

Mode_SMECFunc02a SMEC Open Launch Latch
 File: H_COP_SPI_SMOL.xls
 Author: L.Lucas-hp



Procedure Summary

Objectives

The purpose of this procedure SMEC Open Launch Latch
 Based on procedure:
 Mode_SMECFunc02a (v4)
 Generated:27/03/2009

Summary of Constraints

*FOR GROUND TESTS, ONLY EXECUTE THIS TEST IF THE HERSCHEL
 CRYOSTAT IS HORIZONTAL** Ensure SMEC-
 01, SMEC-03, SMEC-02A and SMEC-FFOFFSET have been run.

Spacecraft Configuration

Start of Procedure

Mode at least SMEC_ON

End of Procedure

Mode at least SMEC_ON

Reference File(s)

Input Command Sequences

Output Command Sequences

HCSSMOL

Referenced Displays

ANDs	GRDs	SLDs
ZAZ90999		
SA_1_559		
SA_6_559		

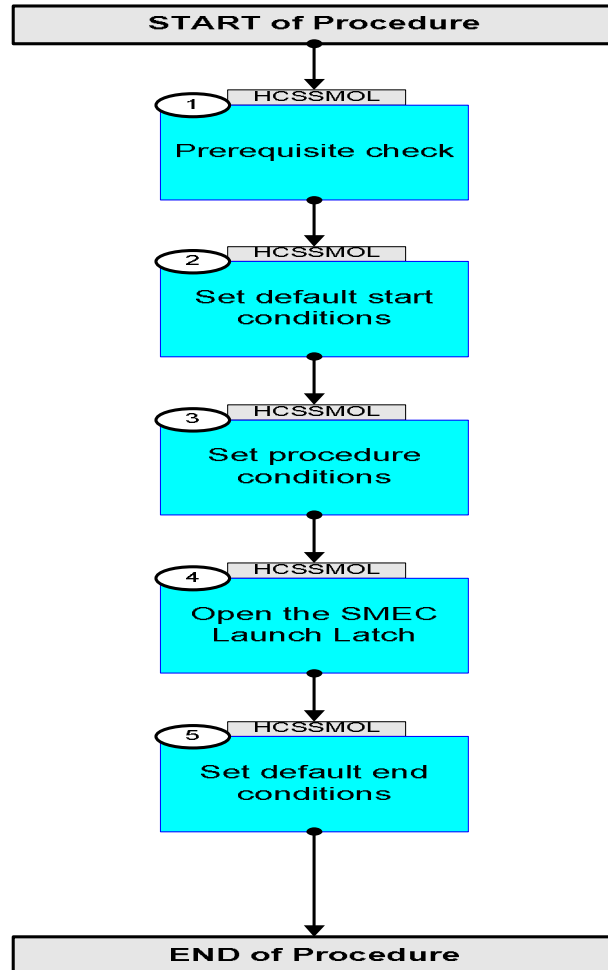
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
22/12/08		1	Created	L.Lucas-hp	
28/01/09	2	2	Removed ETs for ease of loading procedure on to Manual Stack	L.Lucas-hp	
24/03/09	2.2	2.01	Validation : Title Updates	L.Lucas-hp	
07/04/09		3	Commanding updated in line with updates received from SPIRE	L.Lucas-hp	
21/04/09	2.3	3.01	Validation : Text update	L.Lucas-hp	
05/05/09	2.4	4	Remove ET	L.Lucas-hp	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
Beginning of Procedure					
HCSSMOL TC Seq. Name :HCSSMOL (SM OpenLaunchLatch) TimeTag Type: Y Sub Schedule ID: □					
1		Prerequisite check		Next Step: 2	
1.1		HSC/ICC input			
		Verify that the HSC has supplied a valid OBSID value: OBS_ID = 0xnnnn nnnn			
		FOR GROUND TESTS, ONLY EXECUTE THIS TEST IF THE HERSCHEL CRYOSTAT IS HORIZONTAL			
2		Set default start conditions		Next Step: 3	
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands			
	ET+= UT+=00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 0 <hex> Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500	TC	
	ET+= UT+=00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 80010001 <hex> Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500	TC	
		Verify Telemetry BBFULLTYPE SM2LN500 = ClearObs		AND=ZAZ90999	
	ET+= UT+=00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 1 <hex> Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID SC000500 00000000 <hex>	TC	
		Verify Telemetry OBSID SM10N500	= 00000000 <hex>	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80020001 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= StartObs	AND=ZAZ90999	
3		Set procedure conditions		Next Step: 4	
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS Subsch. ID : 370 Det. descr. : RESET DRCU COUNTERS	RESET_DRCU_COUNTERS SCD00505	TC	
		Verify that the TRESET parameter has the same value as the THSK parameter TRESET SM01T500	same as THSK	AND=SA_1_559	
		THSK SM00T500	any	AND=SA_1_559	
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 1 <hex>	TC	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID SC000500 OBS_ID	TC	
		Verify Telemetry OBSID SM10N500	OBS_ID	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 89060001 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= StartMCUdata	AND=SA_6_559	
4		Open the SMEC Launch Latch		Next Step: 5	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91C20000 <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.00	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91c00000 <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91c40000 <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.00	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91c50000 <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91c4000a <hex> 0 <hex> (Def)	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.00	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE ---- -- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91c3ffff <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE ---- -- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 91c10001 <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE ---- -- Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.00	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE ---- -- Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500 80000000 <hex>	TC	
	ET=+ UT=+00.00.03	ENABLE_SMEC_LATCH ENABLE_SMEC_LATCH TC Control Flags : GBM IL DSE ---- -- Subsch. ID : 370 Det. descr. : ENABLE EXECUTION OF SMEC LAUNCH LATCH COMMANDS	SCL00515	TC	
	ET=+ UT=+00.00.02	RELEASE_LATCH RELEASE_LATCH TC Control Flags : GBM IL DSE ---- -- Subsch. ID : 370 Det. descr. : RELEASE THE SMEC LAUNCH LATCH	SCL03515	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.10	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE ---- Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.00	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 TC Control Flags : GBM IL DSE ---- Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	TC	
	ET=+ UT=+00.00.02	SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE ---- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SEND_DRCU_COMMAND SCD06505 91c10000 <hex> 0 <hex> (Def)	TC	
	ET=+ UT=+00.00.01	FLUSH_FIFO Command Parameter(s) : FIFOFLAGS SPD0N505 TC Control Flags : GBM IL DSE ---- Subsch. ID : 370 Det. descr. : FORCE DPU TO READ SCIENCE DATA FROM FIFOS AND FLUSH CONTENTS	FLUSH_FIFO SCD01505 2000 <hex>	TC	
5		Set default end conditions		Next Step: END	
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands			
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80030001 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= EndObs	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 1 <hex>	TC	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID SC000500 00000000 <hex>	TC	
		Verify Telemetry OBSID SM10N500	= 00000000 <hex>	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	TC	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	TC	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999	

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		Note: Wait for the Instrument Team to confirm that the SMEC has been unlatched			
End of Sequence					
End of Procedure					