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HERSCHEL
FLIGHT OPERATIONS PLAN

VOLUME 6
FCP Related Nominal Flight Control Procedures

CDMU FCP's

DHS_4001 to OBS_7114

PT-HMOC-OPS-FOP-6001-OPS-OAH

Issue 3.1

05/09/11

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : ii

DOCUMENT APPROVAL

The Approval Page for all Volumes of the FOP can be found in Volume 1.

DISTRIBUTION LIST

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HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : iv

CHANGE SUMMARY

Date	FOP Issue	Version	Modification Description	Author	SPR Ref
10/03/2009		1	Created	mvoegele-hp	
10/03/2009	2.1	2	New book added	mvoegele-hp	
26/03/2009	2.2	3	Updated change control history for Issue 2.2	mvoegele-hp	
23/04/2009	2.3	4	Updated change control history for Issue 2.3	mvoegele-hp	
06/05/2009	2.4	5	Updated change history for Issue 2.4	mvoegele-hp	
13/10/2009	2.5	6	Updated change control history for issue 2.5	mvoegele-hp	
13/04/2010	3.0	7	Updated change control history for issue 3.0	mvoegele-hp	
05/09/2011	3.1	8	Updated change control history for issue 3.1	mvoegele-hp	

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : v

CHANGE RECORD SHEET

Change No.	Type of Change	Date of Issue	Section Affected	
1	1.0	06/08/08	All	
			Updated:	
			Added:	H_FCP_DHS_1001, H_FCP_DHS_1002, H_FCP_DHS_1003, H_FCP_DHS_1004, H_FCP_DHS_1005, H_FCP_DHS_1006, H_FCP_DHS_1007, H_FCP_DHS_1008, H_FCP_DHS_1009, H_FCP_DHS_1010, H_FCP_DHS_1011, H_FCP_DHS_1012, H_FCP_DHS_1013, H_FCP_DHS_1014, H_FCP_DHS_1015, H_FCP_DHS_1016, H_FCP_DHS_1017, H_FCP_DHS_1018, H_FCP_DHS_1019, H_FCP_DHS_1020, H_FCP_DHS_1021, H_FCP_DHS_1022, H_FCP_DHS_1023, H_FCP_DHS_3001, H_FCP_DHS_3002, H_FCP_DHS_3004, H_FCP_DHS_3005, H_FCP_DHS_3006, H_FCP_DHS_3007, H_FCP_DHS_3008, H_FCP_DHS_3009, H_FCP_DHS_3010, H_FCP_DHS_3011, H_FCP_DHS_3012, H_FCP_DHS_3013, H_FCP_DHS_3014, H_FCP_DHS_3015, H_FCP_DHS_3016, H_FCP_DHS_3017, H_FCP_DHS_3018, H_FCP_DHS_3019, H_FCP_DHS_3020, H_FCP_DHS_3021, H_FCP_DHS_3022, H_FCP_DHS_3023, H_FCP_DHS_3024, H_FCP_DHS_3025, H_FCP_DHS_3026, H_FCP_DHS_3027, H_FCP_DHS_3028, H_FCP_DHS_3029, H_FCP_DHS_3030, H_FCP_DHS_3032, H_FCP_DHS_3033, H_FCP_DHS_3034, H_FCP_DHS_3035, H_FCP_DHS_3036, H_FCP_DHS_3037, H_FCP_DHS_3038, H_FCP_DHS_3039, H_FCP_DHS_3040, H_FCP_DHS_3041, H_FCP_DHS_3042, H_FCP_DHS_3043, H_FCP_DHS_3044, H_FCP_DHS_3045, H_FCP_DHS_3046, H_FCP_DHS_3047, H_FCP_DHS_3048, H_FCP_DHS_3049, H_FCP_DHS_3050, H_FCP_DHS_3051, H_FCP_DHS_3052, H_FCP_DHS_3053, H_FCP_DHS_3054, H_FCP_DHS_3055, H_FCP_DHS_3056, H_FCP_DHS_3057, H_FCP_DHS_3058, H_FCP_DHS_3059, H_FCP_DHS_3060, H_FCP_DHS_3061, H_FCP_DHS_3062, H_FCP_DHS_3063, H_FCP_DHS_3064, H_FCP_DHS_3065, H_FCP_DHS_3066, H_FCP_DHS_3067, H_FCP_DHS_3068, H_FCP_DHS_3069, H_FCP_DHS_3070, H_FCP_DHS_3071, H_FCP_DHS_3072, H_FCP_DHS_3073, H_FCP_DHS_3074, H_FCP_DHS_3075, H_FCP_DHS_3076, H_FCP_DHS_3077, H_FCP_DHS_3078, H_FCP_DHS_3079, H_FCP_DHS_3080, H_FCP_DHS_3081,

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : vi

				H_FCP_DHS_4001, H_FCP_DHS_4002, H_FCP_DHS_4003, H_FCP_DHS_4004, H_FCP_DHS_4005, H_FCP_DHS_4006, H_FCP_DHS_LMCK, H_FCP_DHS_NMCK, H_FCP_DHS_SACK, H_FCP_DHS_SRCK, H_FCP_DHS_STRT, H_FCP_OBS_1210, H_FCP_OBS_1449, H_FCP_OBS_7101, H_FCP_OBS_7102, H_FCP_OBS_7108, H_FCP_OBS_7110, H_FCP_OBS_7112, H_FCP_OBS_7114
			Deleted:	
2	2.0	02/02/09	All – complete re-print for Issue 2.0	
			Updated:	H_FCP_DHS_1001, H_FCP_DHS_1002, H_FCP_DHS_1003, H_FCP_DHS_1004, H_FCP_DHS_1005, H_FCP_DHS_1006, H_FCP_DHS_1007, H_FCP_DHS_1008, H_FCP_DHS_1009, H_FCP_DHS_1010, H_FCP_DHS_1011, H_FCP_DHS_1012, H_FCP_DHS_1013, H_FCP_DHS_1014, H_FCP_DHS_1015, H_FCP_DHS_1018, H_FCP_DHS_1019, H_FCP_DHS_1020, H_FCP_DHS_1021, H_FCP_DHS_1022, H_FCP_DHS_1023, H_FCP_DHS_3001, H_FCP_DHS_3002, H_FCP_DHS_3004, H_FCP_DHS_3005, H_FCP_DHS_3006, H_FCP_DHS_3007, H_FCP_DHS_3008, H_FCP_DHS_3009, H_FCP_DHS_3010, H_FCP_DHS_3011, H_FCP_DHS_3012, H_FCP_DHS_3013, H_FCP_DHS_3014, H_FCP_DHS_3015, H_FCP_DHS_3016, H_FCP_DHS_3017, H_FCP_DHS_3018, H_FCP_DHS_3019, H_FCP_DHS_3020, H_FCP_DHS_3021, H_FCP_DHS_3022, H_FCP_DHS_3023, H_FCP_DHS_3024, H_FCP_DHS_3025, H_FCP_DHS_3026, H_FCP_DHS_3027, H_FCP_DHS_3028, H_FCP_DHS_3029, H_FCP_DHS_3030, H_FCP_DHS_3032, H_FCP_DHS_3033, H_FCP_DHS_3034, H_FCP_DHS_3035, H_FCP_DHS_3036, H_FCP_DHS_3037, H_FCP_DHS_3038, H_FCP_DHS_3039, H_FCP_DHS_3040, H_FCP_DHS_3041, H_FCP_DHS_3042, H_FCP_DHS_3043, H_FCP_DHS_3044, H_FCP_DHS_3045, H_FCP_DHS_3046, H_FCP_DHS_3047, H_FCP_DHS_3048, H_FCP_DHS_3049, H_FCP_DHS_3051, H_FCP_DHS_3052, H_FCP_DHS_3053, H_FCP_DHS_3054, H_FCP_DHS_3055, H_FCP_DHS_3056, H_FCP_DHS_3058, H_FCP_DHS_3059, H_FCP_DHS_3060, H_FCP_DHS_3061, H_FCP_DHS_3066, H_FCP_DHS_3067, H_FCP_DHS_3068, H_FCP_DHS_3074, H_FCP_DHS_3075, H_FCP_DHS_3076, H_FCP_DHS_3077, H_FCP_DHS_3080, H_FCP_DHS_3081, H_FCP_DHS_4001, H_FCP_DHS_4002, H_FCP_DHS_4003, H_FCP_DHS_4004, H_FCP_DHS_4005,

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : vii

					H_FCP_DHS_4006, H_FCP_DHS_LMCK, H_FCP_DHS_NMCK, H_FCP_DHS_SACK, H_FCP_DHS_SRCK, H_FCP_DHS_STRT, H_FCP_OBS_1210, H_FCP_OBS_1449
				Added:	H_FCP_DHS_1025, H_FCP_DHS_1026, H_FCP_DHS_1027, H_FCP_DHS_1028, H_FCP_DHS_1029, H_FCP_DHS_1030, H_FCP_DHS_1031, H_FCP_DHS_1032, H_FCP_DHS_1033, H_FCP_DHS_4007, H_FCP_DHS_4008, H_FCP_DHS_EACK, H_FCP_DHS_FCCT, H_FCP_OBS_1241, H_FCP_OBS_1245, H_FCP_OBS_1249, H_FCP_OBS_1251, H_FCP_OBS_1263, H_FCP_OBS_1423, H_FCP_OBS_1451, H_FCP_OBS_1651
				Deleted:	H_FCP_DHS_3050, H_FCP_DHS_3057, H_FCP_DHS_3062, H_FCP_DHS_3063, H_FCP_DHS_3064, H_FCP_DHS_3065, H_FCP_DHS_3069, H_FCP_DHS_3070, H_FCP_DHS_3071, H_FCP_DHS_3072, H_FCP_DHS_3073, H_FCP_DHS_3078, H_FCP_DHS_3079
3	2.1	06/03/09	New Book added Volume 6 chapter 2 divided into two books as follows: DHS_1001 to DHS_3081 and DHS_4001 to OBS_7114 All – complete re-print for Issue 2.1		
			Updated:		H_FCP_DHS_FCCT, H_FCP_DHS_STRT
			Added:		H_FCP_DHS_DEFFC, H_FCP_DHS_DEFMO, H_FCP_DHS_DEFTC
			Deleted:		
4	2.2	26/03/09	All – Complete re-print		
			Updated:		H_FCP_DHS_4008, H_FCP_DHS_DEFFC, H_FCP_DHS_DEFMO, H_FCP_DHS_DEFTC, H_FCP_DHS_EACK, H_FCP_DHS_LMCK, H_FCP_DHS_NMCK, H_FCP_DHS_SACK, H_FCP_DHS_SRCK, H_FCP_DHS_STRT
			Added:		H_FCP_DHS_4009
			Deleted:		H_FCP_DHS_4006, H_FCP_DHS_FCCT
5	2.3	23/04/09	All – complete re-print for Issue 2.3		
			Updated:		H_FCP_DHS_4001, H_FCP_DHS_4005, H_FCP_DHS_4009, H_FCP_DHS_DEFFC, H_FCP_DHS_EACK, H_FCP_DHS_LMCK, H_FCP_DHS_NMCK, H_FCP_DHS_SACK, H_FCP_DHS_SRCK, H_FCP_OBS_1210, H_FCP_OBS_1241, H_FCP_OBS_1249, H_FCP_OBS_1251, H_FCP_OBS_1263, H_FCP_OBS_1451, H_FCP_OBS_1651, H_FCP_OBS_7101, H_FCP_OBS_7102, H_FCP_OBS_7108, H_FCP_OBS_7110, H_FCP_OBS_7112, H_FCP_OBS_7114
			Added:		
			Deleted:		
6	2.4	06/05/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.		
			Updated:		H_FCP_DHS_DEFFC, H_FCP_DHS_DEFMO, H_FCP_DHS_DEFTC
			Added:		
			Deleted:		

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : viii

7	2.5	07/10/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_FCP_DHS_4002, H_FCP_DHS_4003, H_FCP_DHS_4004, H_FCP_OBS_1210
			Added:	
			Deleted:	
8	3.0	13/04/10	Complete re-print	
			Updated:	
			Added:	
			Deleted:	
9	3.1	05/09/11	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	
			Added:	H_FCP_DHS_AIR, H_FCP_DHS_PKST
			Deleted:	

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No : 3.1
Date : 05/09/11
Page : 1

Introduction

HERSCHEL FOP
VOLUME 6: CDMU FCP's

Document No   : PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue/Rev. No   : 3.1
Date   : 05/09/11
Page   : 2

2.2 CDMU Flight Control Procedures

H_FCP_DHS_4001	S/C Mode transition from Sun Acquisition to Nominal	8	21/04/2009
H_FCP_DHS_4002	Check Sun Acquisition mode configuration	5	03/07/2009
H_FCP_DHS_4003	Check Nominal mode configuration	5	03/07/2009
H_FCP_DHS_4004	Check Earth Acquisition mode configuration	4	03/07/2009
H_FCP_DHS_4005	S/C Mode transition from Nominal to Earth Acquisition	4	15/04/2009
H_FCP_DHS_4007	Check Launch mode configuration	2	11/12/2008
H_FCP_DHS_4008	S/C Mode transition from Earth Acquisition to Nominal	3	23/03/2009
H_FCP_DHS_4009	Disable strap 2 / 3 alarms (PAP6) and check of strap 1 alarm.	3	20/04/2009
H_FCP_DHS_AIR	CDMU checks in sun acquisition mode after AIR	1	21/09/2010
H_FCP_DHS_DEFFC	Default FCCT uplink (editable)	6	05/05/2009
H_FCP_DHS_DEFMO	Default MOT uplink (editable)	5	05/05/2009
H_FCP_DHS_DEFTC	Default TCT uplink (editable)	3	05/05/2009
H_FCP_DHS_EACK	CDMU checks in earth acquisition mode	6	14/04/2009
H_FCP_DHS_LMCK	CDMU checks in launch mode	10	14/04/2009
H_FCP_DHS_NMCK	CDMU checks in Nominal Mode after Sun Acquisition Mode	9	14/04/2009
H_FCP_DHS_PKST	OBCP for Packet Store Cat reports generation	2	02/06/2010
H_FCP_DHS_SACK	CDMU checks in sun acquisition mode after launch	7	14/04/2009
H_FCP_DHS_SRCK	CDMU checks in Survival Mode	5	14/04/2009
H_FCP_DHS_STRT	Acquisition of TM data (launch pad listen-in)	9	19/03/2009
H_FCP_OBS_1210	Load CDMU OBS in EEPROM	4	17/07/2009
H_FCP_OBS_1241	Update CDMU PM PROM ground image from memory dump	2	13/04/2009
H_FCP_OBS_1242	Monitor dump of CDMU PM EEPROM memory area	1	21/04/2009
H_FCP_OBS_1243	Update CDMU PM EEPROM ground image from memory dump	1	21/04/2009
H_FCP_OBS_1245	Update CDMU CPU RAM ground image from memory dump	2	29/01/2009
H_FCP_OBS_1249	Update CDMU CPU System Registers ground image from memory dump	2	10/04/2009
H_FCP_OBS_1251	Update CDMU PM COCOS Registers ground image from memory dump	2	10/04/2009
H_FCP_OBS_1263	Check CDMU OBS image in EEPROM (checksum calculation)	2	16/04/2009
H_FCP_OBS_1423	Clean up the CDMU RM Logs	2	26/01/2009
H_FCP_OBS_1449	Update CDMU SGM ground image from memory dump	3	29/01/2009
H_FCP_OBS_1451	Update CDMU CROME Registers ground image from memory dump	2	10/04/2009
H_FCP_OBS_1651	Update CDMU SSMM COCOS Registers ground image from memory dump	3	10/04/2009
H_FCP_OBS_7101	Load OBCP using OBCP Development Environment generated TC File	2	01/04/2009
H_FCP_OBS_7102	Delete OBCP	4	13/04/2009
H_FCP_OBS_7108	Request list of OBCPs	3	01/04/2009
H_FCP_OBS_7110	Request list of active OBCPs	2	01/04/2009
H_FCP_OBS_7112	Request OBCP status report	2	01/04/2009
H_FCP_OBS_7114	Dump and verify OBCP code	2	01/04/2009