

**HERSCHEL
FLIGHT OPERATIONS PLAN
VOLUME 6
FCP Related Nominal Flight Control Procedures
CDMU FCP's
DHS_1001 to DHS_3081
PT-HMOC-OPS-FOP-6001-OPS-OAH
Issue 3.1
05/09/11**



DOCUMENT APPROVAL

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



DISTRIBUTION LIST

The Distribution List for all Volumes of the FOP can be found in Volume 1.

CHANGE SUMMARY

Date	FOP Issue	Version	Modification Description	Author	SPR Ref
01/08/2008		1	Created	mvoegele-hp	
04/08/2008		2	Updated for Issue 1.0	mvoegele-hp	
05/08/2008	1.0	3	Changed title	mvoegele-hp	
02/02/2009	2.0	4	Updated change control history for Issue 2.0	mvoegele-hp	
06/03/2009		5	Updated change control history for Issue 2.1	mvoegele-hp	
10/03/2009	2.1	6	Due to the large amount of procedures vol6 ch2 has been divided into two books as follows: DHS_1001 to DHS_3081 and DHS_4001 to OBS_7114	mvoegele-hp	
26/03/2009	2.2	7	Updated change control history for Issue 2.2	mvoegele-hp	
23/04/2009	2.3	8	Updated change control history for Issue 2.3	mvoegele-hp	
06/05/2009	2.4	9	Updated change history for Issue 2.4	mvoegele-hp	
08/10/2009	2.5	10	Updated change control history for Issue 2.5	dbleakle-hp	
13/04/2010	3.0	11	Updated change control history for issue 3.0	mvoegele-hp	
05/09/2011	3.1	12	Updated change control history for issue 3.1	mvoegele-hp	

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,

				<p>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</p>
			Deleted:	
2	2.0	02/02/09	All – complete re-print for Issue 2.0	
			Updated:	<p>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,</p>



















































				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_1007, H_FCP_DHS_1009, H_FCP_DHS_1026, H_FCP_DHS_1027, H_FCP_DHS_1030, H_FCP_DHS_1031, H_FCP_DHS_3006, H_FCP_DHS_3007, H_FCP_DHS_3030, H_FCP_DHS_3037, H_FCP_DHS_3049
			Added:	H_FCP_DHS_1034, H_FCP_DHS_1035
			Deleted:	
4	2.2	26/03/09	All – Complete re-print	
			Updated:	H_FCP_DHS_1002, H_FCP_DHS_1004, H_FCP_DHS_1005, H_FCP_DHS_1006, H_FCP_DHS_1007, H_FCP_DHS_1010, H_FCP_DHS_1012, H_FCP_DHS_1014, H_FCP_DHS_1027, H_FCP_DHS_1029, H_FCP_DHS_1030, H_FCP_DHS_1031, H_FCP_DHS_3001, H_FCP_DHS_3005, H_FCP_DHS_3006, H_FCP_DHS_3007, H_FCP_DHS_3008, H_FCP_DHS_3010, H_FCP_DHS_3018, H_FCP_DHS_3019, H_FCP_DHS_3021, H_FCP_DHS_3022, H_FCP_DHS_3025, H_FCP_DHS_3026, H_FCP_DHS_3027, H_FCP_DHS_3028, H_FCP_DHS_3030, H_FCP_DHS_3037, 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_3049, H_FCP_DHS_3080
			Added:	
			Deleted:	H_FCP_DHS_3066, H_FCP_DHS_3068, H_FCP_DHS_3077
5	2.3	23/04/09	All – complete re-print for Issue 2.3	
			Updated:	H_FCP_DHS_1009, H_FCP_DHS_3009,

















































				H_FCP_DHS_3021, H_FCP_DHS_3024, H_FCP_DHS_3028, H_FCP_DHS_3030, H_FCP_DHS_3037, H_FCP_DHS_3049, H_FCP_DHS_3055, H_FCP_DHS_3059, H_FCP_DHS_3067, H_FCP_DHS_3075, H_FCP_DHS_3080, H_FCP_DHS_3081
			Added:	
			Deleted:	
6	2.4	06/05/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_FCP_DHS_1030, H_FCP_DHS_1032, H_FCP_DHS_3080
			Added:	
			Deleted:	
7	2.5	07/10/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_FCP_DHS_1019, H_FCP_DHS_1020, H_FCP_DHS_1021, H_FCP_DHS_1022, H_FCP_DHS_1023, H_FCP_DHS_3014, H_FCP_DHS_3023, H_FCP_DHS_3024
			Added:	H_FCP_DHS_1036, H_FCP_DHS_1037, H_FCP_DHS_1038
			Deleted:	
8	3.0	13/04/10	Complete re-print	
			Updated:	H_FCP_DHS_1003, H_FCP_DHS_1004, H_FCP_DHS_1014, H_FCP_DHS_3027
			Added:	
			Deleted:	
8 9	3.1	05/09/11	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_FCP_DHS_1003, H_FCP_DHS_1004, H_FCP_DHS_1014, H_FCP_DHS_1018, H_FCP_DHS_1027, H_FCP_DHS_3049
			Added:	H_FCP_DHS_1039
			Deleted:	



Introduction

2.2 CDMU Flight Control Procedures




	H_FCP_DHS_1001	Upload default housekeeping and diagnostic packets.	7	08/01/2009
	H_FCP_DHS_1002	Upload default MOT table.	5	19/03/2009
	H_FCP_DHS_1003	Nominal TRANSMIT/STORAGE settings	14	05/10/2010
	H_FCP_DHS_1004	Nominal TM Pkt to Store Routing	13	15/10/2010
	H_FCP_DHS_1005	Define the standard packet stores on SSMM A and B (4 banks)	5	24/03/2009
	H_FCP_DHS_1006	Default packet store catalogues.	13	19/03/2009
	H_FCP_DHS_1007	Dump of PSITs from default stores.	5	19/03/2009
	H_FCP_DHS_1008	AD protocol initialisation	8	09/12/2008
	H_FCP_DHS_1009	Enable default HK packets	10	22/04/2009
	H_FCP_DHS_1010	MM Banks 0, 1, 2 and 3 power ON.	9	24/03/2009
	H_FCP_DHS_1011	MTL Uplink	5	09/12/2008
	H_FCP_DHS_1012	Write survival register after separation	6	23/03/2009
	H_FCP_DHS_1013	Enable/disable VC1 RT	11	09/12/2008
	H_FCP_DHS_1014	Dump of CEL and SSMM packet stores	25	08/12/2010
	H_FCP_DHS_1015	Routine CDMU Checks for DTCP	10	21/11/2008
	H_FCP_DHS_1016	Rejoin HIFI	6	29/07/2008
	H_FCP_DHS_1017	Rejoin PACS	7	29/07/2008
	H_FCP_DHS_1018	Rejoin SPIRE	8	14/12/2010
	H_FCP_DHS_1019	Set SCBP 2 (HIFI prime)	8	27/08/2009
	H_FCP_DHS_1020	Set SCBP 4 (PACS Prime)	8	27/08/2009
	H_FCP_DHS_1021	Set SCBP 3 (SPIRE prime)	8	27/08/2009
	H_FCP_DHS_1022	Select SCBP 8 (parallel mode)	7	27/08/2009
	H_FCP_DHS_1023	Set SCBP 7 (burst mode)	6	27/08/2009
	H_FCP_DHS_1025	SSMM dumps after DTCP loss.	2	09/12/2008
	H_FCP_DHS_1026	Start MTL function during LEOP	7	05/03/2009
	H_FCP_DHS_1027	Dumping BSW TM routing Info array	4	13/10/2010
	H_FCP_DHS_1028	List the HKID defined on board (using SGM dump)	4	11/12/2008
	H_FCP_DHS_1029	CDMU and ACC TC test (Serv 17 or BD/BSW counter only)	3	19/03/2009
	H_FCP_DHS_1030	CDMU OBSW data acquisition	10	04/05/2009
	H_FCP_DHS_1031	Read main registers	6	25/03/2009
	H_FCP_DHS_1032	Set the [TM generating TC] exe rate	5	03/05/2009
	H_FCP_DHS_1033	Abort or modify rate of MTL reports	1	06/01/2009
	H_FCP_DHS_1034	Increase VC0 rate	1	04/02/2009
	H_FCP_DHS_1035	Dump of main On-board tables from SGM	3	23/02/2009
	H_FCP_DHS_1036	HIFI LCL Supercommutation	2	02/09/2009
	H_FCP_DHS_1037	Setup OBCP MOT EAT for SPIRE FDIR	2	26/08/2009
	H_FCP_DHS_1038	Set SCBP 14 (HIFI prime with SupComm)	2	07/09/2009
	H_FCP_DHS_1039	Re-Enabling of Payload Subschedules	1	19/08/2010
	H_FCP_DHS_3001	Define housekeeping or diagnostic packet	8	15/03/2009
	H_FCP_DHS_3002	Clear housekeeping or diagnostic packet	5	12/01/2009
	H_FCP_DHS_3004	Set timeout for ASW internal event filtering	8	01/12/2008
	H_FCP_DHS_3005	Report ASW event filter function and settings	5	24/03/2009
	H_FCP_DHS_3006	Switch to TM encoder A and OBT A	7	23/03/2009
	H_FCP_DHS_3007	Switch to TM encoder B and OBT B	7	23/03/2009
	H_FCP_DHS_3008	Switch PM A ON or OFF	6	24/03/2009
	H_FCP_DHS_3009	Switch PM B ON or OFF	5	14/04/2009
	H_FCP_DHS_3010	Read TTR CROME register	6	22/03/2009
	H_FCP_DHS_3011	Abort current memory dump	3	02/01/2009
	H_FCP_DHS_3012	Dump and interpretation of Reconfiguration Log	6	21/01/2009
	H_FCP_DHS_3013	Dump and interpretation of Unit in Use table	5	12/01/2009

	H_FCP_DHS_3014	Dump and interpretation of CEL	6	17/07/2009
	H_FCP_DHS_3015	Dump and interpretation of SEL	6	12/01/2009
	H_FCP_DHS_3016	Map a MM ID to a MM bank	5	12/01/2009
	H_FCP_DHS_3017	Switching a MM bank ON or OFF	5	12/01/2009
	H_FCP_DHS_3018	MM ID reinitialization	6	22/03/2009
	H_FCP_DHS_3019	Remote terminal synchronization with bus controller	5	22/03/2009
	H_FCP_DHS_3020	Time verification	5	01/12/2008
	H_FCP_DHS_3021	Set central time reference synchronization	7	15/04/2009
	H_FCP_DHS_3022	Enable or disable release of TC from MTL	5	15/03/2009
	H_FCP_DHS_3023	Clearing the complete MTL	4	07/10/2009
	H_FCP_DHS_3024	Normal MTL maintenance	7	07/10/2009
	H_FCP_DHS_3025	Starting or stopping the MTL function	11	19/03/2009
	H_FCP_DHS_3026	Report MTL function	7	19/03/2009
	H_FCP_DHS_3027	Dump MTL summary or detailed report	7	12/04/2010
	H_FCP_DHS_3028	Enable or disable the on board monitoring for a parameter	6	14/04/2009
	H_FCP_DHS_3029	Clearing the complete monitoring table	5	01/12/2008
	H_FCP_DHS_3030	Monitoring table maintenance	7	19/04/2009
	H_FCP_DHS_3032	Report monitoring function	3	01/12/2008
	H_FCP_DHS_3033	Enable or disable the generation of an housekeeping or diagnostic packet	7	11/12/2008
	H_FCP_DHS_3034	TM packet routing to downlink or MM or both	3	27/10/2008
	H_FCP_DHS_3035	Enable or disable storage in a MM packet store	4	13/01/2009
	H_FCP_DHS_3036	Allocate or deallocate TM type and subtype in a MM packet store	3	28/11/2008
	H_FCP_DHS_3037	TM packet store downlink and maintenance	13	19/04/2009
	H_FCP_DHS_3038	Packet store creation and VC 2, 3 allocation	6	13/01/2009
	H_FCP_DHS_3039	Packet store deletion	4	13/01/2009
	H_FCP_DHS_3040	Perform connection test	11	19/03/2009
	H_FCP_DHS_3041	Load or delete an OBCP	4	15/03/2009
	H_FCP_DHS_3042	Start or stop an OBCP	5	15/03/2009
	H_FCP_DHS_3043	Suspend or resume an OBCP	5	15/03/2009
	H_FCP_DHS_3044	Set OBCP parameters	5	15/03/2009
	H_FCP_DHS_3045	Dump OBCP code	4	15/03/2009
	H_FCP_DHS_3046	Start or stop the whole OBCP function	3	28/11/2008
	H_FCP_DHS_3047	Report OBCP management function	3	11/12/2008
	H_FCP_DHS_3048	Clear the complete event-action table	3	28/11/2008
	H_FCP_DHS_3049	Event-action table maintenance	9	07/02/2011
	H_FCP_DHS_3051	Report event-action management status or event detection list	3	28/11/2008
	H_FCP_DHS_3052	Bus profile maintenance	3	01/12/2008
	H_FCP_DHS_3053	Select a bus profile to be active	4	11/12/2008
	H_FCP_DHS_3054	Enable or disable burst mode for a remote terminal	4	13/01/2009
	H_FCP_DHS_3055	Configure 1553 bus FDIR for a remote terminal	4	19/04/2009
	H_FCP_DHS_3056	Enable or disable TC routing to an APID	3	11/12/2008
	H_FCP_DHS_3058	Set AFO or AFS status of FDIR	4	03/12/2008
	H_FCP_DHS_3059	Maintenance of FDIR cross correlated checks	4	19/04/2009
	H_FCP_DHS_3060	Verify configuration matrices for FDIR	4	14/11/2008
	H_FCP_DHS_3061	Report FDIR management function and FDIR cross correlated table	3	01/12/2008
	H_FCP_DHS_3067	Report mode management function and current spacecraft mode	4	20/04/2009
	H_FCP_DHS_3074	Start or stop the whole reconfiguration module (TTR) function	3	02/12/2008
	H_FCP_DHS_3075	Report reconfiguration module (TTR) status	5	20/04/2009



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	H_FCP_DHS_3076	Saving of HK packets in data pool buffers	3	02/12/2008
	H_FCP_DHS_3080	Survival Register maintenance	7	04/05/2009
	H_FCP_DHS_3081	CDMS Subsystem Checkout	7	14/04/2009