

**HERSCHEL
FLIGHT OPERATIONS PLAN
VOLUME 4
COP Related Nominal Flight Control Procedures
Payload FCP's
SPIRE
H_COP_SPI_NSON to H_COP_SPI_SC4R
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
27/04/2009	2.3	1	Created	mvoegele-hp	
06/05/2009	2.4	2	Updated change history for Issue 2.4	mvoegele-hp	
08/10/2009	2.5	3	Updated change history for Issue 2.5	dbleakle-hp	
13/10/2009		4	corrected typo in title	mvoegele-hp	
13/04/2010	3.0	5	Updated change control history for issue 3.0	mvoegele-hp	
05/09/2011	3.1	6	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_COP_PAC_A001, H_COP_PAC_A002, H_COP_PAC_G001, H_COP_PAC_G002, H_COP_PAC_G003, H_COP_PAC_X001, H_COP_PAC_X002, H_COP_PAC_X003
			Deleted:	
2	2.0	02/02/09	All – Complete re-print for Issue 2.0	
			Updated:	H_COP_PAC_A001, H_COP_PAC_A002, H_COP_PAC_G001, H_COP_PAC_G002, H_COP_PAC_G003, H_COP_PAC_X001, H_COP_PAC_X002, H_COP_PAC_X003
			Added:	H_COP_HIF_CFHR, H_COP_HIF_CFWB, H_COP_HIF_NCRT, H_COP_HIF_NFF1, H_COP_HIF_NFF2, H_COP_HIF_NFF3, H_COP_HIF_NFF4, H_COP_HIF_NFF5, H_COP_HIF_NFF6, H_COP_HIF_NFF7, H_COP_HIF_NFF8, H_COP_HIF_NFL1, H_COP_HIF_NFL2, H_COP_HIF_NFL3, H_COP_HIF_NFL4, H_COP_HIF_NFL5, H_COP_HIF_NFL6, H_COP_HIF_NFL7, H_COP_HIF_NFL8, H_COP_HIF_NFL9, H_COP_HIF_NFLA, H_COP_HIF_NFLB, H_COP_HIF_NFLC, H_COP_HIF_NFLD, H_COP_HIF_NFLE, H_COP_HIF_NIF1, H_COP_HIF_NIF2, H_COP_HIF_NIF3, H_COP_HIF_NIF4, H_COP_HIF_NIF5, H_COP_HIF_NIF6, H_COP_HIF_NIF7, H_COP_HIF_RCRT, H_COP_HIF_RFL1, H_COP_HIF_RFL2, H_COP_HIF_RFL3, H_COP_HIF_RFL4, H_COP_HIF_RFL5, H_COP_HIF_RFL6, H_COP_HIF_RFL7, H_COP_HIF_RFL8, H_COP_HIF_RFL9, H_COP_HIF_RFLA, H_COP_HIF_RFLB, H_COP_HIF_RFLC, H_COP_HIF_RFLD, H_COP_HIF_RFLE, H_COP_PAC_A003, H_COP_PAC_C101, H_COP_PAC_C102, H_COP_PAC_C103, H_COP_PAC_C201, H_COP_PAC_C202, H_COP_PAC_C203, H_COP_PAC_C204, H_COP_PAC_CX01, H_COP_PAC_CX02, H_COP_PAC_CX03, H_COP_PAC_CX04, H_COP_PAC_CX05, H_COP_PAC_D000, H_COP_PAC_D001, H_COP_PAC_D002, H_COP_PAC_D003, H_COP_PAC_D100, H_COP_PAC_D101, H_COP_PAC_D102, H_COP_PAC_D103, H_COP_PAC_D200, H_COP_PAC_D201, H_COP_PAC_D202, H_COP_PAC_D203, H_COP_PAC_D204, H_COP_PAC_D300, H_COP_PAC_D301, H_COP_PAC_D302, H_COP_PAC_D303, H_COP_PAC_D304, H_COP_PAC_D305, H_COP_PAC_D306, H_COP_PAC_D307, H_COP_PAC_F000,

			<p>H_COP_PAC_F001, H_COP_PAC_F002, H_COP_PAC_F003, H_COP_PAC_F100, H_COP_PAC_F101, H_COP_PAC_F102, H_COP_PAC_F103, H_COP_PAC_F104, H_COP_PAC_FDIR, H_COP_PAC_G000, H_COP_PAC_G101, H_COP_PAC_G201, H_COP_PAC_G202, H_COP_PAC_G203, H_COP_PAC_G204, H_COP_PAC_GX01, H_COP_PAC_GX02, H_COP_PAC_GX03, H_COP_PAC_GX04, H_COP_PAC_GX07, H_COP_PAC_GX08, H_COP_PAC_GX09, H_COP_PAC_GX10, H_COP_PAC_GX11, H_COP_PAC_L001, H_COP_PAC_LLOP, H_COP_PAC_SFTC, H_COP_PAC_SX01, H_COP_PAC_X004, H_COP_PAC_X005, H_COP_PAC_X006, H_COP_PAC_X007, H_COP_PAC_X008, H_COP_PAC_X009, H_COP_PAC_X010, H_COP_PAC_X011, H_COP_PAC_X012, H_COP_SPI_BS03, H_COP_SPI_BS06, H_COP_SPI_BS5A, H_COP_SPI_BS5B, H_COP_SPI_BSMF, H_COP_SPI_BSMI, H_COP_SPI_BSSC, H_COP_SPI_DCPN, H_COP_SPI_DCSC, H_COP_SPI_DCSN, H_COP_SPI_DPIC, H_COP_SPI_DPNC, H_COP_SPI_DPPS, H_COP_SPI_DRCN, H_COP_SPI_DSIC, H_COP_SPI_DSPS, H_COP_SPI_MCSC, H_COP_SPI_MCUF, H_COP_SPI_MCUN, H_COP_SPI_PCAC, H_COP_SPI_PHOF, H_COP_SPI_PHVT, H_COP_SPI_REDY, H_COP_SPI_SC2P, H_COP_SPI_SC4P, H_COP_SPI_SCAC, H_COP_SPI_SCAT, H_COP_SPI_SCDT, H_COP_SPI_SCSC, H_COP_SPI_SMCP, H_COP_SPI_SMCS, H_COP_SPI_SMEP, H_COP_SPI_SMER, H_COP_SPI_SMFP, H_COP_SPI_SMFR, H_COP_SPI_SMIP, H_COP_SPI_SMIR, H_COP_SPI_SMLP, H_COP_SPI_SMLR, H_COP_SPI_SMOF, H_COP_SPI_SMOL, H_COP_SPI_SMOS, H_COP_SPI_SMPP, H_COP_SPI_SMPR, H_COP_SPI_SOHC, H_COP_SPI_SPNO, H_COP_SPI_SPOF, H_COP_SPI_SPVT</p>
			Deleted:
3	2.1	06/03/09	<p>All – Complete re-print for Issue 2.1. Payload FCP's divided into 4 books. New book added SPIRE FCP's</p>
			<p>Updated: H_COP_SPI_REDY, H_COP_SPI_SC2P, H_COP_SPI_SC4P</p>
			<p>Added: H_COP_SPI_CFT1, H_COP_SPI_CFT2, H_COP_SPI_CFT3, H_COP_SPI_CFT4, H_COP_SPI_CFT5, H_COP_SPI_CFT6, H_COP_SPI_CFT7, H_COP_SPI_MREC, H_COP_SPI_NSON, H_COP_SPI_RSON, H_COP_SPI_SC2R, H_COP_SPI_SC4R, H_COP_SPI_SMLV, H_COP_SPI_SPPD, H_COP_SPI_SWON</p>
			Deleted:

4	2.2	26/03/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_COP_SPI_BS03, H_COP_SPI_BS06, H_COP_SPI_BS5A, H_COP_SPI_BS5B, H_COP_SPI_BSSC, H_COP_SPI_DCPN, H_COP_SPI_DCSC, H_COP_SPI_DCSN, H_COP_SPI_DPIC, H_COP_SPI_DPNC, H_COP_SPI_DRCN, H_COP_SPI_DSIC, H_COP_SPI_MCSC, H_COP_SPI_PCAC, H_COP_SPI_PHVT, H_COP_SPI_SC2P, H_COP_SPI_SC2R, H_COP_SPI_SC4P, H_COP_SPI_SC4R, H_COP_SPI_SCAC, H_COP_SPI_SCAT, H_COP_SPI_SCDT, H_COP_SPI_SCSC, H_COP_SPI_SMCP, H_COP_SPI_SMCS, H_COP_SPI_SMEP, H_COP_SPI_SMER, H_COP_SPI_SMFP, H_COP_SPI_SMFR, H_COP_SPI_SMLP, H_COP_SPI_SMLR, H_COP_SPI_SMOF, H_COP_SPI_SMOL, H_COP_SPI_SMOS, H_COP_SPI_SMPP, H_COP_SPI_SMPR, H_COP_SPI_SOHC, H_COP_SPI_SPNO, H_COP_SPI_SPOF, H_COP_SPI_SPVT
			Added:	H_COP_SPI_DRCR
			Deleted:	
5	2.3	23/04/09	All – New Book added. Vol4 Payload SPIRE FCPs divided into 4 books as follows: H_COP_SPI_APDS to H_COP_SPI_MSPN H_COP_SPI_NSON to H_COP_SPI_SC4R H_COP_SPI_SCAC to H_COP_SPI_SPSH H_COP_SPI_SPU1 to H_COP_SPI_SWON	
			Updated:	H_COP_SPI_NSON, H_COP_SPI_PCAC, H_COP_SPI_PHOF, H_COP_SPI_PHVT, H_COP_SPI_RSON, H_COP_SPI_SC2P, H_COP_SPI_SC2R, H_COP_SPI_SC4P, H_COP_SPI_SC4R,
			Added:	H_COP_SPI_PCSH, H_COP_SPI_PHDG, H_COP_SPI_PPDS, H_COP_SPI_PPDT, H_COP_SPI_PRST, H_COP_SPI_PTC2, H_COP_SPI_PTCT, H_COP_SPI_REDX
			Deleted:	
6	2.4	06/05/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_COP_SPI_NSON, H_COP_SPI_PCAC, H_COP_SPI_PCSH, H_COP_SPI_PHDG, H_COP_SPI_PHOF, H_COP_SPI_PHVT, H_COP_SPI_PRST, H_COP_SPI_PTC2, H_COP_SPI_PTCT, H_COP_SPI_REDX, H_COP_SPI_RSON, H_COP_SPI_SC2P, H_COP_SPI_SC2R, H_COP_SPI_SC4P, H_COP_SPI_SC4R
			Added:	
			Deleted:	
7	2.5	07/10/09	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_COP_SPI_NSON, H_COP_SPI_PTCT, H_COP_SPI_RSON
			Added:	H_COP_SPI_REDB




















			Deleted:	
8	3.0	13/04/10	Complete re-print	
			Updated:	
			Added:	
			Deleted:	
8 9	3.1	05/09/11	Front Page, Change Summary, Change Record Sheet and List of Procedures replaced.	
			Updated:	H_COP_SPI_NSON
			Added:	
			Deleted:	



Introduction

Chapter 3 Payload Flight Control Procedures

3.6 SPIRE Flight Control Procedures

	H_COP_SPI_NSON	SPIRE ON, DPU_START - Switch ON the nominal SPIRE units	7	14/12/2010
	H_COP_SPI_PCAC	Mode_PCALFunc01 Phot Calibration Characterisation Test	2	05/05/2009
	H_COP_SPI_PCSH	SPIRE-CP-PHOT-PCAL-FLASH PCAL FLASH	2	04/05/2009
	H_COP_SPI_PHDG	SPIRE-CP-START-PHOT-DATA	2	04/05/2009
	H_COP_SPI_PHOF	PDET_OFF Photometer BDAs Switch Off	5	04/05/2009
	H_COP_SPI_PHVT	Mode_ILT_PERF_VSS_PC Photometer BDA Vss Test	3	05/05/2009
	H_COP_SPI_PPDS	PTC PID Sub K	1	21/04/2009
	H_COP_SPI_PPDT	PTC PID T2	1	21/04/2009
	H_COP_SPI_PRST	SPIRE-CP-RESET-PHOT-OFFSETS	2	04/05/2009
	H_COP_SPI_PTC2	SPIRE_CP_FUNC_PTC_PID_T2 PTC PID Tuning with Thermistor 2	2	04/05/2009
	H_COP_SPI_PTCT	SPIRE_CP_FUNC_PTC_PID_SUBKTEMP Phot Thermal Controller Tuning	3	29/06/2009
	H_COP_SPI_REDB	Mode_Go2BasicREDY	1	18/05/2009
	H_COP_SPI_REDX	Mode_Go2REDY	2	05/05/2009
	H_COP_SPI_REDY	Mode_Go2REDY	3	26/02/2009
	H_COP_SPI_RSON	SPIRE ON, DPU_START - Switch ON the redundant SPIRE units	5	18/05/2009
	H_COP_SPI_SC2P	SPIRE_CP_SCAL2_PID Tune Control Loop PID	6	05/05/2009
	H_COP_SPI_SC2R	SPIRE-CP-FUNC-SCAL2-PID (RED) Control Loop Tuning	4	05/05/2009
	H_COP_SPI_SC4P	SPIRE-CP-FUNC-SCAL4-PID Control Loop PID	6	05/05/2009
	H_COP_SPI_SC4R	SPIRE_CP_SCAL4_PID (RED) Control Loop PID Tuning	4	05/05/2009