

SWA Power Off
 File: IA-FCP-002.xls
 Author: daniel lakey




Procedure Summary

Objectives

Power down SWA (A & B)

Summary of Constraints

The following minimum delay between sending the HPC Off command and switch off of the different SWA sensors LCLs shall be respected:

- EAS: TBDs
- PAS: TBDs
- HIS: 1 min

Spacecraft Configuration

Start of Procedure

SWA-A or SWA-B is ON

End of Procedure

SWA-A or SWA-B is OFF

Reference File(s)

Input Command Sequences

ADMF715A
 ADMF715B

Output Command Sequences

AIAF002A

Referenced Displays

ANDs **GRDs** **SLDs**
 DSMA0004 (None)

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
30/01/2018		0.01	move as we like it	dlakey	M7
30/01/2018		0.02	ETB/PFM db	dlakey	M7
06/02/2018		0.03	correcting MOIS errors	dlakey	M7
21/02/2018		1	Updates from Feb 2018	dlakey	M7
12/03/2018	0.2				M7
24/04/2018		1.01	Added constraints on power up/down timing	dlakey	M7
12/06/2018		2	Added redundant switch-on and cross strapped procedures, and SpW interface selection	dlakey	M7
18/06/2018	0.3				M7
17/09/2018		2.01	Moved to PFM DB	dlakey	M7

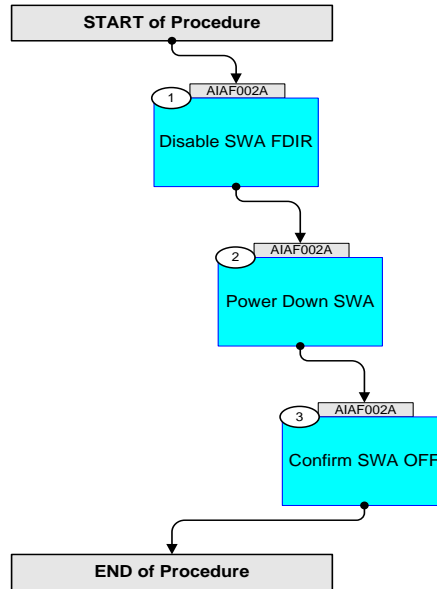
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solar orbiter



Procedure Flowchart Overview



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
Beginning of Procedure				
Beginning of Sequence				
	AIAF002A	AIAF002A SeqFlags [Crit/Plan/Stdalone/Sched] : NSYN TimeTag type : B		
1		Disable SWA FDIR <i>Next step(s):</i> -> 2		
1.1		Disable SpW Link Monitor		
		Disable the Platform monitoring of the SpW Link (Following DM-FCP-715)		
		Note, this will disable SWA HB Monitors for both SWA-A and SWA-B to ensure a consistent state.		
	ET=+00.00.00 UT=+00.00.00	Execute Sequence ADMF715A Dis HB Mon SWA A v03 Sequence Grouping = - Subsch ID : 254		
	ET=+00.00.01 UT=+00.00.01	Execute Sequence ADMF715B Dis HB Mon SWA B v03 Sequence Grouping = - Subsch ID : 254		
1.2		Disable SWA FDIR		
		Confirm each FMON is Enabled and Protected		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.01	Execute Telecommand ZCL08E0A Report Current FMON Status List TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception YCL08E0B Current Functional Monitoring Status List Report TM(142,11), APID 195 (12/3) PI1=0 PI2=0		
		FMON_SWA1		
		NCD8E093 Functional MONitoring ID = 21 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B
		FMON_SWA2		
		NCD8E093 Functional MONitoring ID = 22 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B
		FMON_SWA3		
		NCD8E093 Functional MONitoring ID = 23 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		FMON_SWA4		
		NCD8E093 Functional MONitoring ID = 24 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = ENABLED_RUN		(None) PKT=YCL08E0B
		Confirm related SMON are Enabled		
	+00.00.01	Execute Telecommand ZCL00C08 Report Current Monitoring List TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception YCL00C09 Monitoring List Report TM(12,9), APID 195 (12/3) PI1=0 PI2=0		
		SMON_SWA1		
		NCD0C094 OBCHP_Mon_ID = 21 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA2		
		NCD0C094 OBCHP_Mon_ID = 22 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA3		
		NCD0C094 OBCHP_Mon_ID = 23 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA4		
		NCD0C094 OBCHP_Mon_ID = 24 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		SMON_SWA5		
		NCD0C094 OBCHP_Mon_ID = 25 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA6		
		NCD0C094 OBCHP_Mon_ID = 26 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA7		
		NCD0C094 OBCHP_Mon_ID = 27 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA8		
		NCD0C094 OBCHP_Mon_ID = 28 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA9		
		NCD0C094 OBCHP_Mon_ID = 29 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		SMON_SWA10		
		NCD0C094 OBCHP_Mon_ID = 30 <dec>		(None)
		NCD0C099 Monitoring status = ENABLED		(None)
		Unprotect FMON		
	+00.00.01	Execute Telecommand ZCL08E0D Unprotect Func Mon Parameters TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCD8E061 Number of FMON IDs to be = 4 <dec> PCD8E012 FMON Identifier to be pr = 21 <dec> PCD8E012 FMON Identifier to be pr = 22 <dec> PCD8E012 FMON Identifier to be pr = 23 <dec> PCD8E012 FMON Identifier to be pr = 24 <dec>		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Disable SMON		
	+00.00.01	Execute Telecommand ZCL00C02 Disable Monitoring of Parameters TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCD0C011 Number of Monitorings to = 10 <dec> PCD0C012 (Parameter) Monitoring I = 21 <dec> PCD0C012 (Parameter) Monitoring I = 22 <dec> PCD0C012 (Parameter) Monitoring I = 23 <dec> PCD0C012 (Parameter) Monitoring I = 24 <dec> PCD0C012 (Parameter) Monitoring I = 25 <dec> PCD0C012 (Parameter) Monitoring I = 26 <dec> PCD0C012 (Parameter) Monitoring I = 27 <dec> PCD0C012 (Parameter) Monitoring I = 28 <dec> PCD0C012 (Parameter) Monitoring I = 29 <dec> PCD0C012 (Parameter) Monitoring I = 30 <dec>		
		Disable FMON		
	+00.00.01	Execute Telecommand ZCL08E02 Disable Functional Monitoring TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCD8E011 Number of FMON IDs to be = 4 <dec> PCD8E012 FMON IDentifier to be pr = 21 <dec> PCD8E012 FMON IDentifier to be pr = 22 <dec> PCD8E012 FMON IDentifier to be pr = 23 <dec> PCD8E012 FMON IDentifier to be pr = 24 <dec>		
		Protect FMON		
	+00.00.01	Execute Telecommand ZCL08E0C Protect Func Mon Parameters TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCD8E061 Number of FMON IDs to be = 4 <dec> PCD8E012 FMON IDentifier to be pr = 21 <dec> PCD8E012 FMON IDentifier to be pr = 22 <dec> PCD8E012 FMON IDentifier to be pr = 23 <dec> PCD8E012 FMON IDentifier to be pr = 24 <dec>		
		Confirm FMON is Disabled and Protected		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.01	Execute Telecommand ZCL08E0A Report Current FMON Status List TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception YCL08E0B Current Functional Monitoring Status List Report TM(142,11), APID 195 (12/3) PI1=0 PI2=0		
		FMON_SWA1		
		NCD8E093 Functional MONitoring ID = 21 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B
		FMON_SWA2		
		NCD8E093 Functional MONitoring ID = 22 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B
		FMON_SWA3		
		NCD8E093 Functional MONitoring ID = 23 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		FMON_SWA4		
		NCD8E093 Functional MONitoring ID = 24 <dec>		(None) PKT=YCL08E0B
		NCD8E094 FMON ID Protect Status = PROTECTED		(None) PKT=YCL08E0B
		NCD8E095 FMON ID status = DIS_UNCHECK		(None) PKT=YCL08E0B
		Confirm related SMON are Disabled		
	+00.00.01	Execute Telecommand ZCL00C08 Report Current Monitoring List TC Control Flags: GBM IL DSE --Y NC ---		
		Verify Packet Reception YCL00C09 Monitoring List Report TM(12,9), APID 195 (12/3) PI1=0 PI2=0		
		SMON_SWA1		
		NCD0C094 OBCHP_Mon_ID = 21 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA2		
		NCD0C094 OBCHP_Mon_ID = 22 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA3		
		NCD0C094 OBCHP_Mon_ID = 23 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA4		
		NCD0C094 OBCHP_Mon_ID = 24 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		SMON_SWA5		
		NCD0C094 OBCHP_Mon_ID = 25 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA6		
		NCD0C094 OBCHP_Mon_ID = 26 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA7		
		NCD0C094 OBCHP_Mon_ID = 27 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA8		
		NCD0C094 OBCHP_Mon_ID = 28 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA9		
		NCD0C094 OBCHP_Mon_ID = 29 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
		SMON_SWA10		
		NCD0C094 OBCHP_Mon_ID = 30 <dec>		(None)
		NCD0C099 Monitoring status = DISABLED		(None)
2		<p>Power Down SWA</p> <p>Next step(s): -> 3</p>		
		SWA Power Down function will handle stopping of S20 transmission		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	+00.00.01	Execute Telecommand ZCSD11D3 SWA PowerDown Function TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCSB0036 Unit to power up/down. = UNIT_A		
	+00.00.05	Execute Telecommand ZCSD11D3 SWA PowerDown Function TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCSB0036 Unit to power up/down. = UNIT_B		
		Disable Nominal and Redundant SpW Link		
		Verify Telemetry NSMD0084 Payload 7 Link Status = NomDis RedEnab = NomEnab RedDis		AND=DSMA0004
	+00.00.05	Execute Telecommand ZSM00298 SSMM Sel PL SpW IF OP mode TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PSM00302 SpW I/F E/D = Disabled PSM00303 SpW I/S = Nominal PSM00304 P/L ID = SWA		
	+00.00.01	Execute Telecommand ZSM00298 SSMM Sel PL SpW IF OP mode TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PSM00302 SpW I/F E/D = Disabled PSM00303 SpW I/S = Redundant PSM00304 P/L ID = SWA		
		Verify Telemetry NSMD0084 Payload 7 Link Status = Nom Red Disab		AND=DSMA0004

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
3		<p>Confirm SWA OFF</p> <p>Next step(s): -> END</p>		
		Confirm SWA RSA Telemetry		
		(if RIU-A is in use)		
		<p>Verify Telemetry NRUD2007 RSA_1_1_9 SWA A = Off</p>		(None)
		<p>Verify Telemetry NRUD2067 RSA_2_1_9 SWA B = Off</p>		(None)
		(if RIU-B is in use)		
		<p>Verify Telemetry NRUT2007 RSA_1_1_9 SWA A (RIU B) = Off</p>		(None)
		<p>Verify Telemetry NRUT2067 RSA_2_1_9 SWA B (RIU B) = Off</p>		(None)
		Check SWA A and B LCL is switched OFF and current is near 0		
		(if PCDU-A is in use)		
		<p>Verify Telemetry NPWD0077 A_LCL4_16 SWA-A ST = OFF</p>		(None)
		<p>Verify Telemetry NPWD0038 A_LCL2_17 SWA-B PWR ST = OFF</p>		(None)
		<p>Verify Telemetry NPWD3267 A_LCL4_16 SWA-A TM < 0.05 A</p>		(None)
		<p>Verify Telemetry NPWD2768 A_LCL2_17 SWA-B PWR TM < 0.05 A</p>		(None)
		(if PCDU-B is in use)		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Verify Telemetry NPWT0077 B_LCL4_16 SWA-A ST = OFF		(None)
		Verify Telemetry NPWT0038 B_LCL2_17 SWA-B PWR ST = OFF		(None)
		Verify Telemetry NPWT3267 B_LCL4_16 SWA-A TM < 0.05 A		(None)
		Verify Telemetry NPWT2768 B_LCL2_17 SWA-B PWR TM < 0.05 A		(None)
		Check SCV Telemetry		
		Verify Telemetry NCSD3K72 SWA A SCV Status.scvPwr = OFF		(None)
		Verify Telemetry NCSD3K73 SWA A SCV Status.scvTm = OFF		(None)
		Verify Telemetry NCSD3K82 SWA B SCV Status.scvPwr = OFF		(None)
		Verify Telemetry NCSD3K83 SWA B SCV Status.scvTm = OFF		(None)
AIAF002A		End of Sequence		
End of Procedure				