

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 shall be respected between switching off of the different SWA sensors and sending the HPC Off command:  
 - EAS (1&2): 60s  
 - PAS: 380s  
 - HIS: 3600s

**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  
 AIAF800A

**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
15/02/2019		3	Updated for PFM DB / use dedicated FDIR enable/disable sequences	dlakey	M7
05/03/2019		3.01	Refreshed TM	dlakey	M7

Status : Version 6.00 - Unchanged  
 Last Checkin: 14/01/20

SWA Power Off File: IA-FCP-002.xls Author: daniel lakey	 
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18/03/2019	1			M7
28/03/2019	3.02	Updated constraint text	dlakey	M7
10/07/2019	4	SpW disable before power off - SOL.SC.ASTR.NCR.01323	dlakey	M7
10/07/2019	5	Moved SWA-B power off to 1s after SWA-A, per SWA's request	dlakey	M7
10/07/2019	5.01	Added power-down events	dlakey	M7
16/08/2019	2			M7
14/01/2020	6	SOL_FCR-60 : Update SWA procedures for CSW 3.0.3 & latest FSW	dlakey	M7
20/01/2020	3			M7

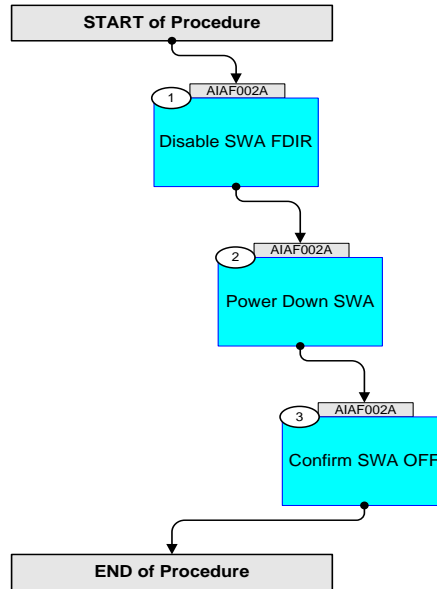
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solar orbiter



### Procedure Flowchart Overview



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Step	Label/Time	Activity/Remarks/Branch	CK	Display
<b>Beginning of Procedure</b>				
Beginning of Sequence				
	<b>AIAF002A</b>	<b>SWA Power OFF</b> SeqFlags [ Crit/Plan/Stdalone/Sched ] : NSYN TimeTag type : B		
1		<b>Disable SWA FDIR</b>  <i>Next step(s):</i> -> 2		
1.1		<b>Disable SpW Link Monitor</b>		
		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	<b>Execute Sequence</b> <b>ADMF715A Dis HB Mon SWA A v03</b> Sequence Grouping = -  Subsch ID : SWA (109)		
	ET=+00.00.01 UT=+00.00.01	<b>Execute Sequence</b> <b>ADMF715B Dis HB Mon SWA B v03</b> Sequence Grouping = -  Subsch ID : SWA (109)		
1.2		<b>Disable SWA FDIR</b>		
		Disable Platform-provided FDIR		

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
	ET=+00.00.01 UT=+00.00.01	<b>Execute Sequence</b> <b>AIAF800A SWA Disable FDIR v01</b> Sequence Grouping = -  Subsch ID : SWA (109)		
2		<b>Power Down SWA</b>  <b>Next step(s):</b> -> 3		
		Stop S20		
	+00.00.01	<b>Execute Telecommand</b> <b>ZCD01402 Stop Information Distribution for User</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PCD14011 Instrument Id = SWA_SPW_ADDR &lt;eng&gt;</b>		
		Disable Nominal and Redundant SpW Link		
		<b>Verify Telemetry</b> <b>NSMD0084 Payload 7 Link Status</b> = NomDis RedEnab = NomEnab RedDis		AND=DSMA0004
	+00.00.01	<b>Execute Telecommand</b> <b>ZSM00298 SSMM Sel PL SpW IF OP mode</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PSM00302 SpW I/F E/D = Disabled &lt;eng&gt;</b> <b>PSM00303 SpW I/S = Nominal &lt;eng&gt;</b> <b>PSM00304 P/L ID = SWA &lt;eng&gt;</b>		
	+00.00.01	<b>Execute Telecommand</b> <b>ZSM00298 SSMM Sel PL SpW IF OP mode</b> TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : <b>PSM00302 SpW I/F E/D = Disabled &lt;eng&gt;</b> <b>PSM00303 SpW I/S = Redundant &lt;eng&gt;</b> <b>PSM00304 P/L ID = SWA &lt;eng&gt;</b>		

SWA Power Off  
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		<b>Verify Telemetry</b> NSMD0084 Payload 7 Link Status = Nom Red Disab		AND=DSMA0004
		SWA Power Down function will handle stopping of S20 transmission		
	+00.00.01	<b>Execute Telecommand</b> ZCSD11D3 SWA PowerDown Function TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCSB0036 Unit to power up/down. = UNIT_A <eng>		
		Verify Packet Reception YCLV3989 SWA_A PowerDown_Started-(LCL-RSA_status) TM(5,1), APID 199 (12/7) PI1=4521 PI2=0		
		Verify Packet Reception YCLV398A SWA_A PowerDown_Ended-(LCL-RSA_status) TM(5,1), APID 199 (12/7) PI1=4522 PI2=0		
	+00.00.01	<b>Execute Telecommand</b> ZCSD11D3 SWA PowerDown Function TC Control Flags: GBM IL DSE --Y NC --- Command Parameters : PCSB0036 Unit to power up/down. = UNIT_B <eng>		
		Verify Packet Reception YCLV3A09 SWA_B PowerDown_Started-(LCL-RSA_status) TM(5,1), APID 199 (12/7) PI1=4649 PI2=0		
		Verify Packet Reception YCLV3A0A SWA_B PowerDown_Ended-(LCL-RSA_status) TM(5,1), APID 199 (12/7) PI1=4650 PI2=0		
3		<b>Confirm SWA OFF</b>  <b>Next step(s):</b> -> END		
		Confirm SWA RSA Telemetry		
		(if RIU-A is in use)		
		<b>Verify Telemetry</b> NRUD2007 RSA_1_1_9 SWA A = Off		(None)

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		<b>Verify Telemetry</b> NRUD2067 RSA_2_1_9 SWA B = Off		(None)
		(if RIU-B is in use)		
		<b>Verify Telemetry</b> NRUT2007 RSA_1_1_9 SWA A (RIU B) = Off		(None)
		<b>Verify Telemetry</b> NRUT2067 RSA_2_1_9 SWA B (RIU B) = Off		(None)
		Check SWA A and B LCL is switched OFF and current is near 0		
		(if PCDU-A is in use)		
		<b>Verify Telemetry</b> NPWD0077 A_LCL4_16 SWA-A ST = OFF		(None)
		<b>Verify Telemetry</b> NPWD0038 A_LCL2_17 SWA-B PWR ST = OFF		(None)
		<b>Verify Telemetry</b> NPWD3267 A_LCL4_16 SWA-A TM < 0.05 A		(None)
		<b>Verify Telemetry</b> NPWD2768 A_LCL2_17 SWA-B PWR TM < 0.05 A		(None)
		(if PCDU-B is in use)		
		<b>Verify Telemetry</b> NPWT0077 B_LCL4_16 SWA-A ST = OFF		(None)
		<b>Verify Telemetry</b> NPWT0038 B_LCL2_17 SWA-B PWR ST = OFF		(None)
		<b>Verify Telemetry</b> NPWT3267 B_LCL4_16 SWA-A TM < 0.05 A		(None)
		<b>Verify Telemetry</b> NPWT2768 B_LCL2_17 SWA-B PWR TM < 0.05 A		(None)

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Step	Label/Time	Activity/Remarks/Branch	CK	Display
		Check SCV Telemetry		
		<b>Verify Telemetry</b> NCSD3K72 SWA A SCV Status.scvPwr = OFF		(None)
		<b>Verify Telemetry</b> NCSD3K73 SWA A SCV Status.scvTm = OFF		(None)
		<b>Verify Telemetry</b> NCSD3K82 SWA B SCV Status.scvPwr = OFF		(None)
		<b>Verify Telemetry</b> NCSD3K83 SWA B SCV Status.scvTm = OFF		(None)
<b>AIAF002A</b>		End of Sequence		
<b>End of Procedure</b>				