

RPW Flight Software Upgrades

*RPW Telecon,
November 30, 2020*



solar orbiter



Requirements and scope

Validation process

Schedule

AOB

Requirements and scope

Need for Flight Software Upgrades (FSW) for LFR, TDS and THR (see Teams' presentations)

No need for DAS (TBC)

To be done before the end of the Cruise Phase

Need to define responsibilities, deliverables, preliminary schedule and identify open issues

MOC needs and recommendations

This is no issue and we do this regularly.

Once you know more/have more, we'll need to know:

(a) FOP impact

(b) DB impact

(c) time period

(a) and (b) are key as if there is a major impact, this ties when and how we can do the upload (as the IF may change, for ex FPs). Requiring detailed coordination MOC/SOC/you. Also on how/when we propagate the DB/FOP changes.

Any mistake can seriously mess things up here.

Once we have (c) we'll need to find a time slot and your POR activities will need to be compatible with your eng activities. For ex at boundaries, and allowing enough margin.

Hence me copying Julia from the team. You may know I'm leaving SoIO at the end of year.

Julia Braun will be taking over from me. So please cc her for any such issues from now onwards. I'll be doing RPW stuff though till end of the year.

RPW requirements

Team	Actors	Deliverable	Open issues / constraints
DAS	Philippe LeeRoy	No need DB upgrade to MOC Provide TcScripts to ROC	No specific constraint or issue reported
TDS	Jan Ludek	TDS FSW upgrade and doc. to FSW team at LESIA	Need 2-3 months No funding needed No need to update TM/TC
LFR	Thomas Bruno & Alexis	TDS FSW upgrade and doc. to FSW team at LESIA	Need at least 6 months No funding needed No need update of TM, but might need ICD change Need quality support?
THR	Milan Antonio & Pierre-Luc M.Dekkali	TDS FSW upgrade and doc. to FSW team at LESIA	Need at least 3 months (TBC) Need funding (see LESIA funds) Need support since K.Boughedada has left Need quality support?
ROC	Xavier Diane	FOP PDOR/MDOR ISM? FCDD? FSW plan and report	

Validation at tests at RPW teams' institute (see Teams' presentations)

Validation tests at LESIA

- By FSW team
 - No need to test at FSW test bench
 - Will prepare TC to upload FSW patches
- By ROC team
 - Command test on EM2 (FSW upgrade + SFT/FFT)
 - Each FSW to be tested independently
 - Will prepare PDOR/MDOR to MOC (FSW upgrade + SFT)

Expected validation at MOC

- ROC to discuss with the MOC about validation steps

Open issues

- What about quality support for validation?

Schedule (optimistic)

Milestone	Deadline	To be achieved	Comments
DAS FSW upgrade release to LESIA	N/A	N/A	No DAS upgrade required
TDS FSW upgrade release to LESIA	May 1	TDS FSW upgrade datapack for DAS FSW team at LESIA	Ok
LFR FSW upgrade release to LESIA	May 1	LFR FSW upgrade datapack for DAS FSW team at LESIA	Too short
THR FSW upgrade release to LESIA	May 1	THR FSW upgrade datapack for DAS FSW team at LESIA	Ok (at least the first 3 priority patches)
FSW upgrades releases to ROC	May 15	Check team datapack against size of image, default memory zone EEPROM,	Teams to check memory software footprint remains in the budget before delivery
FSW upgrades validation	15-30 May	Validation test on EM	What about stimuli ?
FSW upgrades delivery	1 month before FSW? (May, 30)	PDOR/MDOR delivered to MOC	
FSW upgrades	June, 30 2021? (Plan three distinct uploads)		

Deadline to fix the FSW datapacks → end of January

Schedule (pessimistic)

Milestone	Deadline	To be achieved	Comments
DAS FSW upgrade release to LESIA	N/A	N/A	No DAS upgrade required
TDS FSW upgrade release to LESIA	Sept. 1	TDS FSW upgrade datapack for DAS FSW team at LESIA	Ok
LFR FSW upgrade release to LESIA	Sept. 1	LFR FSW upgrade datapack for DAS FSW team at LESIA	Should be OK
THR FSW upgrade release to LESIA	Sept. 1	THR FSW upgrade datapack for DAS FSW team at LESIA	Ok (at least the first 3 priority patches)
FSW upgrades releases to ROC	Sept. 15	Check team datapack against size of image, default memory zone EEPROM,	Teams to check memory software footprint remains in the budget before delivery
FSW upgrades validation	Sept. 15-30	Validation test on EM	What about stimuli ?
FSW upgrades delivery	1 month before FSW? (Sept, 30)	PDOR/MDOR delivered to MOC	
FSW upgrades	Oct, 30 2021?		

Deadline to fix the FSW datapacks → end of January