



15369 - COS FUV Lamp Templates at LP4

Cycle: 24, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	DARK WAVE	COS/FUV S/C	2	08-Aug-2017 16:10:17.0	yes
02	DARK WAVE	COS/FUV S/C	2	08-Aug-2017 16:10:22.0	yes
03	DARK WAVE	COS/FUV S/C	2	08-Aug-2017 16:10:28.0	yes
04	DARK WAVE	COS/FUV S/C	1	08-Aug-2017 16:10:31.0	yes

7 Total Orbits Used

ABSTRACT

This program obtains COS FUV lamp template data at LP4 for the wavelength calibration of LP4 data. The dispersion coefficients vary with absolute focus position, and since the lamp template reference file currently in use for wavelength calibration was obtained at LP1 with a different absolute

focus than that used for LP4 observations, we want to update the lamp template data for LP4.

OBSERVING DESCRIPTION

This program follows the outline of the SMOV program 11488 and Cycle 24 program 14856, where long (1800 sec) lamp exposures are used to wait for the OSM mechanism to settle before the lamp template data is taken in each visit. The wavecal lamp is regularly flashed during the long exposures, using special engineering mode flash durations and separations to sample the drift at defined regular intervals for later analysis.

The Cycle 24 program obtained 120 sec lamp exposures with G130M (vis 01), G160M (vis 02), and G140L (vis 03) at all FP-POS and cenwaves, except for 1055 and 1096, given that these modes are currently operated at LP2 only. We update this template in the following ways:

1. We increase the exposure times of all lamp exposures from 120 sec to 210 sec. We then flash the lamp on and off every 30 sec to add up to collective lamp time of 120 sec per exposure. This is to ensure that the lamp does not get too hot, which could reduce its lifetime.
2. The G130M 1222 cenwave exposure time is increased to 1050 sec to account for this mode's longer lampflash duration (52 sec versus 7 sec or 12 sec for other cenwaves). We flash the lamp on and off for these exposures as well, which adds up to a collective 540 sec lamp time.
3. We also add a new cenwave for G130M, 1223, which is being introduced for LP4 observations. These exposures are the same as those of the 1222 mode, except the focus value is changed.
4. We adjust the HV for all lamp exposures, since at LP4, the lamp spectra will fall at the previous LP2 position on the detector. We raise the HV to the highest value currently allowed (178/175) to mitigate any holes there may be.
5. We expand the first visit with the G130M observations into two separate visits, to allow for easier scheduling.
6. We change the exposure times for the 1800 sec exposures at the beginning of visits 01 (G130M) and 04 (G140L) to 1200 sec and 1710 sec, respectively. This also allows for easier schedulability and decreased orbit request.

Proposal 15369 - Visit 01 - COS FUV Lamp Templates at LP4

Visit	Proposal 15369, Visit 01, implementation Diagnostic Status: Warning Scientific Instruments: S/C, COS/FUV Special Requirements: PARALLEL	Tue Aug 08 20:10:32 GMT 2017
Diagnostics	(Visit 01) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

Proposal 15369 - Visit 01 - COS FUV Lamp Templates at LP4

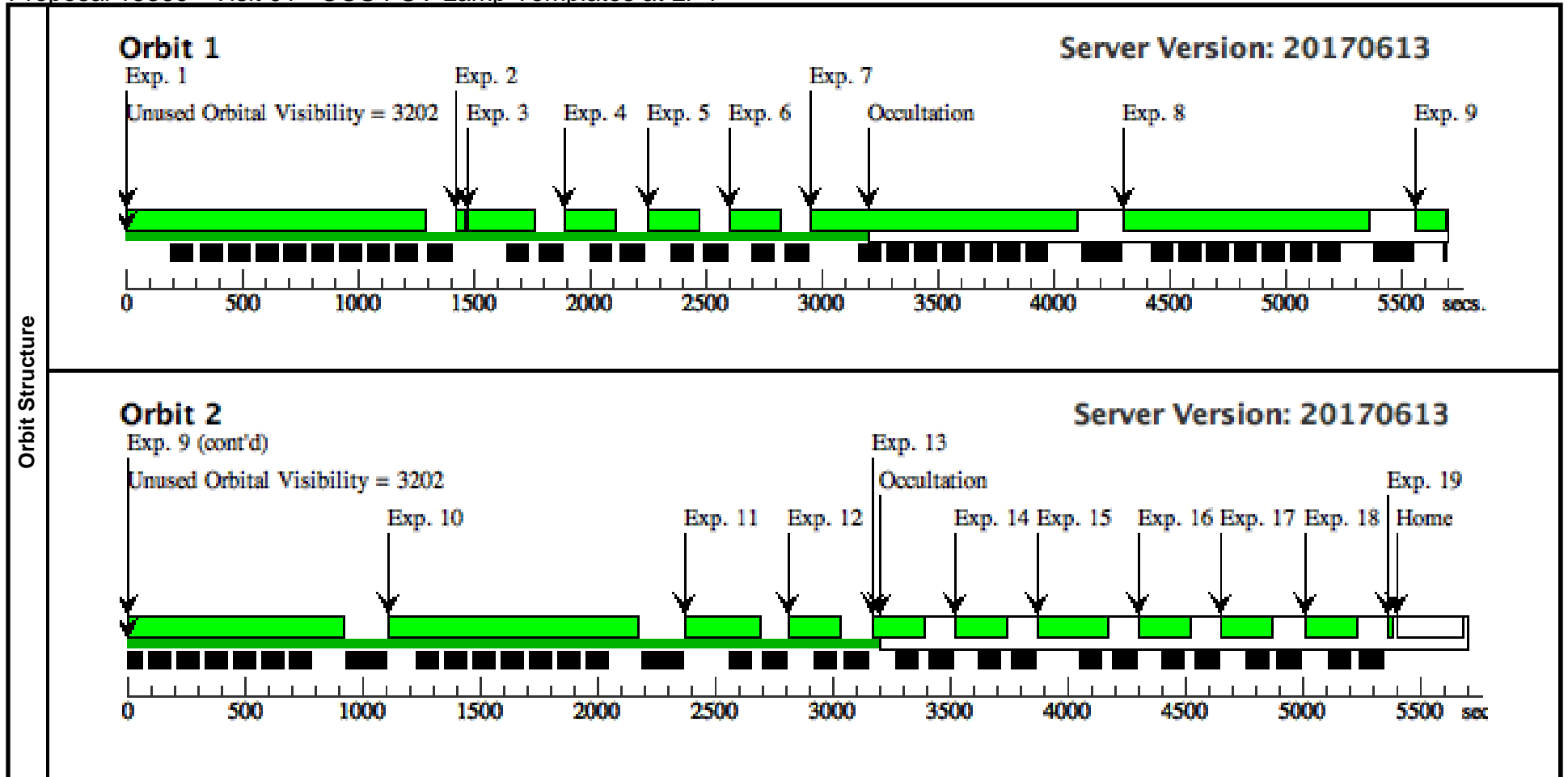
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P4; SEGMENT=BOTH			1200 Secs (1200 Secs) [==>]	[1]
2	Move to highest HV	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 178; QESIPARM ENDC TSB 175		56 Secs (56 Secs) [==>]	[1]
<p>Comments: Nominal HV is 163/163 for LP4 observations. We are going up to 178/175. Max HV change is 178 - 163 = 15 steps Exposure time = 39 + ceiling(1.1*15) = 56 seconds</p>									
3		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
4		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
5		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
6		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]

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7	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1222 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs)	[1]
					[==>]	
8	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1222 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs)	[1]
					[==>]	
9	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1222 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs)	[1]
					[==>]	
10	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1222 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs)	[2]
					[==>]	
11	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs)	[2]
					[==>]	
12	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs)	[2]
					[==>]	
13	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs)	[2]
					[==>]	

Proposal 15369 - Visit 01 - COS FUV Lamp Templates at LP4

14	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
15	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
16	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
17	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
18	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
19	Return to no DARK minimal HV	S/C, DATA, NONE		SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 167; QESIPARM ENDC TSB 175	39 Secs (39 Secs) [==>]	[2]
<p>Comments: Adjust HV to a value appropriate for LP3 observations (since taking this program before LP4 move). CURRENTLY set to 167/175. HV is decreasing on both segments, so exposure time is 39 seconds.</p>						



Proposal 15369 - Visit 02 - COS FUV Lamp Templates at LP4

Visit	Proposal 15369, Visit 02, implementation Diagnostic Status: Warning Scientific Instruments: S/C, COS/FUV Special Requirements: PARALLEL	Tue Aug 08 20:10:33 GMT 2017
Diagnostics	(Visit 02) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

Proposal 15369 - Visit 02 - COS FUV Lamp Templates at LP4

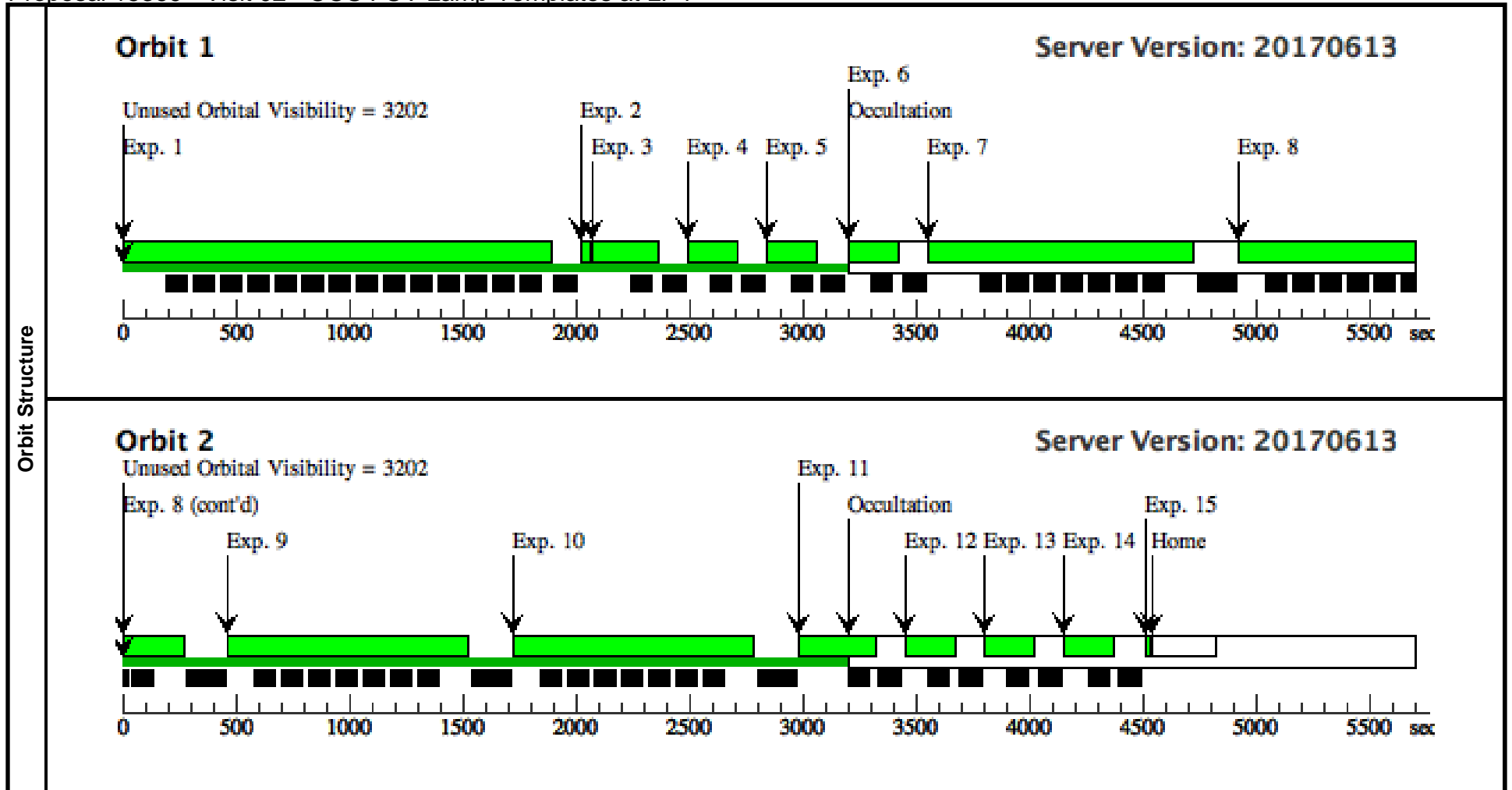
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1318 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P4; SEGMENT=BOTH			1800 Secs (1800 Secs) [==>]	[1]
2	Move to highest HV	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 178; QESIPARM ENDC TSB 175		56 Secs (56 Secs) [==>]	[1]
<p>Comments: Nominal HV is 163/163 for LP4 observations. We are going up to 178/175. Max HV change is 178 - 163 = 15 steps Exposure time = 39 + ceiling(1.1*15) = 56 seconds</p>									
3		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1318 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
4		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1318 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
5		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1318 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
6		WAVE	COS/FUV, TIME-TAG, WCA	G130M 1318 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]

Proposal 15369 - Visit 02 - COS FUV Lamp Templates at LP4

7	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1223 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs) [==>]	[1]
8	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1223 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs) [==>]	[1]
9	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1223 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs) [==>]	[2]
10	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1223 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; SEGMENT=BOTH	1050 Secs (1050 Secs) [==>]	[2]
11	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
12	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]
13	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[2]

Proposal 15369 - Visit 02 - COS FUV Lamp Templates at LP4

14	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs)	[==>]	[2]
15	Return to no DARK minal HV	S/C, DATA, NONE		SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 167; QESIPARM ENDC TSB 175	39 Secs (39 Secs)	[==>]	[2]
<p><i>Comments: Adjust HV to a value appropriate for LP3 observations (since taking this program before LP4 move). CURRENTLY set to 167/175. HV is decreasing on both segments, so exposure time is 39 seconds.</i></p>							



Proposal 15369 - Visit 03 - COS FUV Lamp Templates at LP4

Visit	Proposal 15369, Visit 03, implementation Diagnostic Status: Warning Scientific Instruments: S/C, COS/FUV Special Requirements: PARALLEL	Tue Aug 08 20:10:33 GMT 2017
Diagnostics	(Visit 03) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 03) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 03) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

Proposal 15369 - Visit 03 - COS FUV Lamp Templates at LP4

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1577 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P4			1800 Secs (1800 Secs) [==>]	[1]	
	2	Move to highest HV	DARK	S/C, DATA, NONE		SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 178; QESIPARM ENDC TSB 175		56 Secs (56 Secs) [==>]	[1]	
	<p><i>Comments: Nominal HV is 163/163 for LP4 observations. We are going up to 178/175.</i></p> <p><i>Max HV change is 178 - 163 = 15 steps</i></p> <p><i>Exposure time = 39 + ceiling(1.1*15) = 56 seconds</i></p>									
	3	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1577 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]	
	4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1577 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]	
	5	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1577 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]	
6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1577 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]		

Proposal 15369 - Visit 03 - COS FUV Lamp Templates at LP4

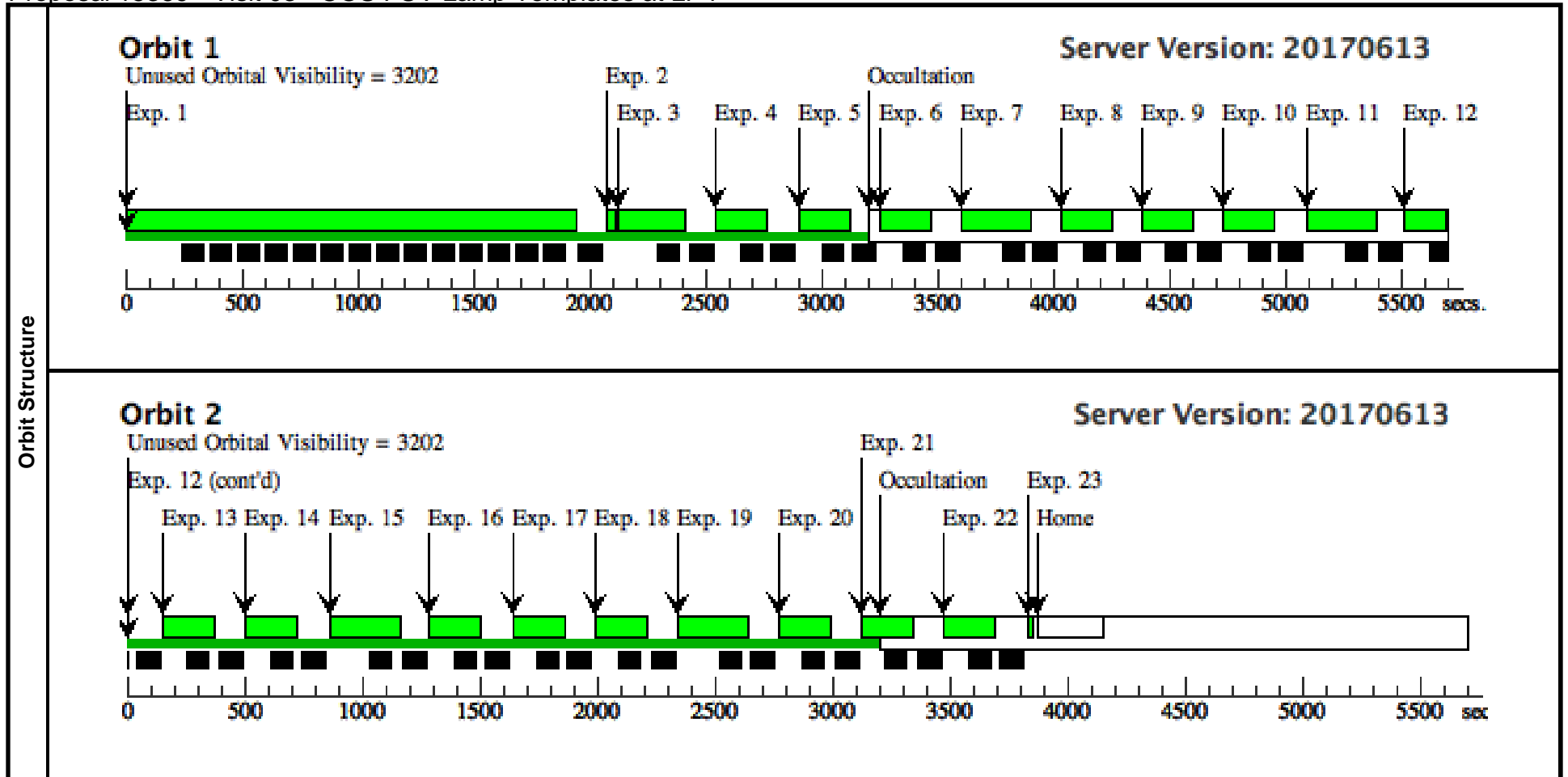
7	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1589 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1589 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
9	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1589 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1589 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
11	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
13	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]

Proposal 15369 - Visit 03 - COS FUV Lamp Templates at LP4

14	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]
15	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1611 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]
16	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1611 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]
17	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1611 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]
18	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1611 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]
19	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1623 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]
20	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1623 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[2]

Proposal 15369 - Visit 03 - COS FUV Lamp Templates at LP4

21	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1623 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs)	[2]
22	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1623 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs)	[2]
23	Return to no DARK minal HV	S/C, DATA, NONE		SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 167; QESIPARM ENDC TSB 175	39 Secs (39 Secs)	[2]
<p><i>Comments: Adjust HV to a value appropriate for LP3 observations (since taking this program before LP4 move). CURRENTLY set to 167/175.</i></p>						
<p><i>HV is decreasing on both segments, so exposure time is 39 seconds.</i></p>						



Proposal 15369 - Visit 04 - COS FUV Lamp Templates at LP4

Visit	Proposal 15369, Visit 04, implementation Diagnostic Status: Warning Scientific Instruments: S/C, COS/FUV Special Requirements: PARALLEL	Tue Aug 08 20:10:33 GMT 2017
Diagnostics	(Visit 04) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 04) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 04) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

Proposal 15369 - Visit 04 - COS FUV Lamp Templates at LP4

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1280 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P4			1709 Secs (1709 Secs) [==>]	[1]	
	2	Move to highest HV	DARK	S/C, DATA, NONE		SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 178; QESIPARM ENDC TSB 175		56 Secs (56 Secs) [==>]	[1]	
	<p><i>Comments: Nominal HV is 163/163 for LP4 observations. We are going up to 178/175.</i></p> <p><i>Max HV change is 178 - 163 = 15 steps</i></p> <p><i>Exposure time = 39 + ceiling(1.1*15) = 56 seconds</i></p>									
	3	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1280 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]	
	4	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1280 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]	
	5	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1280 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]	
6	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1280 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5			210 Secs (210 Secs) [==>]	[1]		

Proposal 15369 - Visit 04 - COS FUV Lamp Templates at LP4

7	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1105 A	FP-POS=1; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
8	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1105 A	FP-POS=2; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
9	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1105 A	FP-POS=3; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
10	WAVE	COS/FUV, TIME-TAG, WCA	G140L 1105 A	FP-POS=4; LIFETIME-POS=L P4; FLASH=S0060D03 0; BUFFER-TIME=10 5	210 Secs (210 Secs) [==>]	[1]
11	Return to nominal HV	DARK S/C, DATA, NONE		SAA CONTOUR 31; SPEC COM INSTR ELHVADJPROP; NEW ALIGNMENT ; QESIPARM ENDC TSA 167; QESIPARM ENDC TSB 175	39 Secs (39 Secs) [==>]	[1]
<p>Comments: Adjust HV to a value appropriate for LP3 observations (since taking this program before LP4 move). CURRENTLY set to 167/175. HV is decreasing on both segments, so exposure time is 39 seconds.</p>						

