



16469 - COS FUV LP5 Calibration: Lamp Templates

Cycle: 28, 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	WAVE	COS/FUV	1	03-Dec-2020 13:01:36.0	yes
02	WAVE	COS/FUV	1	03-Dec-2020 13:01:38.0	yes
03	WAVE	COS/FUV	1	03-Dec-2020 13:01:40.0	yes

3 Total Orbits Used

ABSTRACT

This program obtains COS FUV lamp template data at LP5 and LP3 for the wavelength calibration of LP5 and LP3 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 LP4 with a different absolute focus than that used for LP5/LP3 observations, we want to update the lamp template data for LP5/LP3.

OBSERVING DESCRIPTION

Proposal 16469 (STScI Edit Number: 0, Created: Thursday, December 3, 2020 at 1:01:40 PM Eastern Standard Time) - Overview

First, a long lamp exposure is used to wait for the OSM mechanism to settle before lamp template data is taken in each visit. For the first two visits (G130M), this long lamp exposure is 1440 seconds, in order to fit the visit into one orbit. For the third visit (G140L), this long lamp exposure is 1800 seconds. The wavecal lamp is regularly flashed during the long exposures, using special engineering mode flash durations to sample the drift at defined regular intervals for later analysis.

The G130M grating is used for cenwaves 1291, 1300, 1309, 1318, and 1327, each exposure being 210 seconds long. The lamp is flashed every 30 seconds to add up to a collective lamp time of 120 seconds per exposure. This is to ensure that the lamp does not get too hot, which could reduce its lifetime. These exposures are being taken at LP5.

These exposures are split between two visits in order to increase schedulability.

During the second visit, the G140L grating is used with the cenwave 800. These exposures are being taken at LP3, each one lasting 450 seconds. Again, the lamp is flashed every 30 seconds, adding up to a collective lamp time of 240 seconds.

For both visits, there is one exposure per FP-POS for each observing mode. The buffer time is set at 105 seconds in order to shorten the time between exposures.

Proposal 16469 - Visit 01 - COS FUV LP5 Calibration: Lamp Templates

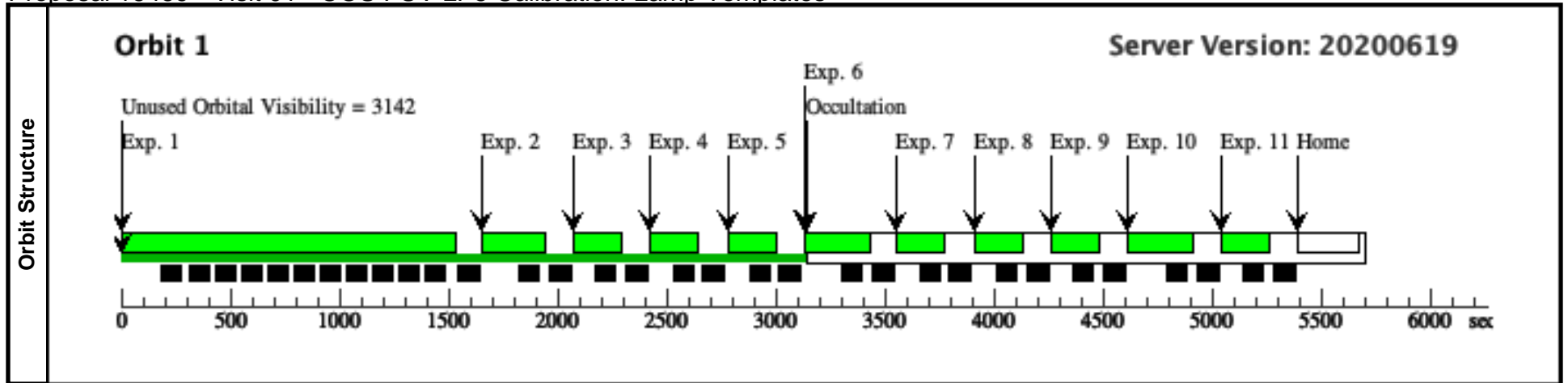
Visit	Proposal 16469, Visit 01 Diagnostic Status: Warning Scientific Instruments: COS/FUV Special Requirements: (none)	Thu Dec 03 18:01:40 GMT 2020
Diagnostics	(Visit 01) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 01) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 01) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

Proposal 16469 - Visit 01 - COS FUV LP5 Calibration: Lamp Templates

#	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	G130M 1291 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P5; SEGMENT=BOTH			1440 Secs (1440 Secs) [==>]	[1]
	2	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FP-POS=1; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
	3	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1291 A	FP-POS=2; LIFETIME-POS=L P5; 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=3; LIFETIME-POS=L P5; 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=4; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
	6	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=1; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]

Proposal 16469 - Visit 01 - COS FUV LP5 Calibration: Lamp Templates

7	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=2; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
8	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=3; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
9	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1300 A	FP-POS=4; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
10	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=1; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
11	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=2; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]



Proposal 16469 - Visit 02 - COS FUV LP5 Calibration: Lamp Templates

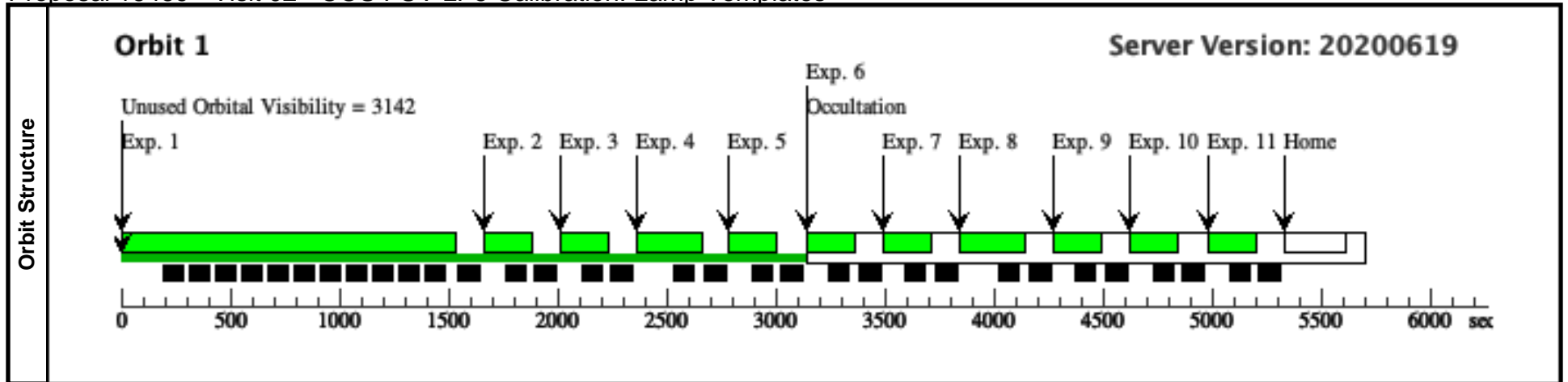
Visit	Proposal 16469, Visit 02 Diagnostic Status: Warning Scientific Instruments: COS/FUV Special Requirements: (none)	Thu Dec 03 18:01:41 GMT 2020
Diagnostics	(Visit 02) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 02) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

Proposal 16469 - Visit 02 - COS FUV LP5 Calibration: Lamp Templates

#	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	G130M 1309 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P5; SEGMENT=BOTH			1440 Secs (1440 Secs) [==>]	[1]
	2	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=3; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]
	3	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1309 A	FP-POS=4; LIFETIME-POS=L P5; 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=1; LIFETIME-POS=L P5; 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=2; LIFETIME-POS=L P5; 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=3; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH			210 Secs (210 Secs) [==>]	[1]

Proposal 16469 - Visit 02 - COS FUV LP5 Calibration: Lamp Templates

7	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1318 A	FP-POS=4; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
8	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=1; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
9	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=2; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
10	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=3; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]
11	WAVE	COS/FUV, TIME-TAG, WCA	G130M 1327 A	FP-POS=4; LIFETIME-POS=L P5; FLASH=S0060D03 0; BUFFER-TIME=10 5; SEGMENT=BOTH	210 Secs (210 Secs) [==>]	[1]



Proposal 16469 - Visit 03 - COS FUV LP5 Calibration: Lamp Templates

Thu Dec 03 18:01:41 GMT 2020

Visit	Proposal 16469, Visit 03 Diagnostic Status: Warning Scientific Instruments: COS/FUV Special Requirements: (none)									
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): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 03) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 03) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 03) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 03) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS (Visit 03) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU									
Exposures	#	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	G140L 800 A	FLASH=S0120D030 ; FP-POS=3; LIFETIME-POS=L P3	1800 Secs (1800 Secs) [==>]		[1]			
2	WAVE	COS/FUV, TIME-TAG, WCA	G140L 800 A	FP-POS=1; LIFETIME-POS=L P3; FLASH=S0060D03 0	450 Secs (450 Secs) [==>]		[1]			
3	WAVE	COS/FUV, TIME-TAG, WCA	G140L 800 A	FP-POS=2; LIFETIME-POS=L P3; FLASH=S0060D03 0	450 Secs (450 Secs) [==>]		[1]			
4	WAVE	COS/FUV, TIME-TAG, WCA	G140L 800 A	FP-POS=3; LIFETIME-POS=L P3; FLASH=S0060D03 0	450 Secs (450 Secs) [==>]		[1]			
5	WAVE	COS/FUV, TIME-TAG, WCA	G140L 800 A	FP-POS=4; LIFETIME-POS=L P3; FLASH=S0060D03 0	450 Secs (450 Secs) [==>]		[1]			

