12807 - Second COS FUV Lifetime Calibration Program: Verification of FUV BOA Operations (FCAL4)

Cycle: 19, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
01	(1) G191B2B WAVE	COS/FUV COS/NUV	1	05-Jun-2012 21:17:30.0	yes

1 Total Orbits Used

ABSTRACT

This program will obtain one external orbit of G191B2B, a previous SMOV4 BOA target. We will obtain spectra in the G130M, G160M, and G140L gratings at one cenwave each to 1) spot-check spectral performance, 2) obtain spatial profiles, and 3) complete updated target acquisition parameters. We will also test auto- wavecals within a BOA observation.

OBSERVING DESCRIPTION

We will acquire using NUV/MIRRORB+BOA aperture imaging, then proceed to take exposures at G140L and G160M with the autowavecal off. Finally we will take more detailed exposures at G130M at all 4 FP-POS and with auto-wavecal enabled to enhance the ability to characterize spectral performance.

Visit	**Proposal 12807, BOA Operations (01)** Wed Jun 06 01:17:38 GMT 2012 **Diagnostic Status: Warning** Scientific Instruments: COS/NUV, COS/FUV Special Requirements: BEFORE 01-SEP-2012:00:00:00 *Comments: We observe in this visit a quick exposure of G140L to obtain the necessary S/N (~5) to be able to update TA parameters. We then take moderate S/N (~7-15) observations at G160M to obtain spatial profile information and TA parameters. Finally we take higher quality G130M data to spot check resolution, spatial profile information, and TA paramters, followed by a WAVECALS at each grating during occultation. For very accurate TA parameters we would Ideally want to include concurrent WAVECALS at every grating position to account for any possible drifts in the OSM, but this provides prohibitively high overheads. Since previous SMOV BOA operations found little difference in terms of parameters between G160M and G130M, and we expect very small drifts within an orbit, this strategy should be sufficient to provide adequate accuracy to the TA parameters. ISM/photospheric lines at G130M should provide a decent handle on how big drifts might actually be.*

Diagnostics	(BOA Operations (01)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting. (BOA Operations (01)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
Fixed Targets	(1)	G191B2B	RA: 05 05 30.6700 (76.3777917d) Dec: +52 49 51.95 (52.83110d) Equinox: J2000	Proper Motion RA: 0.0007 sec of time/yr Proper Motion Dec: -0.0907 arcsec/yr Epoch of Position: 2000	V=11.	Reference Frame: ICRS
	Comments: coordinates taken from COS calibration website					

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	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(COS.ta.391 105)	(1) G191B2B	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs	
									[==>]	[1]
	2	(COS.sp.398 915)	(1) G191B2B	COS/FUV, TIME-TAG, BOA	G140L 1280 A	BUFFER-TIME=80; WAVECAL=NO; FP-POS=3			9 Secs	
									[==>]	[1]
	3	(COS.sp.394 473)	(1) G191B2B	COS/FUV, TIME-TAG, BOA	G160M 1623 A	BUFFER-TIME=637; FP-POS=3; WAVECAL=NO			737 Secs	
									[==>]	[1]
	4	(COS.sp.394 472)	(1) G191B2B	COS/FUV, TIME-TAG, BOA	G130M 1291 A	BUFFER-TIME=120; FP-POS=1; WAVECAL=NO			220 Secs	
									[==>]	[1]
	5	(COS.sp.394 472)	(1) G191B2B	COS/FUV, TIME-TAG, BOA	G130M 1291 A	BUFFER-TIME=120; FP-POS=2; WAVECAL=NO			220 Secs	
									[==>]	[1]
	6	(COS.sp.394 472)	(1) G191B2B	COS/FUV, TIME-TAG, BOA	G130M 1291 A	BUFFER-TIME=120; FP-POS=3; WAVECAL=NO			220 Secs	
									[==>]	[1]
	7	(COS.sp.394 472)	(1) G191B2B	COS/FUV, TIME-TAG, BOA	G130M 1291 A	BUFFER-TIME=120; FP-POS=4; WAVECAL=YES			220 Secs	
									[==>]	[1]
	8		WAVE	COS/FUV, TIME-TAG, WCA	G160M 1623 A	BUFFER-TIME=120; FP-POS=3; FLASH=NO			[==>]	
										[1]
	9		WAVE	COS/FUV, TIME-TAG, WCA	G140L 1280 A	BUFFER-TIME=120; FP-POS=3; FLASH=NO			[==>]	
										[1]