13122 - COS FUV Internal/External Wavelength Scale Monitor

Cycle: 20, Proposal Category: CAL/COS

(Calibration)

(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) AV75 DARK	COS/FUV COS/NUV S/C	2	06-Dec-2012 21:11:21.0	yes

2 Total Orbits Used

ABSTRACT

This programs monitors the offset between the internal and external dispersion solutions. This offset is referred to as DELTA in the wavelength dipsersion reference file and corrects for the shift between the WCA and PSA in TV03 versus the shift btween WCA nd PSA on orbit. Analysis indicates that DELTA is independent of cenwave and grating, but is grating and stripe dependent. To monitor this, the program observes selected cenwaves at mulitple FP-POS positions.

OBSERVING DESCRIPTION

This programs monitors the offset between the internal and external dispersion solutions. This offset is referred to as DELTA in the wavelength dipsersion reference file and corrects for the shift between the WCA and PSA in TV03 versus the shift between WCA nd PSA on orbit. Analysis indicates that DELTA is independent of cenwave and grating, but is grating and stripe dependent. To monitor this, the program observes selected cenwaves at mulitple FP-POS positions. This program is different from the wavelength scale monitor programs done in prior cycles. We are observing a new target AV 75. This new target, AV 75 has been chosen as it can be used with the 3 FUV gratings in 2 orbits as opposed to using different targets for the M and L gratings for a total of 3 orbits in the past cycles.

CALIBRATION JUSTIFICATION

This programs monitors the offset between the internal and external dispersion solutions. This offset is referred to as DELTA in the wavelength dipsersion reference file and corrects for the shift between the WCA and PSA in TV03 versus the shift between WCA nd PSA on orbit. Analysis indicates that DELTA is independent of cenwave and grating, but is grating and stripe dependent. To monitor this at the new lifetime position, the program observes selected cenwaves at mulitple FP-POS positions for which we obtained data as part of lifetime calibration program 12805 and enabling program 12796.

The structure of this monitoring program mirrors some of the observations made in 12805 for the M gratings and 12796 for the L grating. The observations taken in this program will be compared to those already obtained 6 months earlier in programs 12805 and 12796. This new set of observations will allow monitoring of the stability of the COS dispersion solution for the FUV gratings at the new lifetime position.

Proposal 13122 - Visit 01 - COS FUV Internal/External Wavelength Scale Monitor

Visit

Proposal 13122, Visit 01, implementation Fri Dec 07 02:11:32 GMT 2012

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, S/C, COS/FUV

Special Requirements: SCHED 100%; ORIENT 270D TO 60 D; ORIENT 165D TO 165 D; BETWEEN 13-MAR-2013:00:00:00 AND 23-MAR-2013:00:00:00

Diagnostics

(Visit 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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	AV75	RA: 00 50 32.3900 (12.6349583d) Dec: -72 52 36.48 (-72.87680d) Equinox: J2000		V=12.79	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	(COS.ta.424 208)	(1) AV75	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				13.0 Secs *[==>]*	***[1]***
2	(COS.sp.432 501)	(1) AV75	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=120; FP-POS=2			191. Secs *[==>]*	***[1]***
3	(COS.sp.432 501)	(1) AV75	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=120; FP-POS=4			191. Secs *[==>]*	***[1]***
4	(COS.sp.432 488)	(1) AV75	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=111; FP-POS=1			192. Secs *[==>]*	***[1]***
5	(COS.sp.432 488)	(1) AV75	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=111; FP-POS=3			192. Secs *[==>]*	***[1]***
6	(COS.sp.432 506)	(1) AV75	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=150; FP-POS=2			305 Secs *[==>]*	***[1]***
7	(COS.sp.432 506)	(1) AV75	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=150; FP-POS=4			305. Secs *[==>]*	***[2]***
8	(COS.sp.432 497)	(1) AV75	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=134; FP-POS=1			369. Secs *[==>]*	***[2]***
9	(COS.sp.432 497)	(1) AV75	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=134; FP-POS=3			369. Secs *[==>]*	***[2]***
10	(COS.sp.424 237)	(1) AV75	COS/FUV, TIME-TAG, PSA	G140L 1280 A	BUFFER-TIME=80; FP-POS=3			80. Secs *[==>]*	***[2]***
11		DARK	S/C, DATA, NONE			QASISTATES COS FUV HVLOW HVLOW		1 Secs *[==>]*	***[2]***
Comments: Eliminates SPSS induced reconfiguration gaps.									
12	(COS.sp.424 236)	(1) AV75	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=80; FP-POS=3			80 Secs *[==>]*	***[2]***

Orbit Structure