13527 - NUV Spectroscopic Sensitivity Monitoring

Cycle: 21, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
L1	(1) WD1057+719	COS/NUV	1	01-Nov-2013 21:09:21.0	yes
L2	(1) WD1057+719	COS/NUV	1	01-Nov-2013 21:09:30.0	yes
L3	(1) WD1057+719	COS/NUV	1	01-Nov-2013 21:09:38.0	yes
M1	(2) G191B2B	COS/NUV	1	01-Nov-2013 21:09:49.0	yes
M2	(2) G191B2B	COS/NUV	1	01-Nov-2013 21:09:59.0	yes
M3	(2) G191B2B	COS/NUV	1	01-Nov-2013 21:10:10.0	yes

6 Total Orbits Used

ABSTRACT

Purpose is to monitor sensitivity of each NUV grating mode to detect any change due to contamination or other causes. The same basic strategy as employed in previous cycles is used here, with a few notable exceptions: Two cenwaves of G225M have been dropped (2306 and 2410), and only the bluest one retained. One cenwave of G285M has been dropped (2739), and the bluest and reddest have been retained. This is to continue to monitor the wavelength dependence of the G285M sensitivity decline, and monitor the wavelength dependence of the G225M sensitivity decline,

which only appears at the shortest wavelengths (stripe A of the 2186 cenwave). These two gratings are also not used for science exposures in Cycle 19. The G185M grating has the most usage of the NUV gratings, and an additional cenwave is added to ensure the wavelength independence of the sensitivity degradation. For the G230L, the 3360 cenwave is dropped due to the contamination in both stripes B and C from second order light, which does not stretch the wavelength coverage very red compared to the other G230L cenwaves, and this cenwave is costly in terms of exposure time. The exposure time of the G230L/2950 setting was also reduced, since it was apparently overflowing its buffer.

OBSERVING DESCRIPTION

Obtain exposures in all NUV gratings -- G230L, G185M, G225M, and G285M -- 3 times a year. The first two gratings have stable behavior, while the last two are experiencing steady sensitivity declines. However, they are rarely used in Cycle 19 so quarterly observations will suffice to monitor the trends.

Visit

Proposal 13527, Visit L1, implementation Sat Nov 02 01:10:18 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/NUV

Special Requirements: SCHED 100%; BETWEEN 20-JAN-2014:00:00:00 AND 26-JAN-2014:00:00:00

Diagnostics

(Visit L1) 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)	WD1057+719	RA: 11 00 34.2200 (165.1425833d) Dec: +71 38 2.99 (71.63416d) Equinox: J2000	Proper Motion RA: -0.00973 sec of time/yr Proper Motion Dec: -0.02 arcsec/yr Epoch of Position: 2000.0	V=14.68	Reference Frame: ICRS

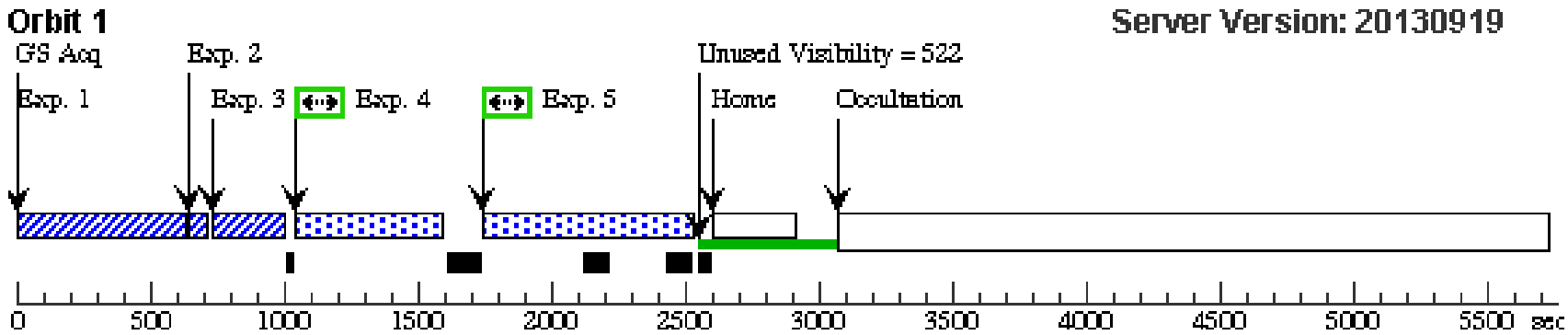
Comments: HST FASTEX standard PM, coords from USNOB

GSC2 coords are 11:00:34.25, 71:38:02.97, 1997.19 epoch

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G230L - ACQ/SEARCH (COS.sa.429215)	(1) WD1057+719	COS/NUV, ACQ/SEARCH, PSA	G230L 2635 A	SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		0.7 Secs (0.7 Secs) *[==>]*	*[1]*
2	G230L - ACQ/PEAKXD (COS.sa.429216)	(1) WD1057+719	COS/NUV, ACQ/PEAKXD, PSA	G230L 2635 A				0.7 Secs (0.7 Secs) *[==>]*	*[1]*
3	G230L - ACQ/PEAKD (COS.sa.429215)	(1) WD1057+719	COS/NUV, ACQ/PEAKD, PSA	G230L 2635 A	CENTER=FLUX-WT-FLR; NUM-POS=9.0; STEP-SIZE=1.			0.7 Secs (0.7 Secs) *[==>]*	*[1]*
4	G230L - 2635 A (COS.sp.428940)	(1) WD1057+719	COS/NUV, TIME-TAG, PSA	G230L 2635 A	BUFFER-TIME=471; FP-POS=3			540.0 Secs (540 Secs) *[==>]*	*[1]*
5	G230L - 2950 A (COS.sp.428941)	(1) WD1057+719	COS/NUV, TIME-TAG, PSA	G230L 2950 A	BUFFER-TIME=304; FP-POS=3			700.0 Secs (700 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 13527, Visit L2, implementation Sat Nov 02 01:10:20 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/NUV

Special Requirements: SCHED 100%; BETWEEN 16-APR-2014:00:00:00 AND 22-APR-2014:00:00:00

Diagnostics

(Visit L2) 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)	WD1057+719	RA: 11 00 34.2200 (165.1425833d) Dec: +71 38 2.99 (71.63416d) Equinox: J2000	Proper Motion RA: -0.00973 sec of time/yr Proper Motion Dec: -0.02 arcsec/yr Epoch of Position: 2000.0	V=14.68	Reference Frame: ICRS

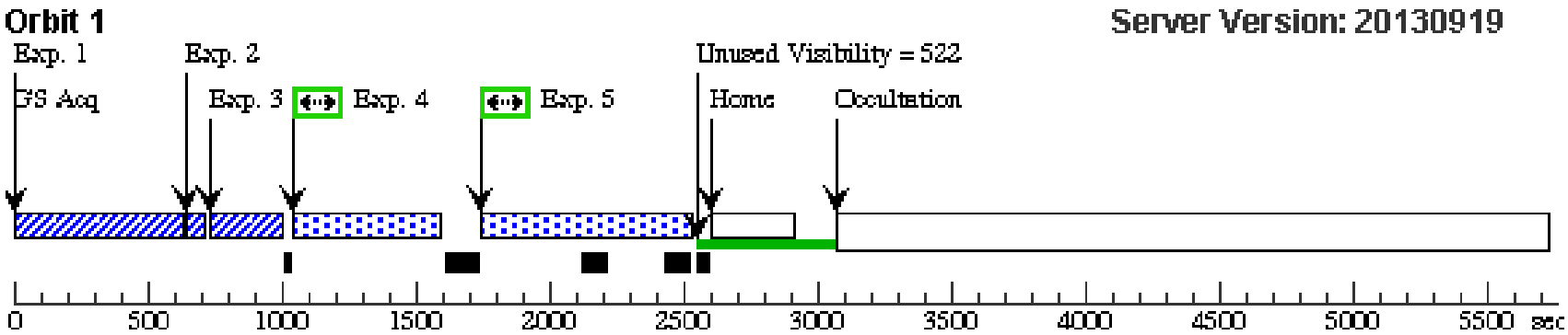
Comments: HST FASTEX standard PM, coords from USNOB

GSC2 coords are 11:00:34.25, 71:38:02.97, 1997.19 epoch

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G230L - ACQ/SEARCH (COS.sa.429215)	(1) WD1057+719	COS/NUV, ACQ/SEARCH, PSA	G230L 2635 A	SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		0.7 Secs (0.7 Secs) *[==>]*	*[1]*
2	G230L - ACQ/PEAKXD (COS.sa.429216)	(1) WD1057+719	COS/NUV, ACQ/PEAKXD, PSA	G230L 2635 A				1.0 Secs (1 Secs) *[==>]*	*[1]*
3	G230L - ACQ/PEAKD (COS.sa.429215)	(1) WD1057+719	COS/NUV, ACQ/PEAKD, PSA	G230L 2635 A	CENTER=FLUX-WT-FLR; NUM-POS=9.0; STEP-SIZE=1.			0.7 Secs (0.7 Secs) *[==>]*	*[1]*
4	G230L - 2635 A (COS.sp.199622)	(1) WD1057+719	COS/NUV, TIME-TAG, PSA	G230L 2635 A	BUFFER-TIME=471; FP-POS=3			540.0 Secs (540 Secs) *[==>]*	*[1]*
5	G230L - 2950 A (COS.sp.199623)	(1) WD1057+719	COS/NUV, TIME-TAG, PSA	G230L 2950 A	BUFFER-TIME=304; FP-POS=3			700.0 Secs (700 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 13527, Visit L3, implementation Sat Nov 02 01:10:21 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/NUV

Special Requirements: SCHED 100%; BETWEEN 22-SEP-2014:00:00:00 AND 28-SEP-2014:00:00:00

Diagnostics

(Visit L3) 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)	WD1057+719	RA: 11 00 34.2200 (165.1425833d) Dec: +71 38 2.99 (71.63416d) Equinox: J2000	Proper Motion RA: -0.00973 sec of time/yr Proper Motion Dec: -0.02 arcsec/yr Epoch of Position: 2000.0	V=14.68	Reference Frame: ICRS

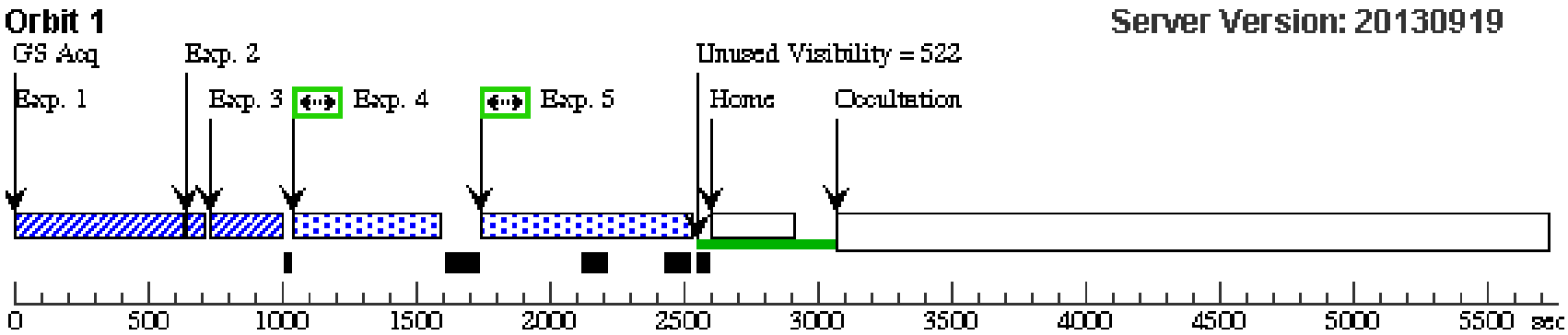
Comments: HST FASTEX standard PM, coords from USNOB

GSC2 coords are 11:00:34.25, 71:38:02.97, 1997.19 epoch

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G230L - ACQ/SEARCH (COS.sa.429215)	(1) WD1057+719	COS/NUV, ACQ/SEARCH, PSA	G230L 2635 A	SCAN-SIZE=3; STEP-SIZE=1.767			0.7 Secs (0.7 Secs) *[==>]*	*[1]*
2	G230L - ACQ/PEAKXD (COS.sa.429216)	(1) WD1057+719	COS/NUV, ACQ/PEAKXD, PSA	G230L 2635 A				1.0 Secs (1 Secs) *[==>]*	*[1]*
3	G230L - ACQ/PEAKD (COS.sa.429215)	(1) WD1057+719	COS/NUV, ACQ/PEAKD, PSA	G230L 2635 A	CENTER=FLUX-WT-FLR; NUM-POS=9.0; STEP-SIZE=1.			0.7 Secs (0.7 Secs) *[==>]*	*[1]*
4	G230L - 2635 A (COS.sp.199622)	(1) WD1057+719	COS/NUV, TIME-TAG, PSA	G230L 2635 A	BUFFER-TIME=471; FP-POS=3			540.0 Secs (540 Secs) *[==>]*	*[1]*
5	G230L - 2950 A (COS.sp.199623)	(1) WD1057+719	COS/NUV, TIME-TAG, PSA	G230L 2950 A	BUFFER-TIME=304; FP-POS=3			700.0 Secs (700 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 13527, Visit M1, implementation Sat Nov 02 01:10:22 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/NUV

Special Requirements: SCHED 100%; BETWEEN 20-JAN-2014:00:00:00 AND 26-JAN-2014:00:00:00

Diagnostics

(Visit M1) 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

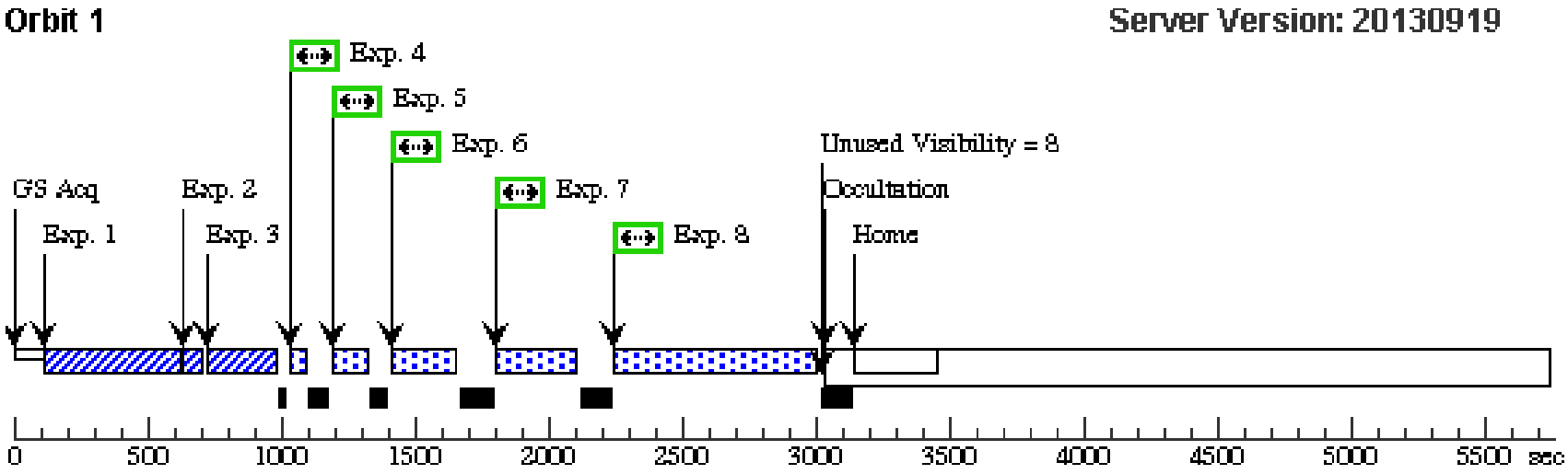
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	G191B2B	RA: 05 05 30.6060 (76.3775250d) Dec: +52 49 52.74 (52.83132d) Equinox: J2000	Proper Motion RA: 0.00071 sec of time/yr Proper Motion Dec: -0.0907 arcsec/yr Epoch of Position: 1991.25	V=11.79	Reference Frame: ICRS

Comments: coords, PM from Hipparcos

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G185M - ACQ/SEARCH (COS.sa.428950)	(2) G191B2B	COS/NUV, ACQ/SEARCH, PSA	G185M 1921 A	STEP-SIZE=1.767; SCAN-SIZE=3			1.0 Secs (1 Secs) *[==>]*	*[1]*
2	G185M - ACQ/PEAKXD (COS.sa.428948)	(2) G191B2B	COS/NUV, ACQ/PEAKXD, PSA	G185M 1921 A				1.0 Secs (1 Secs) *[==>]*	*[1]*
3	G185M - ACQ/PEAKD (COS.sa.428947)	(2) G191B2B	COS/NUV, ACQ/PEAKD, PSA	G185M 1921 A	STEP-SIZE=0.6; NUM-POS=9.0			1.0 Secs (1 Secs) *[==>]*	*[1]*
4	G185M - 1921 A (COS.sp.428943)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G185M 1921 A	BUFFER-TIME=80; FP-POS=3			47.0 Secs (47 Secs) *[==>]*	*[1]*
5	G185M - 1786A (COS.sp.428942)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G185M 1786 A	BUFFER-TIME=80; FP-POS=3			42.0 Secs (42 Secs) *[==>]*	*[1]*
6	G225M - 2186 A (COS.sp.428944)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G225M 2186 A	BUFFER-TIME=80.; FP-POS=3			92.0 Secs (92 Secs) *[==>]*	*[1]*
7	G285M - 2617 A (COS.sp.428945)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G285M 2617 A	BUFFER-TIME=179.; FP-POS=3			180.0 Secs (180 Secs) *[==>]*	*[1]*
8	G285M - 3094 A (COS.sp.428946)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G285M 3094 A	BUFFER-TIME=639.; FP-POS=3			675.0 Secs (675 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 13527, Visit M2, implementation Sat Nov 02 01:10:23 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/NUV

Special Requirements: SCHED 100%; BETWEEN 21-APR-2014:00:00:00 AND 27-APR-2014:00:00:00

Diagnostics

(Visit M2) 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

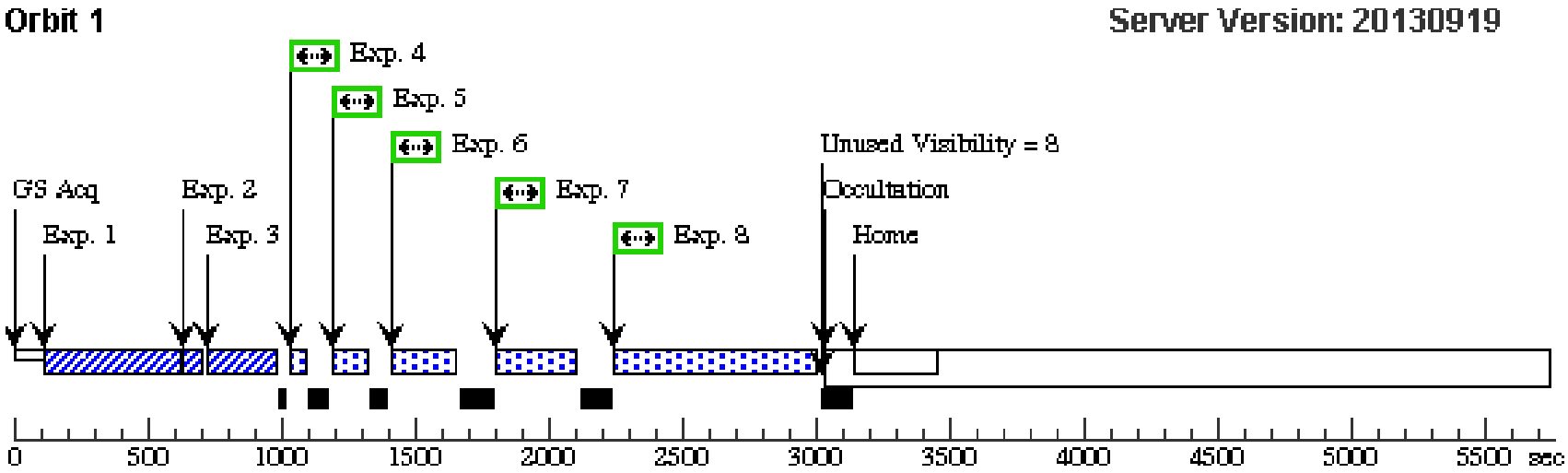
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	G191B2B	RA: 05 05 30.6060 (76.3775250d) Dec: +52 49 52.74 (52.83132d) Equinox: J2000	Proper Motion RA: 0.00071 sec of time/yr Proper Motion Dec: -0.0907 arcsec/yr Epoch of Position: 1991.25	V=11.79	Reference Frame: ICRS

Comments: coords, PM from Hipparcos

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G185M - ACQ/SEARCH (COS.sa.428950)	(2) G191B2B	COS/NUV, ACQ/SEARCH, PSA	G185M 1921 A	STEP-SIZE=1.767; SCAN-SIZE=3			1.0 Secs (1 Secs) *[==>]*	*[1]*
2	G185M - ACQ/PEAKXD (COS.sa.428948)	(2) G191B2B	COS/NUV, ACQ/PEAKXD, PSA	G185M 1921 A				1.0 Secs (1 Secs) *[==>]*	*[1]*
3	G185M - ACQ/PEAKD (COS.sa.428947)	(2) G191B2B	COS/NUV, ACQ/PEAKD, PSA	G185M 1921 A	STEP-SIZE=0.6; NUM-POS=9.0			1.0 Secs (1 Secs) *[==>]*	*[1]*
4	G185M - 1921 A (COS.sp.428943)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G185M 1921 A	BUFFER-TIME=80; FP-POS=3			47.0 Secs (47 Secs) *[==>]*	*[1]*
5	G185M - 1786A (COS.sp.428942)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G185M 1786 A	BUFFER-TIME=80; FP-POS=3			42.0 Secs (42 Secs) *[==>]*	*[1]*
6	G225M - 2186 A (COS.sp.428944)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G225M 2186 A	BUFFER-TIME=80.; FP-POS=3			92.0 Secs (92 Secs) *[==>]*	*[1]*
7	G285M - 2617 A (COS.sp.428945)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G285M 2617 A	BUFFER-TIME=179.; FP-POS=3			180.0 Secs (180 Secs) *[==>]*	*[1]*
8	G285M - 3094 A (COS.sp.428946)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G285M 3094 A	BUFFER-TIME=639; FP-POS=3			675.0 Secs (675 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 13527, Visit M3, implementation Sat Nov 02 01:10:24 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/NUV

Special Requirements: SCHED 100%; BETWEEN 22-SEP-2014:00:00:00 AND 28-SEP-2014:00:00:00

Diagnostics

(Visit M3) 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
(2)	G191B2B	RA: 05 05 30.6060 (76.3775250d) Dec: +52 49 52.74 (52.83132d) Equinox: J2000	Proper Motion RA: 0.00071 sec of time/yr Proper Motion Dec: -0.0907 arcsec/yr Epoch of Position: 1991.25	V=11.79	Reference Frame: ICRS

Comments: coords, PM from Hipparcos

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G185M - ACQ/SEARCH (COS.sa.428950)	(2) G191B2B	COS/NUV, ACQ/SEARCH, PSA	G185M 1921 A	STEP-SIZE=1.767; SCAN-SIZE=3			1.0 Secs (1 Secs) *[==>]*	*[1]*
2	G185M - ACQ/PEAKXD (COS.sa.428948)	(2) G191B2B	COS/NUV, ACQ/PEAKXD, PSA	G185M 1921 A				1.0 Secs (1 Secs) *[==>]*	*[1]*
3	G185M - ACQ/PEAKD (COS.sa.237025COS.sa.428947)	(2) G191B2B	COS/NUV, ACQ/PEAKD, PSA	G185M 1921 A	STEP-SIZE=0.6; NUM-POS=9.0			1.0 Secs (1 Secs) *[==>]*	*[1]*
4	G185M - 1921 A (COS.sp.428943)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G185M 1921 A	BUFFER-TIME=80; FP-POS=3			47.0 Secs (47 Secs) *[==>]*	*[1]*
5	G185M - 1786A (COS.sp.428942)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G185M 1786 A	BUFFER-TIME=80; FP-POS=3			42.0 Secs (42 Secs) *[==>]*	*[1]*
6	G225M - 2186 A (COS.sp.428944)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G225M 2186 A	BUFFER-TIME=80.; FP-POS=3			92.0 Secs (92 Secs) *[==>]*	*[1]*
7	G285M - 2617 A (COS.sp.428945)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G285M 2617 A	BUFFER-TIME=179.; FP-POS=3			180.0 Secs (180 Secs) *[==>]*	*[1]*
8	G285M - 3094 A (COS.sp.428946)	(2) G191B2B	COS/NUV, TIME-TAG, PSA	G285M 3094 A	BUFFER-TIME=639; FP-POS=3			675.0 Secs (675 Secs) *[==>]*	*[1]*

Orbit Structure