11698 - The Structure and Dynamics of Virgo's Multi-Phase Intracluster Medium

Cycle: 17, Proposal Category: GO

(Availability Mode: SUPPORTED)

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) SDSSJ121716.08+080942.0	COS/FUV COS/NUV	1	19-Jan-2010 21:08:37.0	yes
02	(2) SDSSJ121640.56+071224.3	COS/FUV COS/NUV	1	19-Jan-2010 21:08:42.0	yes
03	(3) SDSSJ122520.13+084450.7	COS/FUV COS/NUV	1	19-Jan-2010 21:08:45.0	yes
04	(4) SDSSJ122102.49+155447.0	COS/FUV COS/NUV	1	19-Jan-2010 21:08:47.0	yes
05	(5) SDSSJ123426.80+072411.3	COS/FUV COS/NUV	1	19-Jan-2010 21:08:50.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
06	(6) SDSSJ122018.43+064119.6	COS/FUV COS/NUV	1	19-Jan-2010 21:08:53.0	yes
07	(7) SDSSJ122512.93+121835.6	COS/FUV COS/NUV	1	19-Jan-2010 21:08:56.0	yes
08	(8) SDSSJ122312.16+095017.7	COS/FUV COS/NUV	1	19-Jan-2010 21:08:59.0	yes
09	(9) SDSSJ121850.51+101554.2	COS/FUV COS/NUV	2	19-Jan-2010 21:09:03.0	yes
10	(10) SDSSJ122317.79+092306.9	COS/FUV COS/NUV	2	19-Jan-2010 21:09:09.0	yes
11	(11) SDSSJ120924.07+103612.0	COS/FUV COS/NUV	2	19-Jan-2010 21:09:13.0	yes
12	(12) SDSSJ120556.08+104253.8	COS/FUV COS/NUV	2	19-Jan-2010 21:09:18.0	yes
13	(13) SDSSJ121430.55+082508.1	COS/FUV COS/NUV	2	19-Jan-2010 21:09:22.0	yes
14	(14) SDSSJ124035.51+094941.0	COS/FUV COS/NUV	2	19-Jan-2010 21:09:27.0	yes
15	(15) SDSSJ123647.72+060048.4	COS/FUV COS/NUV	2	19-Jan-2010 21:09:31.0	yes

22 Total Orbits Used

ABSTRACT

The dynamical flows of the intracluster medium (ICM) are largely unknown. We propose to map the spatial and kinematic distribution of the warm ICM of the nearby Virgo cluster using the Cosmic Origins Spectrograph. 15 sightlines at a range of impact parameters within the virial radius of the cluster (0.2 - 1.7 Mpc) will be probed for Lyman-alpha absorption and the data compared to blind HI, dust and x-ray surveys to create a multi-phase map of the cluster's ICM. Absorption line sightlines are commonly 40-100 kpc from a galaxy, allowing the flow of baryons between galaxies and the ICM to be assessed. The velocity distribution of the absorbers will be directly compared to simulations and used to constrain the turbulent motions of the ICM. This proposal will result in the first map of a cluster's warm ICM and provide important tests for our theoretical understanding of cluster formation and the treatment of gas cooling in cosmological simulations.

OBSERVING DESCRIPTION

Our 22 orbit program will map the warm ICM of the Virgo cluster in Lya absorption using COS observations of background SDSS QSOs. We have chosen 15 UV bright QSOs from the SDSS DR5 QSO catalogue that lie at a range of impact parameters within the virial radius of the Virgo cluster. Our wavelength range (1150 -- 1450AA) will cover Lya absorption from the ICM gas, as well as other possible ions, including NV and SiIV. UV brightness has been assessed using Galex FUV and NUV magnitudes (m_FUV = 17.0 - 18.8; m_NUV = 16.9 - 18.0).

We will employ the G130M (1300AA) grating with the FUV channel of COS to obtain 15km/s resolution spectra with good quality (S/N >= 10). The G130M grating has been chosen to enable us to separate the low-redshift Virgo absorption from the MW Lya trough and geocoronal emission. The combination of resolution and signal-to-noise is designed to allow us to detect weak absorption features, W > 50mA at 5sigma. Our observations will be sensitive to Lya absorbers beyond Milky Way velocities (~700km/s; set by the strength of the MW Lya absorption), out to the maximum velocity of the Virgo cluster (~3000km/s). All science observations are safe to conduct in TTAG mode.

The acquisition strategy (mirror A vs B) has been chosen using the COS Imaging Acquisition ETC and the measured Galex NUV fluxes to normalise a variety of input spectra (both flat spectra, and QSO spectra redshifted to the measured QSO redshift). To be conservative, we chose the longest suggested exposure time among the various results, while ensuring count-rate limits are not exceeded. Science exposure times were estimated with the COS spectroscopy ETC, and extended to fully pack the orbits.

BOT note: In 4 of our visits (Visits 8,9,10,12), the APT BOT designated 1 unsafe object in field of the PSA. In every case, this unsafe object is in reality our target. The count-rates estimated by the BOT are incorrect, since they assume a stellar spectral type of O5V for safety. All tests with the COS NUV Imaging Acquisition ETC indicate safe count rates (acceptable global count rate, <300cps for the 9x9 extracted box, and <50cps in the brightest pixel) as suggested in the Phase II instructions, and the ETC.

In addition, for some of our visits the BOT notes some "unknown" sources. In all cases, these unknowns are either our science target, or they have no corresponding GALEX detection. Since all our targets are selected based on GALEX fluxes, these unknowns are within the GALEX coverage area (the GALEX FOV is 1.25deg in diameter), and the lack of UV detection implies they are not an instrument safety concern.

Visit 5 note: Our science target for visit 5 has a star close to the target, ~5" to the SW. We have checked that this nearby object should not cause concern. The star is not seen in the galex survey, despite being in the galex FOV (GALEX tile AISCHV3_227_13249). GALEX has a PSF of ~5" FWHM, so if the star was UV bright, we would see this is a blended or non-symmetric target object. Inspection of the GALEX image shows no such assymetry.
Further, the star is seen in the SDSS photometric survey (but no spectrum), and has g-r = 0.98; u - g = 2.33; the star is ~2.5mag fainter than our QSO target in u-band. Given the lack of UV flux, its red colour, and the lack of a BOT trigger, this star should not cause problems for either imaging acquisition, nor science exposures.

Visit

Proposal 11698, Visit 01, implementation Wed Jan 20 02:09:35 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

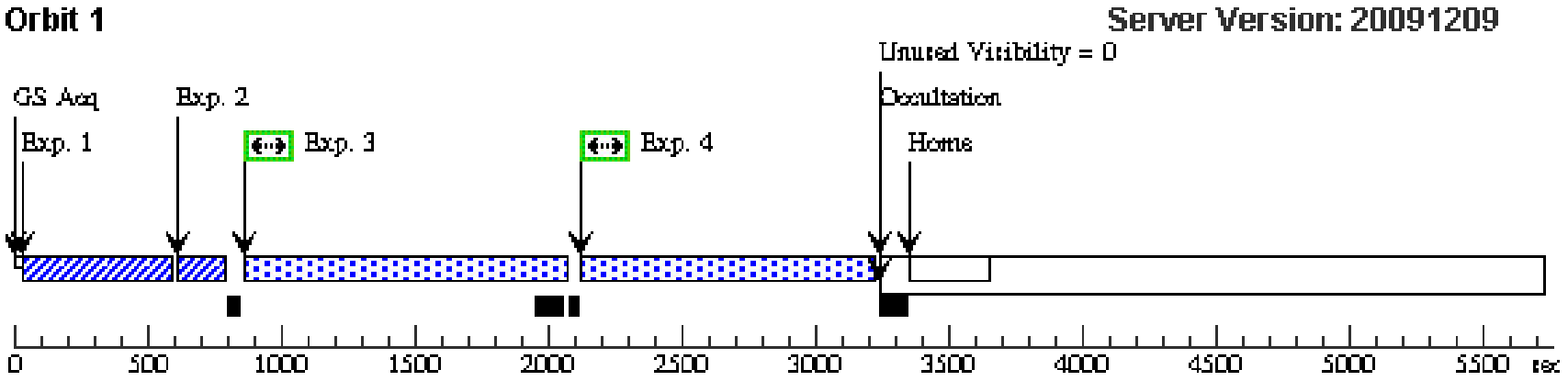
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ121716.08+080942.0	RA: 12 17 16.0896 (184.3170400d) Dec: +08 09 42.05 (8.16168d) Equinox: J2000		V=16.75 GALEX MAGS: m_FUV = 17.048 +/- 0.045; m_NUV = 16.935 +/- 0.028	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) SDSSJ121716.08+080942.0	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			30 Secs *[==>]*	*[1]*
2		(1) SDSSJ121716.08+080942.0	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs *[==>]*	*[1]*
3		(1) SDSSJ121716.08+080942.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=947; FP-POS=3			1047 Secs *[==>]*	*[1]*
4		(1) SDSSJ121716.08+080942.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1047; FP-POS=4			1047 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 02, implementation Wed Jan 20 02:09:35 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

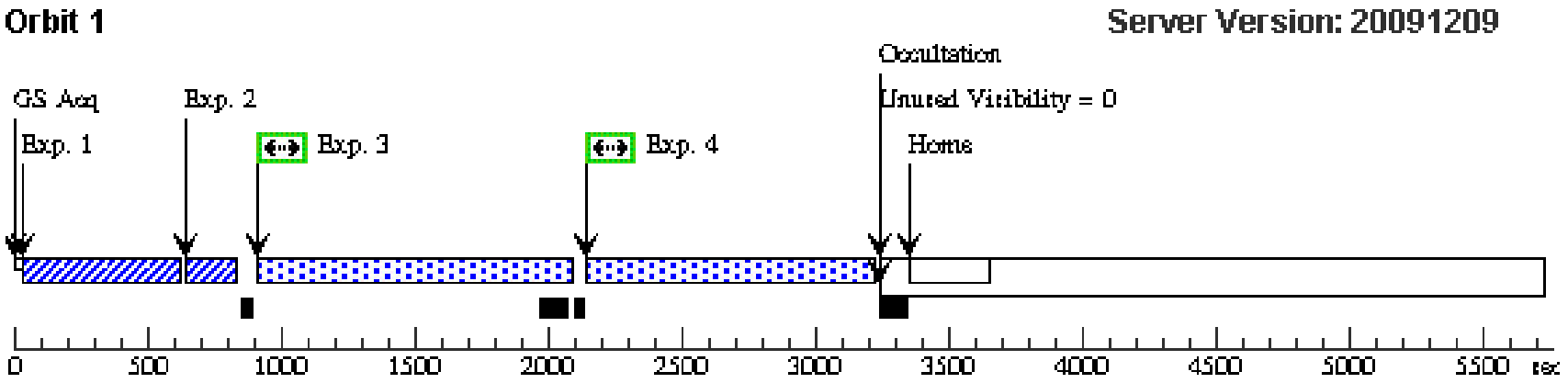
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSSJ121640.56+071224.3	RA: 12 16 40.5672 (184.1690300d) Dec: +07 12 24.34 (7.20676d) Equinox: J2000		V=16.61 GALEX MAGS: m_FUV = 17.587 +/- 0.054; m_NUV = 17.107 +/- 0.030	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) SDSSJ121640.56+071224.3	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			37.3 Secs *[==>]*	*[1]*
2		(2) SDSSJ121640.56+071224.3	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				37.3 Secs *[==>]*	*[1]*
3		(2) SDSSJ121640.56+071224.3	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=924; FP-POS=3			1024 Secs *[==>]*	*[1]*
4		(2) SDSSJ121640.56+071224.3	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1024; FP-POS=4			1024 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 03, implementation Wed Jan 20 02:09:36 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

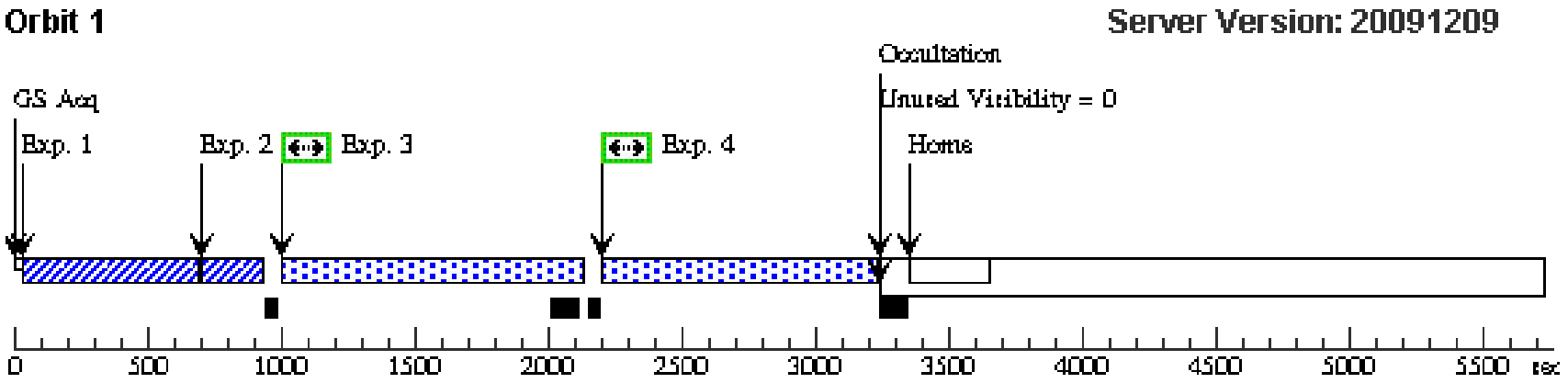
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSSJ122520.13+084450.7	RA: 12 25 20.1336 (186.3338900d) Dec: +08 44 50.78 (8.74744d) Equinox: J2000		V=17.29 GALEX MAGS: m_FUV = 17.816 +/- 0.070; m_NUV = 17.521 +/- 0.039	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) SDSSJ122520.13+084450.7	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			53.4 Secs *[==>]*	*[1]*
2		(3) SDSSJ122520.13+084450.7	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				53.4 Secs *[==>]*	*[1]*
3		(3) SDSSJ122520.13+084450.7	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=871; FP-POS=3			971 Secs *[==>]*	*[1]*
4		(3) SDSSJ122520.13+084450.7	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=971; FP-POS=4			971 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 04, implementation Wed Jan 20 02:09:36 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

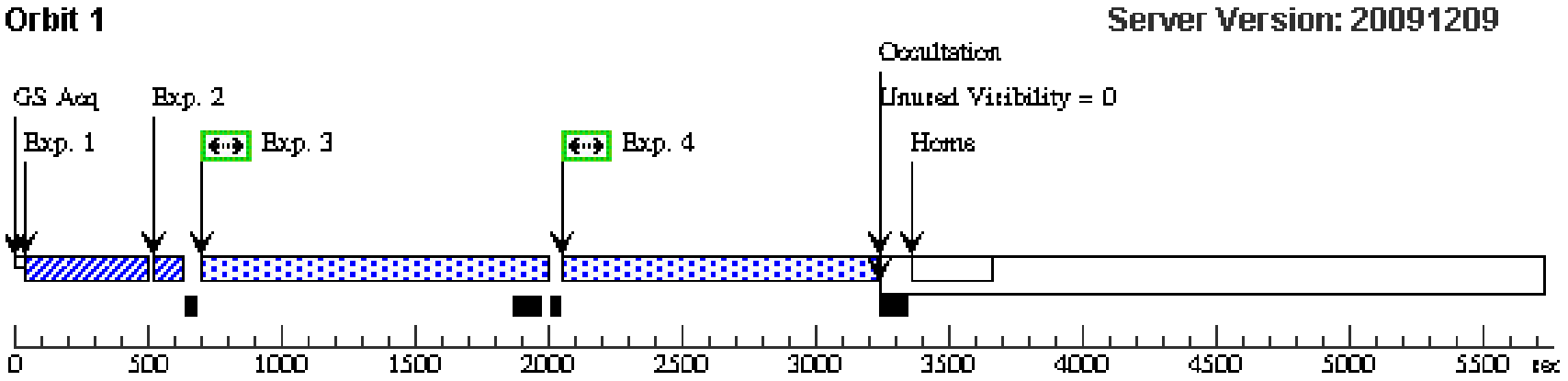
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSSJ122102.49+155447.0	RA: 12 21 2.4984 (185.2604100d) Dec: +15 54 47.05 (15.91307d) Equinox: J2000		V=18.06 GALEX MAGS: m_FUV = 18.021 +/- 0.020; m_NUV = 17.977 +/- 0.009	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) SDSSJ122102.49+155447.0	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2; STEP-SIZE=1.767			6.7 Secs *[==>]*	*[1]*
2		(4) SDSSJ122102.49+155447.0	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6.7 Secs *[==>]*	*[1]*
3		(4) SDSSJ122102.49+155447.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1035; FP-POS=3			1135 Secs *[==>]*	*[1]*
4		(4) SDSSJ122102.49+155447.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1135; FP-POS=4			1128 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 05, implementation Wed Jan 20 02:09:37 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

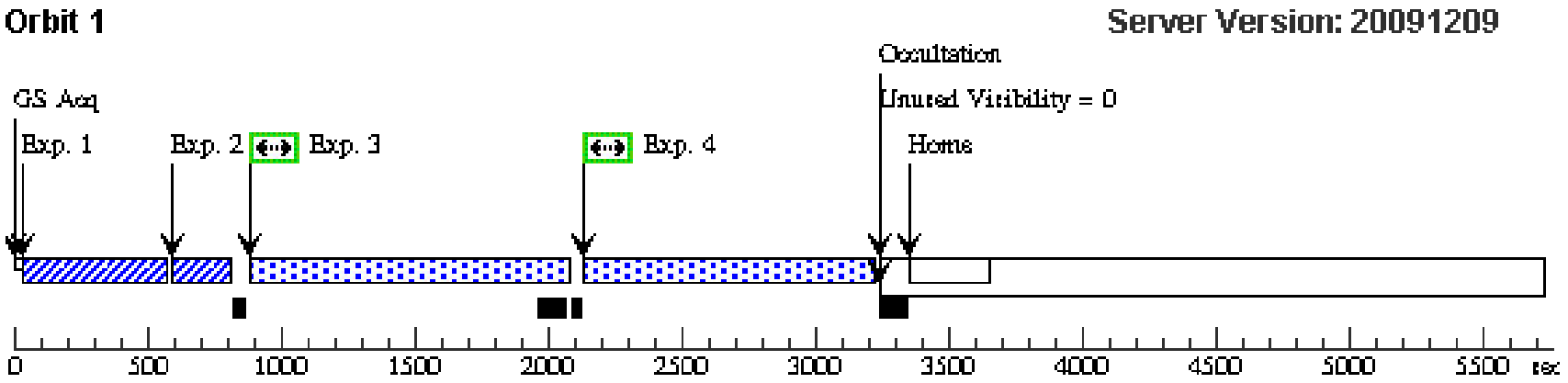
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	SDSSJ123426.80+072411.3	RA: 12 34 26.8056 (188.6116900d) Dec: +07 24 11.34 (7.40315d) Equinox: J2000		V=17.05 GALEX MAGS: m_FUV = 18.050 +/- 0.079; m_NUV = 17.351 +/- 0.034	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) SDSSJ123426.80+072411.3	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		25 Secs *[==>]*	*[1]*
2		(5) SDSSJ123426.80+072411.3	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				51 Secs *[==>]*	*[1]*
3		(5) SDSSJ123426.80+072411.3	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=9366; FP-POS=3			1036 Secs *[==>]*	*[1]*
4		(5) SDSSJ123426.80+072411.3	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1036; FP-POS=4			1036 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 06, implementation Wed Jan 20 02:09:37 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

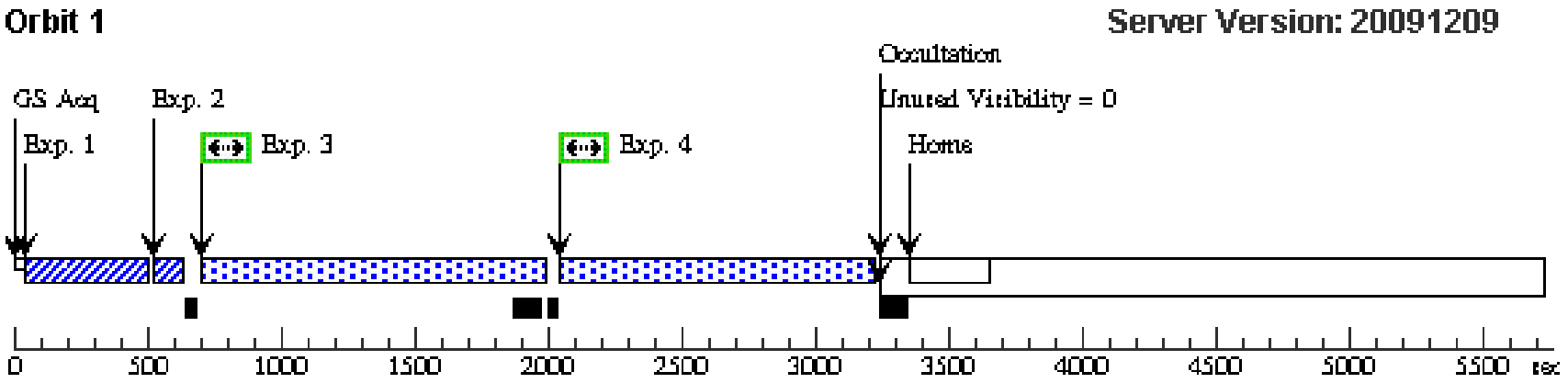
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	SDSSJ122018.43+064119.6	RA: 12 20 18.4392 (185.0768300d) Dec: +06 41 19.61 (6.68878d) Equinox: J2000		V=17.49 GALEX MAGS: m_FUV = 18.061 +/- 0.072; m_NUV = 17.990 +/- 0.045	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) SDSSJ122018.43+064119.6	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2; STEP-SIZE=1.767			6.9 Secs *[==>]*	*[1]*
2		(6) SDSSJ122018.43+064119.6	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6.9 Secs *[==>]*	*[1]*
3		(6) SDSSJ122018.43+064119.6	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FP-POS=3; BUFFER-TIME=1027			1127 Secs *[==>]*	*[1]*
4		(6) SDSSJ122018.43+064119.6	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FP-POS=4; BUFFER-TIME=1128			1128 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 07, implementation Wed Jan 20 02:09:37 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

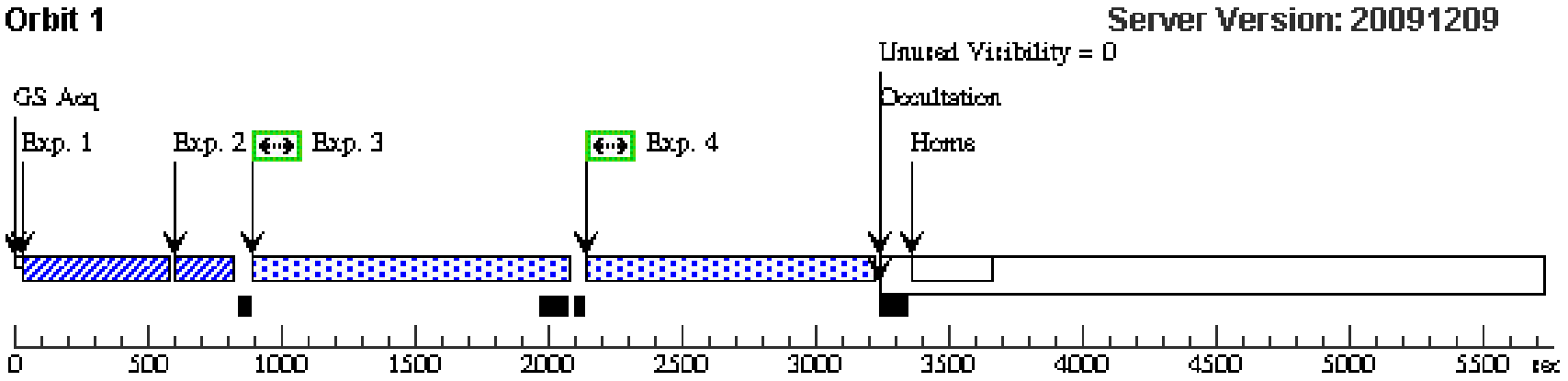
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	SDSSJ122512.93+121835.6	RA: 12 25 12.9384 (186.3039100d) Dec: +12 18 35.71 (12.30992d) Equinox: J2000		V=17.36 GALEX MAGS: m_FUV = 18.093 +/- 0.025; m_NUV = 17.500 +/- 0.008	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) SDSSJ122512.93+121835.6	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			28 Secs *[==>]*	*[1]*
2		(7) SDSSJ122512.93+121835.6	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				50.5 Secs *[==>]*	*[1]*
3		(7) SDSSJ122512.93+121835.6	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=934; FP-POS=3			1034 Secs *[==>]*	*[1]*
4		(7) SDSSJ122512.93+121835.6	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1035; FP-POS=4			1029 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 08, implementation Wed Jan 20 02:09:38 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

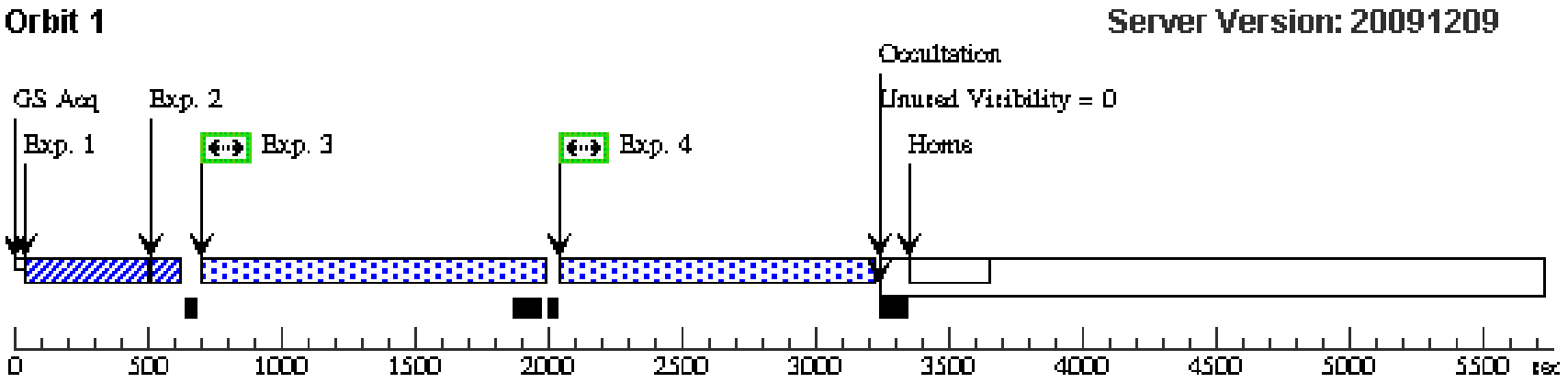
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	SDSSJ122312.16+095017.7	RA: 12 23 12.1656 (185.8006900d) Dec: +09 50 17.74 (9.83826d) Equinox: J2000		V=17.78 GALEX MAGS: m_FUV = 18.123 +/- 0.076; m_NUV = 17.883 +/- 0.045	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) SDSSJ122312.16+095017.7	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2; STEP-SIZE=1.767			6.2 Secs *[==>]*	*[1]*
2		(8) SDSSJ122312.16+095017.7	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6.2 Secs *[==>]*	*[1]*
3		(8) SDSSJ122312.16+095017.7	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FP-POS=3; BUFFER-TIME=1029			1129 Secs *[==>]*	*[1]*
4		(8) SDSSJ122312.16+095017.7	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FP-POS=4; BUFFER-TIME=1129			1129 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11698, Visit 09, implementation Wed Jan 20 02:09:38 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

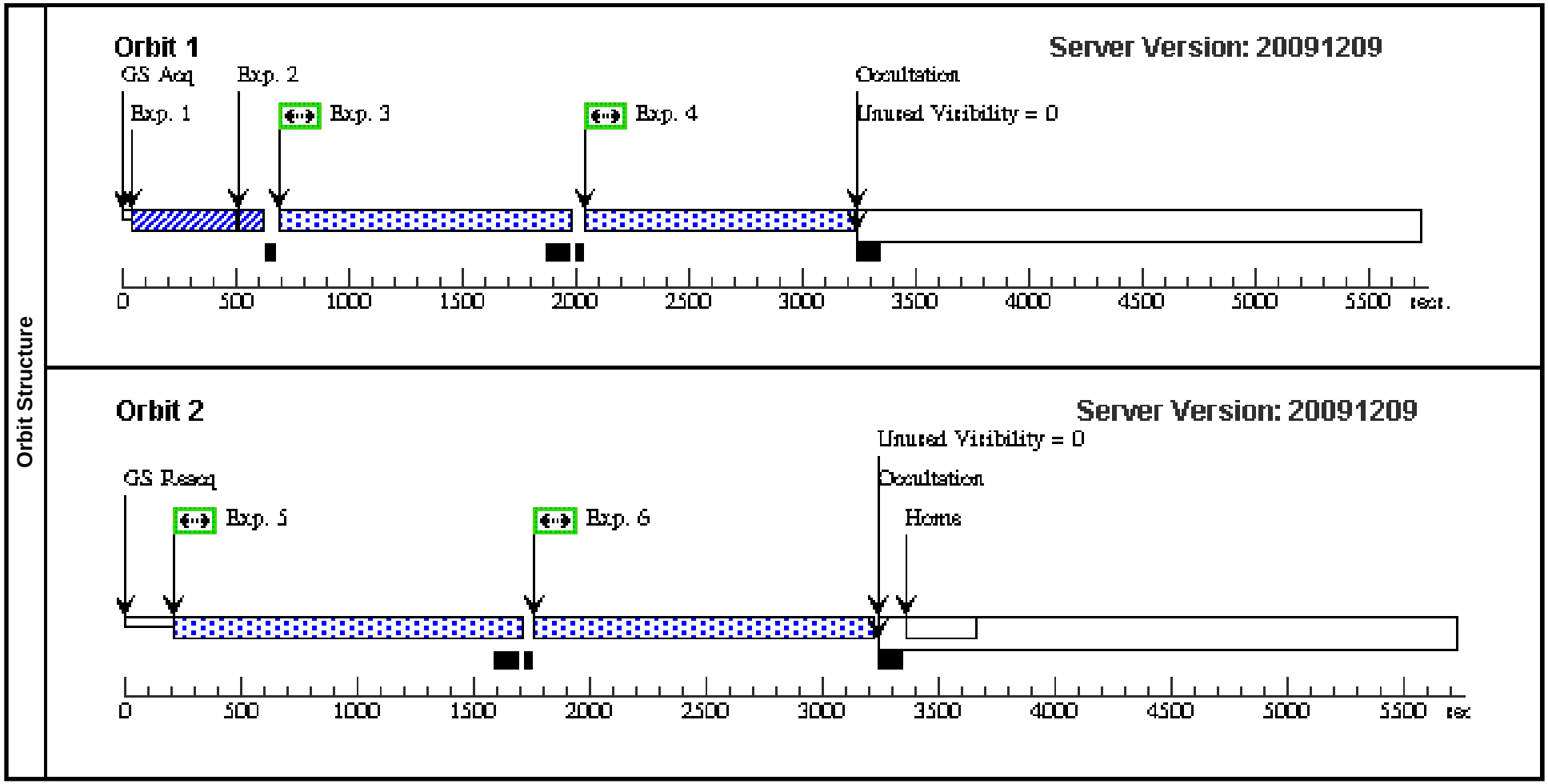
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	SDSSJ121850.51+101554.2	RA: 12 18 50.5200 (184.7105000d) Dec: +10 15 54.25 (10.26507d) Equinox: J2000		V=17.25 GALEX MAGS: m_FUV = 18.332 +/- 0.098; m_NUV = 17.762 +/- 0.043	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) SDSSJ121850.51+101554.2	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2; STEP-SIZE=1.767			5.5 Secs *[==>]*	*[1]*
2		(9) SDSSJ121850.51+101554.2	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				5.5 Secs *[==>]*	*[1]*
3		(9) SDSSJ121850.51+101554.2	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1034; FP-POS=1			1134 Secs *[==>]*	*[1]*
4		(9) SDSSJ121850.51+101554.2	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1138; FP-POS=2			1132 Secs *[==>]*	*[1]*
5		(9) SDSSJ121850.51+101554.2	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1341; FP-POS=3			1441 Secs *[==>]*	*[2]*
6		(9) SDSSJ121850.51+101554.2	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1442; FP-POS=4			1409 Secs *[==>]*	*[2]*


Orbit Structure
Orbit 1
Server Version: 20091209
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
Unused Visibility = 0
GS Reacq
Exp. 5
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11698, Visit 10, implementation Wed Jan 20 02:09:38 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

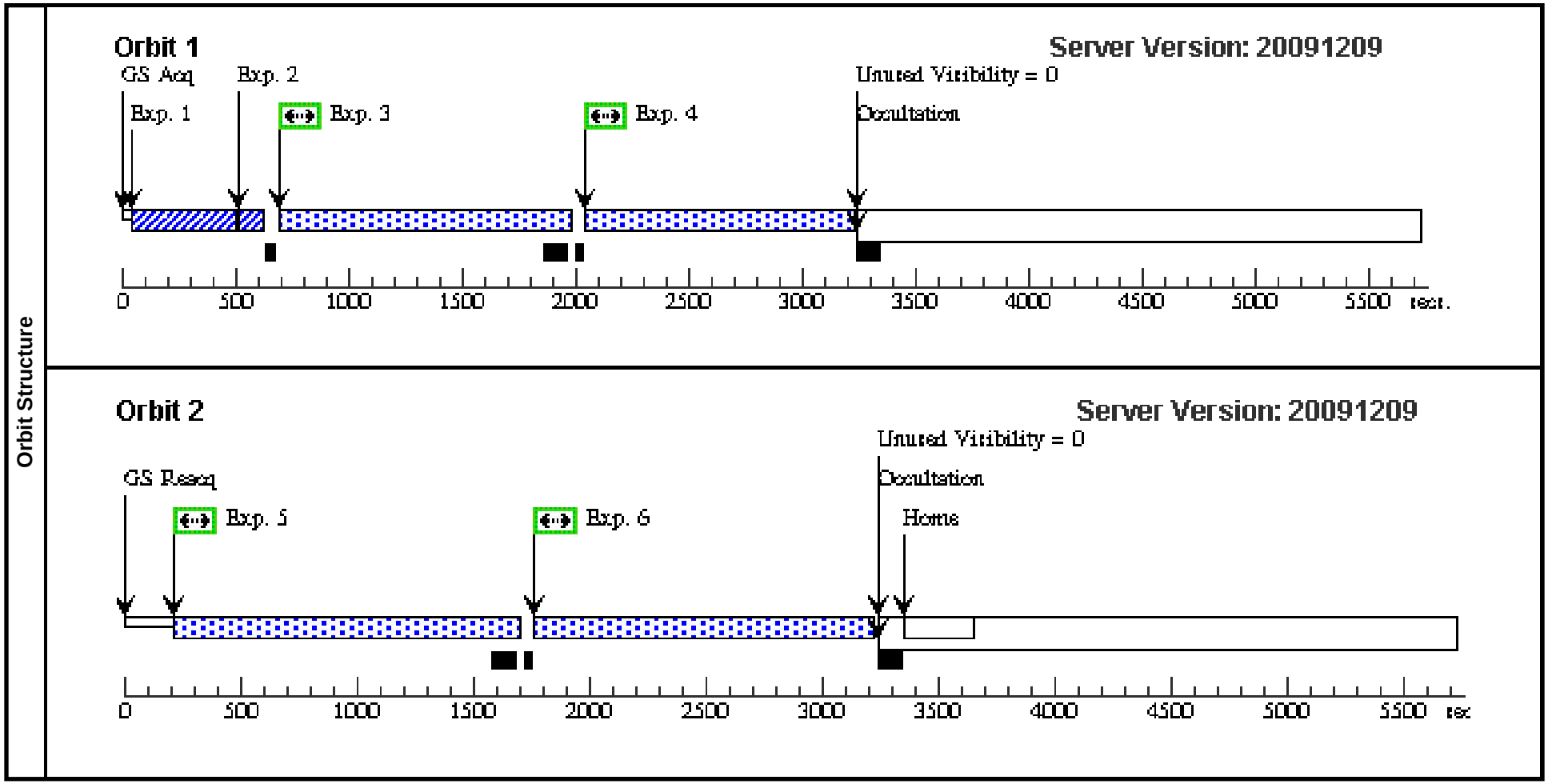
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	SDSSJ122317.79+092306.9	RA: 12 23 17.7984 (185.8241600d) Dec: +09 23 6.97 (9.38527d) Equinox: J2000		V=17.37 GALEX MAGS: m_FUV = 18.420 +/- 0.100; m_NUV = 17.806 +/- 0.043	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) SDSSJ122317.79+092306.9	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2; STEP-SIZE=1.767			6.0 Secs *[==>]*	*[1]*
2		(10) SDSSJ122317.79+092306.9	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				6.0 Secs *[==>]*	*[1]*
3		(10) SDSSJ122317.79+092306.9	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1030; FP-POS=1			1130 Secs *[==>]*	*[1]*
4		(10) SDSSJ122317.79+092306.9	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1131; FP-POS=2			1131 Secs *[==>]*	*[1]*
5		(10) SDSSJ122317.79+092306.9	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1337; FP-POS=3			1437 Secs *[==>]*	*[2]*
6		(10) SDSSJ122317.79+092306.9	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1437; FP-POS=4			1410 Secs *[==>]*	*[2]*


Orbit Structure
Orbit 1
Server Version: 20091209
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Unused Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
Unused Visibility = 0
GS Reacq
Exp. 5
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11698, Visit 11, implementation Wed Jan 20 02:09:38 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

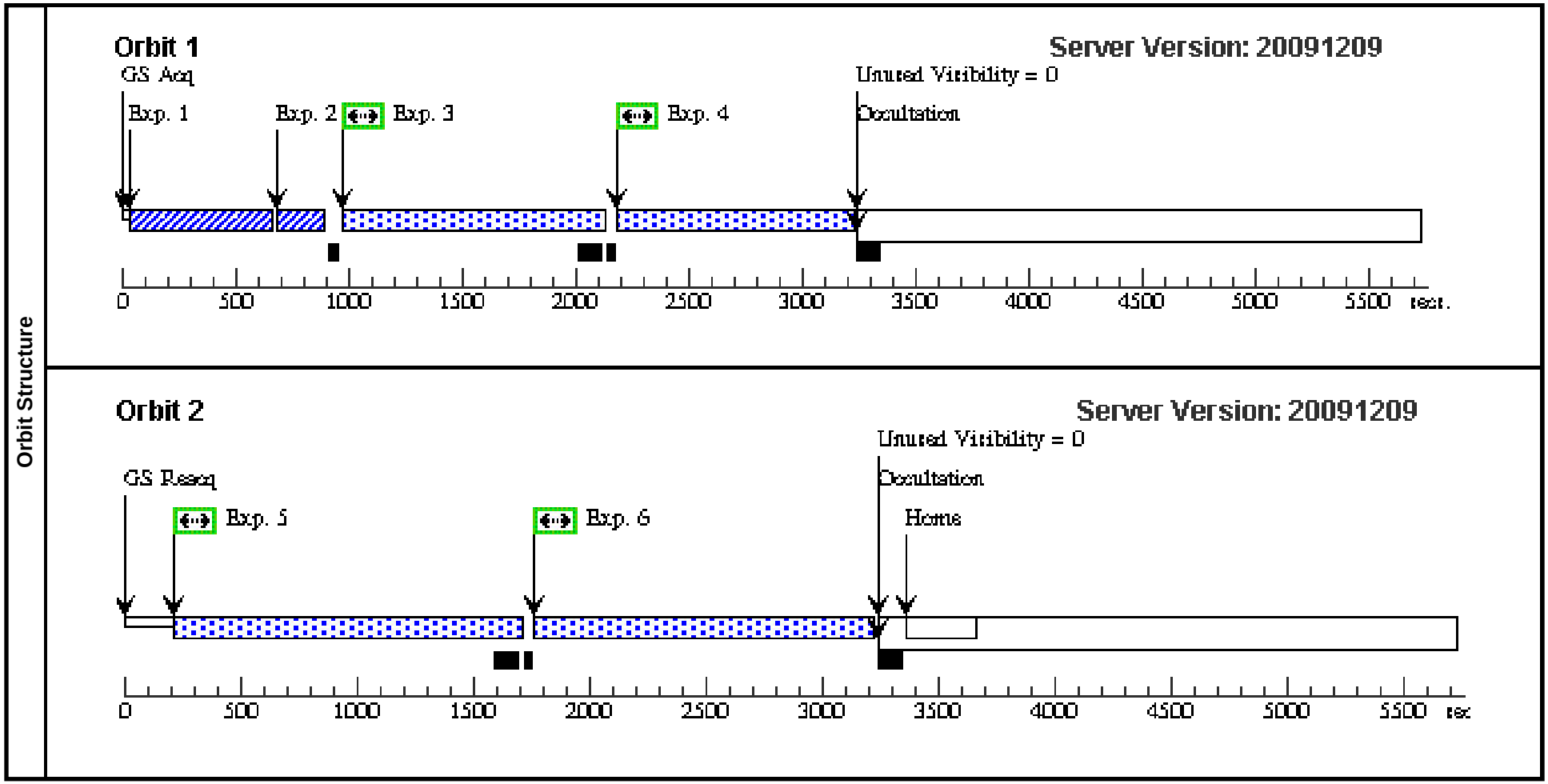
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	SDSSJ120924.07+103612.0	RA: 12 09 24.0792 (182.3503300d) Dec: +10 36 12.06 (10.60335d) Equinox: J2000		V=16.56 GALEX MAGS: m_FUV = 18.433 +/- 0.090; m_NUV = 17.447 +/- 0.035	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(11) SDSSJ120924.07+103612.0	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			48.0 Secs *[==>]*	*[1]*
2		(11) SDSSJ120924.07+103612.0	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				48.0 Secs *[==>]*	*[1]*
3		(11) SDSSJ120924.07+103612.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=8988; FP-POS=1			997 Secs *[==>]*	*[1]*
4		(11) SDSSJ120924.07+103612.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=998; FP-POS=2			992 Secs *[==>]*	*[1]*
5		(11) SDSSJ120924.07+103612.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1341; FP-POS=3			1441 Secs *[==>]*	*[2]*
6		(11) SDSSJ120924.07+103612.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1442; FP-POS=4			1409 Secs *[==>]*	*[2]*


Orbit Structure
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Server Version: 20091209
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Unused Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
GS Reacq
Exp. 5
Exp. 6
Unused Visibility = 0
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11698, Visit 12, implementation Wed Jan 20 02:09:39 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

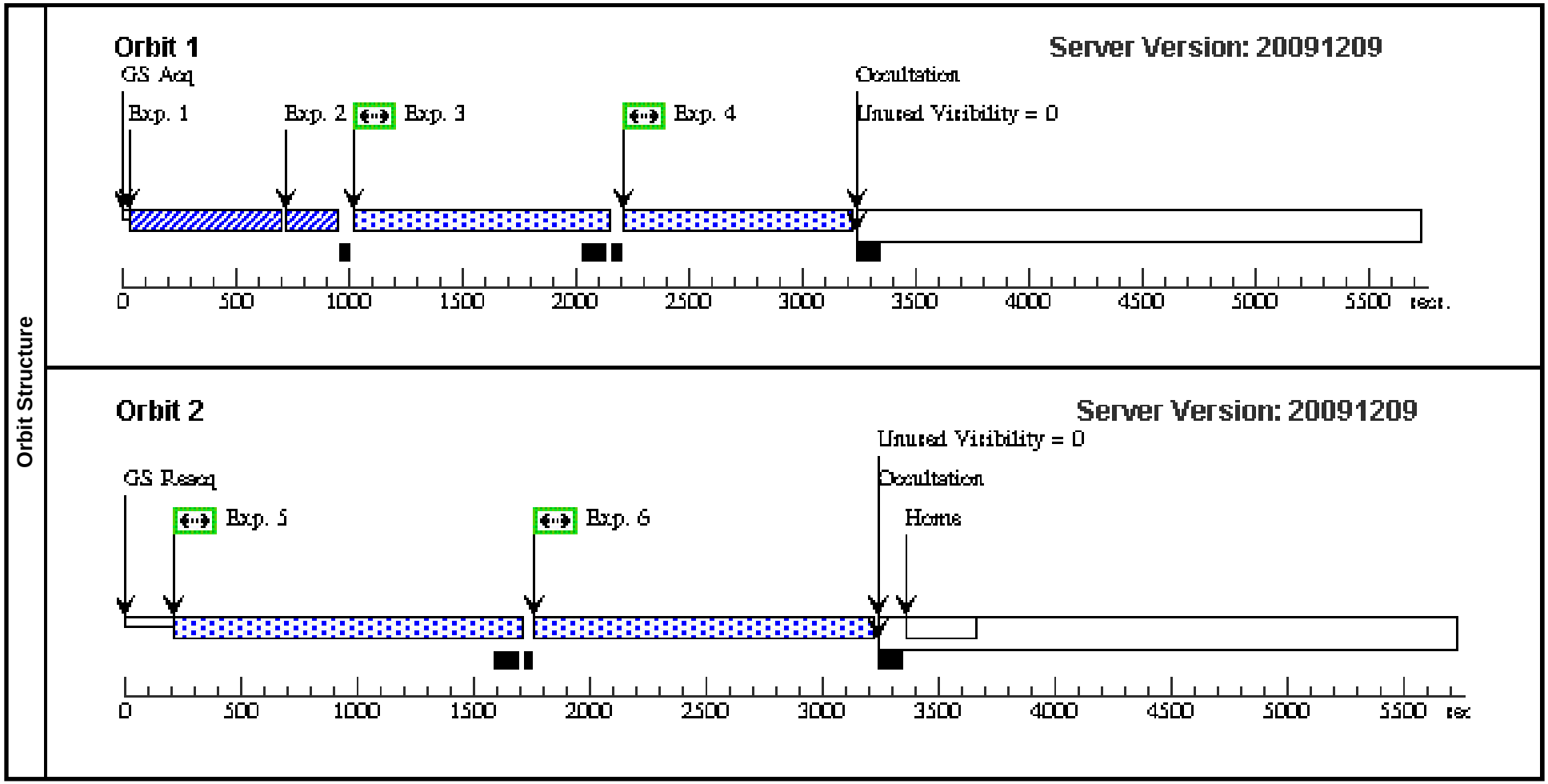
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	SDSSJ120556.08+104253.8	RA: 12 05 56.0880 (181.4837000d) Dec: +10 42 53.89 (10.71497d) Equinox: J2000		V=16.92 GALEX MAGS: m_FUV = 18.525 +/- 0.104; m_NUV = 17.379 +/- 0.034	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(12) SDSSJ120556.08+104253.8	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			56.7 Secs *[==>]*	*[1]*
2		(12) SDSSJ120556.08+104253.8	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				56.7 Secs *[==>]*	*[1]*
3		(12) SDSSJ120556.08+104253.8	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=866; FP-POS=1			966 Secs *[==>]*	*[1]*
4		(12) SDSSJ120556.08+104253.8	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=996; FP-POS=2			960 Secs *[==>]*	*[1]*
5		(12) SDSSJ120556.08+104253.8	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1341; FP-POS=3			1441 Secs *[==>]*	*[2]*
6		(12) SDSSJ120556.08+104253.8	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1442; FP-POS=4			1409 Secs *[==>]*	*[2]*


Orbit Structure
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Server Version: 20091209
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
Unused Visibility = 0
GS Reacq
Exp. 5
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11698, Visit 13, implementation Wed Jan 20 02:09:39 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

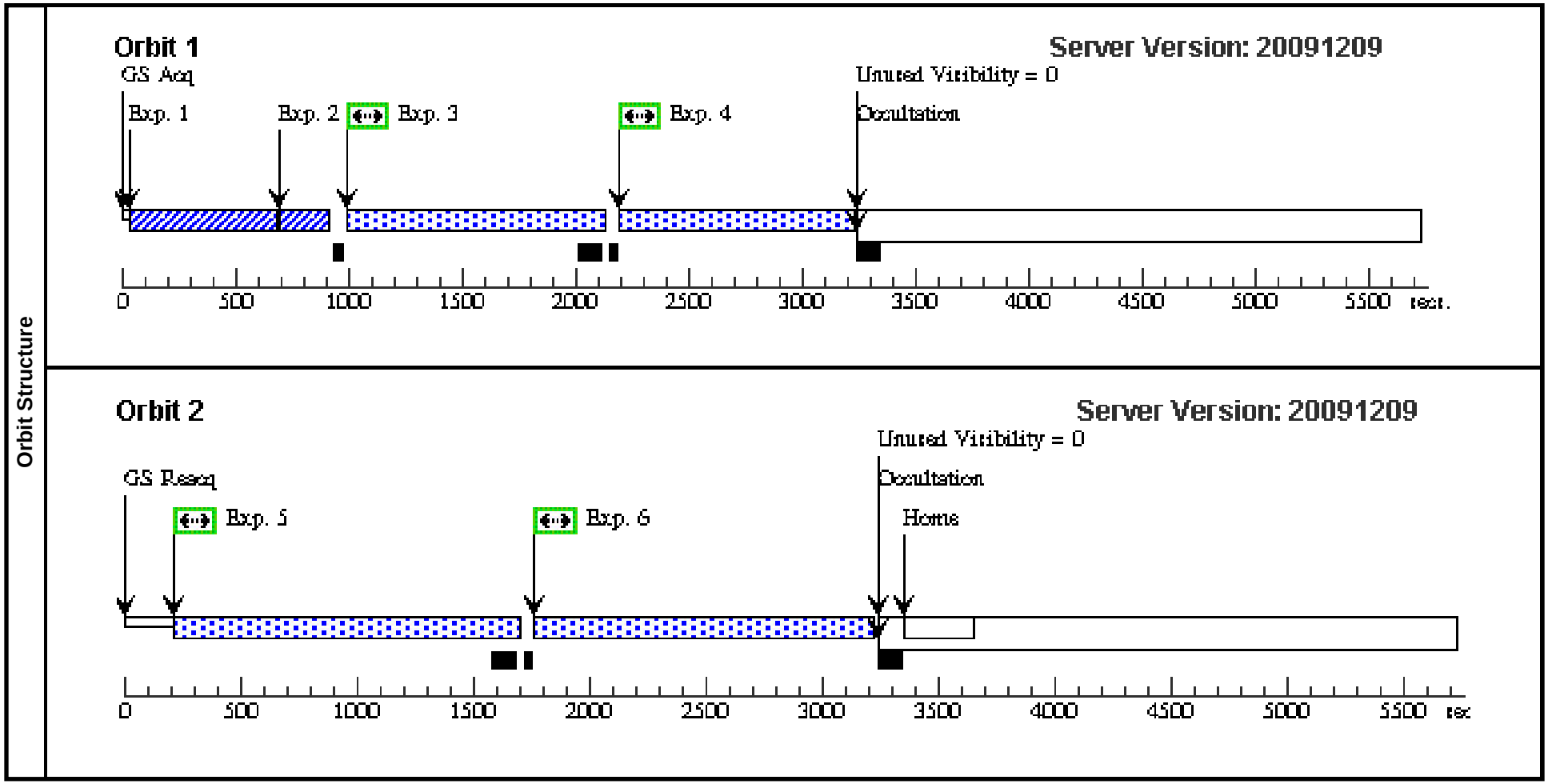
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	SDSSJ121430.55+082508.1	RA: 12 14 30.5520 (183.6273000d) Dec: +08 25 8.16 (8.41893d) Equinox: J2000		V=17.17 GALEX MAGS: m_FUV = 18.549 +/- 0.086; m_NUV = 17.438 +/- 0.034	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(13) SDSSJ121430.55+082508.1	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			51.2 Secs *[==>]*	*[1]*
2		(13) SDSSJ121430.55+082508.1	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				51.2 Secs *[==>]*	*[1]*
3		(13) SDSSJ121430.55+082508.1	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=884; FP-POS=1			982 Secs *[==>]*	*[1]*
4		(13) SDSSJ121430.55+082508.1	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=983; FP-POS=2			983 Secs *[==>]*	*[1]*
5		(13) SDSSJ121430.55+082508.1	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1337; FP-POS=3			1437 Secs *[==>]*	*[2]*
6		(13) SDSSJ121430.55+082508.1	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1437; FP-POS=4			1410 Secs *[==>]*	*[2]*


Orbit Structure
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Server Version: 20091209
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Unused Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
GS Reacq
Exp. 5
Exp. 6
Unused Visibility = 0
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11698, Visit 14, implementation Wed Jan 20 02:09:39 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

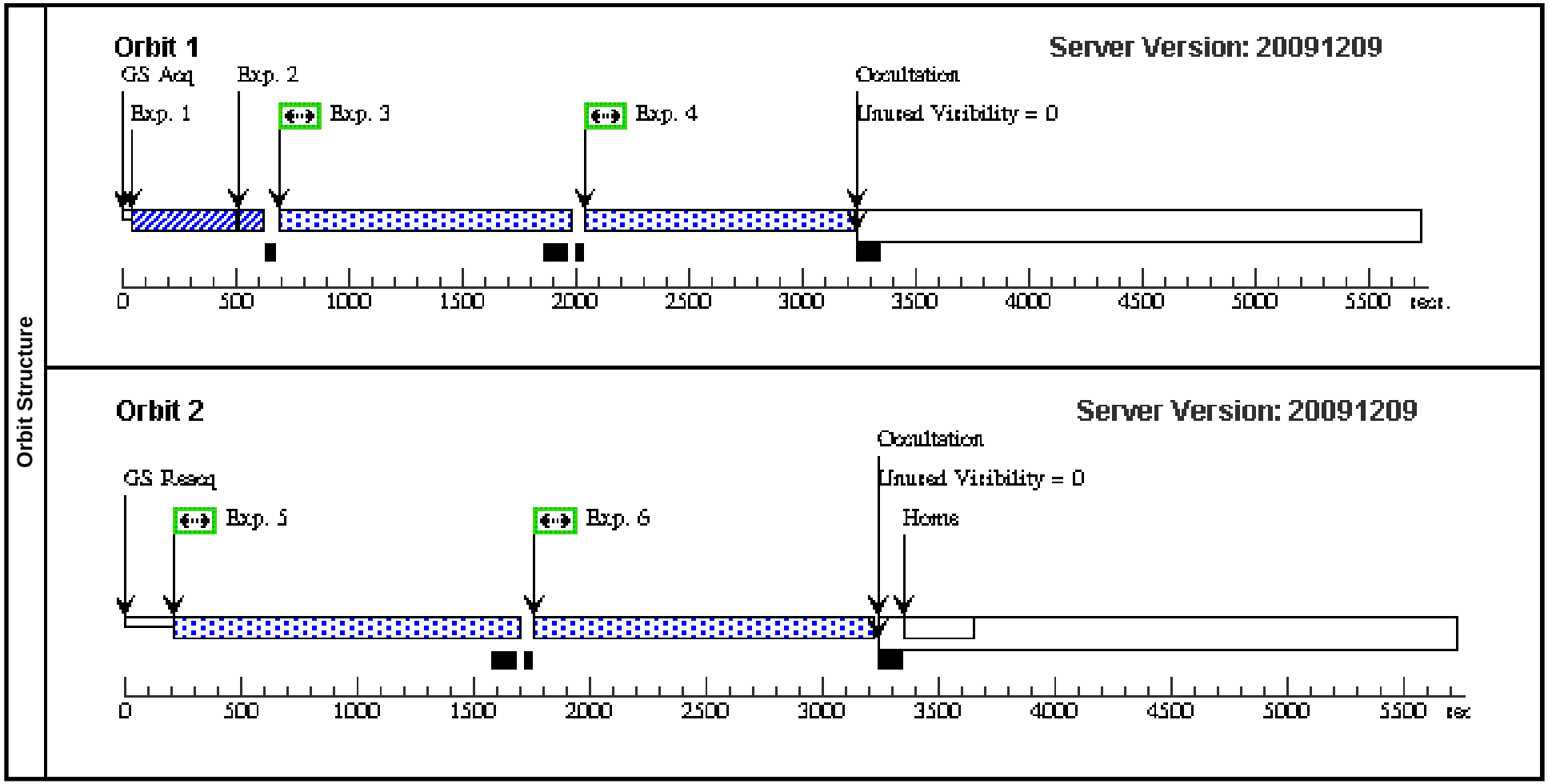
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	SDSSJ124035.51+094941.0	RA: 12 40 35.5104 (190.1479600d) Dec: +09 49 41.01 (9.82806d) Equinox: J2000		V=17.54 GALEX MAGS: m_FUV = 18.742 +/- 0.119; m_NUV = 17.697 +/- 0.047	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) SDSSJ124035.51+094941.0	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2; STEP-SIZE=1.767			5.5 Secs *[==>]*	*[1]*
2		(14) SDSSJ124035.51+094941.0	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				5.5 Secs *[==>]*	*[1]*
3		(14) SDSSJ124035.51+094941.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1031; FP-POS=1			1131 Secs *[==>]*	*[1]*
4		(14) SDSSJ124035.51+094941.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1132; FP-POS=2			1132 Secs *[==>]*	*[1]*
5		(14) SDSSJ124035.51+094941.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1337; FP-POS=3			1437 Secs *[==>]*	*[2]*
6		(14) SDSSJ124035.51+094941.0	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1437; FP-POS=4			1410 Secs *[==>]*	*[2]*


Orbit Structure
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Server Version: 20091209
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
GS Reacq
Exp. 5
Exp. 6
Occultation
Unused Visibility = 0
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11698, Visit 15, implementation Wed Jan 20 02:09:40 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

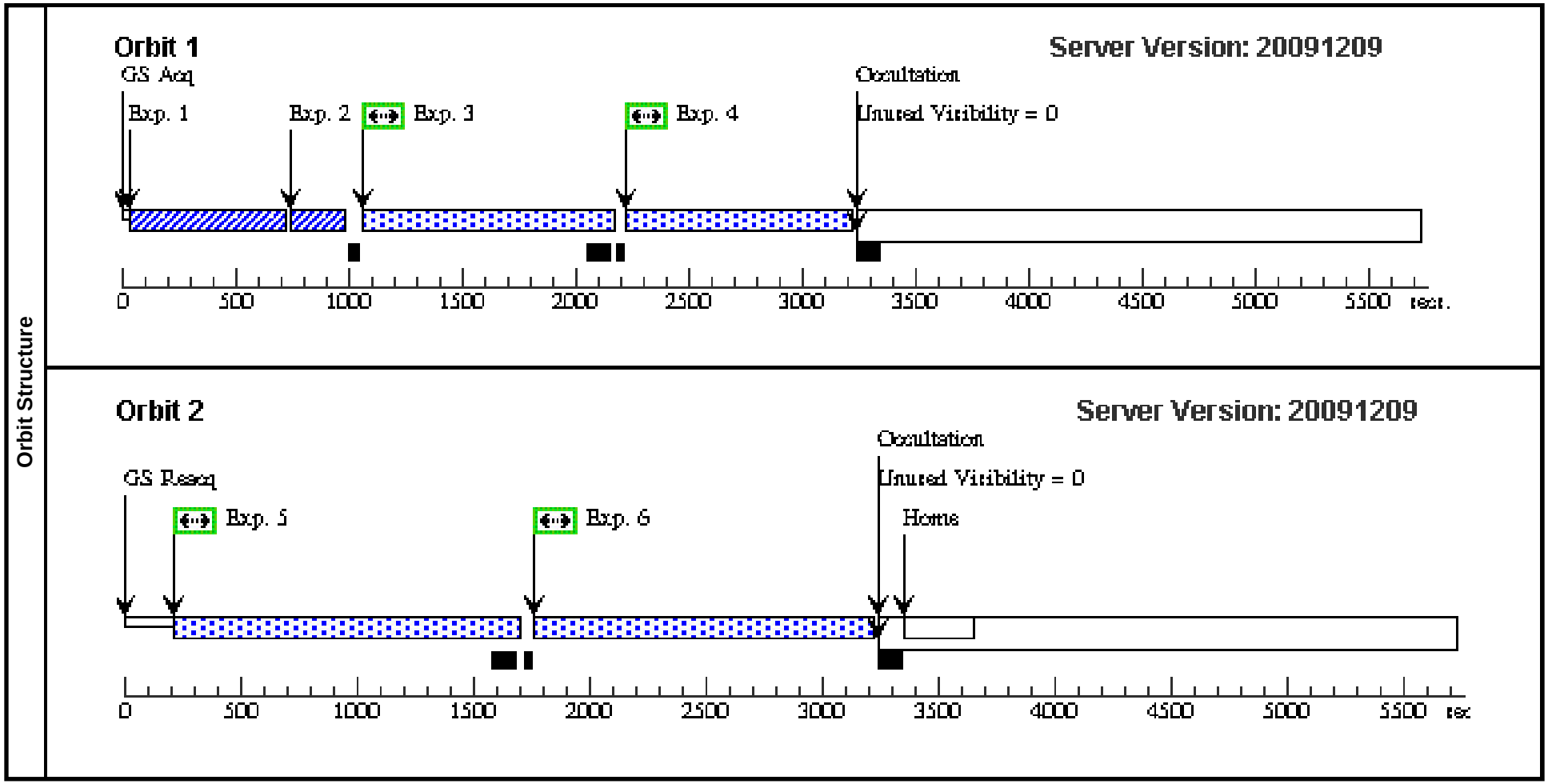
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	SDSSJ123647.72+060048.4	RA: 12 36 47.7216 (189.1988400d) Dec: +06 00 48.40 (6.01344d) Equinox: J2000		V=16.82 GALEX MAGS: m_FUV = 18.809 +/- 0.122; m_NUV = 17.584 +/- 0.037	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(15) SDSSJ123647.72+060048.4	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2; STEP-SIZE=1.767			62.8 Secs *[==>]*	*[1]*
2		(15) SDSSJ123647.72+060048.4	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				62.8 Secs *[==>]*	*[1]*
3		(15) SDSSJ123647.72+060048.4	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=856; FP-POS=1			948 Secs *[==>]*	*[1]*
4		(15) SDSSJ123647.72+060048.4	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=948; FP-POS=2			948 Secs *[==>]*	*[1]*
5		(15) SDSSJ123647.72+060048.4	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1337; FP-POS=3			1437 Secs *[==>]*	*[2]*
6		(15) SDSSJ123647.72+060048.4	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1437; FP-POS=4			1410 Secs *[==>]*	*[2]*


Orbit Structure
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GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Occultation
Unused Visibility = 0
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20091209
Occultation
GS Reacq
Unused Visibility = 0
Exp. 5
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec