10907 - New Sightlines for the Study of Intergalactic Helium: A Dozen High-Confidence, UV-Bright Quasars from SDSS/GALEX

Cycle: 15, 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) SDSSJ0056-0941	ACS/SBC	2	29-Jan-2007 22:02:27.0	yes
02	(2) SDSSJ0139-0847	ACS/SBC	2	29-Jan-2007 22:02:38.0	yes
03	(3) SDSSJ0808+4550	ACS/SBC	2	29-Jan-2007 22:02:45.0	yes
04	(4) SDSSJ0941+5607	ACS/SBC	2	29-Jan-2007 22:02:56.0	yes
05	(5) SDSSJ1001+6308	ACS/SBC	2	29-Jan-2007 22:03:04.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
06	(6) SDSSJ1007+4723	ACS/SBC	2	29-Jan-2007 22:03:11.0	yes
07	(7) SDSSJ1009+3917	ACS/SBC	2	29-Jan-2007 22:03:18.0	yes
08	(8) SDSSJ1024+4903	ACS/SBC	2	29-Jan-2007 22:03:25.0	yes
09	(9) SDSSJ1137+6237	ACS/SBC	2	29-Jan-2007 22:03:32.0	yes
10	(10) SDSS1247+6730	ACS/SBC	2	29-Jan-2007 22:03:42.0	yes
11	(11) SDSSJ1442+0920	ACS/SBC	2	29-Jan-2007 22:03:49.0	yes
12	(12) SDSSJ2251-0857	ACS/SBC	2	29-Jan-2007 22:03:56.0	yes

24 Total Orbits Used

ABSTRACT

The reionization of intergalactic helium is thought to have occurred between redshifts of about 3 and 4. Detailed study of HeII Lyman-alpha absorption toward a handful quasars at 2.7<z<3.3 demonstrates the great potential of such probes of the IGM, but the current critically-small sample limits confidence in resulting cosmological inferences. The requisite unobscured quasar sightlines to high-redshift are extremely rare, especially due to severe absorption in random intervening Lyman-limit systems, but SDSS provides thousands of z>3.1 quasars potentially suitable for HeII studies. We have cross-correlated SDSS quasars with GALEX UV sources to obtain a dozen new, very high-confidence, candidate quasars/sightlines (z=3.1 to 4.1) potentially useful for detailed HeII studies even with current HST instruments. We propose brief, 2-orbit per target, reconnaissance spectral exposures with the ACS SBC prism to definitively verify UV flux down to the HeII break. Our combined SDSS/GALEX selection insures a very high-yield of confirmations, as the quasars are already known to be UV-bright from broadband GALEX images. The additional sightlines, extending to very high-redshift, will directly enable ensemble spectral stacks, as well as long exposure follow-up spectra, at high S/N with the ACS/SBC ultraviolet prisms (or perhaps STIS or COS later), to confidently measure the spectrum and evolution of the ionizing background radiation, the evolution of HeII opacity, and the density of intergalactic baryons.

OBSERVING DESCRIPTION

We will observe 12 z>3.1 quasars selected from SDSS and GALEX, using ACS/SBC PR130L to confirm UV flux (detected in GALEX) down to HeII Lyman-alpha break. Two dither positions are used, with direct images at each dither position to correlate with prism exposures. The last prims exposure in each orbit may be adjusted in length to fill orbit.

ADDITIONAL COMMENTS

Basic UV bright object safety data information is included in the comments for each target based on GALEX UV imaging photometry of each target/field. 5-band SDSS imaging photometry is also available in the optical for all targets/fields. (Each quasar target has an SDSS optical spectrum available as well).

Visit

Proposal 10907, Visit 01, implementation Tue Jan 30 03:04:00 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: ORIENT 260.0D TO 280.0 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ0056-0941	RA: 00 56 53.2520 (14.2218833d) Dec: -09 41 21.88 (-9.68941d) Equinox: J2000		V=19.8+/-0.1 u=21.6;g=20.1;r=19.8;i=19.8;z=19.8;GALEXfuv=23.0;nuv=22.1 (GR2)	Reference Frame: ICRS

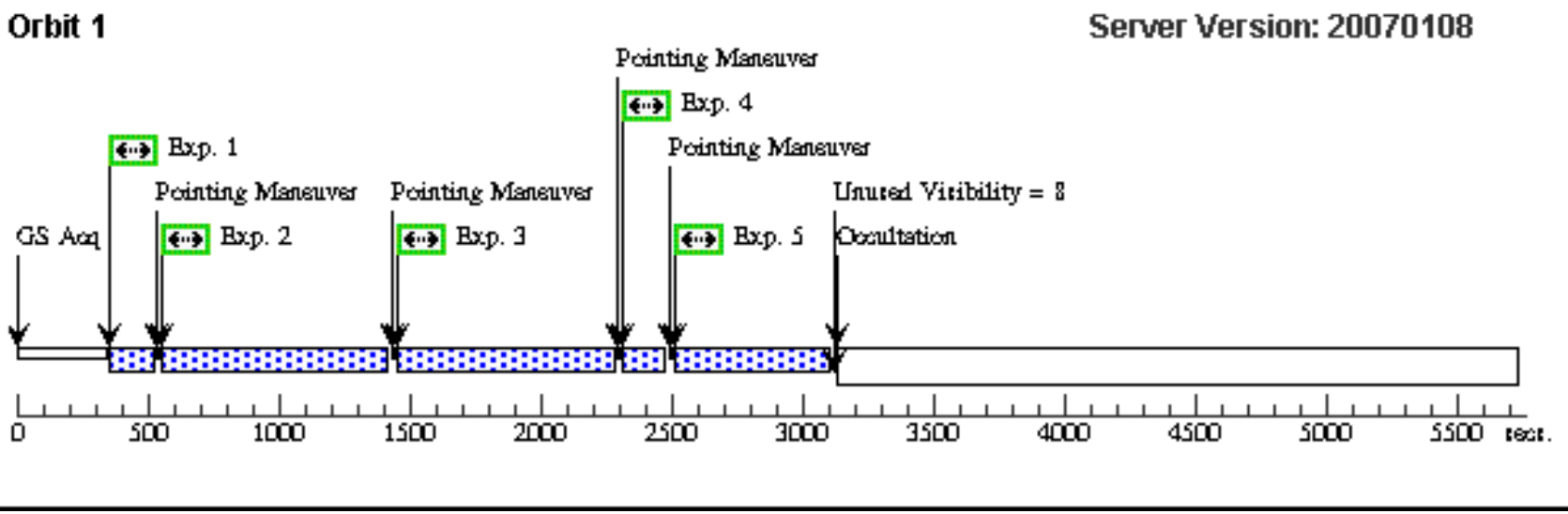
Comments: Brightest GALEX GR2 sources within 0.5' radius are:
FUV: quasar target (m=23.0)
NUV: m=20.5
Brightest GALEX GR1 sources within 0.5' radius are:
FUV: m=21.8
NUV:m=20.5

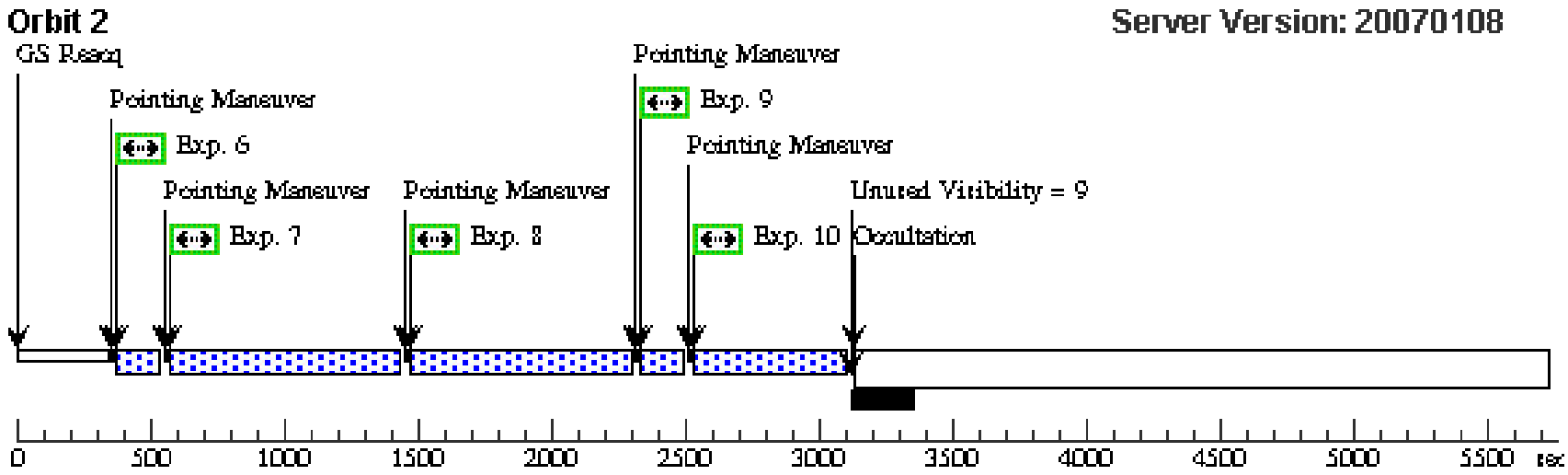
Brightest (in g) SDSS optical object within 0.5' is quasar target
(Target position is 5" south of quasar to avoid star possibly on edge of SBC FOV)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	PR130L				530.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(1) SDSSJ0056-0941	ACS/SBC, ACCUM, SBC	PR130L				510.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure





Visit

Proposal 10907, Visit 02, scheduling Tue Jan 30 03:04:01 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSSJ0139-0847	RA: 01 39 0.7860 (24.7532750d) Dec: -08 47 20.54 (-8.78904d) Equinox: J2000		V=19.2+/-0.1 u=20.8;g=19.4;r=19.2;i=19.1;z=19.1;GALEXfuv=22.5 (GR2)	Reference Frame: ICRS

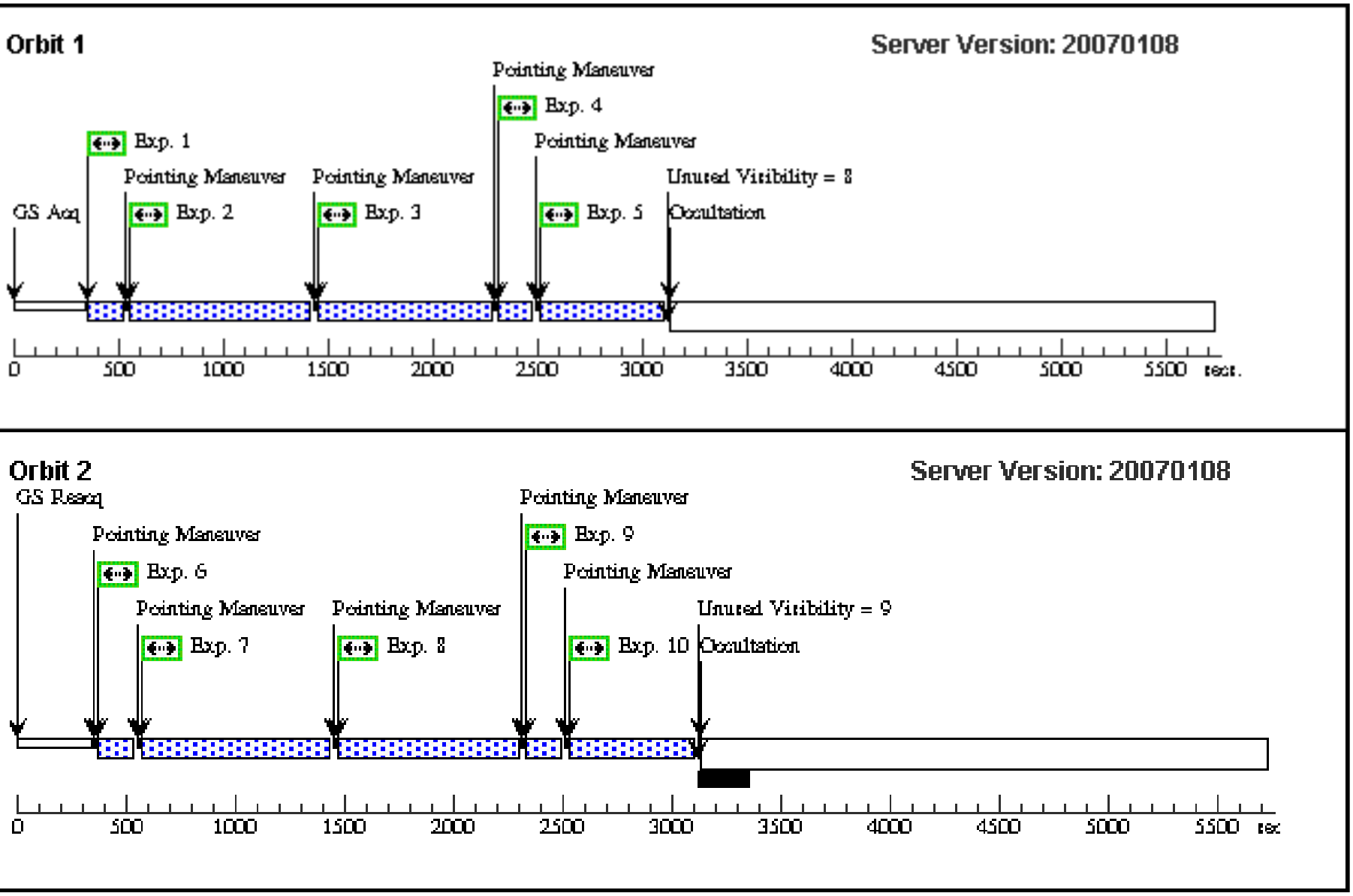
Comments: Brightest UV sources in GALEX GR2 within 0.5' are:
FUV: quasar target (m=22.5)
NUV: m=23.3
Brightest UV sources in GALEX GR1 within 0.5' are:
FUV: quasar target (m=22.3)
NUV: m=22.9

Brightest (in g) SDSS optical object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	PR130L				530.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(2) SDSSJ0139-0847	ACS/SBC, ACCUM, SBC	PR130L				510.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure



Visit

Proposal 10907, Visit 03, implementation Tue Jan 30 03:04:03 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSSJ0808+4550	RA: 08 08 56.1920 (122.2341333d) Dec: +45 50 6.67 (45.83519d) Equinox: J2000		V=19.6+/-0.1 u=20.9;g=19.9;r=19.6;i=19.6z=19.7;GALEXfuv=22.6;nuv=23.8 (GR2)	Reference Frame: ICRS

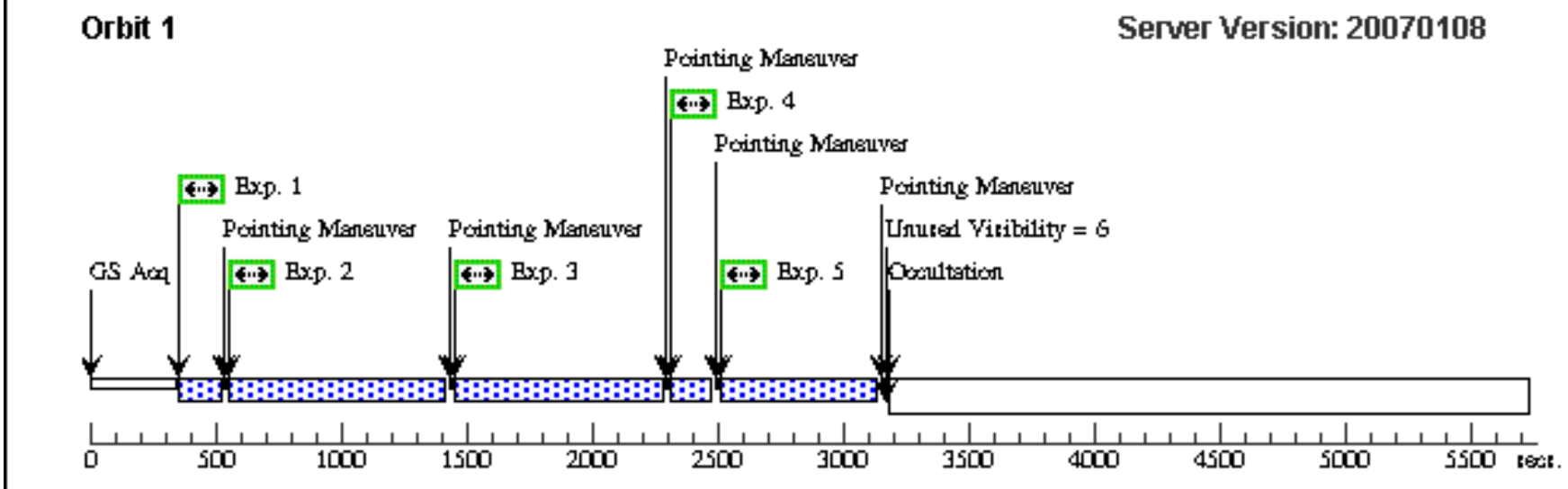
Comments: Brightest GALEX GR2 UV sources within 0.5' are:
FUV: quasar target
NUV: m=20.9
Brightest GALEX GR1 UV sources within 0.5' are:
FUV: quasar target (m=22.3)
NUV: m=22.9

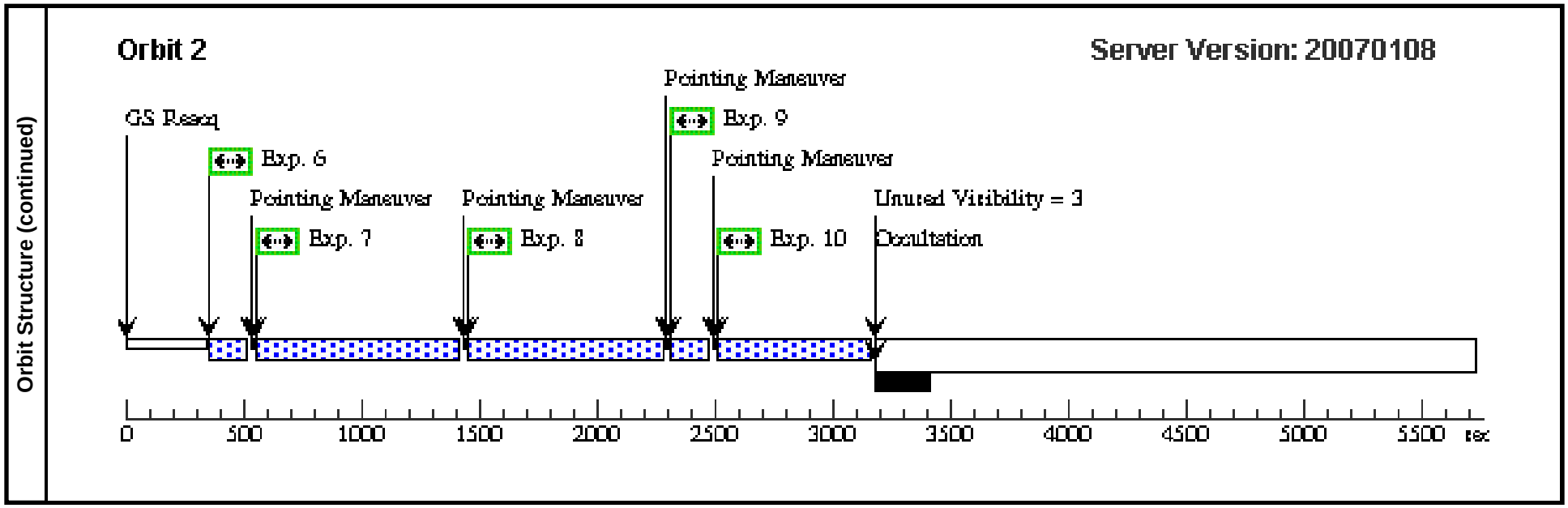
Brightest (in g) SDSS optical object within 0.5' is quasar target.
(Target position is 7" West of quasar to exclude star from SBC FOV).

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	PR130L				560.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(3) SDSSJ0808+4550	ACS/SBC, ACCUM, SBC	PR130L				590.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Visibility = 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 04, scheduling Tue Jan 30 03:04:04 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSSJ0941+5607	RA: 09 41 2.5152 (145.2604800d) Dec: +56 07 6.56 (56.11849d) Equinox: J2000		V=19.5+/-0.1 u=22.9;g=20.8;r=19.5;i=19.4;z=19.4;GALEXnuv=22.5(GR1)	Reference Frame: ICRS

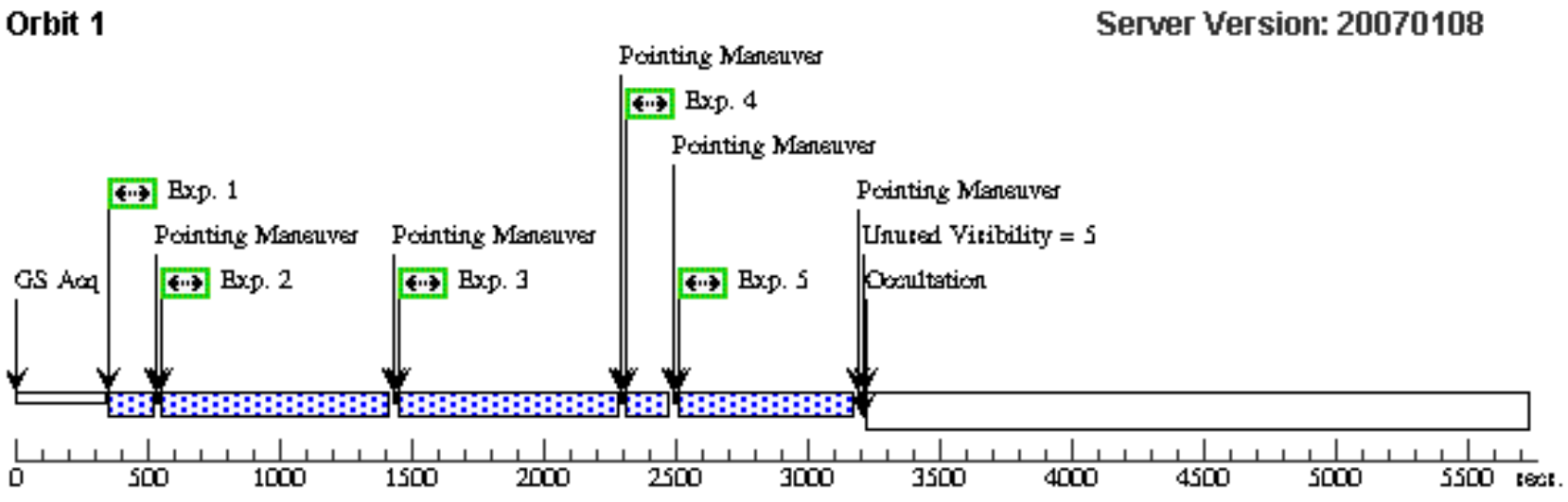
Comments: Brightest GALEX GR1 UV sources within 0.5':
FUV: none
NUV: quasar target (m=22.5)
(nothing brighter in GR2)

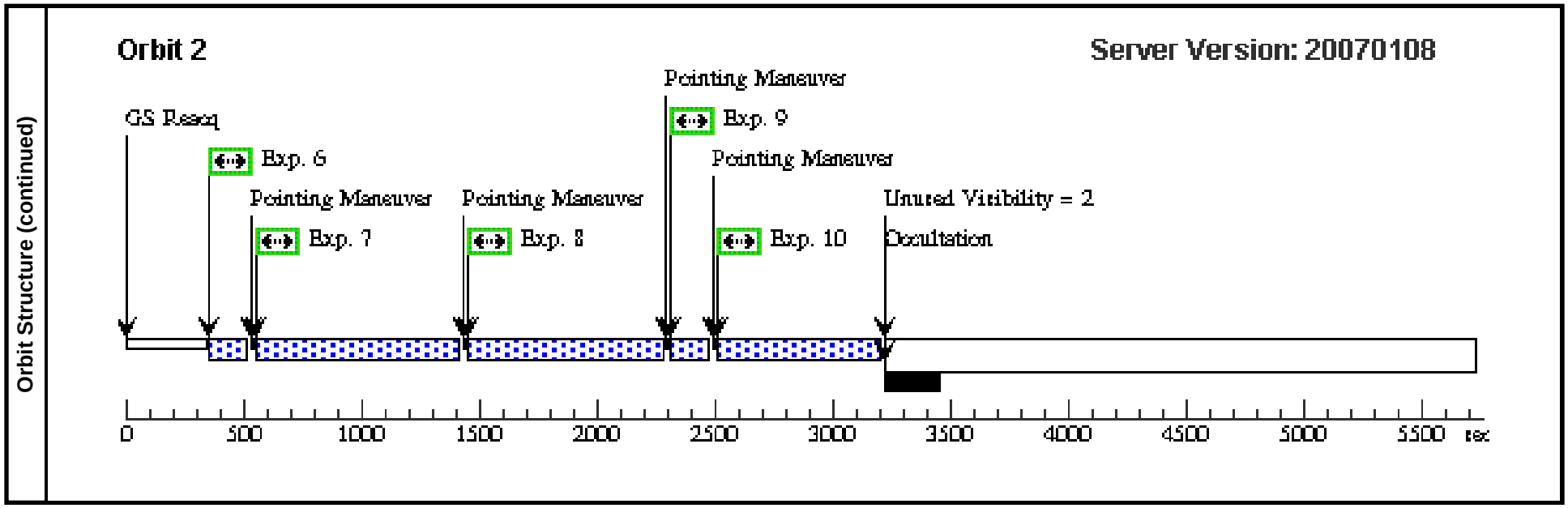
Brightest (in g) optical object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	PR130L				600.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(4) SDSSJ0941+5607	ACS/SBC, ACCUM, SBC	PR130L				630.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 05, scheduling Tue Jan 30 03:04:05 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	SDSSJ1001+6308	RA: 10 01 54.8767 (150.4786529d) Dec: +63 08 17.95 (63.13832d) Equinox: J2000		V=20.4+/-0.1 u=25.3;g=22.3;r=20.4;i=20.3;z=20.5;GALEXnuv=22.5(GR1)	Reference Frame: ICRS

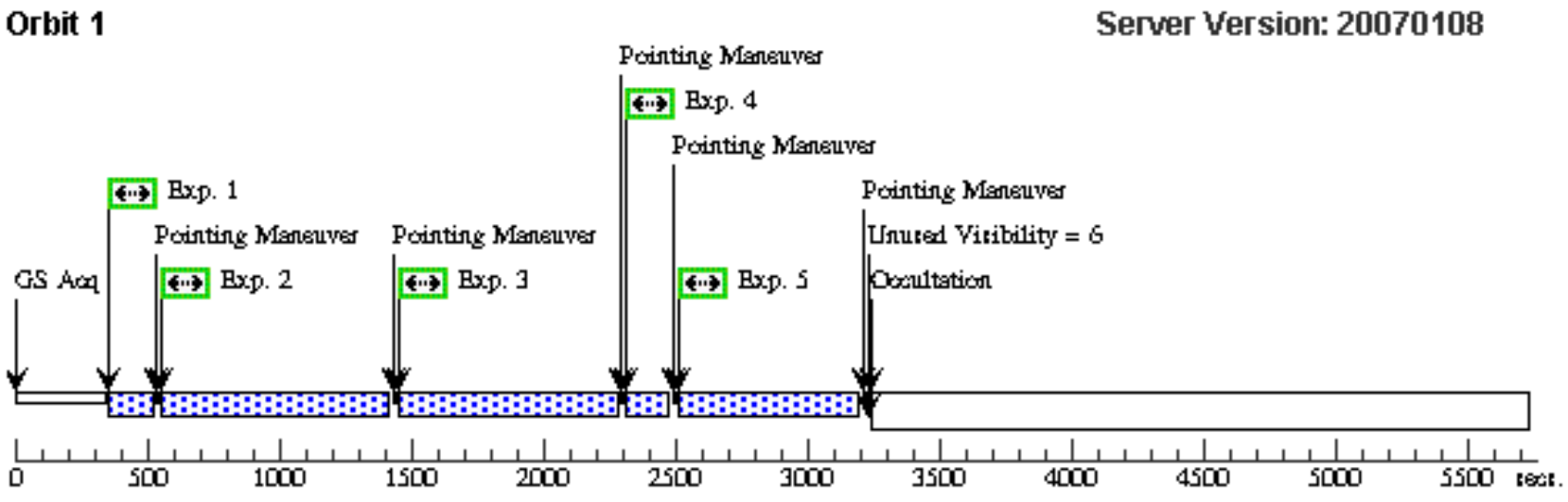
Comments: Brightest GALEX GR2 UV sources within 0.5' are:
FUV: none
NUV: m=23.5
Brightest GALEX GR1 UV sources within 0.5' are:
FUV: none
NUV: quasar target (m=22.5)

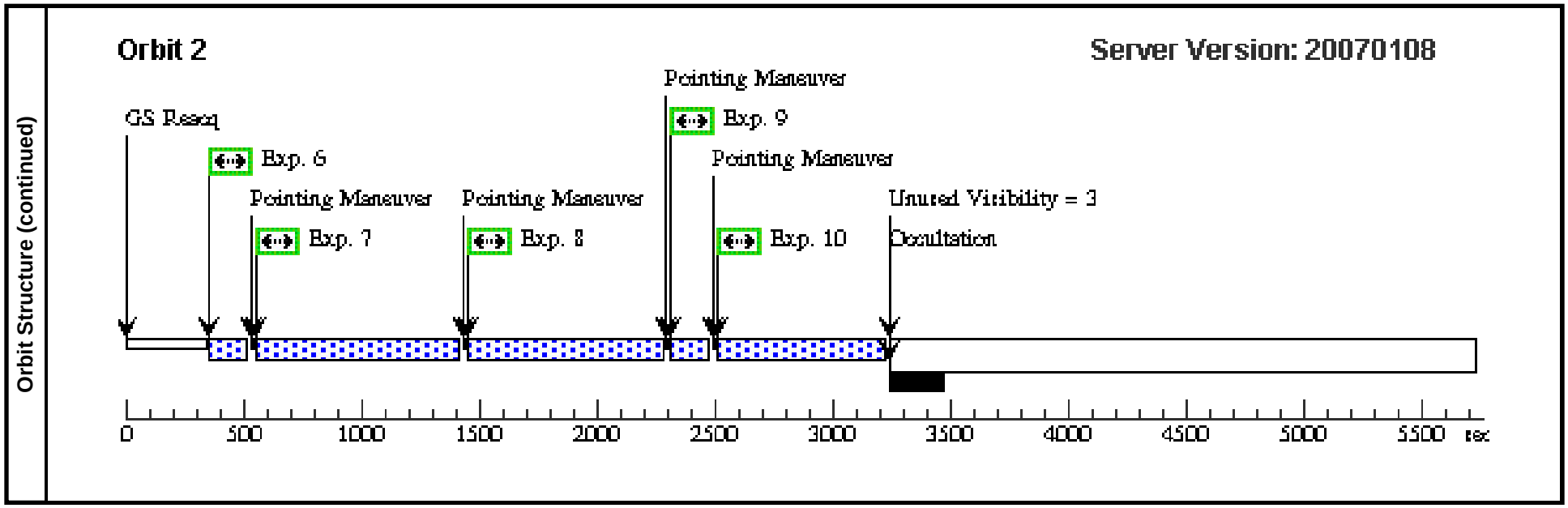
Brightest (in g) SDSS optical object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	PR130L				620.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(5) SDSSJ1001+6308	ACS/SBC, ACCUM, SBC	PR130L				650.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Vitibility = 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 06, scheduling Tue Jan 30 03:04:05 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	SDSSJ1007+4723	RA: 10 07 45.9038 (151.9412658d) Dec: +47 23 21.11 (47.38920d) Equinox: J2000		V=19.6+/-0.1 u=22.8;g=20.2;r=19.6;i=19.6;z=19.5;GALEXfuv=22.2 (GR1)	Reference Frame: ICRS

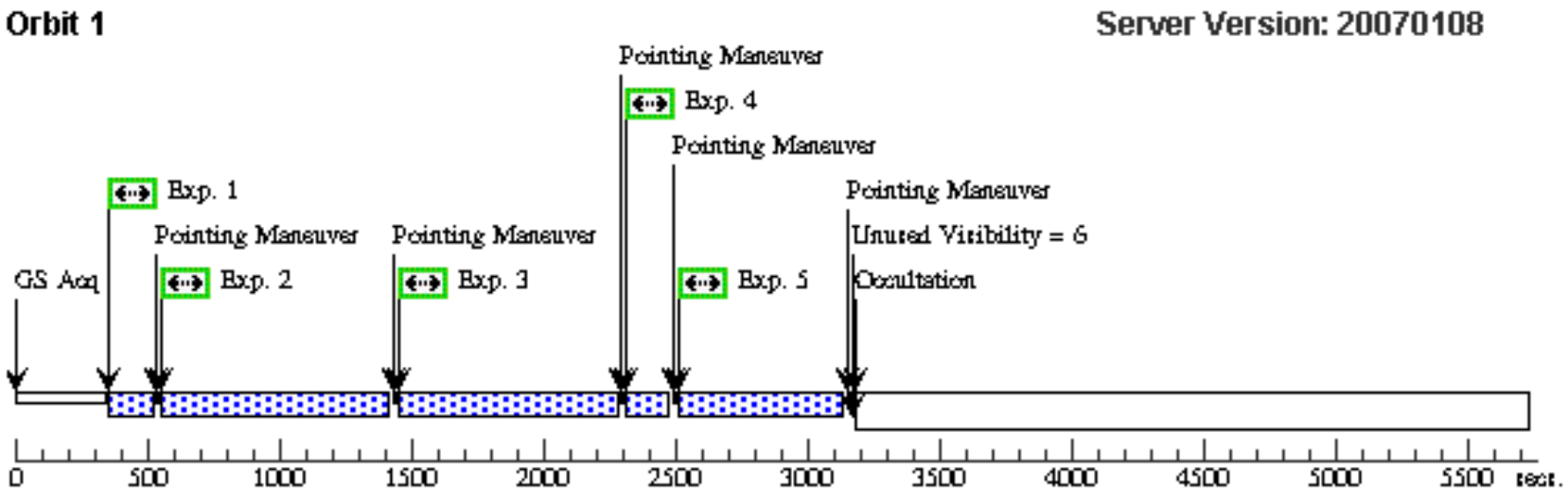
Comments: Brightest GALEX GR1 UV sources within 0.5' are:
FUV: none
NUV: quasar target (m=22.2)
(nothing brighter in GR2)

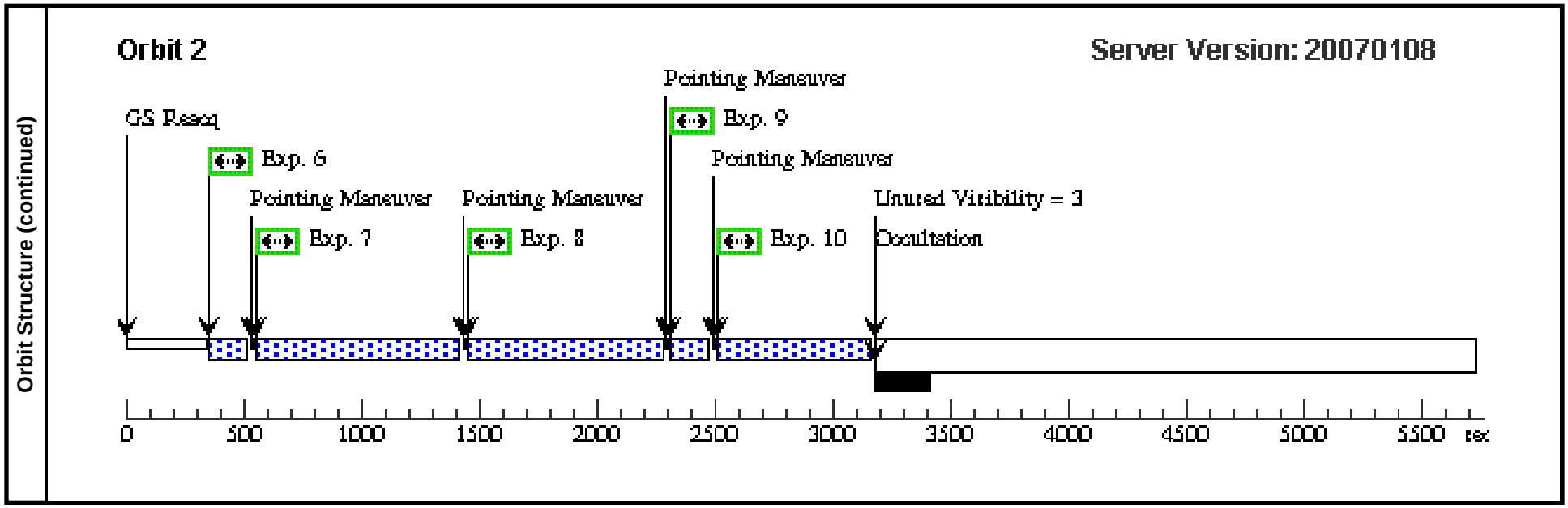
Brightest (in g) optical SDSS object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	PR130L				560.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(6) SDSSJ1007+4723	ACS/SBC, ACCUM, SBC	PR130L				590.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Visibility = 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 07, scheduling Tue Jan 30 03:04:06 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	SDSSJ1009+3917	RA: 10 09 56.0520 (152.4835500d) Dec: +39 17 18.41 (39.28845d) Equinox: J2000		V=19.5+/-0.1 u=23.8;g=20.5;r=19.5;i=19.3;z=19.1; GALEXnuv=22.1 (GR1)	Reference Frame: ICRS

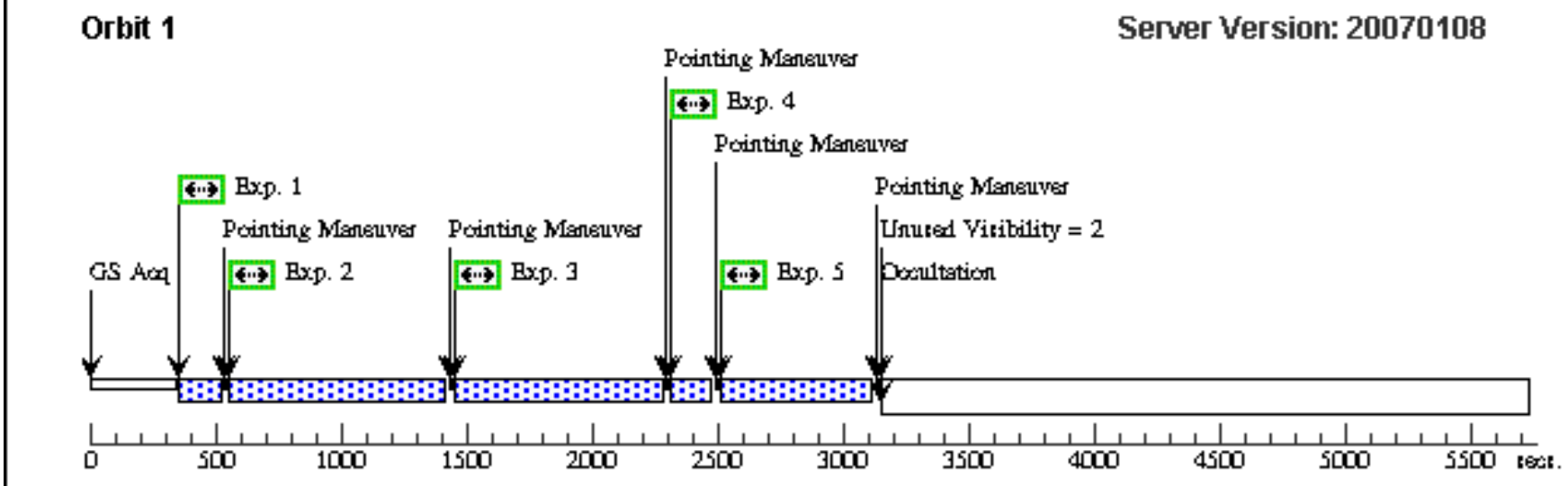
Comments: Brightest GALEX GR1 UV sources within 0.5' are:
FUV: none
NUV: quasar target (m=22.1)
(nothing brighter in GR2)

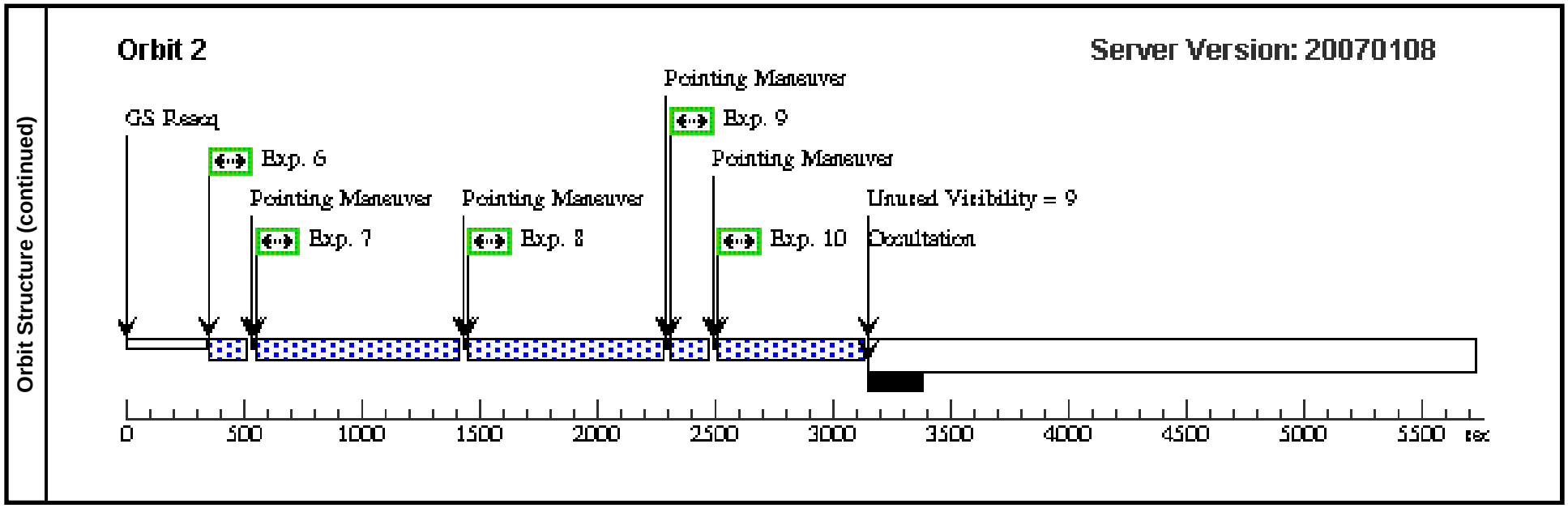
Brightest (in g) SDSS optical object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	PR130L				540.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(7) SDSSJ1009+3917	ACS/SBC, ACCUM, SBC	PR130L				560.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Visibility = 9
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 08, scheduling Tue Jan 30 03:04:07 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	SDSSJ1024+4903	RA: 10 24 8.1552 (156.0339800d) Dec: +49 03 7.60 (49.05211d) Equinox: J2000		V=19.9+/-0.1 u=23.0;g=21.1;r=19.9;i=19.8;z=19.7;GALEXnuv=21.9 (GR1)	Reference Frame: ICRS

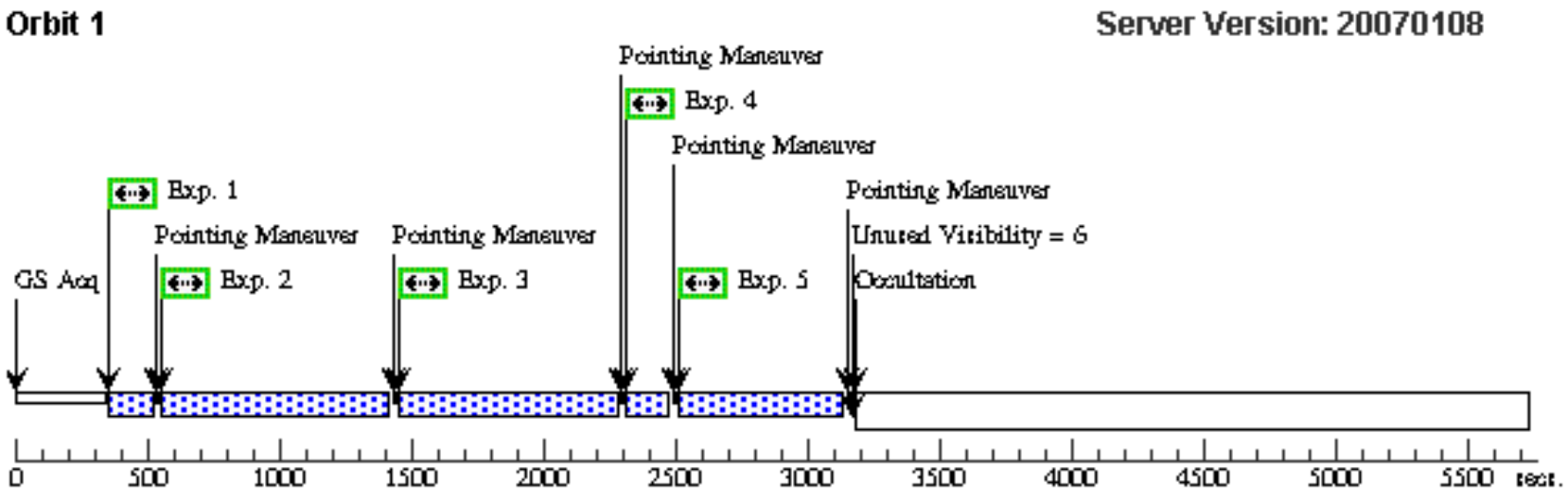
Comments: Brightest GALEX GR1 UV sources within 0.5' are:
FUV: none
NUV: quasar target (m=21.9)
(nothing brighter in GR2)

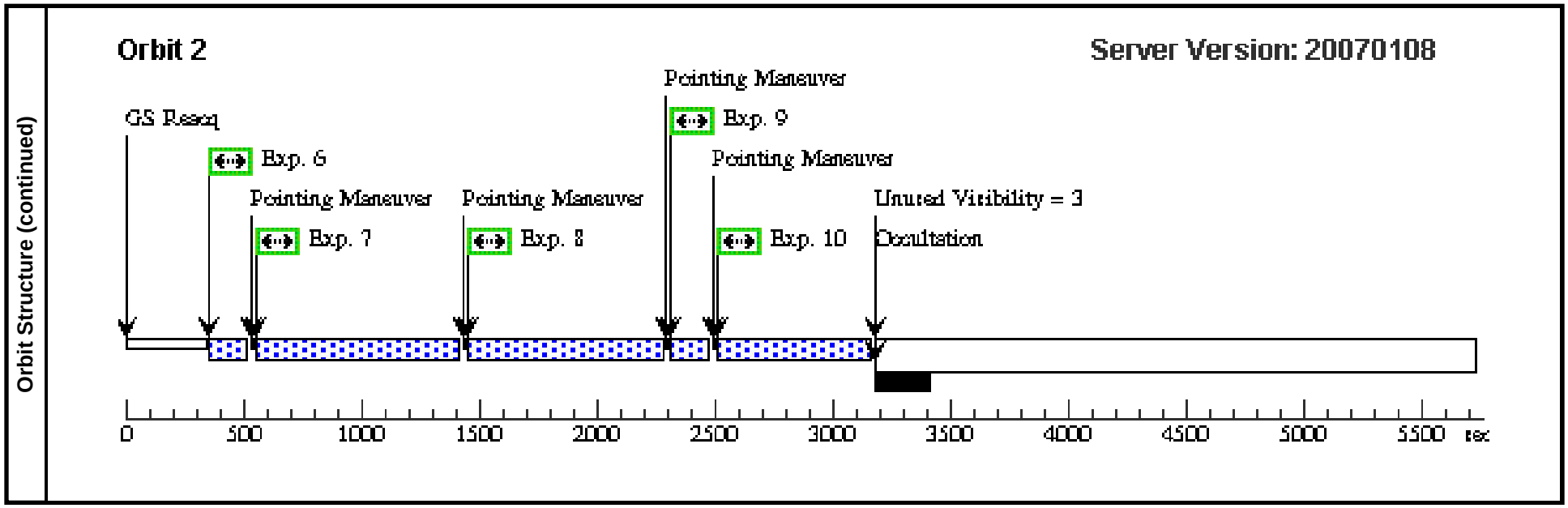
Brightest (in g) SDSS optical object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	PR130L				560.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(8) SDSSJ1024+4903	ACS/SBC, ACCUM, SBC	PR130L				590.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Visibility = 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 09, scheduling Tue Jan 30 03:04:08 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	SDSSJ1137+6237	RA: 11 37 21.7222 (174.3405092d) Dec: +62 37 7.20 (62.61867d) Equinox: J2000		V=19.3+/-0.1 u=23.3;g=20.4;r=19.3;i=19.3;z=19.4;GALEXnuv=22.3 (GR1)	Reference Frame: ICRS

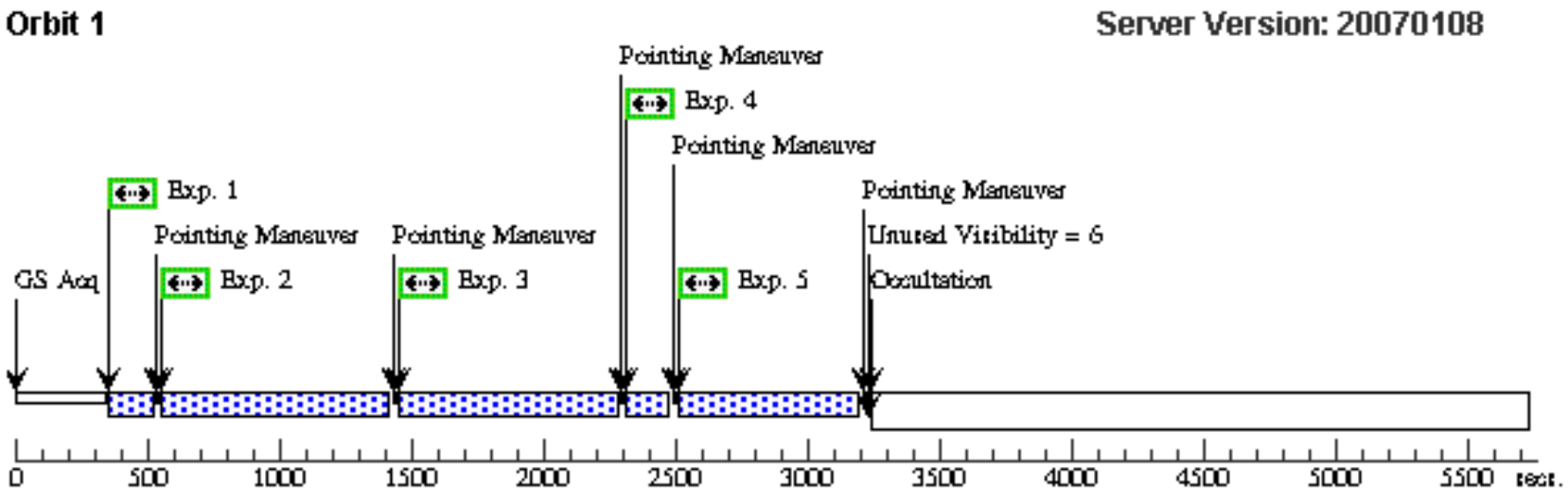
Comments: Brightest GALEX GR1 sources within 0.5' are:
FUV: none
NUV: m=21.8
(nothing brighter in GR2)

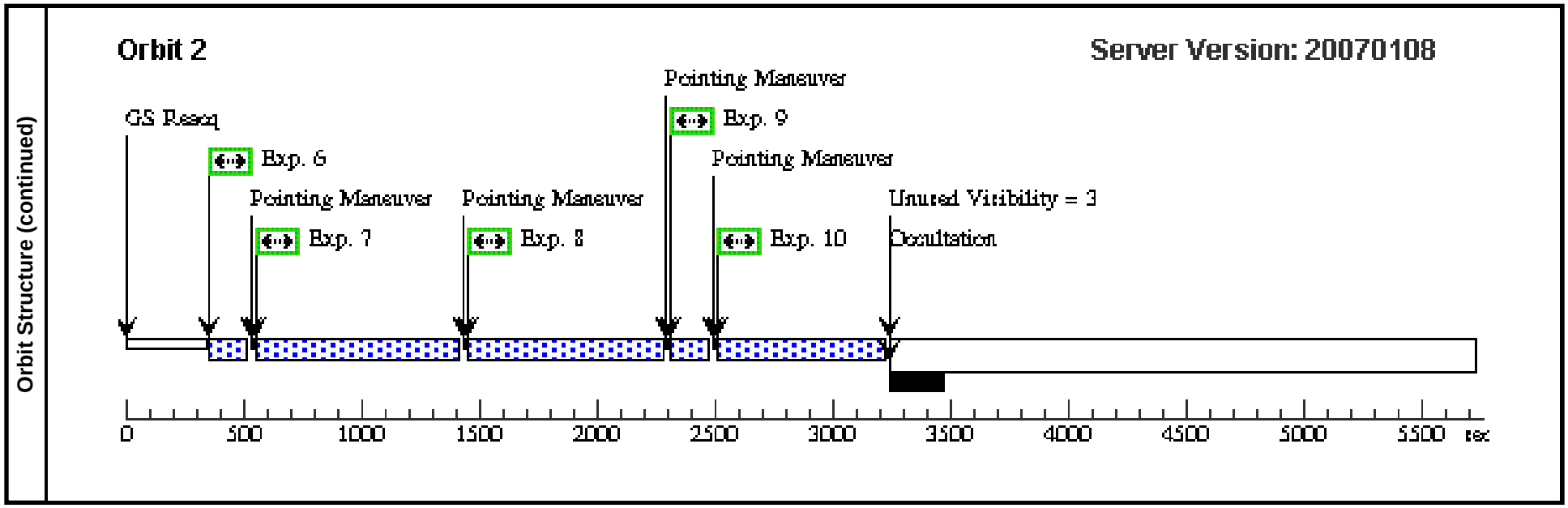
There is one brighter (in g) SDSS optical object potentially within SBC FOV.
It has u,g,r,i,z=22.73,20.21,18.76,17.88,17.46

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	PR130L				620.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(9) SDSSJ1137+6237	ACS/SBC, ACCUM, SBC	PR130L				650.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20070108
GS Reacq
Exp. 6
Pointing Maneuver
Exp. 7
Pointing Maneuver
Exp. 8
Pointing Maneuver
Exp. 9
Pointing Maneuver
Exp. 10
Unused Vitibility = 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10907, Visit 10, scheduling Tue Jan 30 03:04:09 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	SDSS1247+6730	RA: 12 47 12.9727 (191.8040529d) Dec: +67 30 10.10 (67.50281d) Equinox: J2000		V=18.6+/-0.1 u=20.4;g=18.8;r=18.6;i=18.5;z=18.4;GALEXfuv=23.5;nuv=22.5 (GR2)	Reference Frame: ICRS

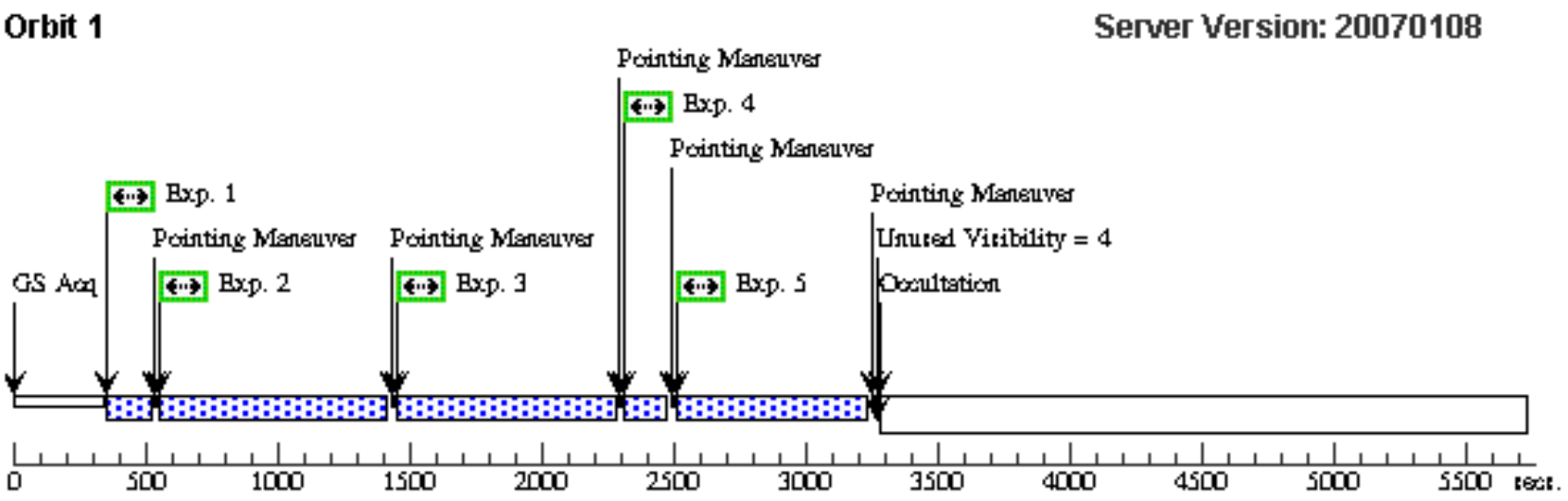
Comments: Brightest GALEX GR2 UV sources within 0.5' are:
FUV: m=22.6
NUV: m=22.4
Brightest GALEX GR1 UV sources within 0.5' are:
FUV: m=22.7
NUV: m=21.6

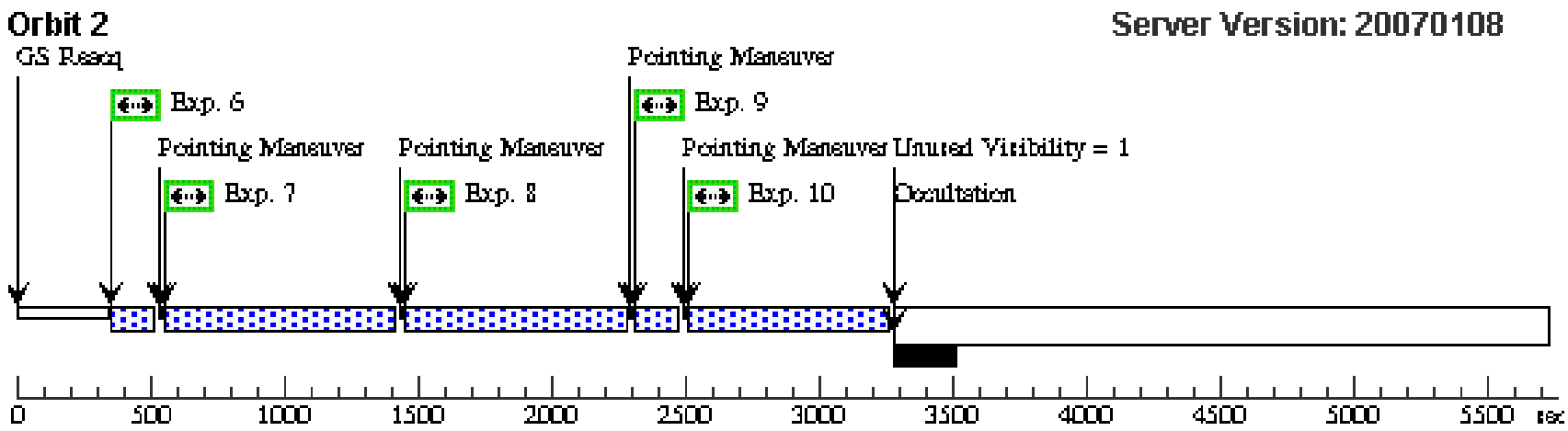
The brightest (in g) SDSS object within 0.5' is the quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	PR130L				660.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(10) SDSS1247+6730	ACS/SBC, ACCUM, SBC	PR130L				690.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure





Visit

Proposal 10907, Visit 11, pi Tue Jan 30 03:04:10 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	SDSSJ1442+0920	RA: 14 42 50.1200 (220.7088333d) Dec: +09 20 1.50 (9.33375d) Equinox: J2000		V=18.2 u=20.1, g=18.2;r=17.5;i=17.4;z=17.4;GALEXnuv=21.5 (GR2)	Reference Frame: ICRS

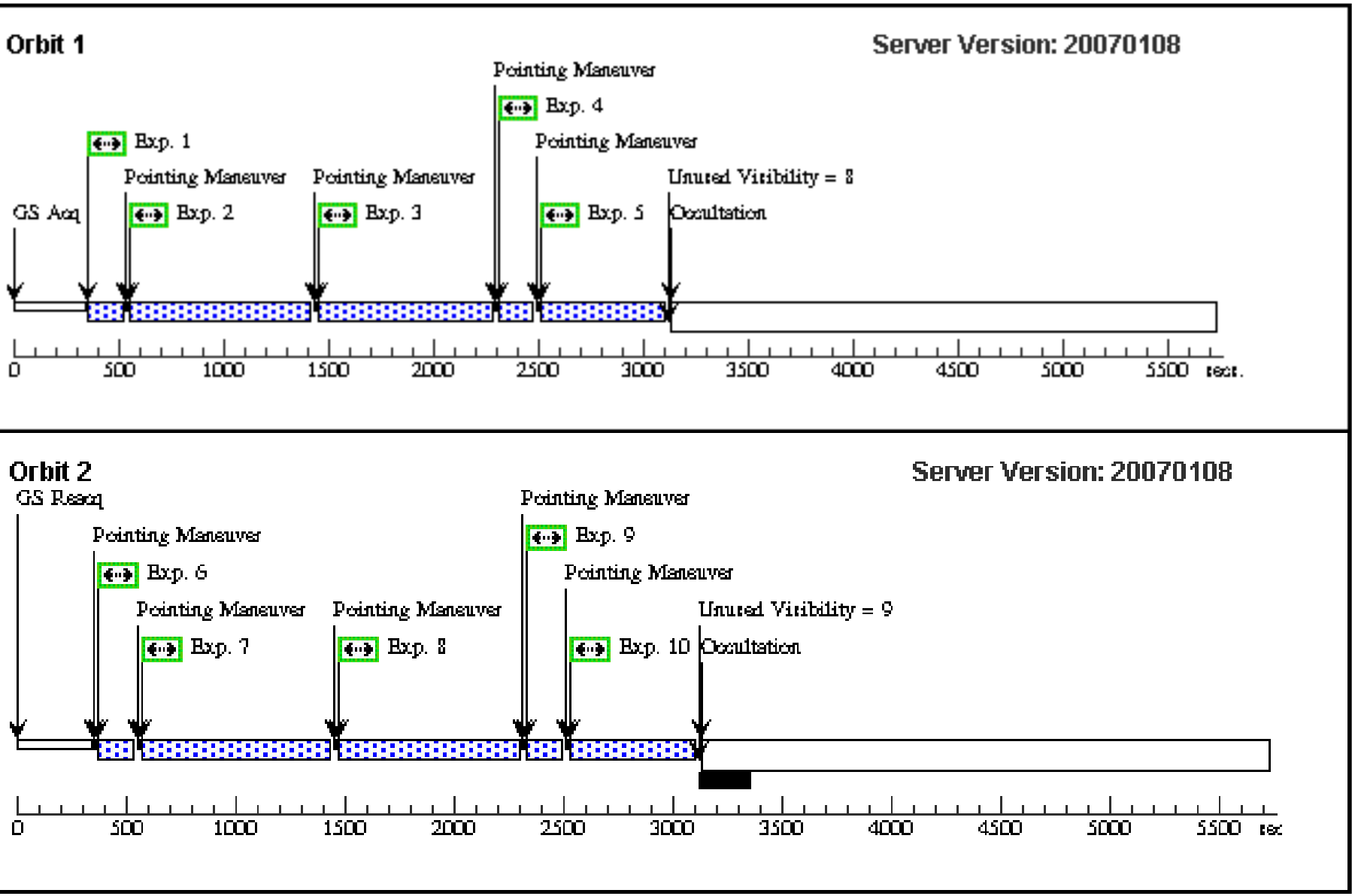
Comments: Brightest GALEX GR1 UV sources within 0.5' are:
FUV: none
NUV: quasar target (m=21.5)

Brightest (in g) SDSS optical object within 0.5' is quasar target

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	PR130L				530.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(11) SDSSJ1442+0920	ACS/SBC, ACCUM, SBC	PR130L				510.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure



Visit

Proposal 10907, Visit 12, scheduling Tue Jan 30 03:04:11 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/SBC

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	SDSSJ2251-0857	RA: 22 51 17.7953 (342.8241471d) Dec: -08 57 22.78 (-8.95633d) Equinox: J2000		V=18.7+/-0.1 u=20.2;g=18.9;r=18.7;i=18.7;z=18.7;GALEXfuv=21.6;nuv=20.6 (GR1)	Reference Frame: ICRS

Comments: Brightest GALEX GR1 UV sources within 0.5' is:
FUV: quasar target (m=21.6)
NUV: quasar target (m=20.6)
(nothing brighter in GR2)

Brightest (in g) SDSS optical object within 0.5' is quasar target.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[1]***
2		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[1]***
3		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[1]***
4		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[1]***
5		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	PR130L				530.0 Secs	
								[==>]	***[1]***
Comments: exposure 5 time can be adjusted									
6		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	F150LP				100.0 Secs	
								[==>]	***[2]***
7		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	PR130L				800.0 Secs	
								[==>]	***[2]***
8		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	PR130L		POS TARG 0.017,0		800.0 Secs	
								[==>]	***[2]***
9		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	F150LP		POS TARG 0.017,0		100.0 Secs	
								[==>]	***[2]***
10		(12) SDSSJ2251-0857	ACS/SBC, ACCUM, SBC	PR130L				510.0 Secs	
								[==>]	***[2]***
Comments: exposure 10 time may be adjusted									

Orbit Structure