11557 - The Nature of low-ionization BAL QSOs

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) SDSS-J023102.49-083141.2	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:06.0	yes
02	(2) SDSS-J023153.63-093333.5	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:11.0	yes
03	(3) SDSS-J025026.66+000903.4	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:14.0	yes
04	(4) SDSS-J083525.98+435211.2	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:18.0	yes
05	(5) SDSS-J085053.12+445122.5	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:22.0	yes
06	(6) SDSS-J085215.66+492040.8	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:25.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(7) SDSS-J085357.87+463350.6	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:28.0	yes
08	(8) SDSS-J101151.95+542942.7	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:31.0	yes
09	(9) SDSS-J102802.32+592906.6	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:34.0	yes
10	(10) SDSS-J105102.77+525049.8	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:37.0	yes
11	(11) SDSS-J105404.73+042939.3	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:41.0	yes
12	(12) SDSS-J112822.41+482309.9	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:45.0	yes
13	(13) SDSS-J114043.62+532439.0	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:48.0	yes
14	(14) SDSS-J130952.89+011950.6	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:51.0	yes
15	(15) SDSS-J140025.53-012957.0	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:56.0	yes
16	(16) SDSS-J141946.36+463424.3	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:01:59.0	yes
17	(17) SDSS-J142649.24+032517.7	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:01.0	yes
18	(18) SDSS-J142927.28+523849.5	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:05.0	yes
19	(19) SDSS-J161425.17+375210.7	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:08.0	yes
24	(19) SDSS-J161425.17+375210.7	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:11.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
20	(20) SDSS-J170010.83+395545.8	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:14.0	yes
21	(21) SDSS-J170341.82+383944.7	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:17.0	yes
22	(22) SDSS-J204333.20-001104.2	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:20.0	yes
23	(23) GRW+70D5824	WFC3/IR WFC3/UVIS	1	25-Mar-2011 21:02:27.0	yes

24 Total Orbits Used

ABSTRACT

The rare subclass of optically-selected QSOs known as low-ionization broad absorption line (LoBAL) QSOs show signs of high-velocity gas outflows and reddened continua indicative of dust obscuration. Recent studies show that galaxies hosting LoBAL QSOs tend to be ultraluminous infrared systems that are undergoing mergers, and that have dominant young (< 100 Myr) stellar populations. Such studies support the idea that LoBAL QSOs represent a short-lived phase early in the life of QSOs, when powerful AGN-driven winds are blowing away the dust and gas surrounding the QSO. If so, understanding LoBALs would be critical in the study of phenomena regulating black hole and galaxy evolution, such as AGN feedback and the early stages of nuclear accretion. These results, however, come from very small samples that may have serious selection biases. We are therefore taking a more aggressive approach by conducting a systematic multiwavelength study of a volume limited sample of LoBAL QSOs at $0.5 < z < 0.6$ drawn from SDSS. We propose to image their host galaxies in two bands using WFC3/UVIS and WFC3/IR to study the morphologies for signs of recent tidal interactions and to map their interaction and star forming histories. We will thus determine whether LoBAL QSOs are truly exclusively found in young merging systems that are likely to be in the early stages of nuclear accretion.

OBSERVING DESCRIPTION

We propose to obtain imaging observations of 22 LoBAL QSOs host galaxies using WFC3/UVIS with the F475W filter and WFC3/IR with the F125W filter. Each object will require a single orbit. In addition, we plan to spend one orbit observinng a PSF star with the same instrument configuration in order to construct a PSF model with a very high dynamic range. Therefore we request a total of 23 orbits.

The observations in F475W will cover restframe ~2500 A to ~3600 A. This region is very sensitive to the age of the stellar populations, with young populations being significantly brighter than old populations. Balmer emission lines and [O II] 3727A will be excluded from this region even for the highest z objects in our sample. Normally, one would have to worry about MgII 2800A being included in this region. However, since these objects are LoBALs, the nuclear MgII emission is much less intense than in normal QSOs.

Observations in F125W will cover restframe ~6900 to ~9300A, a region dominated by the continuum from older stellar populations. This region excludes H-alpha from even our highest z targets. These observations are particularly helpful to search for tidal tails and debris, and to determine the morphological types of the hosts.

The ratio of both images will map stellar populations and our Spitzer observations will help us quantify the star formation. Using both the morphological information and the color maps, we can recreate merging and star forming histories for these objects (see Canalizo & Stockton 2000 for a description of the technique). An obvious concern is the possibility of dust obscuration in the host galaxies, which could potentially confuse the results inferred from the color maps. We will obtain follow up Keck spectroscopy for those objects where there is ambiguity, in order to quantify the redenning and to verify the inferred stellar populations in any extended features that we find.

Our targets are visible for 54 - 58 minutes per orbit, depending on their declination. For each target, we will need six minutes for guide star acquisition. Next, we will obtain two exposures 800s to 900s each (depending on the visibility of the target) with WFC3/UVIS using the F475W filter, for a total exposure time of 1600s to 1800s. This will give us a S/N of ~5 per kpc^2 (or 0.2 arcsec^{-2}) assuming a flux of 5 x 10^{-19} ergs cm^{-2} s^{-1} A^{-1} arcsec^{-2} for the host galaxies. This value is a conservative estimation based on our Keck ESI spectra of the host galaxies of other QSOs at $z\sim0.5$. However, for regions with young stellar populations, we will achieve higher signal to noise.

Next, we will switch to WFC3/IR while the last buffer dump is occuring. We will then take a two-dither pattern with 500s exposures in the F125W filter, for a total of 1000s of integration time. This will give us a S/N~12 using similar assumptions as above. The total time needed, including overheads, will be 54 - 58 minutes, so that each object can be observed in only one orbit.

We propose to spend one orbit to obtain a deep, unsaturated stellar PSF using
both the F475W and F125W filters with a star centered on exactly the same part of the chip as all the science objects. We will obtain images of the white dwarf GRW+70D5824. This star was chosen as its B-V color of 0.09 is comparable to the average color of our QSO sample. To avoid contamination of the PSF by scattering of another nearby bright object, we carefully checked that no bright star lies within 30 arcsec. We will carry

out five exposures of different lengths at two dither positions. The 2-point dither pattern will improve the sampling of the PSF. The three exposures with lengths of 4 s, 40 s and 400 s will insure that we obtain both unsaturated images of the PSF core and deep images of the wings. From that, a composite PSF of very high dynamic range
will be created.

Our program is best suited for WFC3 because of the possibility of taking the optical and IR images with the same instrument. However, if WFC3 is not available for Cycle 17, the observations can easily be switched to ACS WFC and/or NICMOS if necessary.

Visit

Proposal 11557, Visit 01, completed Sat Mar 26 01:02:33 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 35D TO 87 D; ORIENT 135D TO 167 D; ORIENT 207D TO 220 D; ORIENT 260.0D TO 270.0 D; ORIENT 320.0D TO 342.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

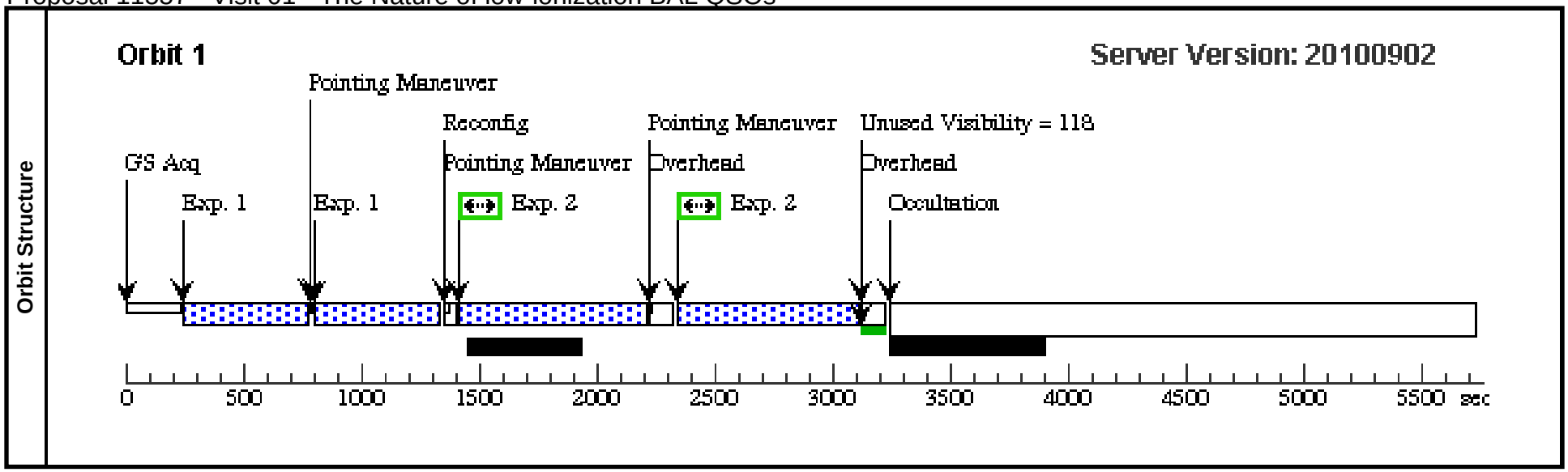
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSS-J023102.49-083141.2	RA: 02 31 2.5000 (37.7604167d) Dec: -08 31 41.28 (-8.52813d) Equinox: J2000	Redshift: 0.587	V=19.286	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) SDSS-J023102.49-083141.2	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50	GS ACQ SCENARIO SINGLE	Pattern 2, Exps 1-1 in Visit 01 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(1) SDSS-J023102.49-083141.2	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 01 (4)	768 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 118
GS Acq
Pointing Maneuver
Overhead
Overhead
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 02, completed Sat Mar 26 01:02:34 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 10.0D TO 110.0 D; ORIENT 190.0D TO 290.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

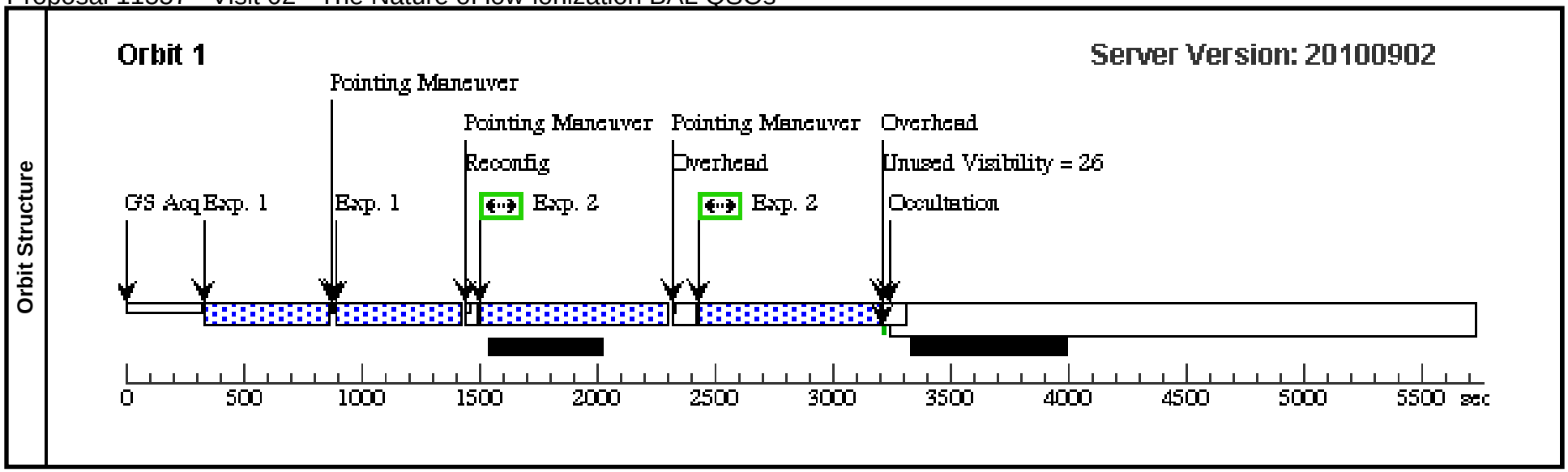
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSS-J023153.63-093333.5	RA: 02 31 53.6430 (37.9735125d) Dec: -09 33 33.57 (-9.55933d) Equinox: J2000	Redshift: 0.554	V=19.49	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) SDSS-J023153.63-093333.5	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 02 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(2) SDSS-J023153.63-093333.5	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 02 (4)	768 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Overhead
Reconfig
Overhead
Unused Visibility = 26
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 03, completed Sat Mar 26 01:02:34 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

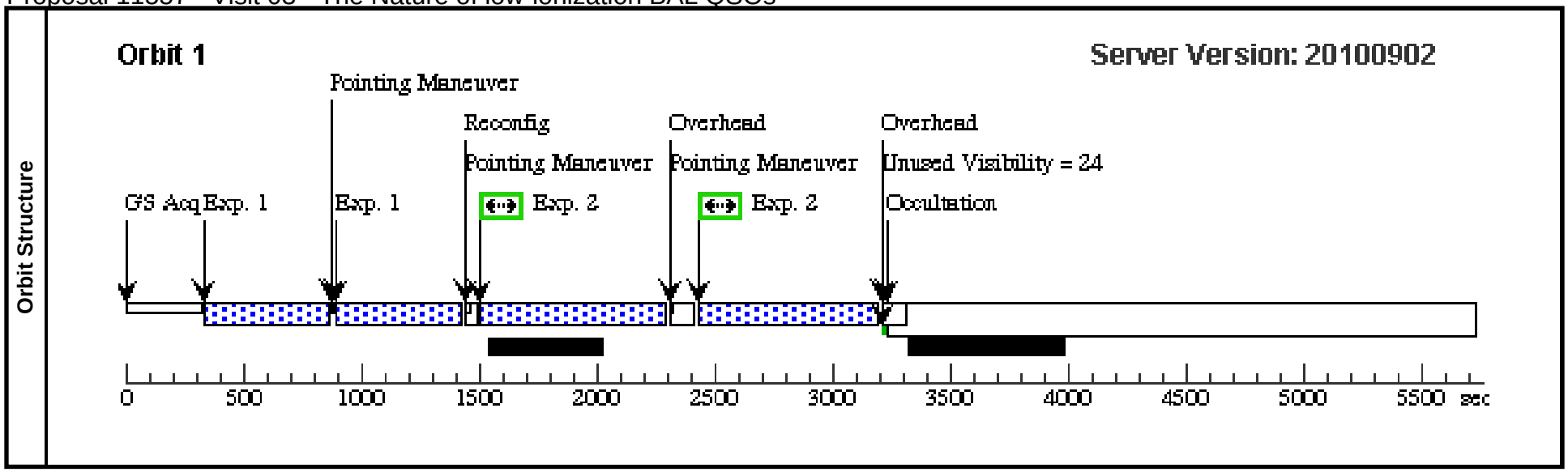
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS-J025026.66+000903.4	RA: 02 50 26.6600 (42.6110833d) Dec: +00 09 3.40 (.15094d) Equinox: J2000	Redshift: 0.596	V=20.04	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) SDSS-J025026.66+000903.4	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 03 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(3) SDSS-J025026.66+000903.4	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 03 (4)	765 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Unused Visibility = 24
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 04, completed Sat Mar 26 01:02:34 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

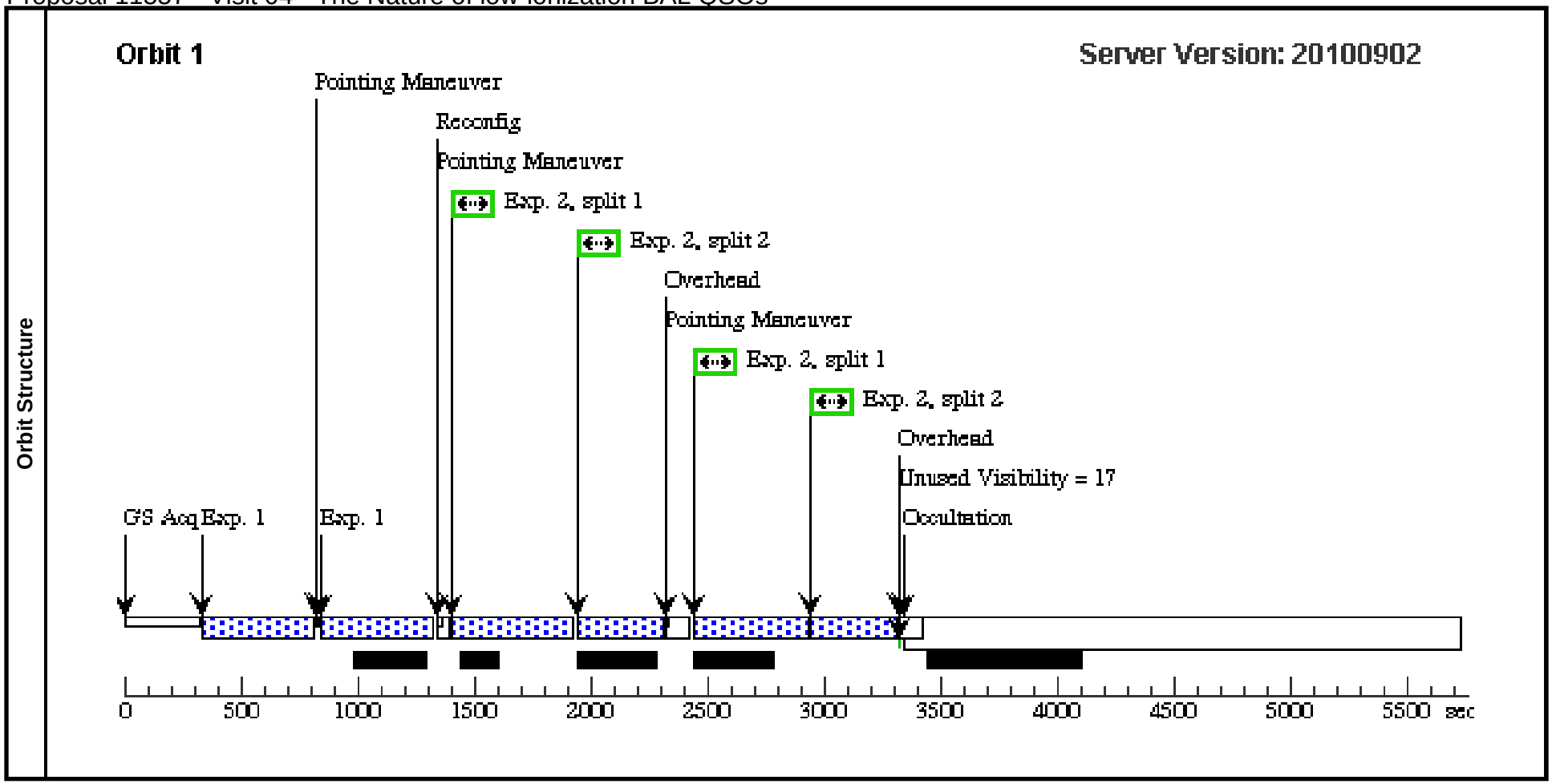
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSS-J083525.98+435211.2	RA: 08 35 25.9800 (128.8582500d) Dec: +43 52 11.30 (43.86981d) Equinox: J2000	Redshift: 0.568	V=17.59	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) SDSS-J083525.98+435211.2	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 04 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(4) SDSS-J083525.98+435211.2	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 04 (4)	743 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Overhead
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 17
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 05, completed Sat Mar 26 01:02:35 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 20.0D TO 100.0 D; ORIENT 200.0D TO 280.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

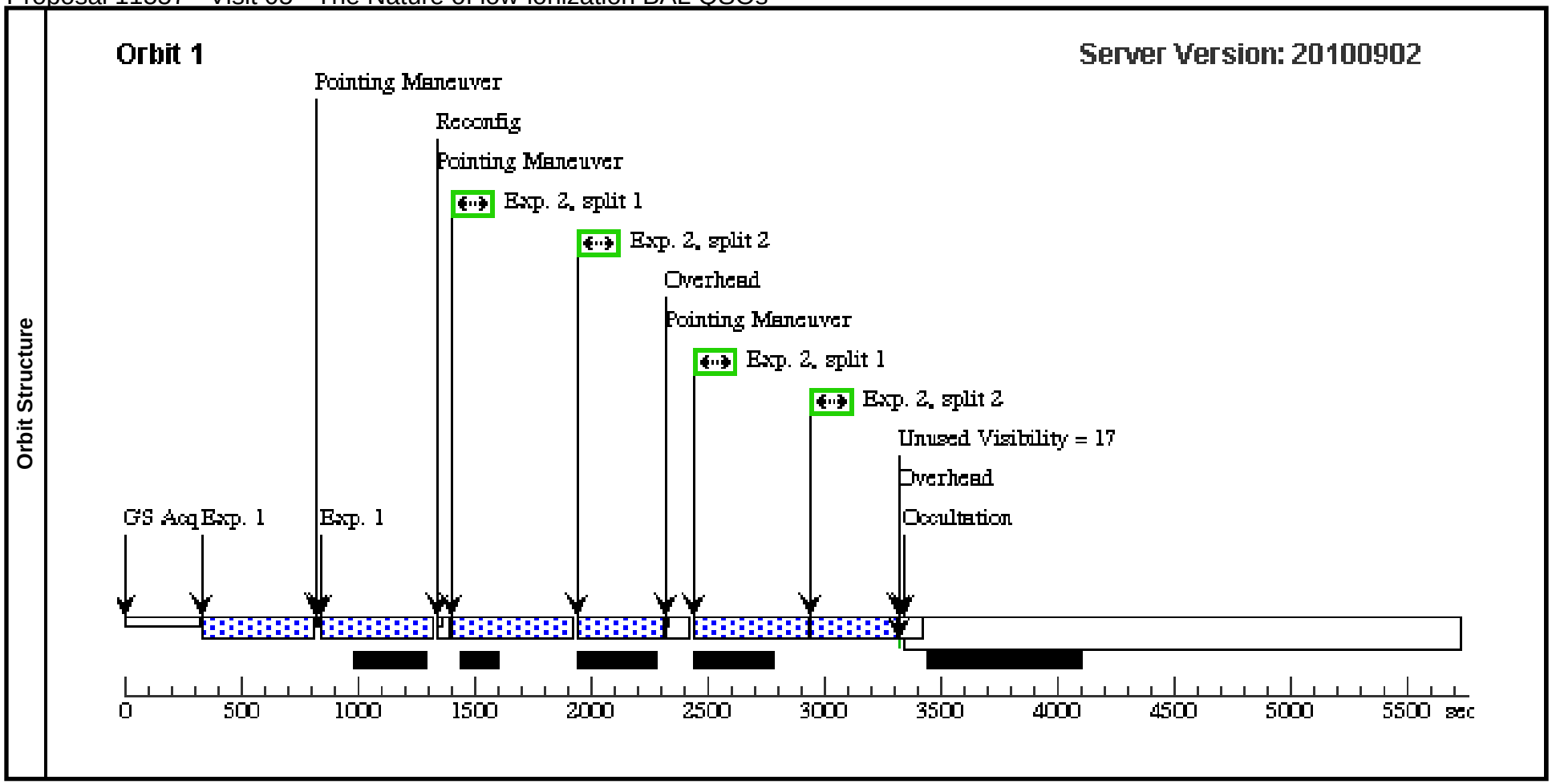
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	SDSS-J085053.12+445122.5	RA: 08 50 53.1200 (132.7213333d) Dec: +44 51 22.50 (44.85625d) Equinox: J2000	Redshift: 0.541	V=17.536	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) SDSS-J085053.12+445122.5	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 05 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(5) SDSS-J085053.12+445122.5	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 05 (4)	743 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Overhead
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Unused Visibility = 17
Overhead
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 06, completed Sat Mar 26 01:02:35 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 350.0D TO 5.0 D; ORIENT 80.0D TO 100.0 D; ORIENT 160.0D TO 185.0 D; ORIENT 262.0D TO 280.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

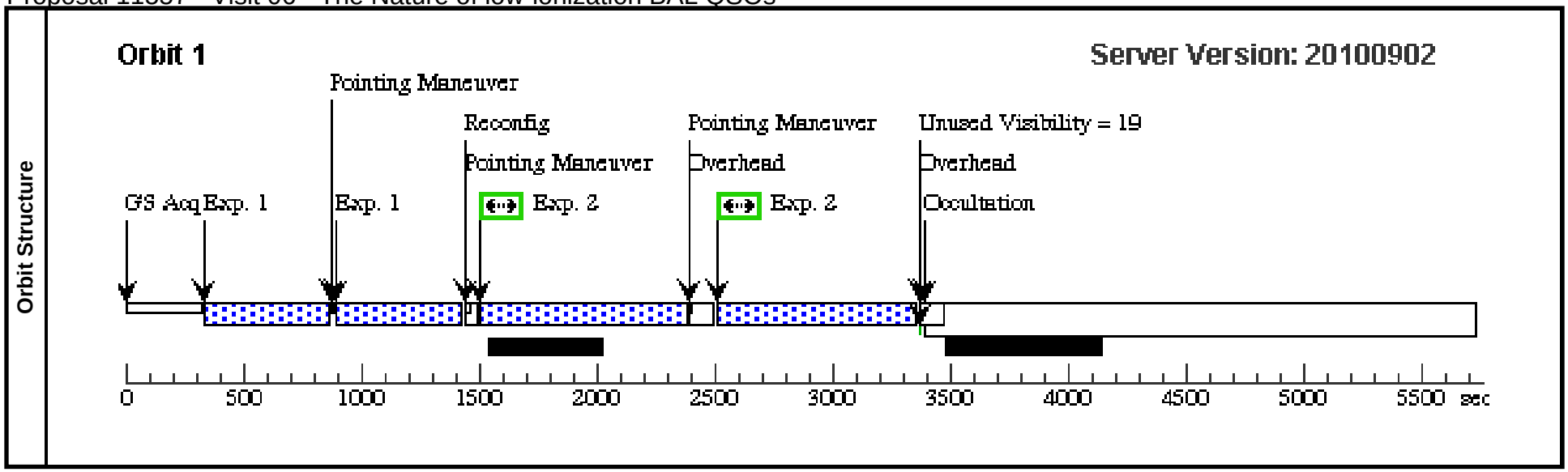
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	SDSS-J085215.66+492040.8	RA: 08 52 15.6630 (133.0652625d) Dec: +49 20 40.88 (49.34469d) Equinox: J2000	Redshift: 0.566	V=19.042	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) SDSS-J085215.66+492040.8	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 06 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(6) SDSS-J085215.66+492040.8	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 06 (4)	846 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 19
Overhead
Overhead
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 07, completed Sat Mar 26 01:02:35 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 5.0D TO 170.0 D; ORIENT 180.0D TO 345.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

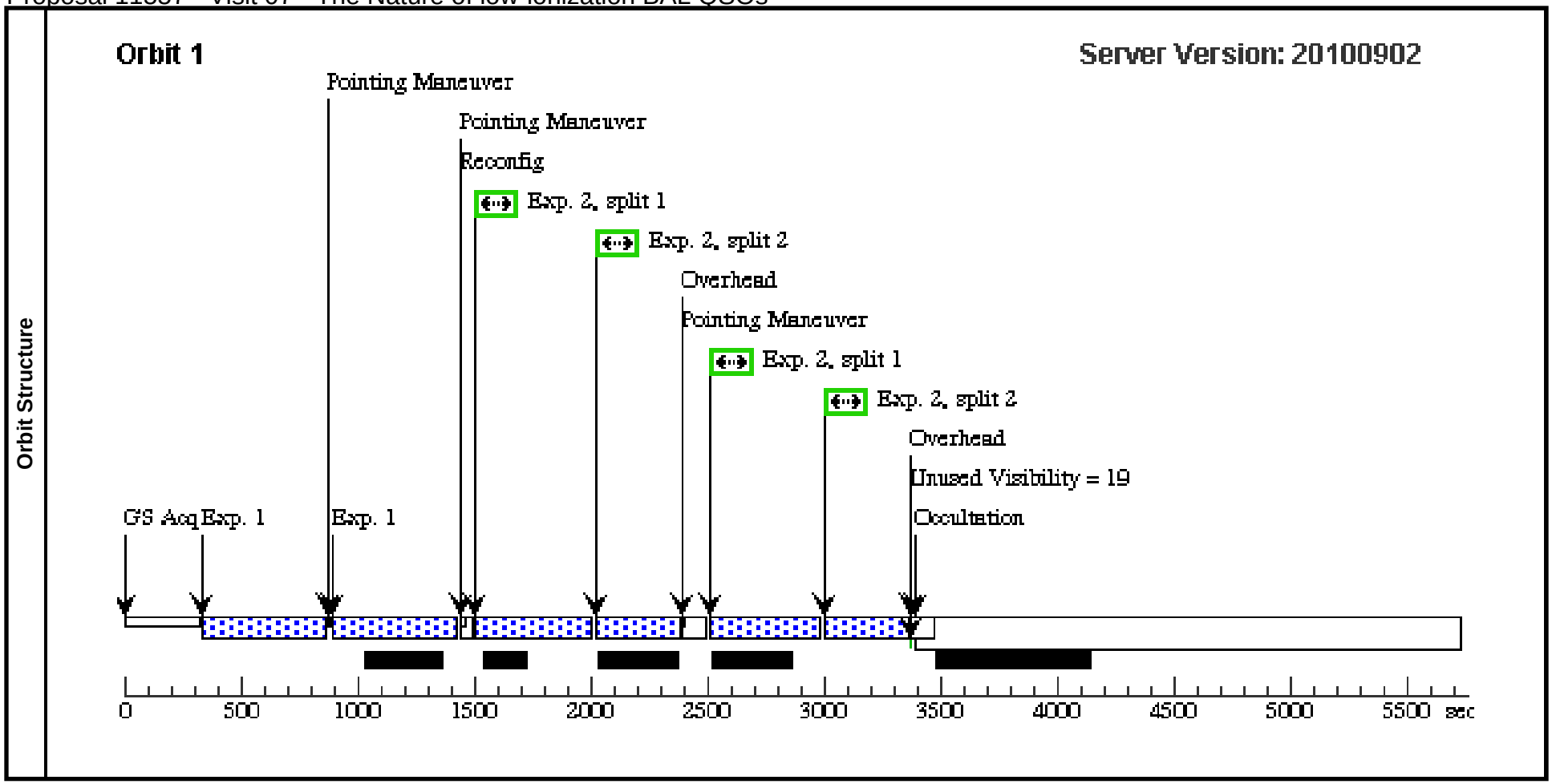
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	SDSS-J085357.87+463350.6	RA: 08 53 57.8800 (133.4911667d) Dec: +46 33 50.60 (46.56406d) Equinox: J2000	Redshift: 0.550	V=18.273	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) SDSS-J085357.87+463350.6	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 07 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(7) SDSS-J085357.87+463350.6	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 07 (4)	718 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Exp. 2, split 1
Exp. 2, split 2
Overhead
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 19
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 08, completed Sat Mar 26 01:02:36 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 15.0D TO 70.0 D; ORIENT 125.0D TO 160.0 D; ORIENT 200.0D TO 250.0 D; ORIENT 300.0D TO 350.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

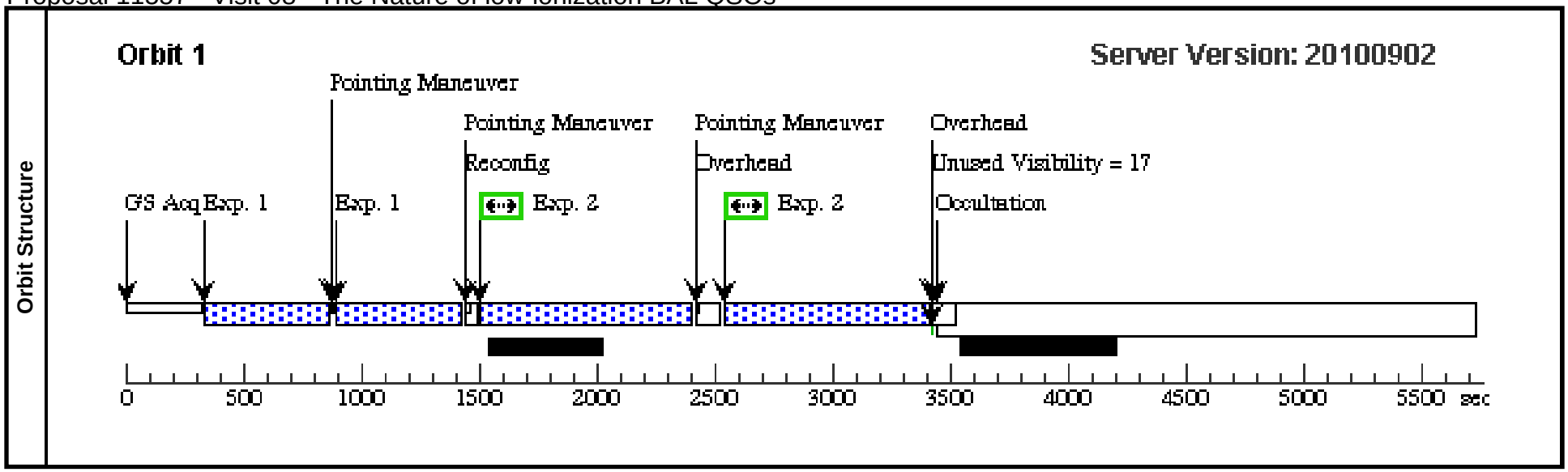
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	SDSS-J101151.95+542942.7	RA: 10 11 51.9500 (152.9664583d) Dec: +54 29 42.70 (54.49519d) Equinox: J2000	Redshift: 0.536	V=19.642	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) SDSS-J101151.95+542942.7	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 08 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(8) SDSS-J101151.95+542942.7	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 08 (4)	874 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Pointing Maneuver
Overhead
Overhead
Unused Visibility = 17
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 09, completed Sat Mar 26 01:02:36 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 345.0D TO 70.0 D; ORIENT 80.0D TO 152.0 D; ORIENT 166.0D TO 250.0 D; ORIENT 263.0D TO 333.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

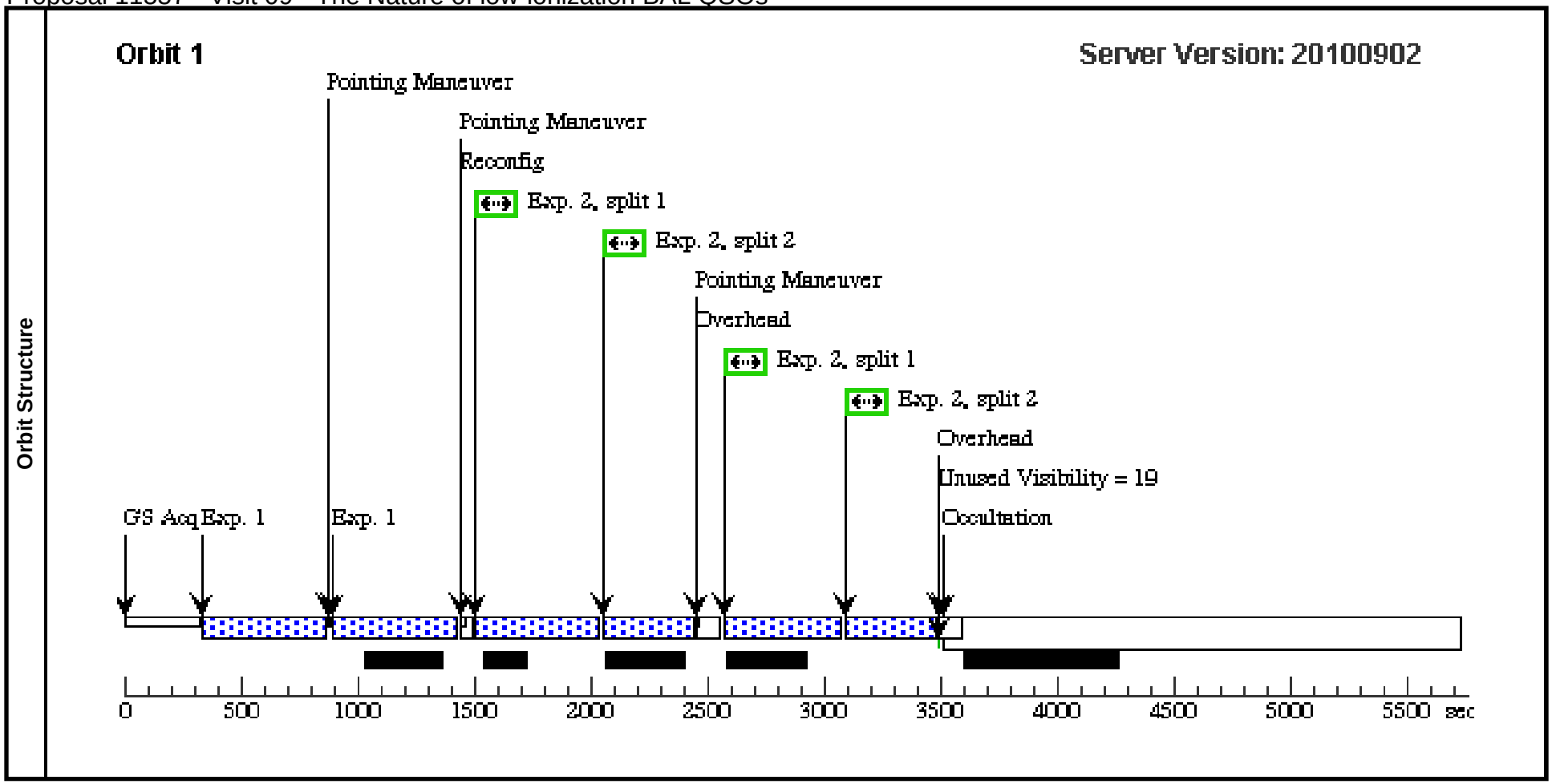
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	SDSS-J102802.32+592906.6	RA: 10 28 2.3200 (157.0096667d) Dec: +59 29 6.70 (59.48519d) Equinox: J2000	Redshift: 0.535	V=18.784	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) SDSS-J102802.32+592906.6	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50	GS ACQ SCENARIO BASE1B3	Pattern 2, Exps 1-1 in Visit 09 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(9) SDSS-J102802.32+592906.6	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 09 (4)	778 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Overhead
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 19
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 10, completed Sat Mar 26 01:02:36 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

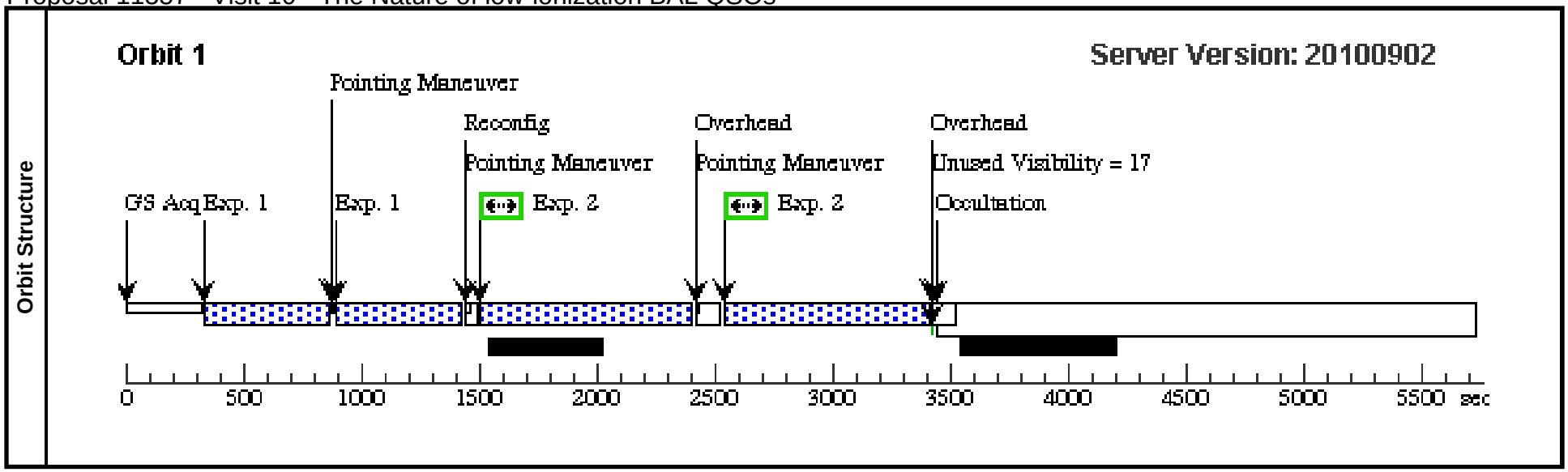
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	SDSS-J105102.77+525049.8	RA: 10 51 2.7700 (162.7615417d) Dec: +52 50 49.90 (52.84719d) Equinox: J2000	Redshift: 0.543	V=19.349	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) SDSS-J105102.77+525049.8	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 10 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(10) SDSS-J105102.77+525049.8	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 10 (4)	874 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Unused Visibility = 17
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 11, completed Sat Mar 26 01:02:36 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

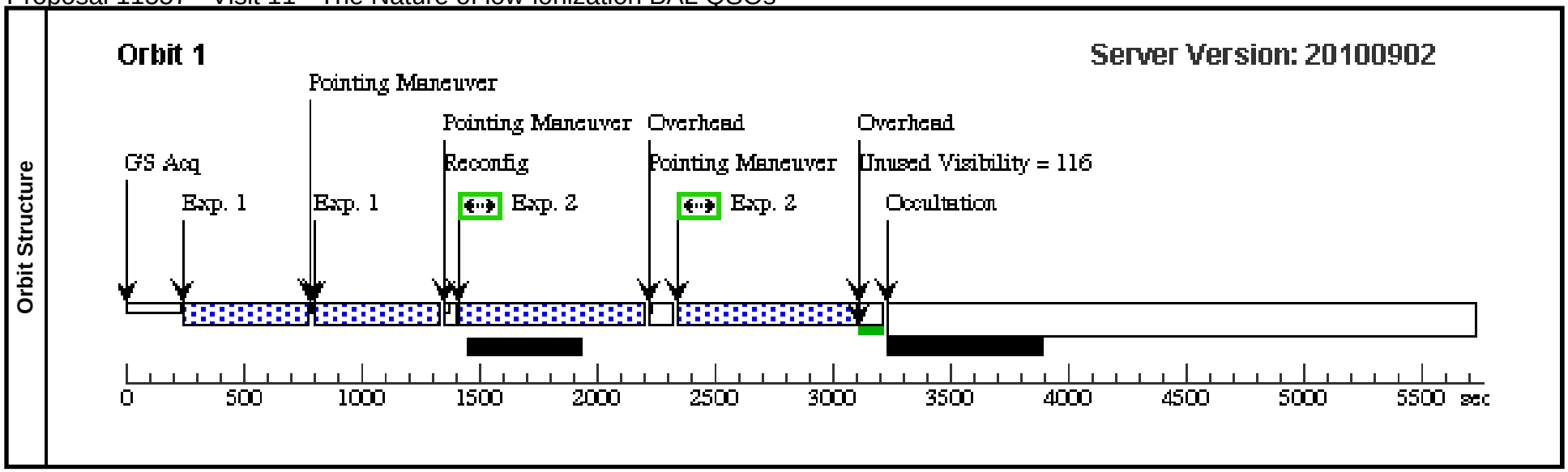
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	SDSS-J105404.73+042939.3	RA: 10 54 4.7300 (163.5197083d) Dec: +04 29 39.30 (4.49425d) Equinox: J2000	Redshift: 0.578	V=19.688	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(11) SDSS-J105404.73+042939.3	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50	GS ACQ SCENARIO SINGLE	Pattern 2, Exps 1-1 in Visit 11 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(11) SDSS-J105404.73+042939.3	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 11 (4)	765 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Overhead
Overhead
GS Acq
Reconfig
Pointing Maneuver
Unused Visibility = 116
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 12, completed Sat Mar 26 01:02:37 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

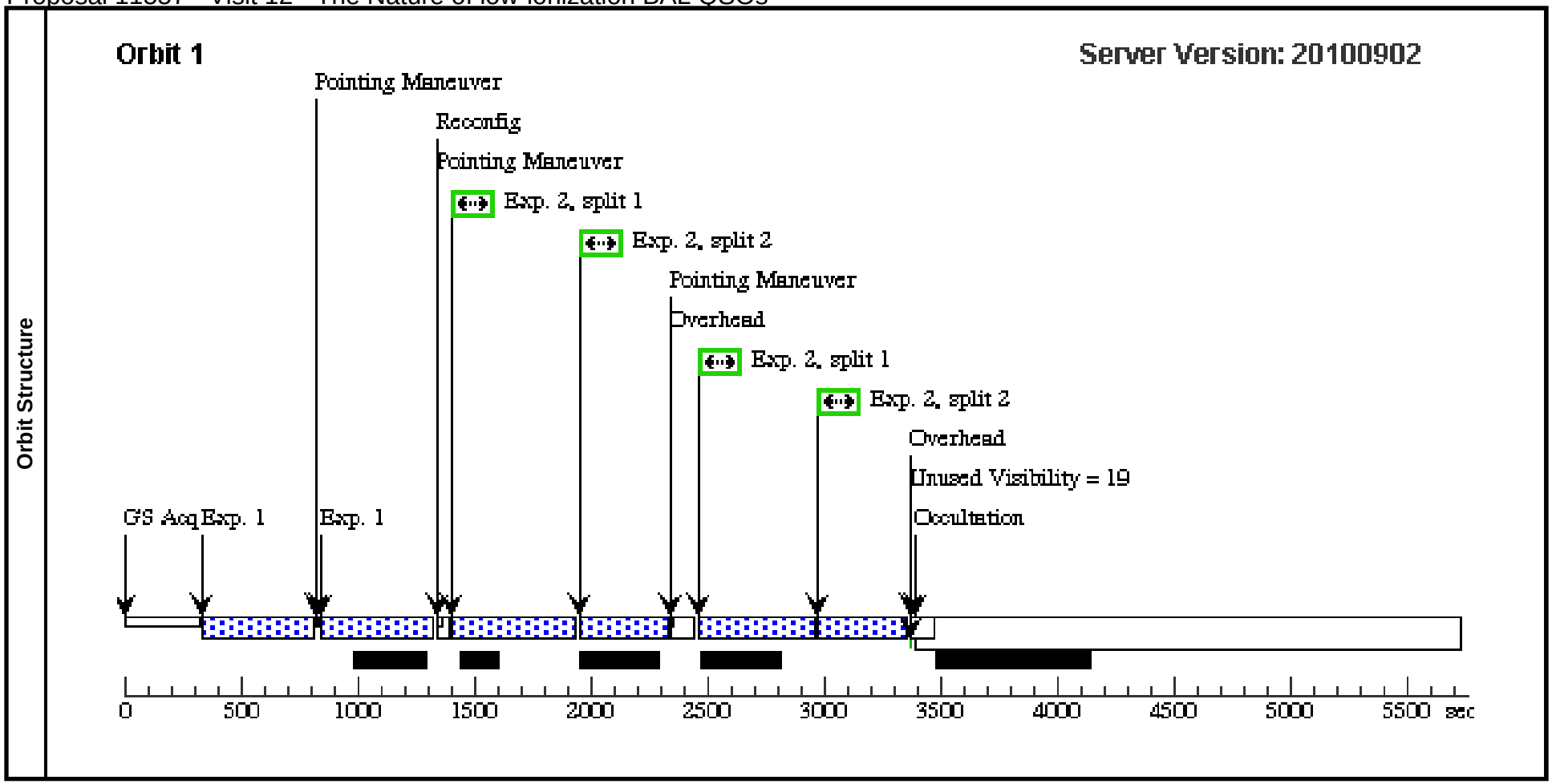
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	SDSS-J112822.41+482309.9	RA: 11 28 22.4100 (172.0933750d) Dec: +48 23 10.00 (48.38611d) Equinox: J2000	Redshift: 0.543	V=17.893	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(12) SDSS-J112822.41+482309.9	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 12 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(12) SDSS-J112822.41+482309.9	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 12 (4)	768 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Overhead
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 19
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 13, completed Sat Mar 26 01:02:37 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

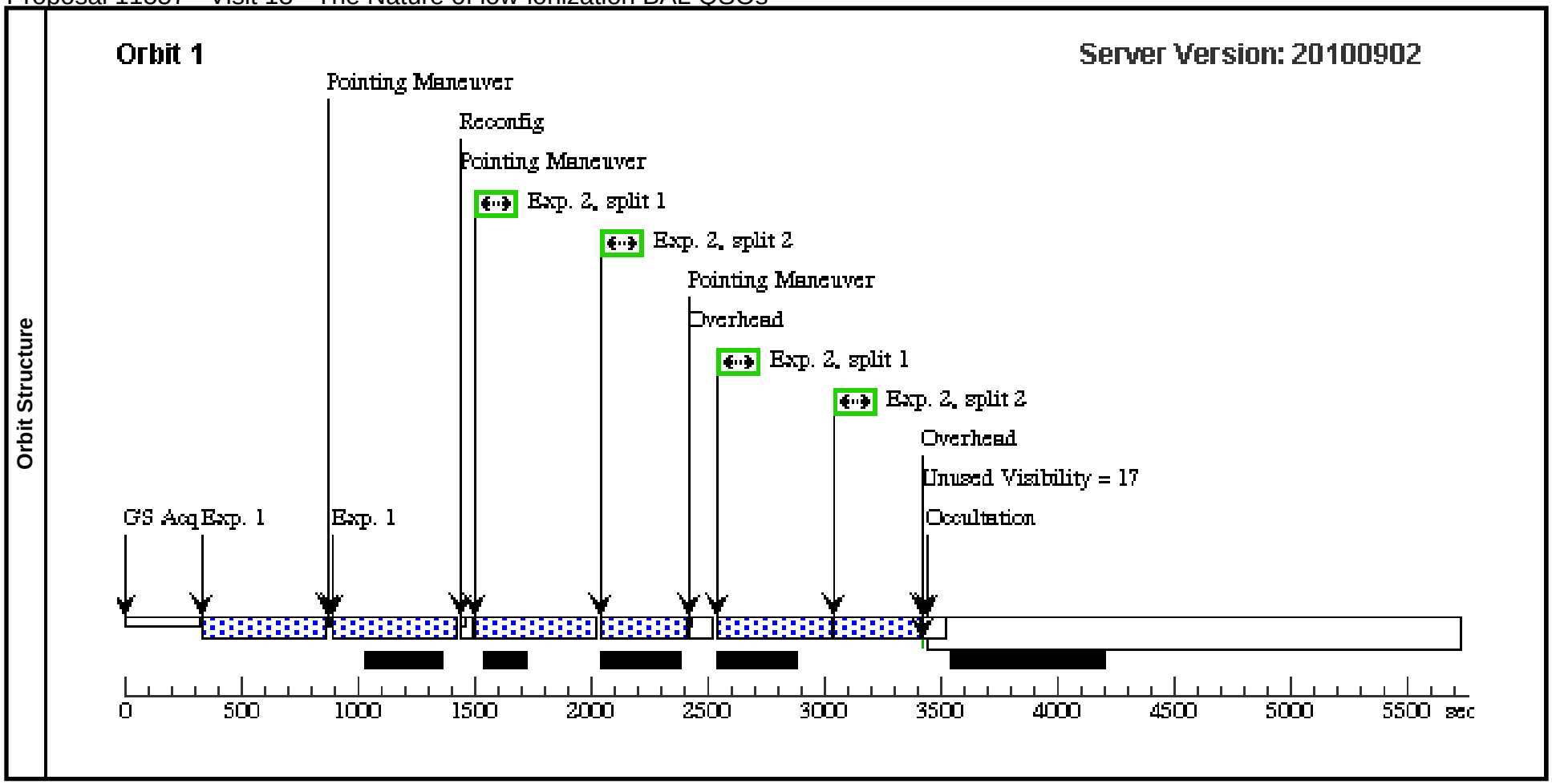
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	SDSS-J114043.62+532439.0	RA: 11 40 43.6200 (175.1817500d) Dec: +53 24 39.00 (53.41083d) Equinox: J2000	Redshift: 0.530	V=18.357	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(13) SDSS-J114043.62+532439.0	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 13 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(13) SDSS-J114043.62+532439.0	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 13 (4)	746 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit 1
Server Version: 20100902
Orbit Structure
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Overhead
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 17
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 14, completed Sat Mar 26 01:02:37 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 305.0D TO 6.0 D; ORIENT 47.0D TO 87.0 D; ORIENT 123.0D TO 190.0 D; ORIENT 227.0D TO 267.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

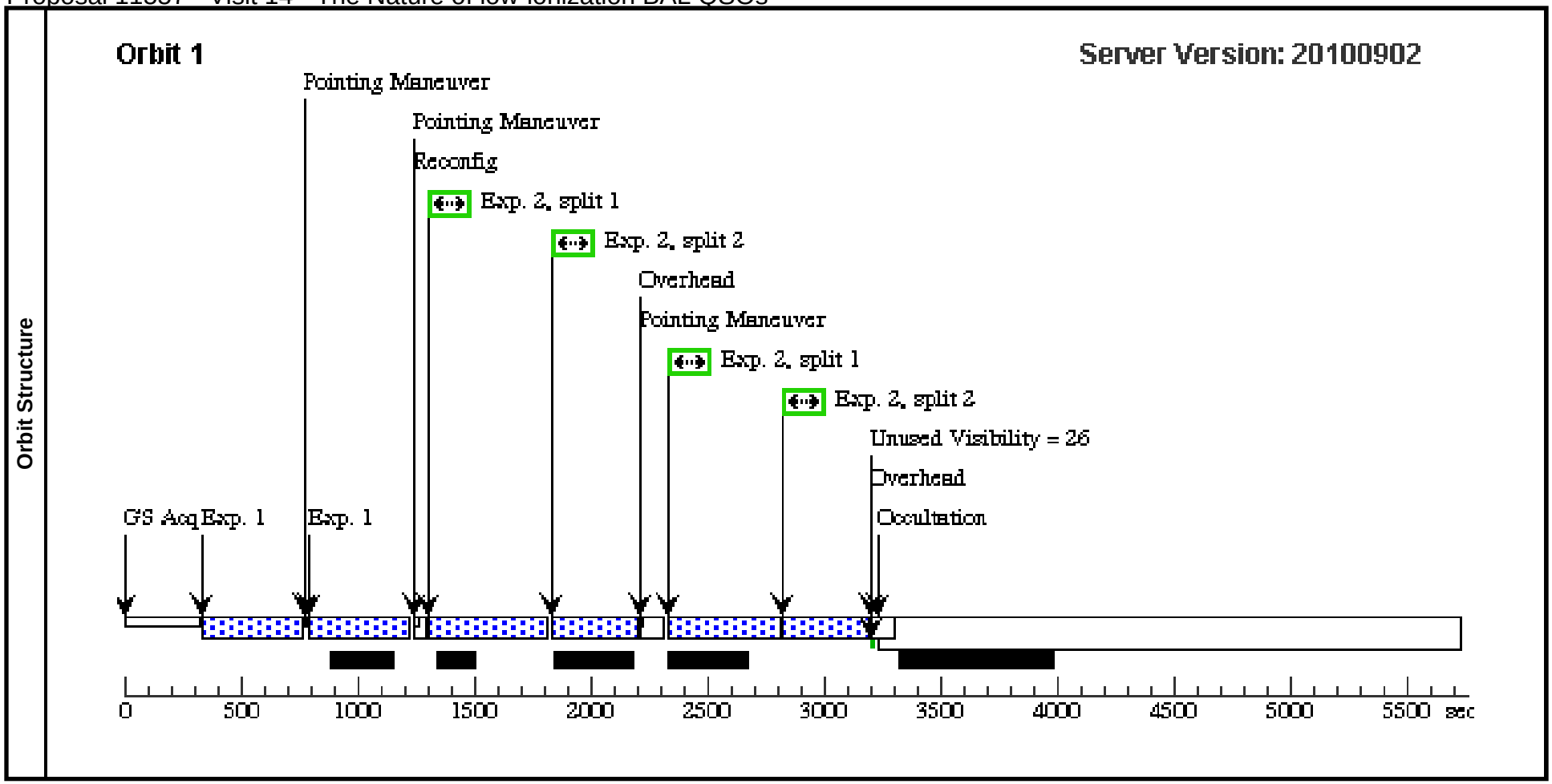
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	SDSS-J130952.89+011950.6	RA: 13 09 52.8900 (197.4703750d) Dec: +01 19 50.60 (1.33072d) Equinox: J2000	Redshift: 0.547	V=17.6	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) SDSS-J130952.89+011950.6	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=9; SAMP-SEQ=SPARS50	GS ACQ SCENARIO BASE1B3	Pattern 2, Exps 1-1 in Visit 14 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(14) SDSS-J130952.89+011950.6	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 14 (4)	736 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Exp. 2, split 1
Exp. 2, split 2
Overhead
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Unused Visibility = 26
Overhead
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 15, completed Sat Mar 26 01:02:37 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 95.0D TO 125.0 D; ORIENT 173.0D TO 230.0 D; ORIENT 276.0D TO 310.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

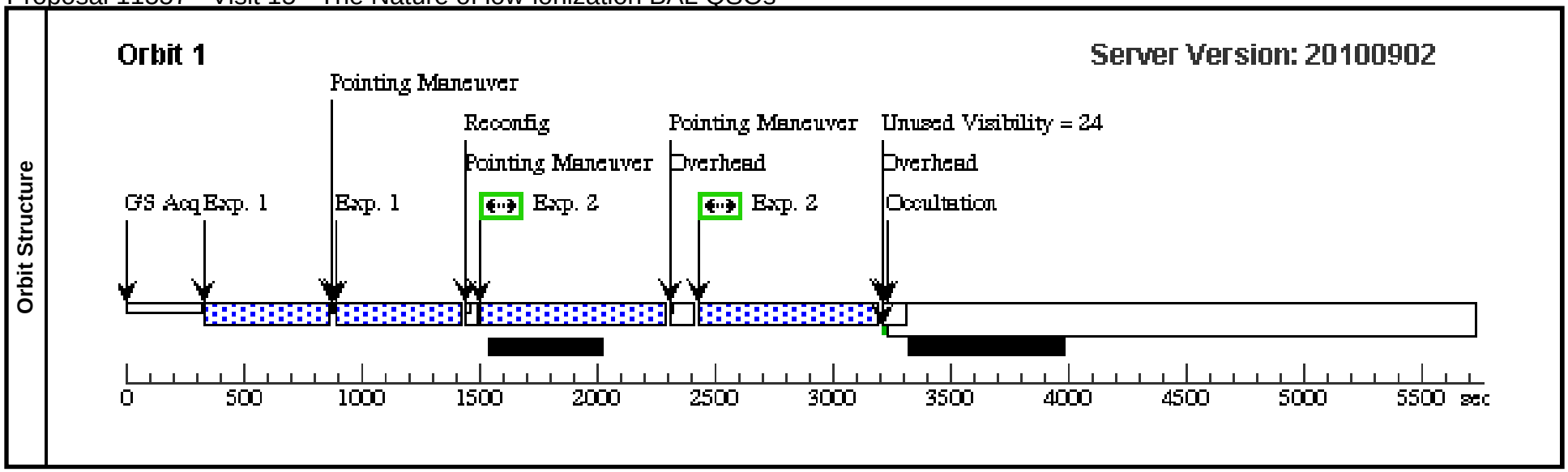
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	SDSS-J140025.53-012957.0	RA: 14 00 25.5400 (210.1064167d) Dec: -01 29 57.00 (-1.49917d) Equinox: J2000	Redshift: 0.584	V=18.678	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(15) SDSS-J140025.53-012957.0	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 15 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(15) SDSS-J140025.53-012957.0	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 15 (4)	765 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 24
Overhead
Overhead
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 16, completed Sat Mar 26 01:02:38 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

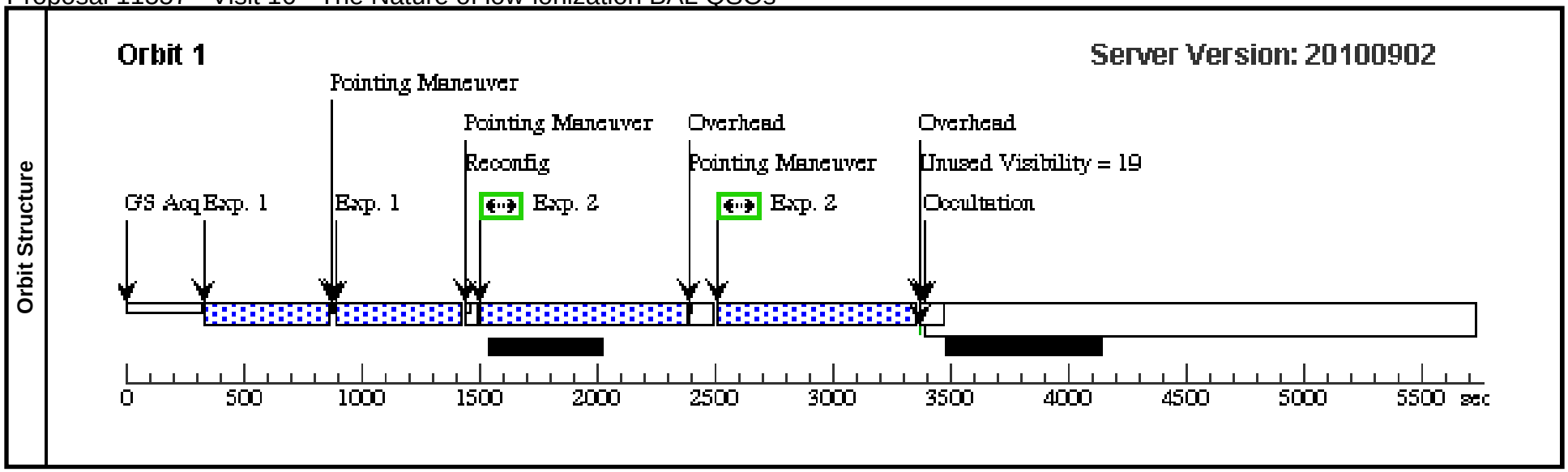
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(16)	SDSS-J141946.36+463424.3	RA: 14 19 46.3700 (214.9432083d) Dec: +46 34 24.30 (46.57342d) Equinox: J2000	Redshift: 0.546	V=20.45	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(16) SDSS-J141946.36+463424.3	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 16 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(16) SDSS-J141946.36+463424.3	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 16 (4)	846 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Overhead
Pointing Maneuver
Overhead
Unused Visibility = 19
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 17, completed Sat Mar 26 01:02:38 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 360.0D TO 120.0 D; ORIENT 160D TO 300.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

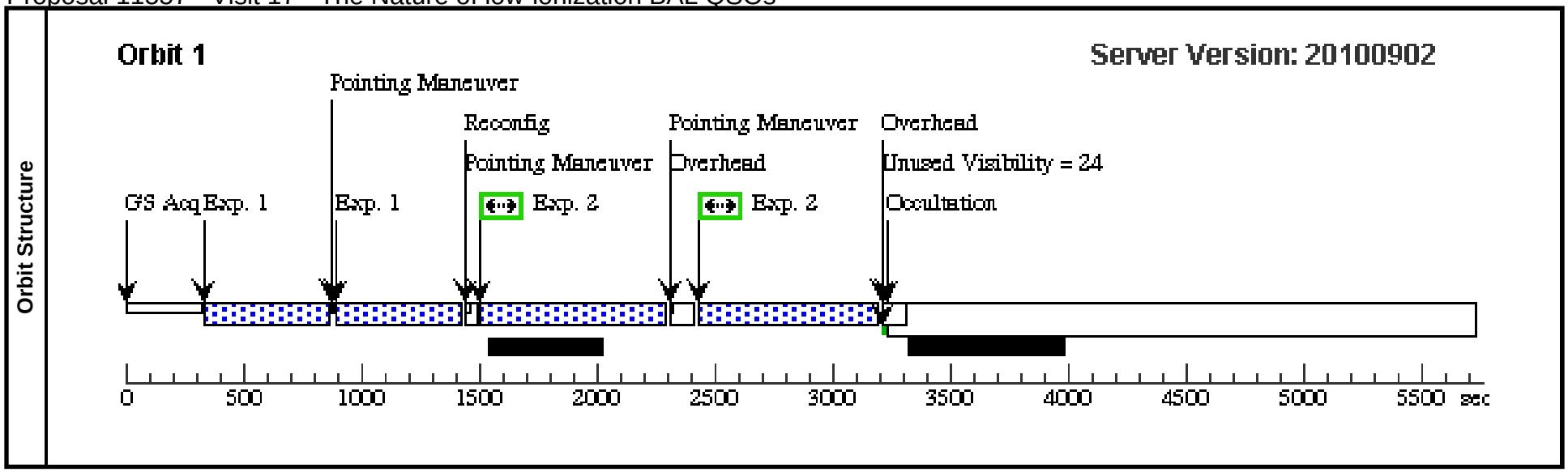
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(17)	SDSS-J142649.24+032517.7	RA: 14 26 49.2430 (216.7051792d) Dec: +03 25 17.71 (3.42159d) Equinox: J2000	Redshift: 0.530	V=18.53	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(17) SDSS-J142649.24+032517.7	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 17 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(17) SDSS-J142649.24+032517.7	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 17 (4)	765 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Pointing Maneuver
Overhead
Overhead
Unused Visibility = 24
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 18, completed Sat Mar 26 01:02:38 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 115.0D TO 140.0 D; ORIENT 220.0D TO 255.0 D; ORIENT 295.0D TO 317.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

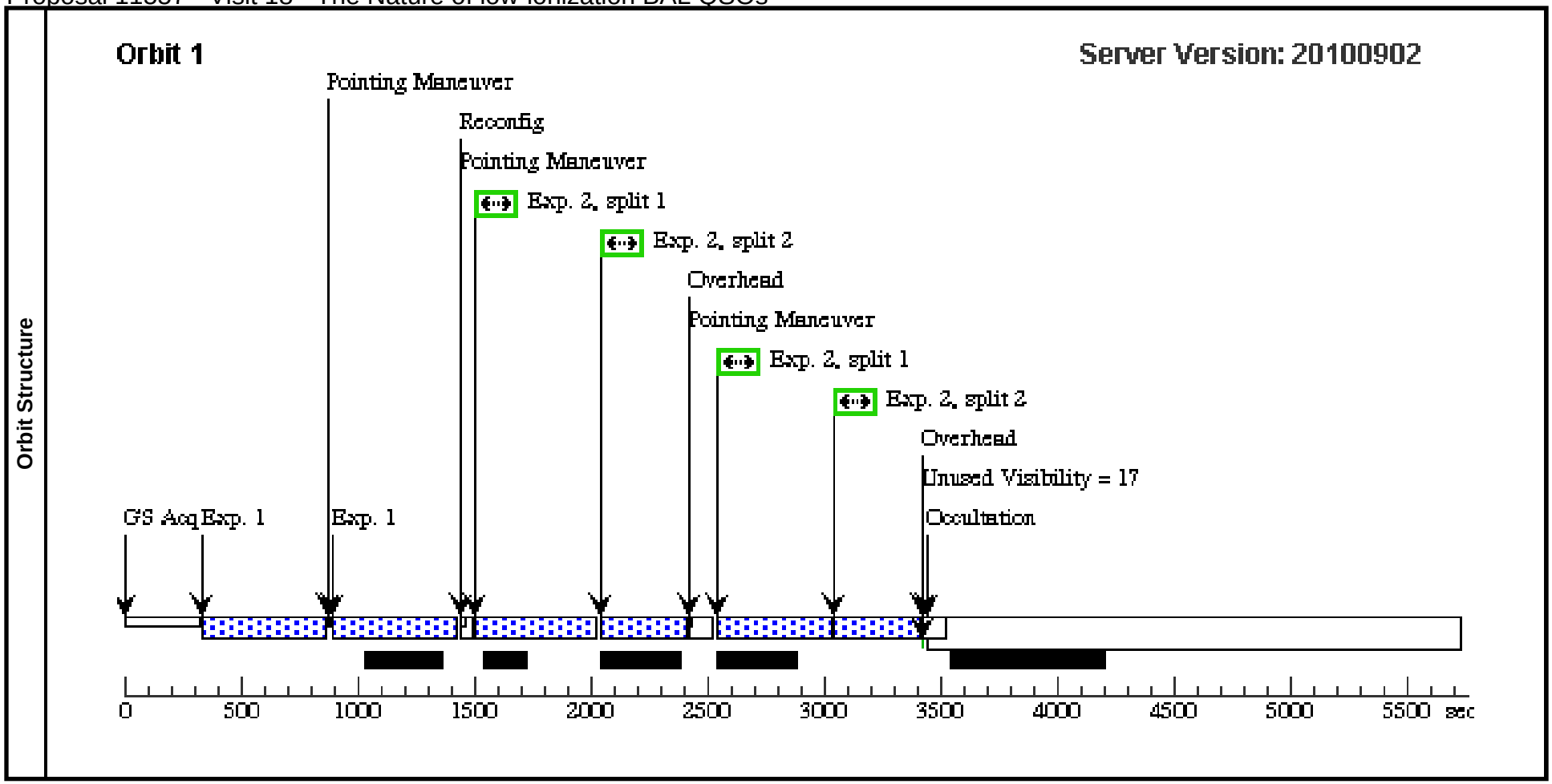
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(18)	SDSS-J142927.28+523849.5	RA: 14 29 27.2800 (217.3636667d) Dec: +52 38 49.50 (52.64708d) Equinox: J2000	Redshift: 0.594	V=17.594	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(18) SDSS-J142927.28+523849.5	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 18 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(18) SDSS-J142927.28+523849.5	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 18 (4)	746 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit 1
Server Version: 20100902
Orbit Structure
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Overhead
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 17
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 19, completed Sat Mar 26 01:02:38 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 50.0D TO 120.0 D; ORIENT 230.0D TO 300.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

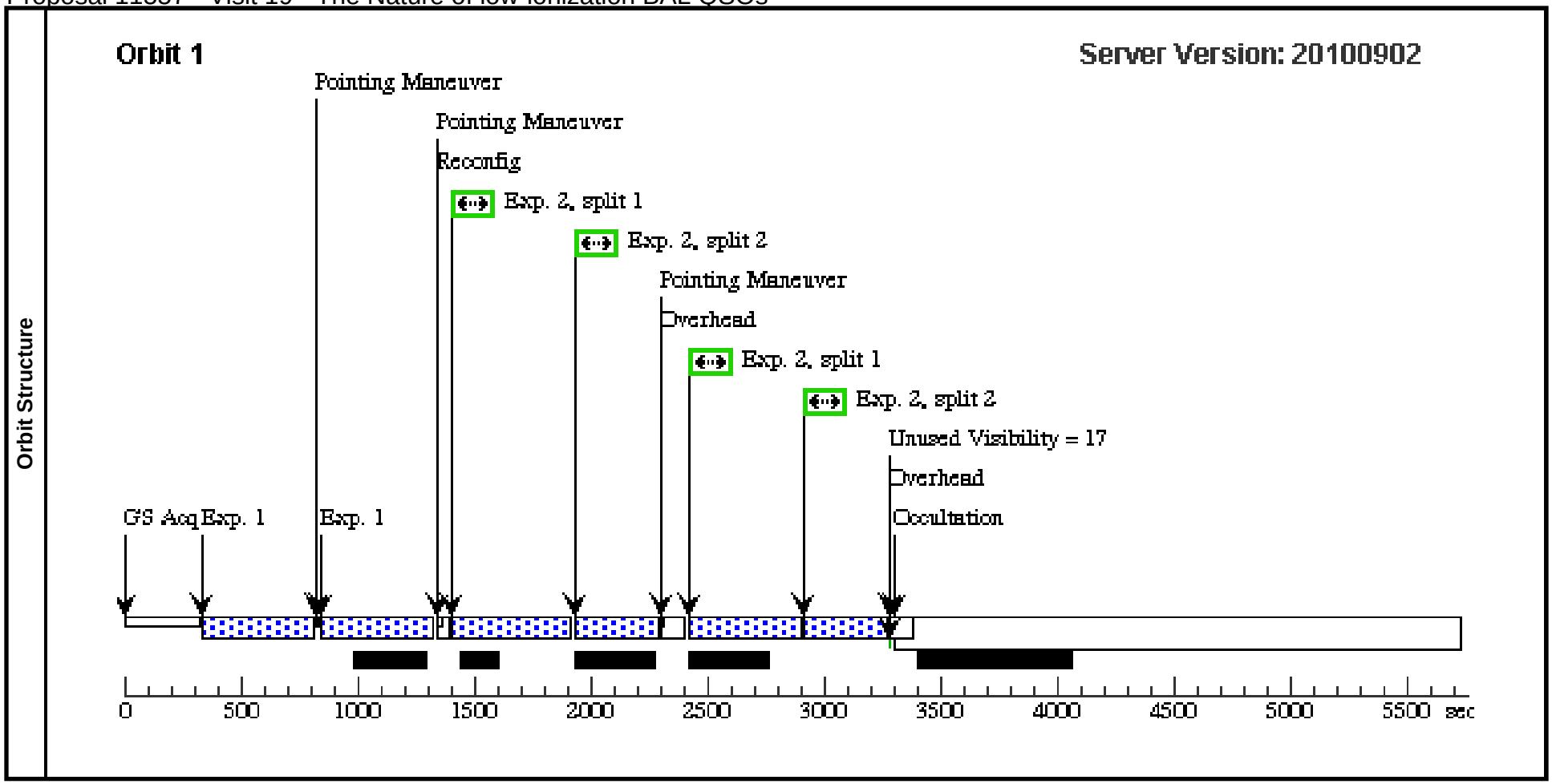
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	SDSS-J161425.17+375210.7	RA: 16 14 25.1700 (243.6048750d) Dec: +37 52 10.70 (37.86964d) Equinox: J2000	Redshift: 0.553	V=16.989	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(19) SDSS-J161425.17+375210.7	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 19 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(19) SDSS-J161425.17+375210.7	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 19 (4)	724 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Overhead
Exp. 2, split 1
Exp. 2, split 2
Unused Visibility = 17
Overhead
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 24 Sat Mar 26 01:02:39 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 50.0D TO 120.0 D; ORIENT 230.0D TO 300.0 D

Comments: HOPR repeat of visit 19.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

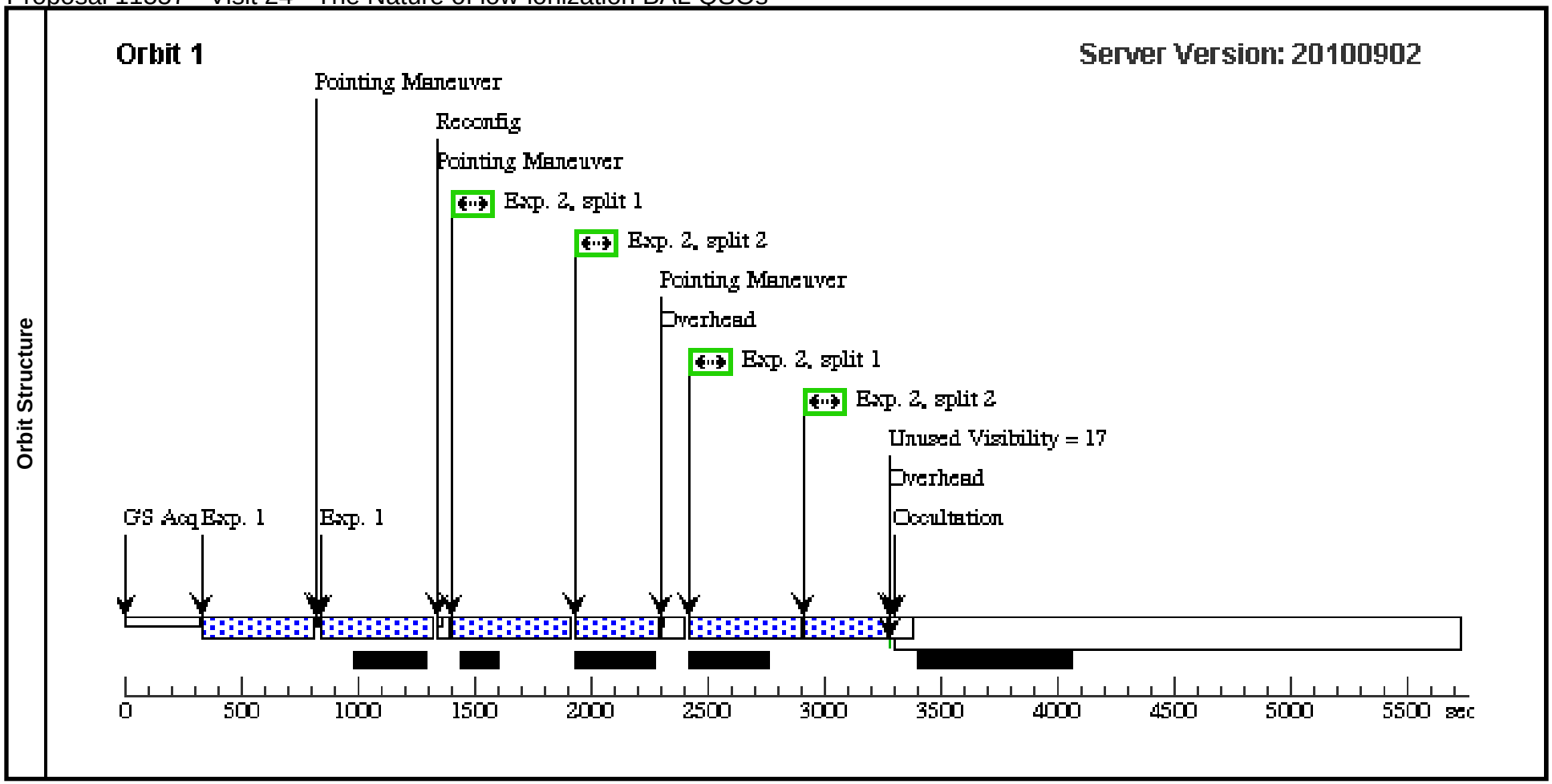
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	SDSS-J161425.17+375210.7	RA: 16 14 25.1700 (243.6048750d) Dec: +37 52 10.70 (37.86964d) Equinox: J2000	Redshift: 0.553	V=16.989	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(19) SDSS-J161425.17+375210.7	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 24 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(19) SDSS-J161425.17+375210.7	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 24 (4)	724 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Overhead
Exp. 2, split 1
Exp. 2, split 2
Unused Visibility = 17
Overhead
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 20, completed Sat Mar 26 01:02:39 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

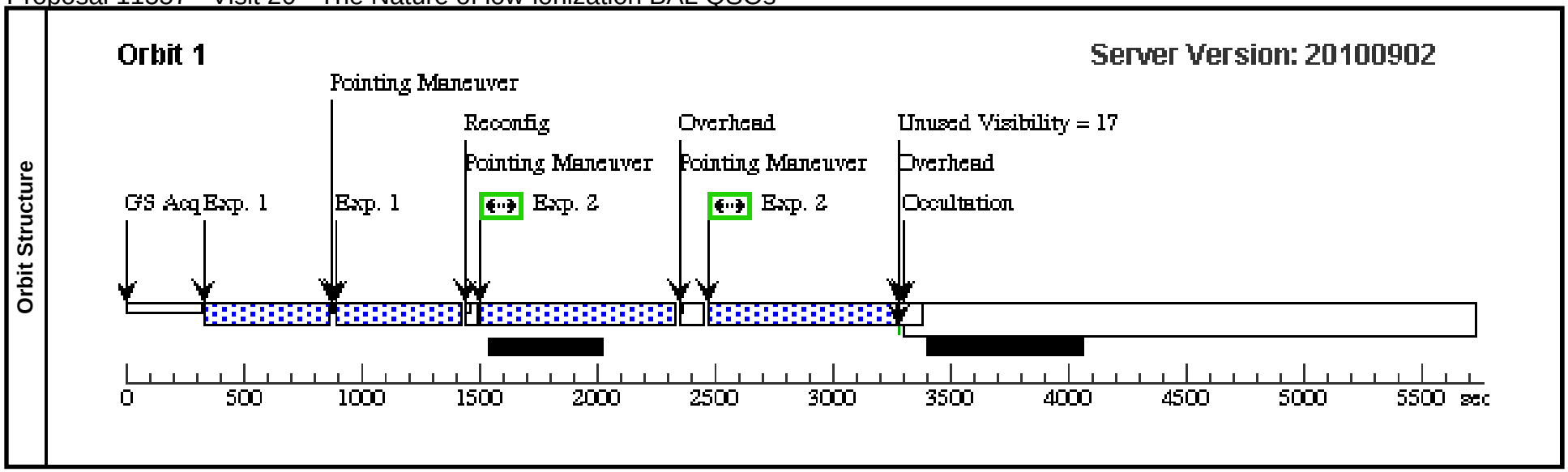
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(20)	SDSS-J170010.83+395545.8	RA: 17 00 10.8280 (255.0451167d) Dec: +39 55 45.82 (39.92939d) Equinox: J2000	Redshift: 0.577	V=19.529	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(20) SDSS-J170010.83+395545.8	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 20 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(20) SDSS-J170010.83+395545.8	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 20 (4)	802 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Reconfig
Pointing Maneuver
Overhead
Pointing Maneuver
Unused Visibility = 17
Overhead
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 21, completed Sat Mar 26 01:02:39 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 300.0D TO 40.0 D; ORIENT 130.0D TO 230.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

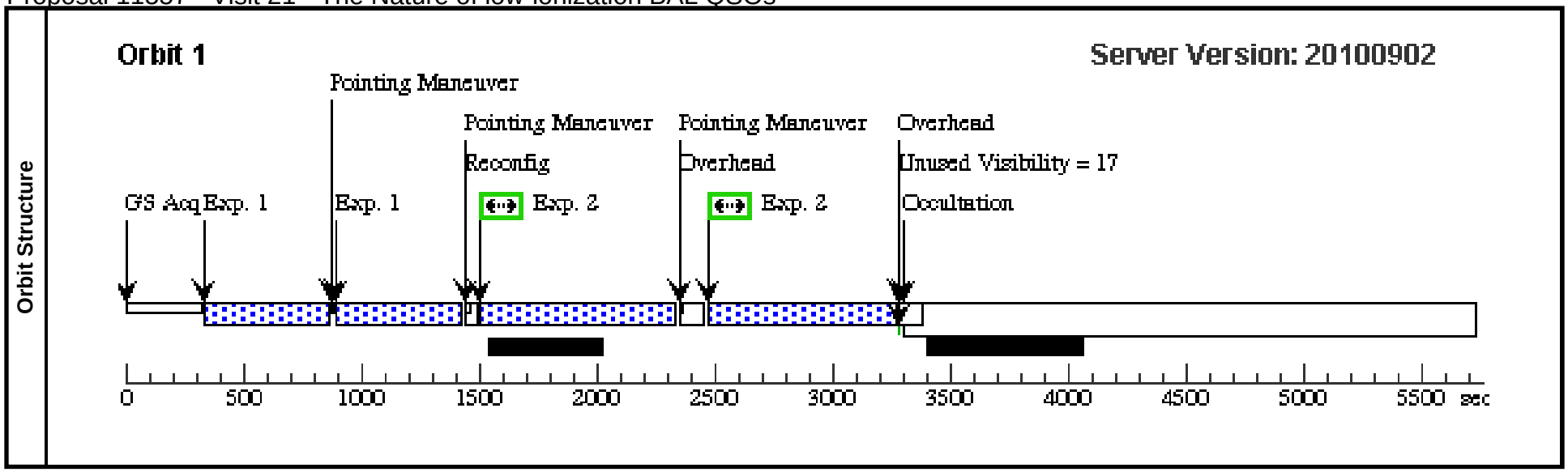
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(21)	SDSS-J170341.82+383944.7	RA: 17 03 41.8210 (255.9242542d) Dec: +38 39 44.77 (38.66244d) Equinox: J2000	Redshift: 0.554	V=19.234	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(21) SDSS-J170341.82+383944.7	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=11; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 21 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(21) SDSS-J170341.82+383944.7	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 2-2 in Visit 21 (4)	802 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Overhead
Reconfig
Overhead
Unused Visibility = 17
GS Acq
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 22, completed Sat Mar 26 01:02:39 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 340.0D TO 13.0 D; ORIENT 108.0D TO 120.0 D; ORIENT 160.0D TO 192.0 D; ORIENT 300.0D TO 310.0 D; ORIENT 23.0D TO 42.0 D; ORIENT 205.0D TO 223.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

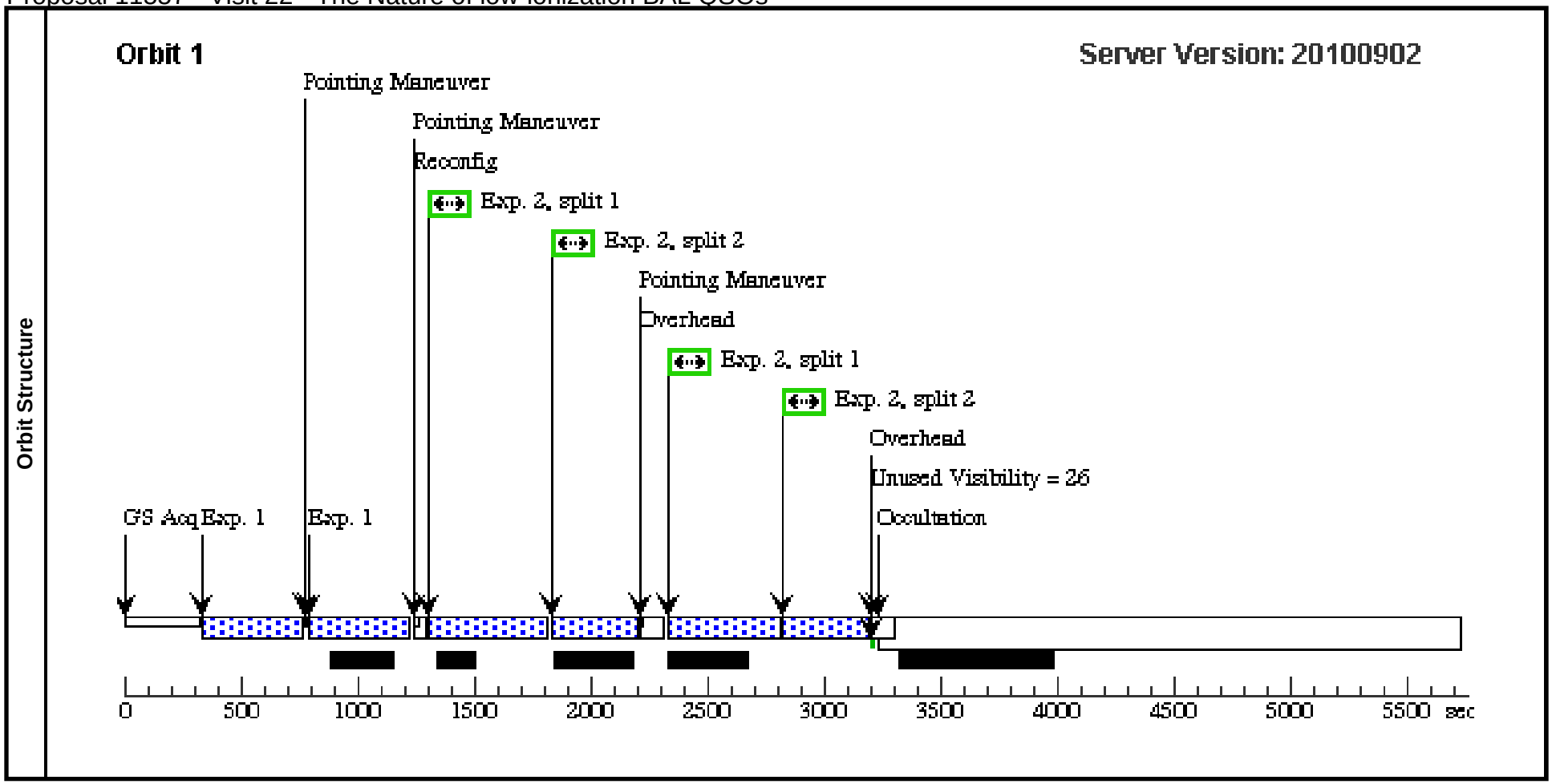
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(22)	SDSS-J204333.20-001104.2	RA: 20 43 33.2000 (310.8883333d) Dec: -00 11 4.30 (-.18453d) Equinox: J2000	Redshift: 0.545	V=18.267	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(22) SDSS-J204333.20-001104.2	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=9; SAMP-SEQ=SPARS50		Pattern 2, Exps 1-1 in Visit 22 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(22) SDSS-J204333.20-001104.2	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=2		Pattern 4, Exps 2-2 in Visit 22 (4)	736 Secs *[==>(Pattern 1, Split 1)]* *[==>(Pattern 1, Split 2)]* *[==>(Pattern 2, Split 1)]* *[==>(Pattern 2, Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Reconfig
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Overhead
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 26
Occultation
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11557, Visit 23, completed Sat Mar 26 01:02:40 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: ORIENT 40.0D TO 66.0 D; ORIENT 215.0D TO 252.0 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1-3), (4), (5)
(4)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6), (7), (8)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(23)	GRW+70D5824	RA: 13 38 50.4743 (204.7103096d) Dec: +70 17 7.62 (70.28545d) Equinox: J2000		V=12.773	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(23) GRW+70D5824	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=1; SAMP-SEQ=SPARS10		Pattern 2, Exps 1-3 in Visit 23 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(23) GRW+70D5824	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=1; SAMP-SEQ=SPARS10		Pattern 2, Exps 1-3 in Visit 23 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(23) GRW+70D5824	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=1; SAMP-SEQ=SPARS10		Pattern 2, Exps 1-3 in Visit 23 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4		(23) GRW+70D5824	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=2; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in Visit 23 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5		(23) GRW+70D5824	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=4; SAMP-SEQ=RAPID		Pattern 2, Exps 5-5 in Visit 23 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6		(23) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 6-6 in Visit 23 (4)	2.0 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7		(23) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 7-7 in Visit 23 (4)	5.0 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8		(23) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO		Pattern 4, Exps 8-8 in Visit 23 (4)	30.0 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure