14135 - Are High-Redshift Spectroscopic Black Hole Mass Estimates Biased?

Cycle: 23, Proposal Category: GO

(UV Initiative)

(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) SDSSJ002019.22-110609.2	STIS/CCD	1	24-Jan-2017 21:01:03.0	yes
02	(2) SDSSJ082024.21+233450.4	STIS/CCD	1	24-Jan-2017 21:01:04.0	yes
03	(3) SDSSJ082658.85+061142.6	STIS/CCD	1	24-Jan-2017 21:01:05.0	yes
04	(4) SDSSJ083332.92+164411.0	STIS/CCD	1	24-Jan-2017 21:01:05.0	yes
05	(5) SDSSJ083510.36+035901.1	STIS/CCD	1	24-Jan-2017 21:01:06.0	yes
06	(6) SDSSJ085116.14+424328.8	STIS/CCD	1	24-Jan-2017 21:01:06.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(7) SDSSJ091451.42+421957.0	STIS/CCD	1	24-Jan-2017 21:01:07.0	yes
08	(8) SDSSJ093502.52+433110.6	STIS/CCD	1	24-Jan-2017 21:01:08.0	yes
09	(9) SDSSJ100054.96+262242.4	STIS/CCD	1	24-Jan-2017 21:01:08.0	yes
10	(10) SDSSJ103320.65+274024.2	STIS/CCD	1	24-Jan-2017 21:01:09.0	yes
11	(11) SDSSJ111138.66+575030.0	STIS/CCD	1	24-Jan-2017 21:01:10.0	yes
12	(12) SDSSJ111941.12+595108.7	STIS/CCD	1	24-Jan-2017 21:01:10.0	yes
13	(13) SDSSJ112224.15+031802.6	STIS/CCD	1	24-Jan-2017 21:01:11.0	yes
14	(14) SDSSJ112614.93+310146.6	STIS/CCD	1	24-Jan-2017 21:01:11.0	yes
15	(15) SDSSJ113327.78+032719.1	STIS/CCD	1	24-Jan-2017 21:01:12.0	yes
16	(16) SDSSJ113923.66+002301.6	STIS/CCD	1	24-Jan-2017 21:01:12.0	yes
17	(17) SDSSJ123734.47+444731.7	STIS/CCD	1	24-Jan-2017 21:01:13.0	yes
18	(18) SDSSJ125415.55+480850.6	STIS/CCD	1	24-Jan-2017 21:01:14.0	yes
19	(19) SDSSJ131627.84+315825.7	STIS/CCD	1	24-Jan-2017 21:01:14.0	yes
20	(20) SDSSJ134701.54+215401.1	STIS/CCD	1	24-Jan-2017 21:01:15.0	yes
21	(21) SDSSJ140331.29+462804.8	STIS/CCD	1	24-Jan-2017 21:01:15.0	yes
22	(22) SDSSJ145334.13+311401.4	STIS/CCD	1	24-Jan-2017 21:01:16.0	yes
23	(23) SDSSJ152654.61+565512.3	STIS/CCD	1	24-Jan-2017 21:01:16.0	yes
24	(24) SDSSJ155837.77+081345.8	STIS/CCD	1	24-Jan-2017 21:01:17.0	yes
25	(25) SDSSJ234145.51-004640.5	STIS/CCD	1	24-Jan-2017 21:01:18.0	yes
26	(14) SDSSJ112614.93+310146.6	STIS/CCD	1	24-Jan-2017 21:01:18.0	yes

26 Total Orbits Used

ABSTRACT

Black hole (BH) masses estimated from single-epoch spectroscopy underlie our understanding of the build-up of BHs from high redshift to the present, but are currently based on a small sample of low-L,

low-z "reverberation mapped" (RM) AGNs. The existing sample of RM AGNs appears to be biased against quasars where a radiation line driven disk-wind dominates the broad emission line region (BELR). As such, we propose UV spectroscopy of 25 SDSS quasars at z~0.5 that have luminosities comparable to the existing RM quasars, but that are more representative of the BELR properties of the average quasar. These data will enable us to confirm the bias in the RM quasar sample and lay the groundwork for reverberation mapping of quasars where winds affect the BELR. This work is important because successful RM measurements of local AGNs have not been extended to the high-z, high-L regime, requiring extrapolation methods from low redshift. The best tool for this work comes from UV observations of the CIV emission line region where it is possible to distinguish between virial- and wind-dominated BELRs. These measurements will further enable us to inter-compare BH masses computed using measurements from CIV, MgII, and Hbeta for each quasar. For this work we require spectral coverage of all the optical and UV broad emission lines (Ly-apha to H-beta) to characterize the diversity of quasar spectra, which we will then relate to BH mass, accretion rate and accretion disk physics. These data will provide a powerful UV legacy database for investigations of the BELR structures of all quasars in addition to more robust bootstrapping of BH mass estimates from low to high redshift.

OBSERVING DESCRIPTION

Each quasar will be observed with STIS/CCD and G230LB grating which covers 1680<lambda <3060 (observed; 1120<lambda <2040 at z~0.5) using the 52"x0.2" slit at position E1. CCD observations are preferred over MAMA observations since we do not require time resolution and the CCD as better throughput at lambda>2400 Angstroms. STIS is preferred over COS because of the desire to cover not just CIV at 1550 Angstroms, but all of the UV lines between Ly-alpha (1216 Ang) and CIII] (1909 Ang) which STIS can do at one time, but COS needs multiple grating tilts for.

However, the observations could be done with COS if it became necessary (with lower S/N at CIII]).

Targets were selected from the SDSS and matched to GALEX catalogs in order to obtain UV fluxes to estimate HST exposure times. One orbit (>=54 minutes) is enough for each of our observations. We allow for 18 minutes of overhead for each object, which includes 6 minutes for guide star acquisition, 6 minutes for target acquisition, 5 minutes for CCD overhead and 1 minute for CR-splitting. Target acquisition exposure times (with STIS/CCD) were calculated to achieve S/N > 40 over a 3x3 pixel checkbox, based on their SDSS optical magnitudes. No "peak-up" should be needed for the 0.2" slit. The remaining 2160 seconds allows us to achieve a S/N of 7 in the continuum at rest-frame 1550 Angstroms for the faintest quasar in our sample. Moderate S/N is needed because we are trying to measure accurate line profiles and precise redshifts, in contrast to the accuracy of the redshift that one gets from a S/N~3 spectrum. Our expected S/N also means that individual CR-split exposures will not be read-noise limited.

Visit

Proposal 14135, Visit 01, completed Wed Jan 25 02:01:19 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

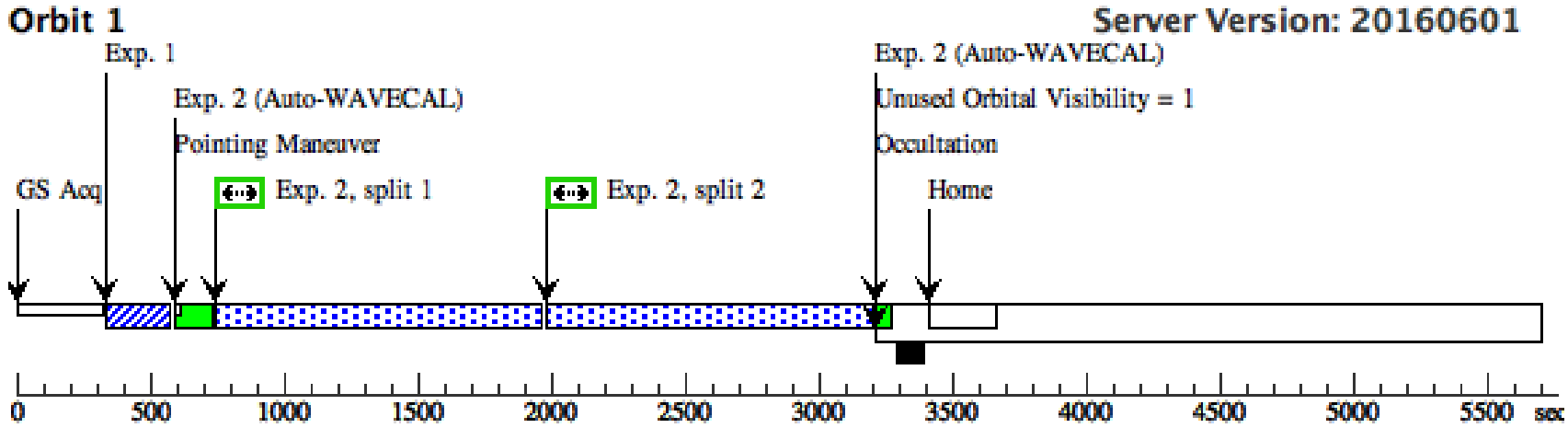
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ002019.22-110609.2	RA: 00 20 19.2200 (5.0800833d) Dec: -11 06 9.20 (-11.10256d) Equinox: J2000	Redshift: 0.492	V=17.37 NUV = 18.12, g=17.62	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720315)	(1) SDSSJ002019.22-110609.2	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720320)	(1) SDSSJ002019.22-110609.2	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2380 Secs (2380 Secs) *[==>1190.0 Secs (Split 1)]* *[==>1190.0 Secs (Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 02, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Fixed Targets

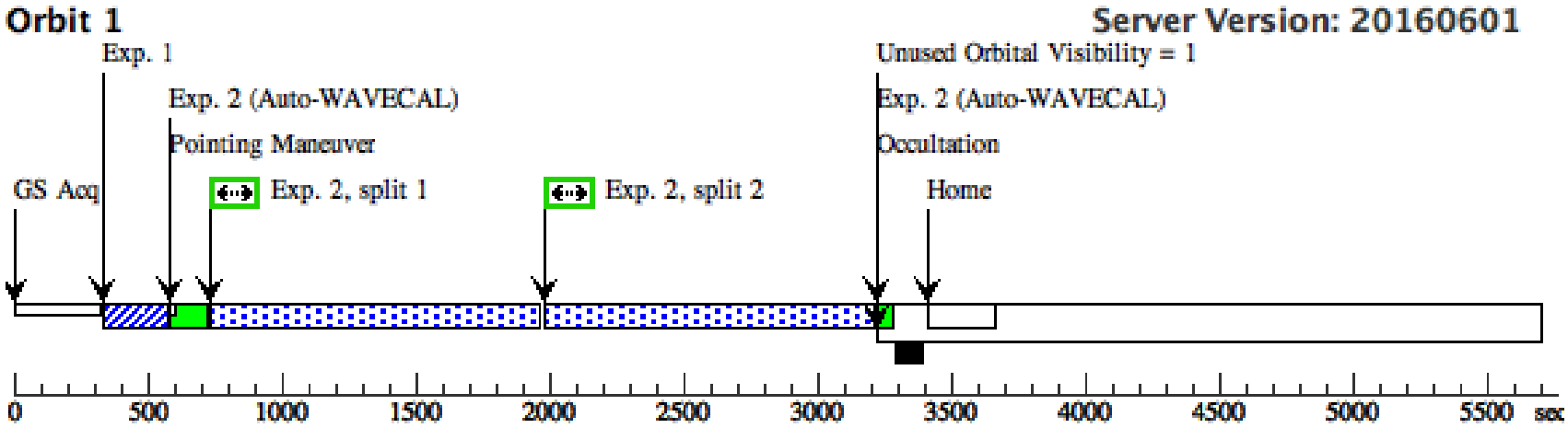
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSSJ082024.21+233450.4	RA: 08 20 24.2100 (125.1008750d) Dec: +23 34 50.40 (23.58067d) Equinox: J2000	Redshift: 0.471	V=17.25 NUV = 17.92, g=17.37	Reference Frame: ICRS

Comments: COS coverage of Ly-alpha emission, but not the CIV emission line, so not a duplicate.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720314)	(2) SDSSJ082024.21 +233450.4	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720319)	(2) SDSSJ082024.21 +233450.4	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2388 Secs (2388 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 03, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

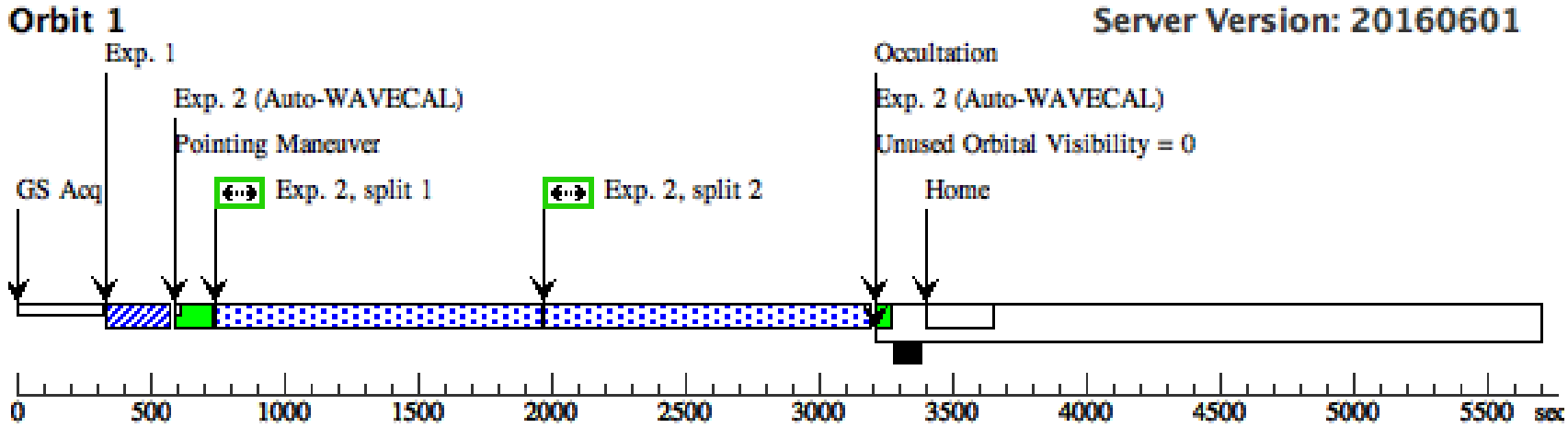
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSSJ082658.85+061142.6	RA: 08 26 58.8500 (126.7452083d) Dec: +06 11 42.60 (6.19517d) Equinox: J2000	Redshift: 0.496	V=17.36 NUV = 18.35, g=17.62	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720326)	(3) SDSSJ082658.85+061142.6	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720331)	(3) SDSSJ082658.85+061142.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2376 Secs (2376 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 04, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

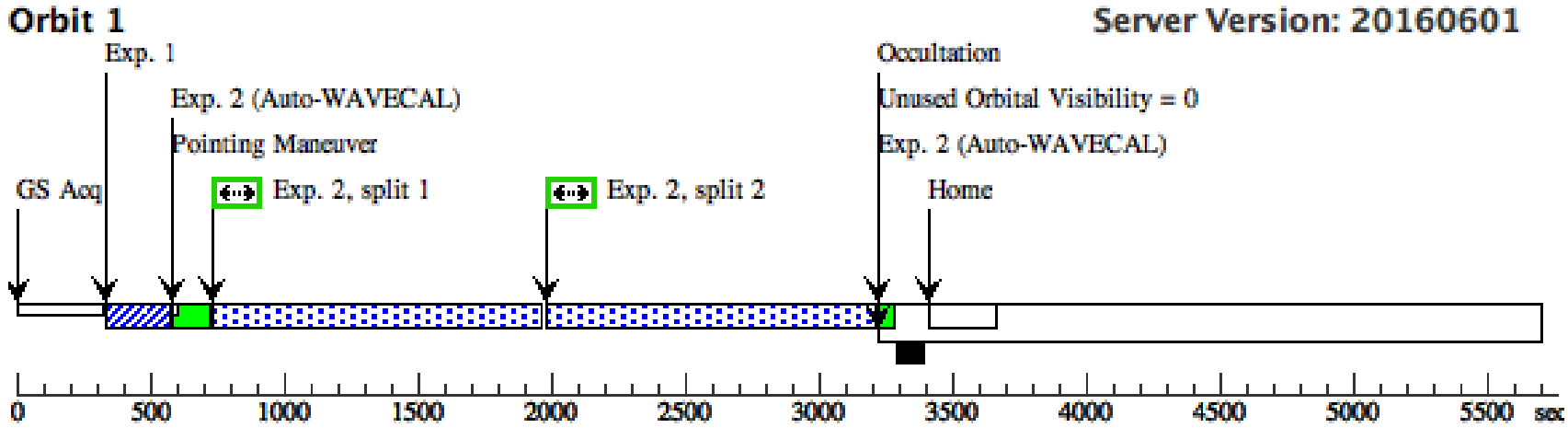
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSSJ083332.92+164411.0	RA: 08 33 32.9200 (128.3871667d) Dec: +16 44 11.00 (16.73639d) Equinox: J2000	Redshift: 0.461	V=17.21 NUV = 18.15, g=17.45	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720332)	(4) SDSSJ083332.92 +164411.0	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720335)	(4) SDSSJ083332.92 +164411.0	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2388 Secs (2388 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 05, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

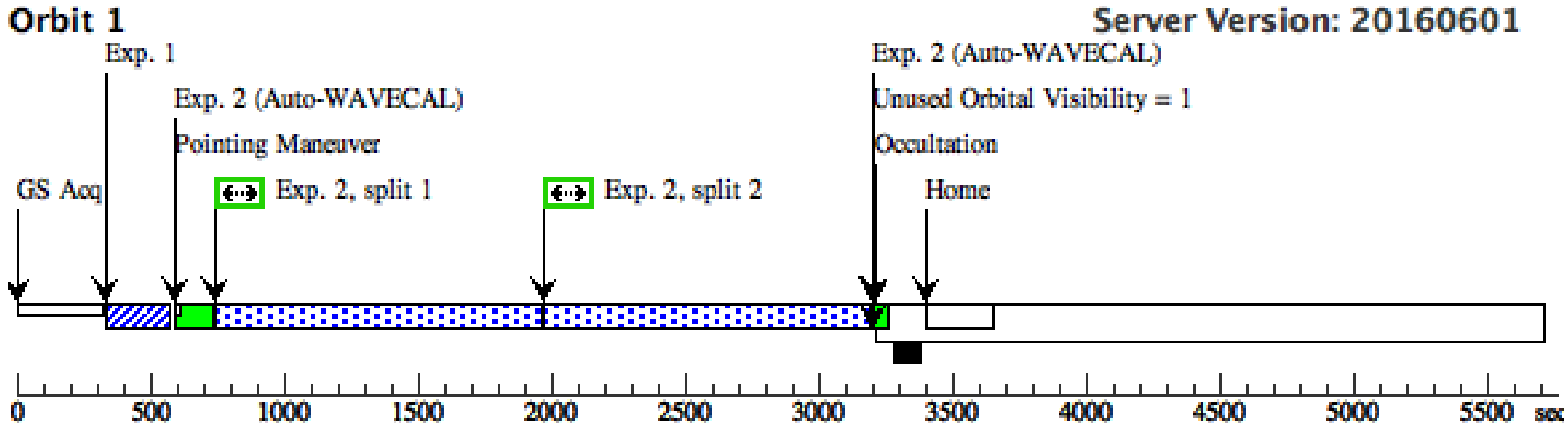
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	SDSSJ083510.36+035901.1	RA: 08 35 10.3600 (128.7931667d) Dec: +03 59 1.10 (3.98364d) Equinox: J2000	Redshift: 0.492	V=17.33 NUV = 18.48, g=17.49	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720338)	(5) SDSSJ083510.36+035901.1	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720341)	(5) SDSSJ083510.36+035901.1	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2372 Secs (2372 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 06, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Fixed Targets

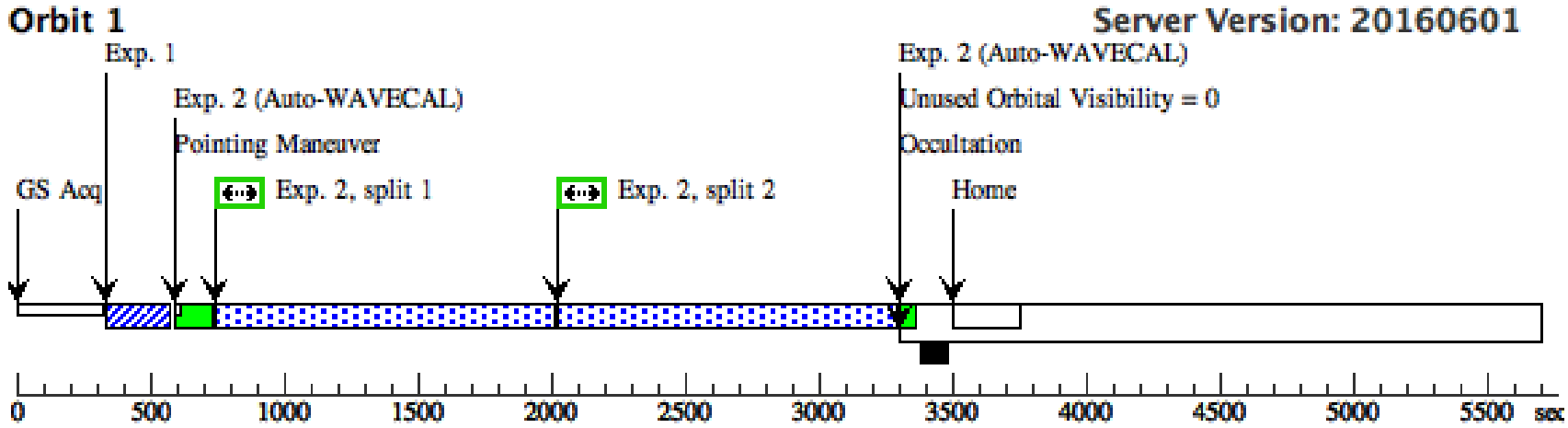
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	SDSSJ085116.14+424328.8	RA: 08 51 16.1400 (132.8172500d) Dec: +42 43 28.80 (42.72467d) Equinox: J2000	Redshift: 0.483	V=17.44 NUV = 17.85, g=17.51	Reference Frame: ICRS

Comments: Recent COS coverage of the Ly-alpha emission line, but not of the CIV emission line, so no duplicate.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720344)	(6) SDSSJ085116.14+424328.8	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720351)	(6) SDSSJ085116.14+424328.8	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2470 Secs (2470 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 07, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

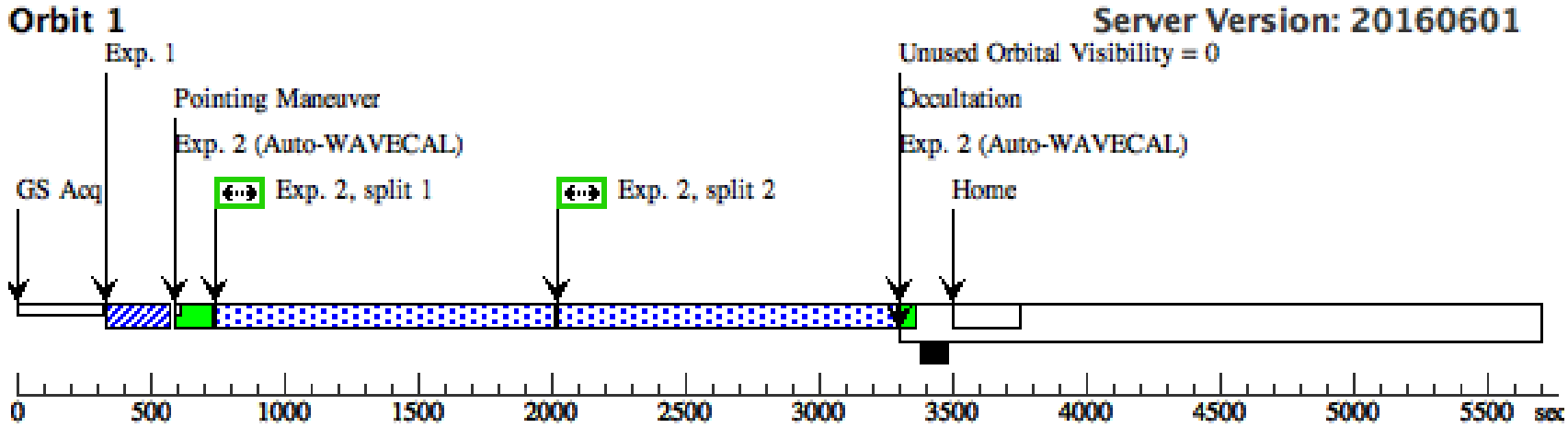
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	SDSSJ091451.42+421957.0	RA: 09 14 51.4200 (138.7142500d) Dec: +42 19 57.00 (42.33250d) Equinox: J2000	Redshift: 0.550	V=17.37 NUV = 17.80, g=17.56	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720354)	(7) SDSSJ091451.42 +421957.0	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720356)	(7) SDSSJ091451.42 +421957.0	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2470 Secs (2470 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 08, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

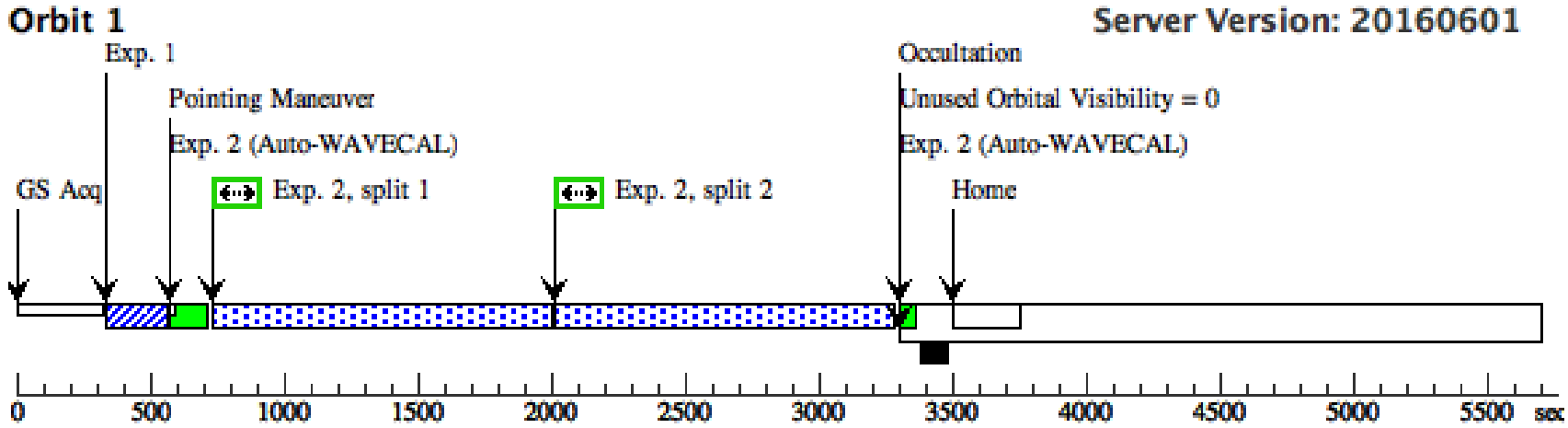
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	SDSSJ093502.52+433110.6	RA: 09 35 2.5200 (143.7605000d) Dec: +43 31 10.60 (43.51961d) Equinox: J2000	Redshift: 0.459	V=15.91 NUV = 16.10, g=15.7	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720358)	(8) SDSSJ093502.52 +433110.6	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720359)	(8) SDSSJ093502.52 +433110.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2482 Secs (2482 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 09, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

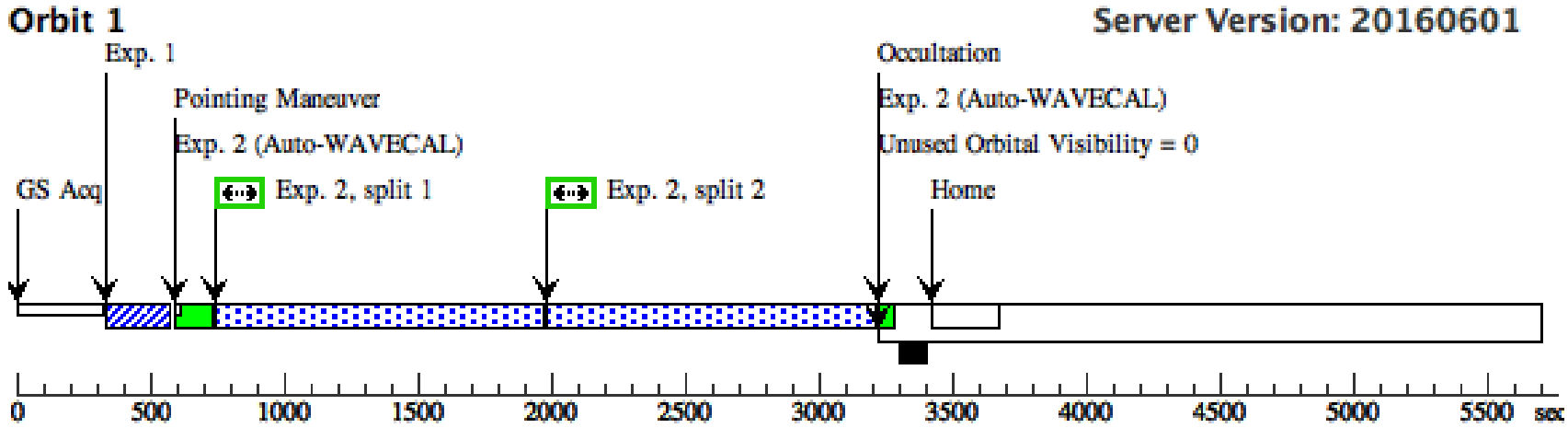
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	SDSSJ100054.96+262242.4	RA: 10 00 54.9600 (150.2290000d) Dec: +26 22 42.40 (26.37844d) Equinox: J2000	Redshift: 0.506	V=17.49 NUV = 18.32, g=17.71	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720360)	(9) SDSSJ100054.96+262242.4	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720362)	(9) SDSSJ100054.96+262242.4	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2392 Secs (2392 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 10, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

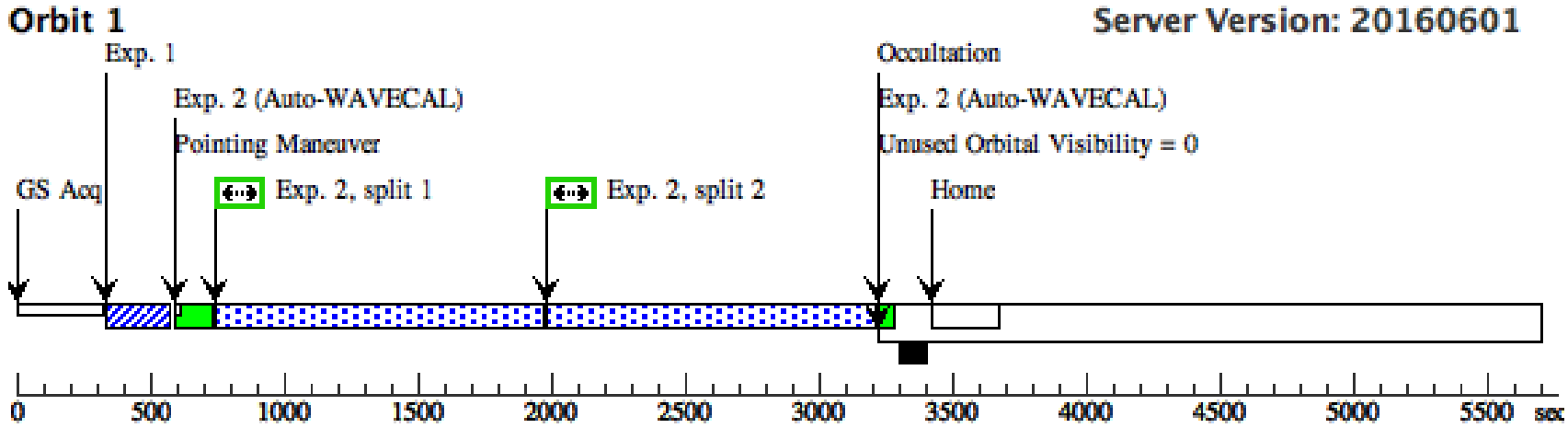
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	SDSSJ103320.65+274024.2	RA: 10 33 20.6500 (158.3360417d) Dec: +27 40 24.20 (27.67339d) Equinox: J2000	Redshift: 0.536	V=17.37 NUV = 18.30, g=17.56	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720363)	(10) SDSSJ103320.65+274024.2	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720364)	(10) SDSSJ103320.65+274024.2	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2392 Secs (2392 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 11, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

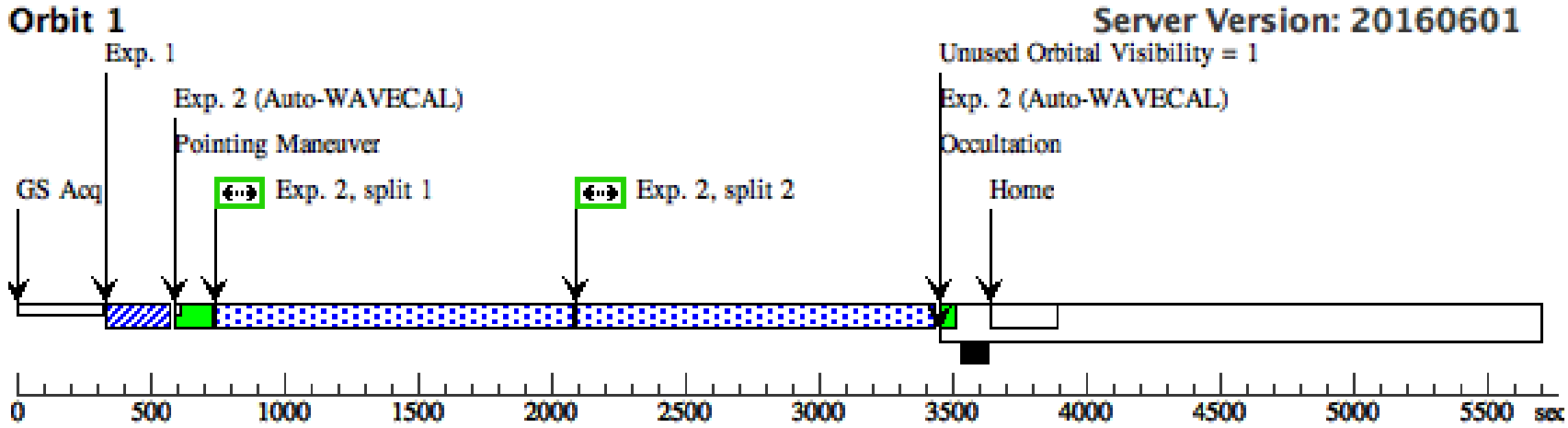
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	SDSSJ111138.66+575030.0	RA: 11 11 38.6600 (167.9110833d) Dec: +57 50 30.00 (57.84167d) Equinox: J2000	Redshift: 0.466	V=17.34 NUV = 18.06, g=17.51	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720366)	(11) SDSSJ111138.66+575030.0	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720368)	(11) SDSSJ111138.66+575030.0	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2618 Secs (2618 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 12, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

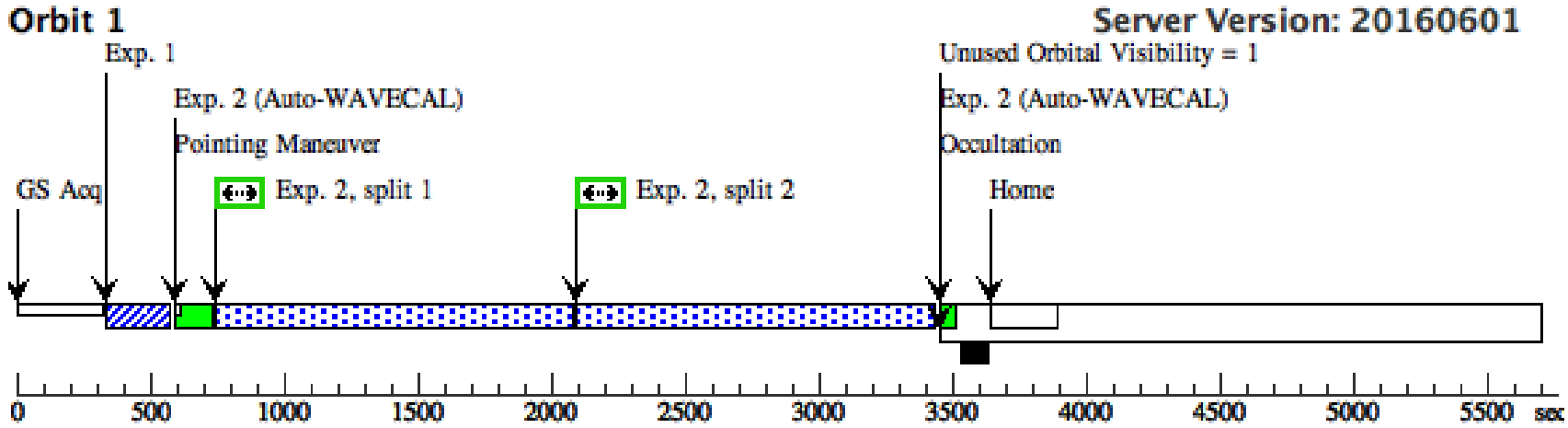
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	SDSSJ111941.12+595108.7	RA: 11 19 41.1200 (169.9213333d) Dec: +59 51 8.70 (59.85242d) Equinox: J2000	Redshift: 0.489	V=17.31 NUV = 17.99, g=17.51	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720370)	(12) SDSSJ111941.12+595108.7	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720373)	(12) SDSSJ111941.12+595108.7	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2618 Secs (2618 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 13, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Fixed Targets

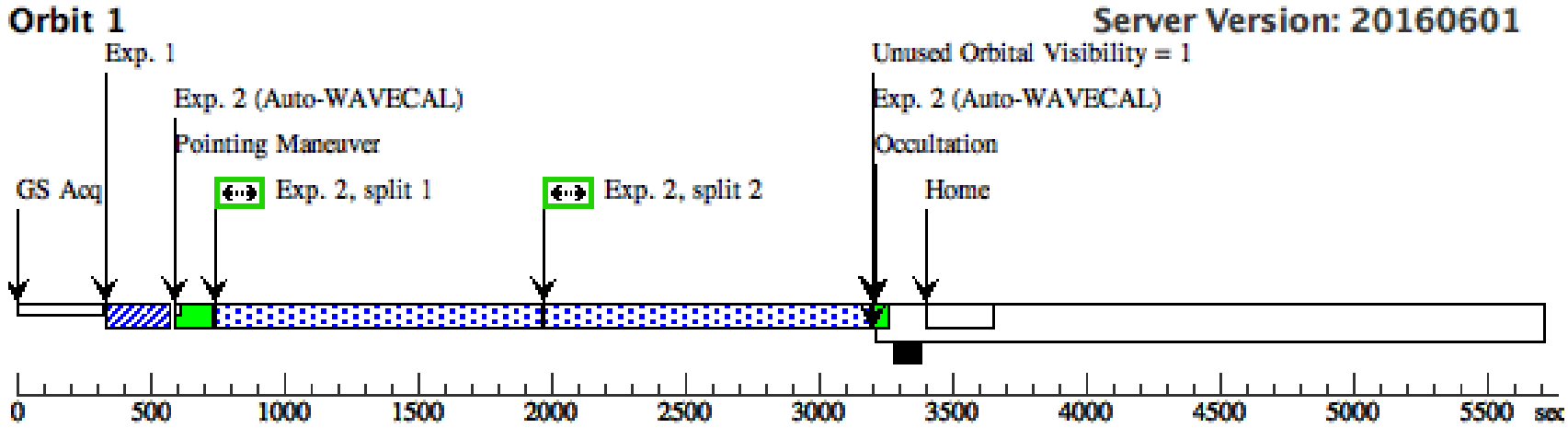
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	SDSSJ112224.15+031802.6	RA: 11 22 24.1500 (170.6006250d) Dec: +03 18 2.60 (3.30072d) Equinox: J2000	Redshift: 0.475	V=17.37 NUV = 18.29, g=17.66	Reference Frame: ICRS

Comments: Existing COS coverage of the Ly-alpha forest, but not the CIV emission line, so not a duplicate.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720374)	(13) SDSSJ112224.15+031802.6	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720379)	(13) SDSSJ112224.15+031802.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2372 Secs (2372 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 14, failed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

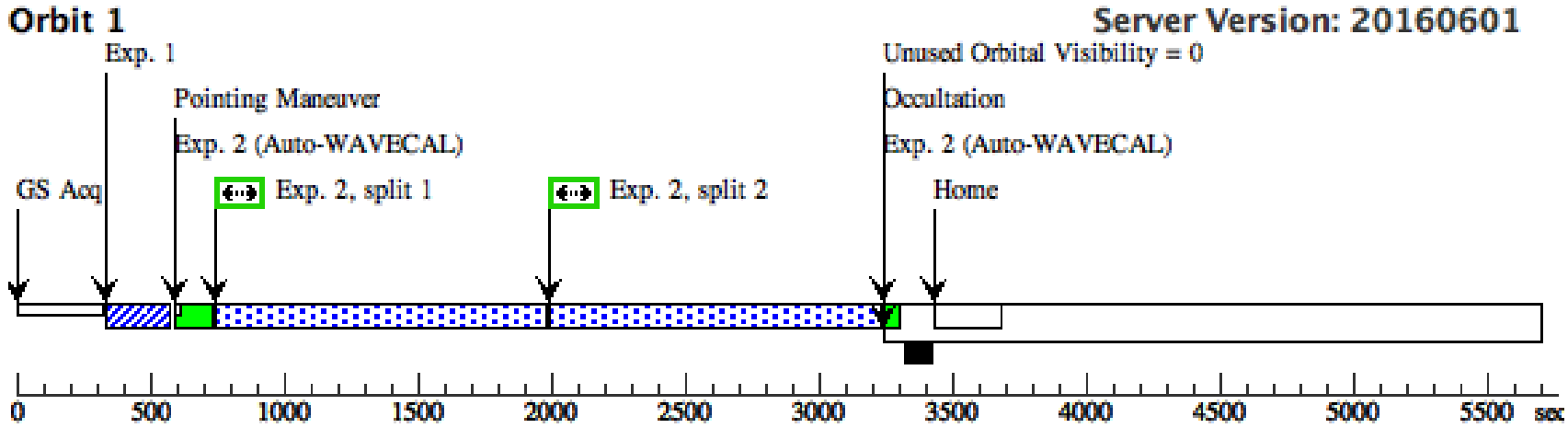
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	SDSSJ112614.93+310146.6	RA: 11 26 14.9300 (171.5622083d) Dec: +31 01 46.60 (31.02961d) Equinox: J2000	Redshift: 0.495	V=17.49 NUV = 17.89, g=17.51	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720380)	(14) SDSSJ112614.93+310146.6	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720382)	(14) SDSSJ112614.93+310146.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2408 Secs (2408 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 15, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Fixed Targets

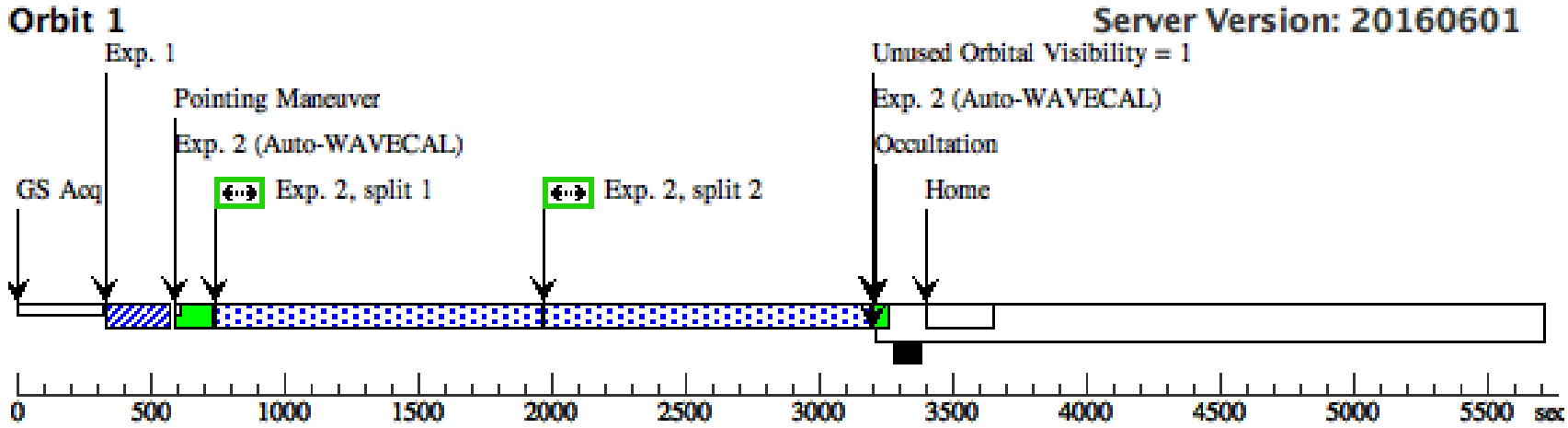
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	SDSSJ113327.78+032719.1	RA: 11 33 27.7800 (173.3657500d) Dec: +03 27 19.10 (3.45531d) Equinox: J2000	Redshift: 0.524	V=17.49 NUV = 18.11, g=17.52	Reference Frame: ICRS

Comments: Existing COS coverage of the Ly-alpha forest, but not the CIV emission line, so not a duplicate.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720383)	(15) SDSSJ113327.78+032719.1	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720384)	(15) SDSSJ113327.78+032719.1	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2372 Secs (2372 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 16, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

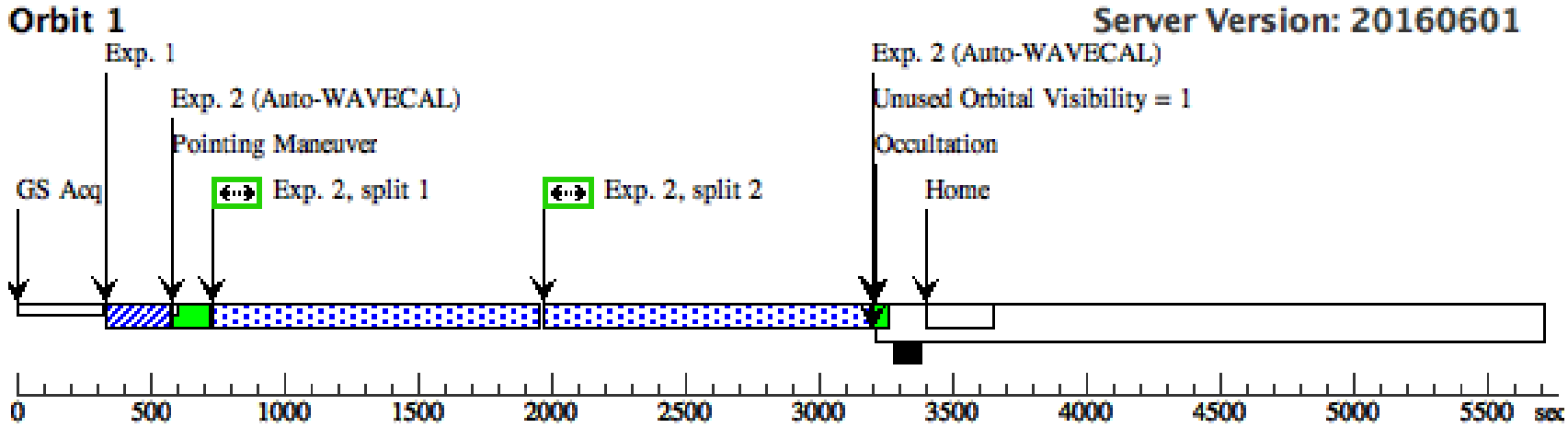
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(16)	SDSSJ113923.66+002301.6	RA: 11 39 23.6600 (174.8485833d) Dec: +00 23 1.60 (.38378d) Equinox: J2000	Redshift: 0.472	V=17.10 NUV = 18.43, g=17.17	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720389)	(16) SDSSJ113923.66+002301.6	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720390)	(16) SDSSJ113923.66+002301.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2376 Secs (2376 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 17, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

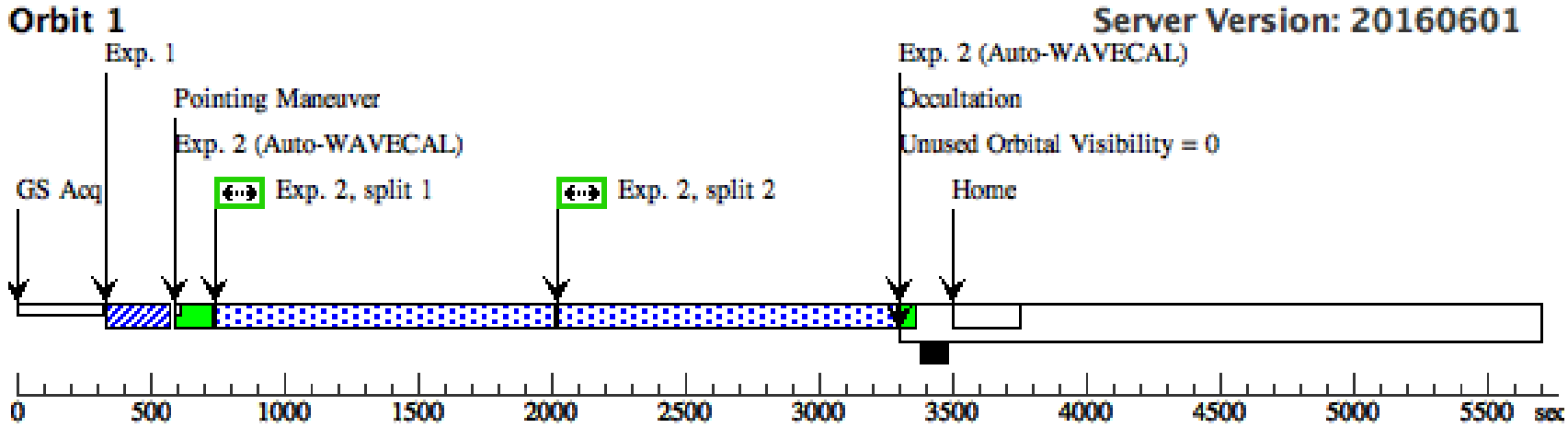
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(17)	SDSSJ123734.47+444731.7	RA: 12 37 34.4700 (189.3936250d) Dec: +44 47 31.70 (44.79214d) Equinox: J2000	Redshift: 0.461	V=17.36 NUV = 17.55, g=17.39	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720393)	(17) SDSSJ123734.47+444731.7	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720395)	(17) SDSSJ123734.47+444731.7	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2470 Secs (2470 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 18, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

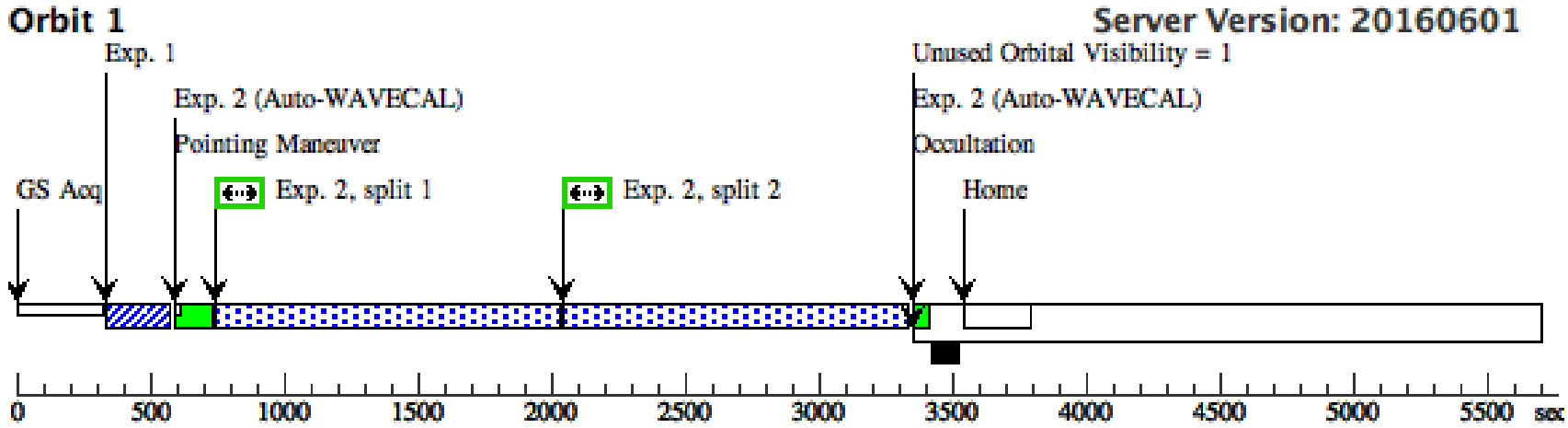
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(18)	SDSSJ125415.55+480850.6	RA: 12 54 15.5500 (193.5647917d) Dec: +48 08 50.60 (48.14739d) Equinox: J2000	Redshift: 0.503	V=17.33 NUV = 18.06, g=17.33	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720396)	(18) SDSSJ125415.55+480850.6	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720397)	(18) SDSSJ125415.55+480850.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2514 Secs (2514 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 19, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

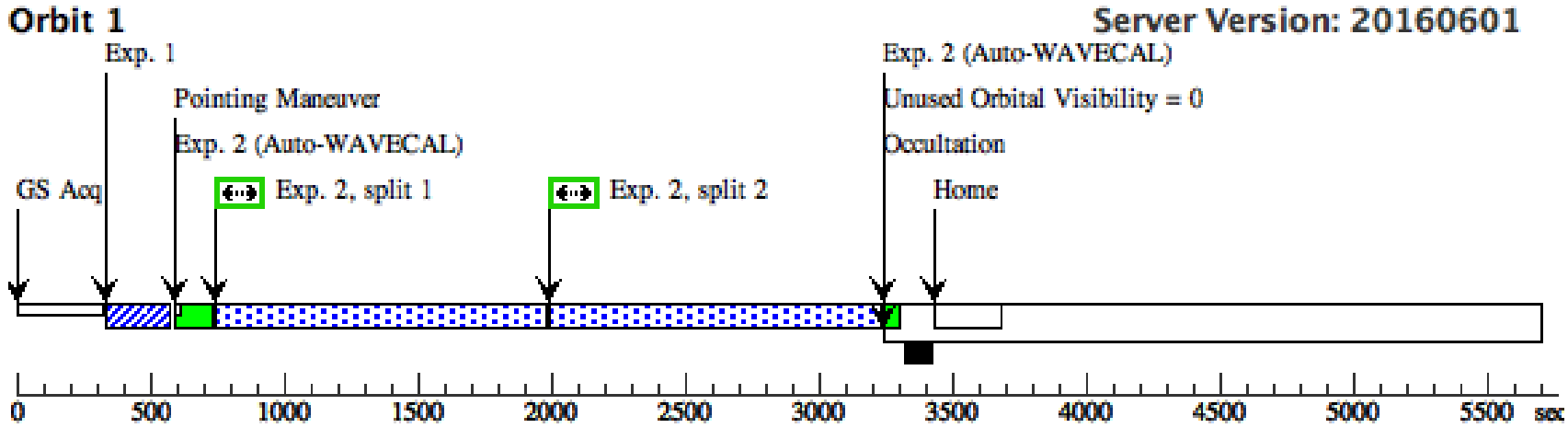
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	SDSSJ131627.84+315825.7	RA: 13 16 27.8400 (199.1160000d) Dec: +31 58 25.70 (31.97381d) Equinox: J2000	Redshift: 0.463	V=17.42 NUV = 18.28, g=17.41	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720398)	(19) SDSSJ131627.84+315825.7	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720401)	(19) SDSSJ131627.84+315825.7	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2408 Secs (2408 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 20, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

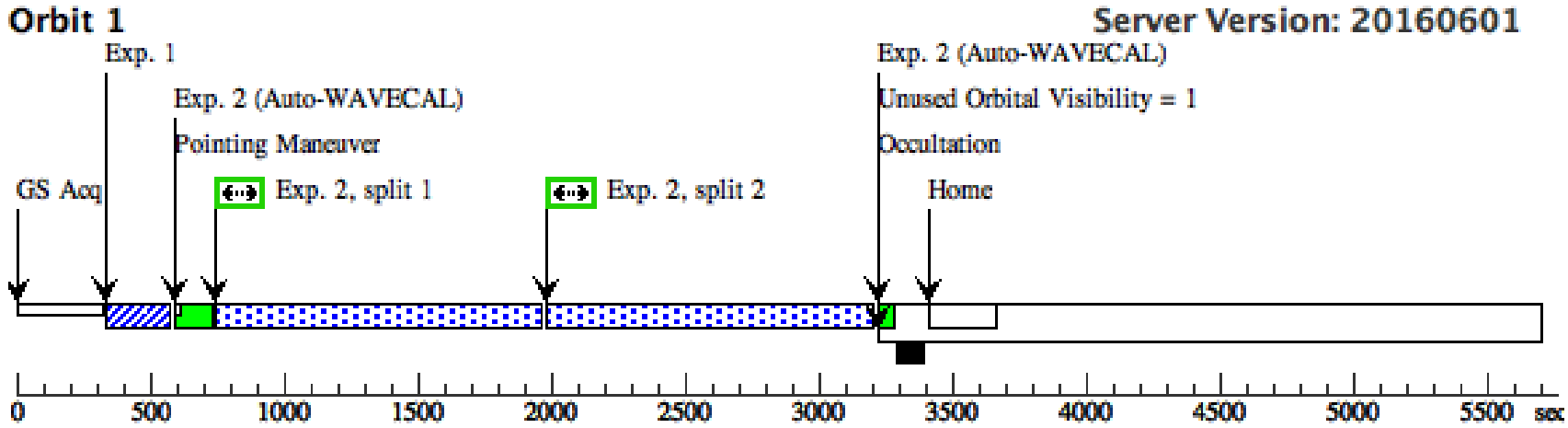
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(20)	SDSSJ134701.54+215401.1	RA: 13 47 1.5400 (206.7564167d) Dec: +21 54 1.10 (21.90031d) Equinox: J2000	Redshift: 0.502	V=17.45 NUV = 17.84, g=17.35	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.718872)	(20) SDSSJ134701.54+215401.1	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720408)	(20) SDSSJ134701.54+215401.1	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2384 Secs (2384 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 21, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

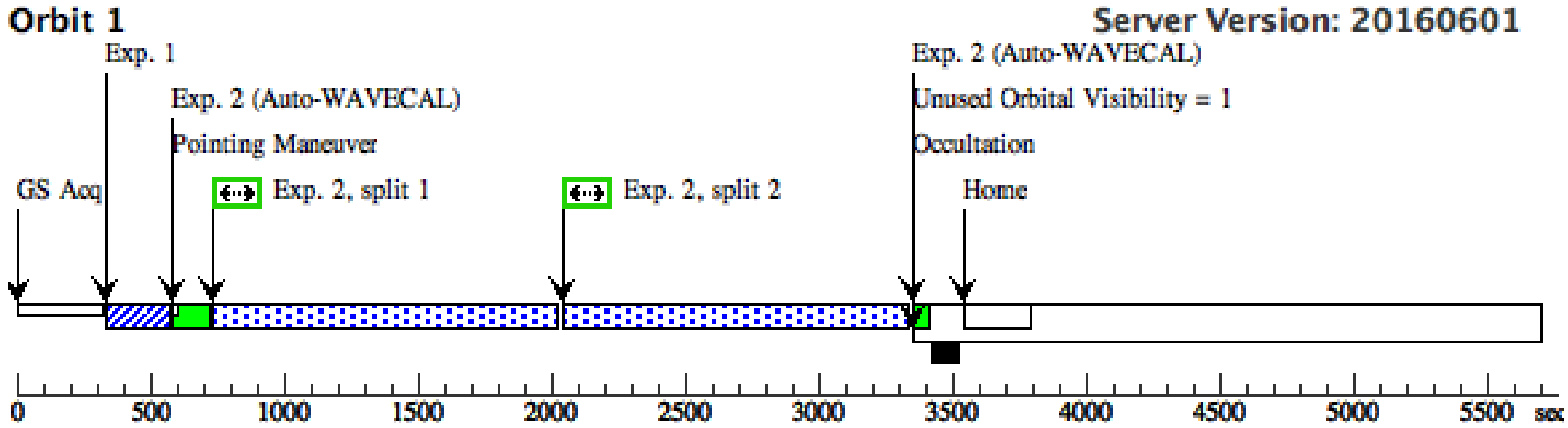
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(21)	SDSSJ140331.29+462804.8	RA: 14 03 31.2900 (210.8803750d) Dec: +46 28 4.80 (46.46800d) Equinox: J2000	Redshift: 0.459	V=17.20 NUV = 18.18, g=17.28	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720417)	(21) SDSSJ140331.29+462804.8	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720418)	(21) SDSSJ140331.29+462804.8	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2518 Secs (2518 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 22, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

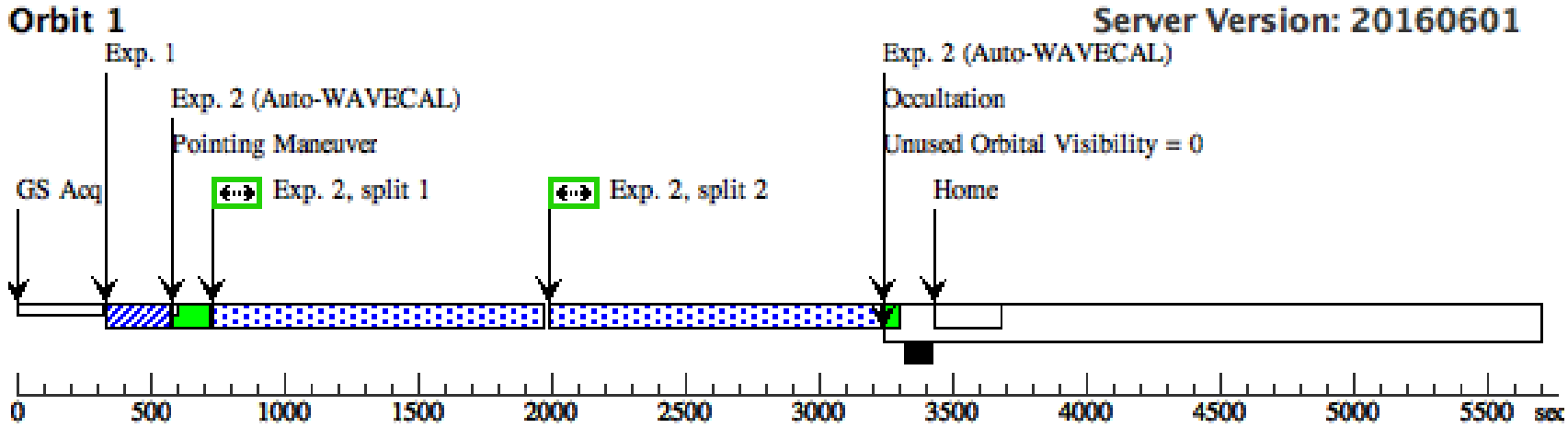
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(22)	SDSSJ145334.13+311401.4	RA: 14 53 34.1300 (223.3922083d) Dec: +31 14 1.40 (31.23372d) Equinox: J2000	Redshift: 0.465	V=17.27 NUV = 17.98, g=17.37	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720419)	(22) SDSSJ145334.13+311401.4	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720425)	(22) SDSSJ145334.13+311401.4	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2412 Secs (2412 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 23, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

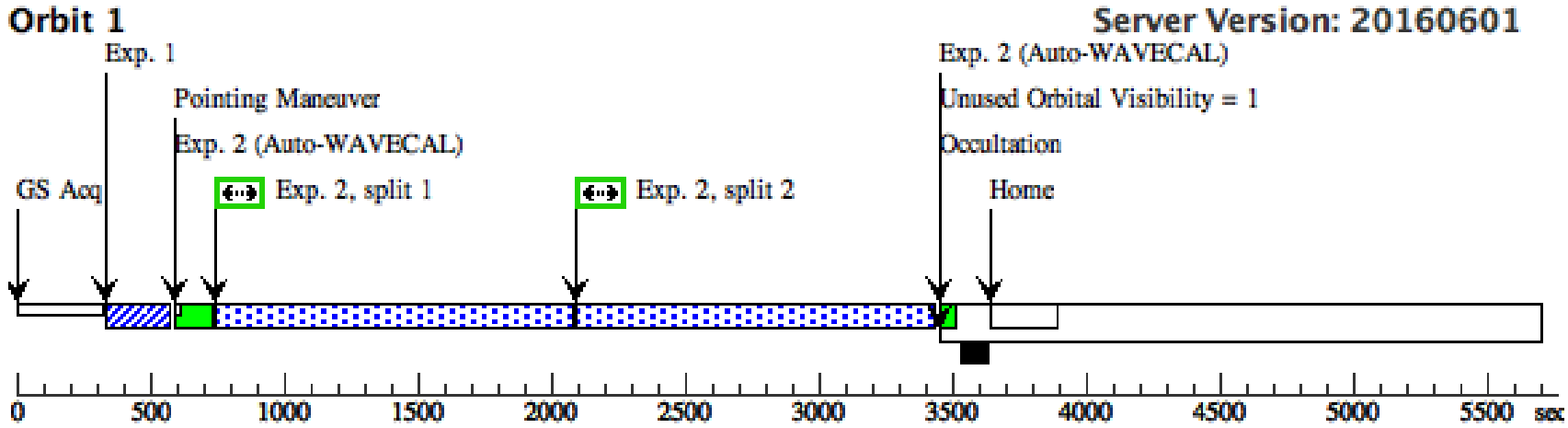
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(23)	SDSSJ152654.61+565512.3	RA: 15 26 54.6100 (231.7275417d) Dec: +56 55 12.30 (56.92008d) Equinox: J2000	Redshift: 0.482	V=17.36 NUV = 18.10, g=17.57	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720432)	(23) SDSSJ152654.61+565512.3	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720434)	(23) SDSSJ152654.61+565512.3	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2618 Secs (2618 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 24, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

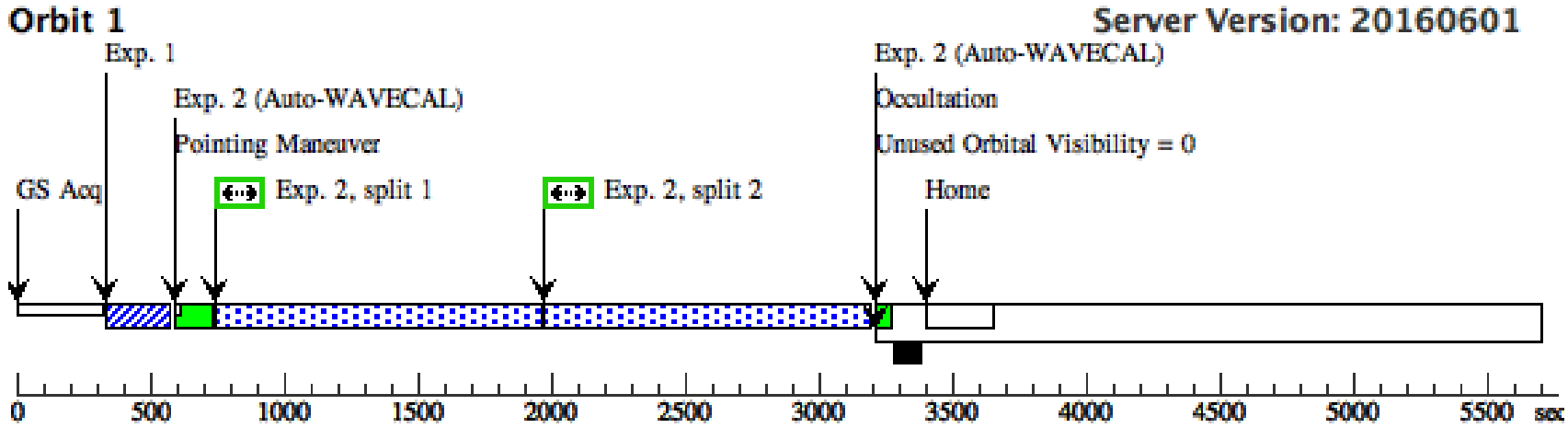
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(24)	SDSSJ155837.77+081345.8	RA: 15 58 37.7700 (239.6573750d) Dec: +08 13 45.80 (8.22939d) Equinox: J2000	Redshift: 0.517	V=17.44 NUV = 18.25, g=17.62	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720435)	(24) SDSSJ155837.77+081345.8	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720437)	(24) SDSSJ155837.77+081345.8	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2376 Secs (2376 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 25, completed Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

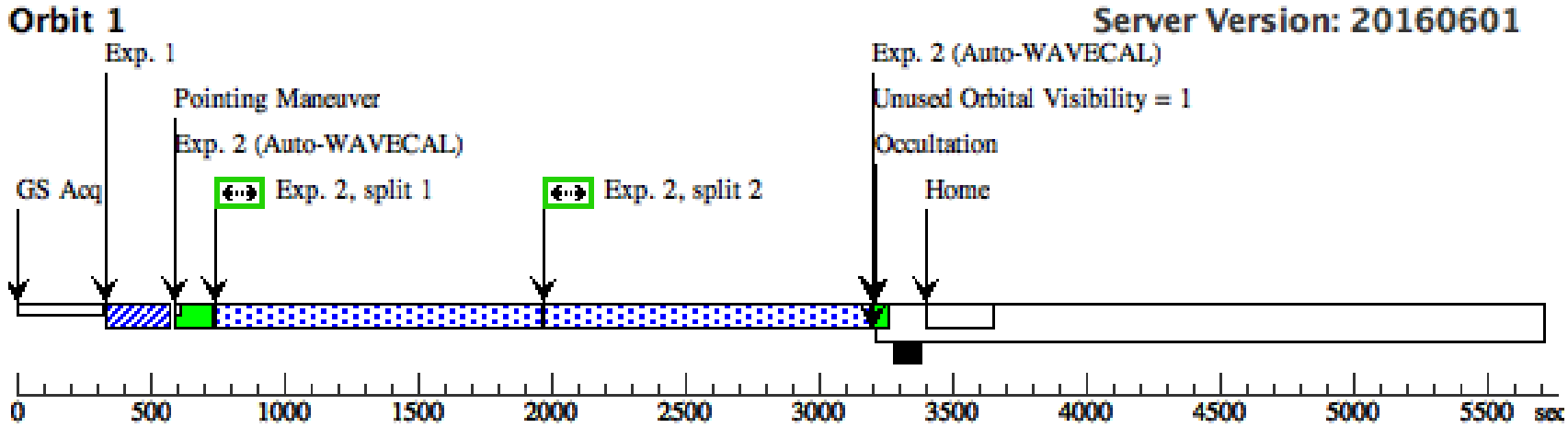
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(25)	SDSSJ234145.51-004640.5	RA: 23 41 45.5100 (355.4396250d) Dec: -00 46 40.50 (-.77792d) Equinox: J2000	Redshift: 0.524	V=17.44 NUV = 17.89, g=17.43	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720438)	(25) SDSSJ234145.51-004640.5	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720439)	(25) SDSSJ234145.51-004640.5	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2372 Secs (2372 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 14135, Visit 26, implementation Wed Jan 25 02:01:20 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Comments: Repeat of visit 14 that failed due to Hubble safing.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	SDSSJ112614.93+310146.6	RA: 11 26 14.9300 (171.5622083d) Dec: +31 01 46.60 (31.02961d) Equinox: J2000	Redshift: 0.495	V=17.49 NUV = 17.89, g=17.51	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	TA (STIS.ta.720380)	(14) SDSSJ112614.93+310146.6	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G230LB (STIS.sp.720382)	(14) SDSSJ112614.93+310146.6	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=2			2408 Secs (2408 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure