12557 - Low-Mass Black Holes and CIV in Low-Luminosity AGN

Cycle: 19, 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) NGC-3259	COS/FUV COS/NUV	1	13-Sep-2011 22:39:53.0	yes
02	(2) SDSS-J004042.09-110957.7	COS/FUV COS/NUV	1	13-Sep-2011 22:39:59.0	yes
03	(3) SDSS-J083803.67+540642.1	COS/FUV COS/NUV	1	13-Sep-2011 22:40:06.0	yes
04	(4) MCG-+09-19-078	COS/FUV COS/NUV	1	13-Sep-2011 22:40:13.0	yes
05	(5) 2MASX-J13242823+0446298	COS/FUV COS/NUV	1	13-Sep-2011 22:40:17.0	yes
06	(6) 2MASX-J17172551+2911075	COS/FUV COS/NUV	1	13-Sep-2011 22:40:21.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(2) SDSS-J004042.09-110957.7	WFC3/IR WFC3/UVIS	1	13-Sep-2011 22:40:26.0	yes
08	(3) SDSS-J083803.67+540642.1	WFC3/IR WFC3/UVIS	1	13-Sep-2011 22:40:30.0	yes
09	(4) MCG-+09-19-078	WFC3/IR WFC3/UVIS	1	13-Sep-2011 22:40:36.0	yes
10	(5) 2MASX-J13242823+0446298	WFC3/IR WFC3/UVIS	1	13-Sep-2011 22:40:40.0	yes
11	(6) 2MASX-J17172551+2911075	WFC3/IR WFC3/UVIS	1	13-Sep-2011 22:40:45.0	yes

11 Total Orbits Used

ABSTRACT

The observed tight correlations between black hole mass and host galaxy properties evince a fundamental connection between their joint evolution. The key to understanding this co-evolution rests on the ability to measure the smallest black hole masses, which closely trace the formation of black holes. But, recent observational evidence suggests the smallest black holes and/or the smallest galaxies (especially pseudobulges) diverge from the scaling relations. There is therefore a pressing need: (1) to firmly establish multiple, independent measures of black hole mass in these smallest objects, and (2) to accurately determine properties of the host galaxy. Unfortunately, low AGN luminosity means that galaxy contamination is a prohibiting issue for normal ground-based measures of BH mass. But, in the UV this is not a problem allowing the use of CIV to measure BH masses through COS spectroscopy. Moreover, with WFC3 imaging we can unambiguously determine the bulge morphology and luminosity. Therefore, only with our proposed HST campaign to study 6 low-luminosity AGN will we be able to test whether or not the smallest black holes in the smallest galaxies are truly aberrations compared to their higher-mass counterparts.

OBSERVING DESCRIPTION

COS SPECTROSCOPY

We are taking UV spectra of 6 AGNs to measure the width of the CIV (1549) line as well as 1500 AA continuum flux. This can be done in a single

COS/FUV spectrum. Our strategy is the same for each source: All sources have SDSS positions, which are generally accurate to 0.1". Thus we do not do an ACQ/SEARCH routine. We do COS/NUV imaging acquisition (ACQ/IMAGE) to acquire the source, and then observe in FUV with the G160M grating through the PSA with central wavelength 1600 AA. We observe in TIMETAG mode at all four FP-POS positions with FLASH=YES and BUFFER-TIME set to the exposure time minus 100 seconds for efficient readout. Exposure times for the ACQ/IMAGE exposures are set using the COS ETC with estimated 1500 AA flux based on the SDSS g-band flux and a standard AGN SED. Science exposures are made as large as possible to pad the orbit.

WFC3 IMAGING

We are observing 5 of the 6 host galaxies with WFC3 in both IR and UVIS channels. The sixth galaxy has sufficient archival data. Our strategy for each target is the same. In a single orbit, we observe first in IR with the F160W filter with the IRSUB256 subarray. Using the subarray minimizes overhead for these targets, which are small on the sky. All images are dithered using the WFC3-IR-DITHER-BOX-MIN dithering pattern with the SAMP-SEQ=SPARS25 readout schedule. The NSAMP parameter is adjusted for each source to maximize the exposure time while within the orbit, keeping the other exposures for each orbit in mind.

The UVIS channel exposures are in the F555W filter with the UVIS1-2K2A-SUB subarray. All images are dithered 4x4 using the WFC3-UVIS-DITHER-BOX dithering pattern with CR-SPLIT=NO. Exposure times are set to maximum within a single orbit, keeping the other exposures in mind.

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REAL TIME JUSTIFICATION

N/A

CALIBRATION JUSTIFICATION

N/A

Visit

Proposal 12557, Visit 01, implementation Wed Sep 14 02:40:49 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Diagnostics

(Visit 01) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC-3259 Alt Name1: UGC05717 Alt Name2: SDSSJ103234.85+650227.9	RA: 10 32 34.8528 (158.1452200d) Dec: +65 02 27.92 (65.04109d) Equinox: J2000		V=17.819+/-0.021 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 1.1e-15 erg/s/cm^2/A.	Reference Frame: ICRS

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

Exposures

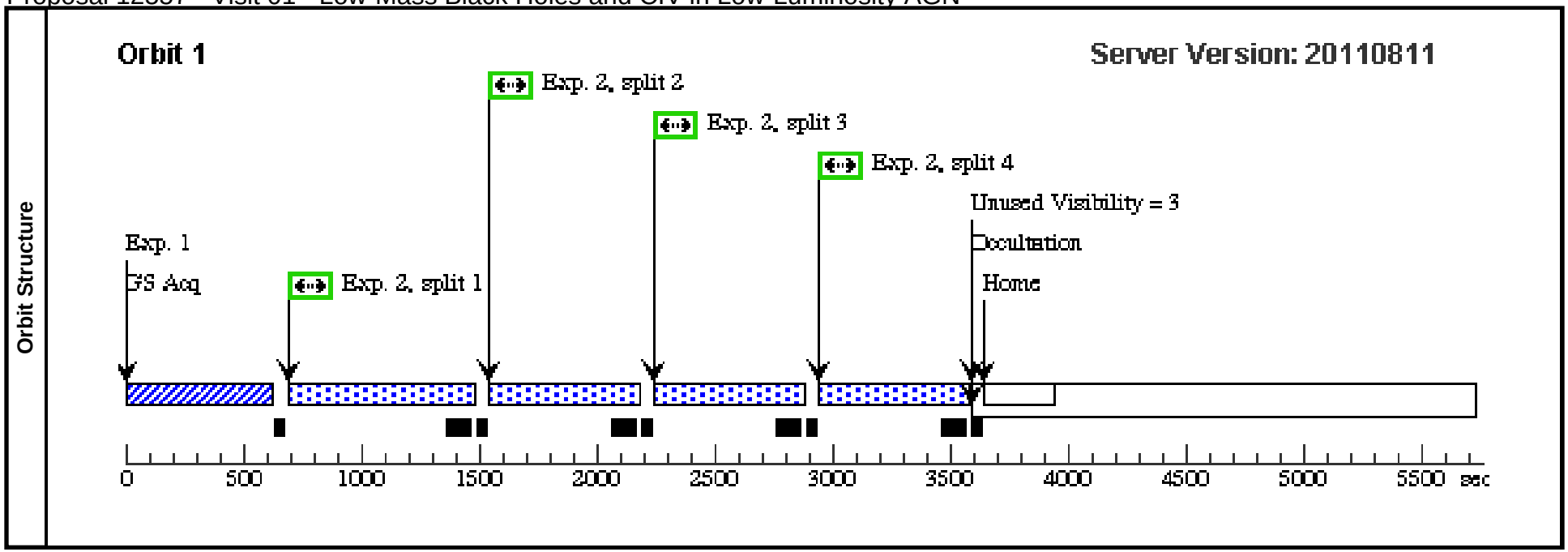
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	NGC3259 COS ACQ/Imaging (COS.ta.183942)	(1) NGC-3259	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				100 Secs *[==>]*	***[1]***

Comments: There is a large discrepancy (factor ~20) between (1) our estimated UV flux based on SDSS g' AGN luminosity measurements and (2) GALEX FUV flux towards this source. As a precaution, we are using MIRRORB to avoid harming the instrument (if the higher flux estimate is more accurate) but setting the exposure time so that we can still get S/N > 25 if the lower flux estimate is more accurate. The ETC Run # above assumes the higher flux estimate. The lower flux estimate can be seen for ETC Run # COS.ta.183944. Thus we are being conservative both in terms of instrument safety and in terms of acquisition.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2	NGC3259 COS Science!!! (COS.sp.184061)	(1) NGC-3259	COS/FUV, TIME-TAG, PSA	G160M 1623 A	SEGMENT=BOTH; FLASH=YES; FP-POS=ALL; BUFFER-TIME=481			581 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***

Comments: There is a large discrepancy (factor ~20) between (1) our estimated UV flux based on SDSS g' AGN luminosity measurements and (2) GALEX FUV flux towards this source. The ETC Run # above assumes the higher flux estimate. The lower flux estimate can be seen for ETC Run # COS.sp.184062.

Source has z = 0.0056; D_L = 24.1; F_l = 230 or 11.3 e-16


Orbit Structure
Orbit 1
Server Version: 20110811
Exp. 2, split 2
Exp. 2, split 3
Exp. 2, split 4
Unused Visibility = 3
Occultation
Exp. 1
GS Acq
Exp. 2, split 1
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12557, Visit 02, implementation Wed Sep 14 02:40:50 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: The unknown Bright Object from the GSC2 is the AGN we are observing.

Diagnostics

(Visit 02) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSS-J004042.09-110957.7 Alt Name1: GH008	RA: 00 40 42.1008 (10.1754200d) Dec: -11 09 57.74 (-11.16604d) Equinox: J2000		V=17.618+/-0.011 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 2.24e-16 erg/s/cm^2/A.	Reference Frame: ICRS

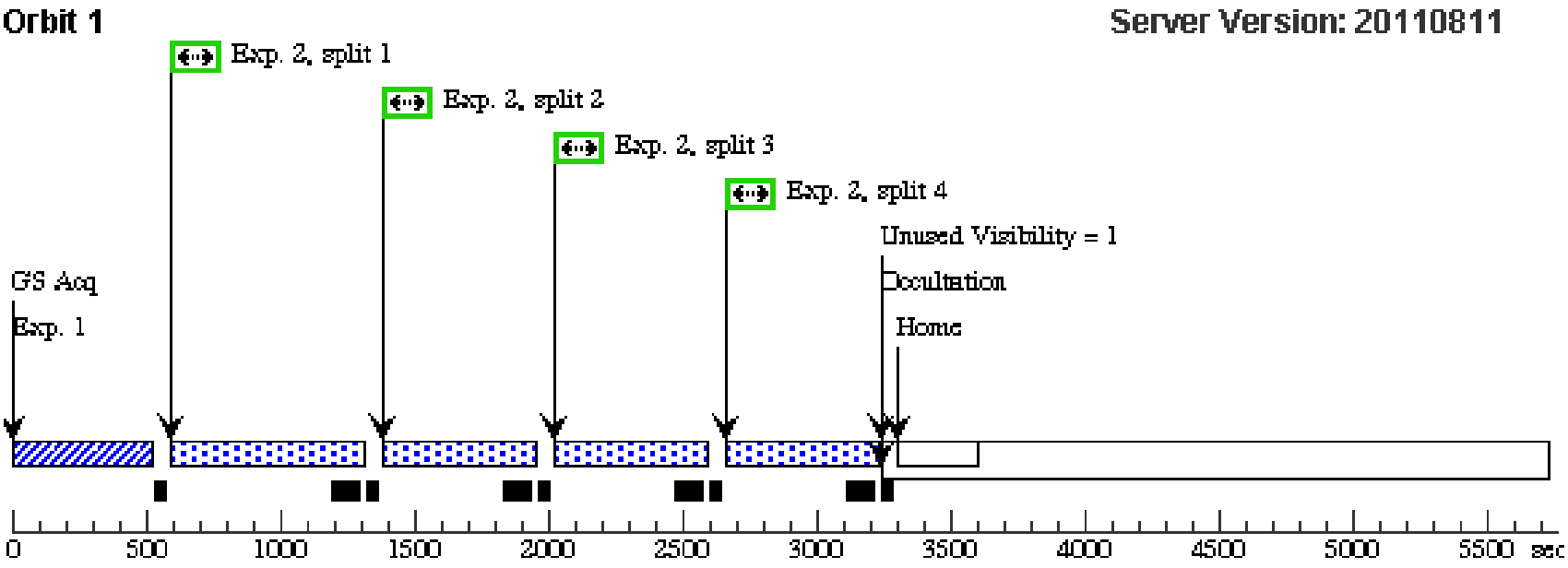
Comments: This object was generated by the targetselector and retrieved from the NED database.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	SDSSJ004042.09-110957.7 COS ACQ/Imaging (COS.ta.183946)	(2) SDSS-J004042.09-110957.7	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				65 Secs *[==>]*	 ***[1]***
2	SDSSJ004042.09-110957.7 COS Science!!! (COS.sp.184063)	(2) SDSS-J004042.09-110957.7	COS/FUV, TIME-TAG, PSA	G160M 1623 A	SEGMENT=BOTH; FLASH=YES; FP-POS=ALL; BUFFER-TIME=411			511 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***

Comments: Source has z = 0.0274; D_L = 119.8; F_l = 2.24e-16

Orbit Structure



Visit

Proposal 12557, Visit 03, implementation Wed Sep 14 02:40:51 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: The GALEX Health/Saftey Bright Object warning as well as the Unknown GSC2 Bright Object warning are the AGN at the center of this galaxy. The AGN is our target. The O5-star assumption is therefore wrong, and the detector is safe.

Diagnostics

(Visit 03) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

Fixed Targets

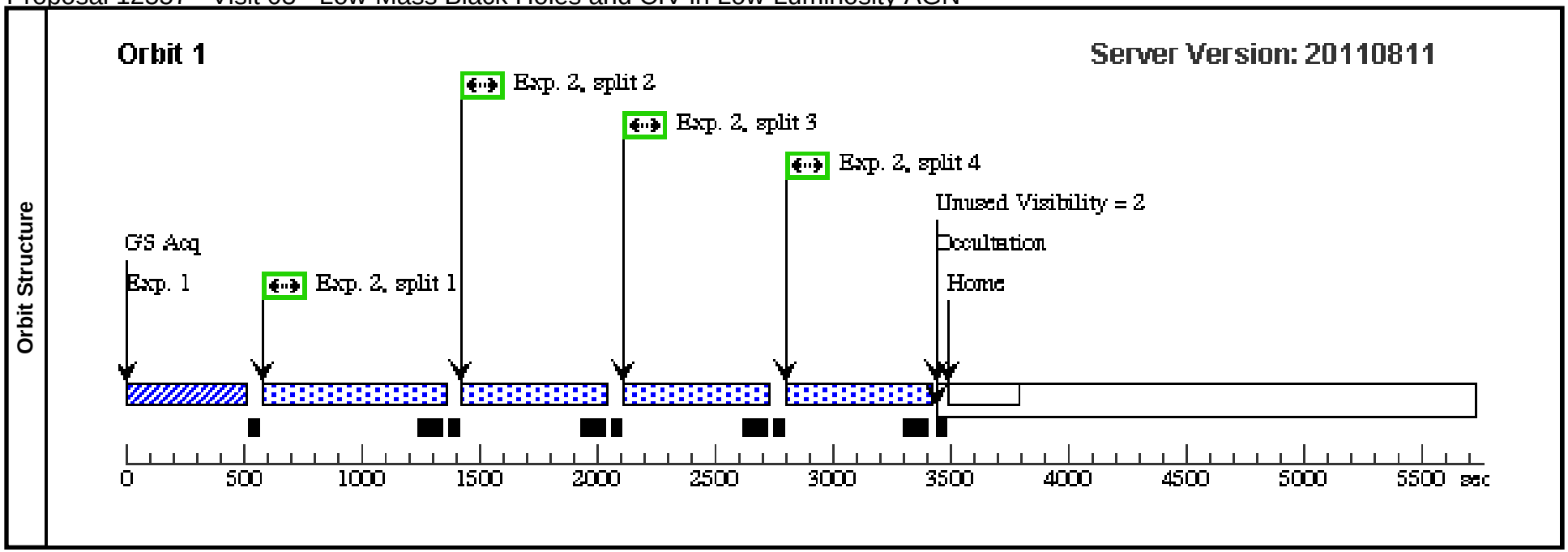
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS-J083803.67+540642.1 Alt Name1: GH053	RA: 08 38 3.6744 (129.5153100d) Dec: +54 06 42.12 (54.11170d) Equinox: J2000		V=18.028+/-0.010 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 2.61e-16 erg/s/cm^2/A.	Reference Frame: ICRS

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

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	SDSSJ083803.67+540642.1 COS ACQ/Imaging (COS.ta.183953)	(3) SDSS-J083803.67+540642.1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs *[==>]*	*[1]*
2	SDSSJ083803.67+540642.1 COS Science!!! (COS.sp.184064)	(3) SDSS-J083803.67+540642.1	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FLASH=YES; FP-POS=ALL; SEGMENT=BOTH; BUFFER-TIME=470			570 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*

Comments: Source has z = 0.0295; D_L = 129.2; F_l = 2.61e-16


Orbit Structure
Orbit 1
Server Version: 20110811
Exp. 2, split 2
Exp. 2, split 3
Exp. 2, split 4
Unused Visibility = 2
GS Acq
Occultation
Exp. 1
Exp. 2, split 1
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12557, Visit 04, implementation Wed Sep 14 02:40:52 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: The unknown Bright Object from the GSC2 is the AGN we are observing.

Diagnostics

(Visit 04) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

Fixed Targets

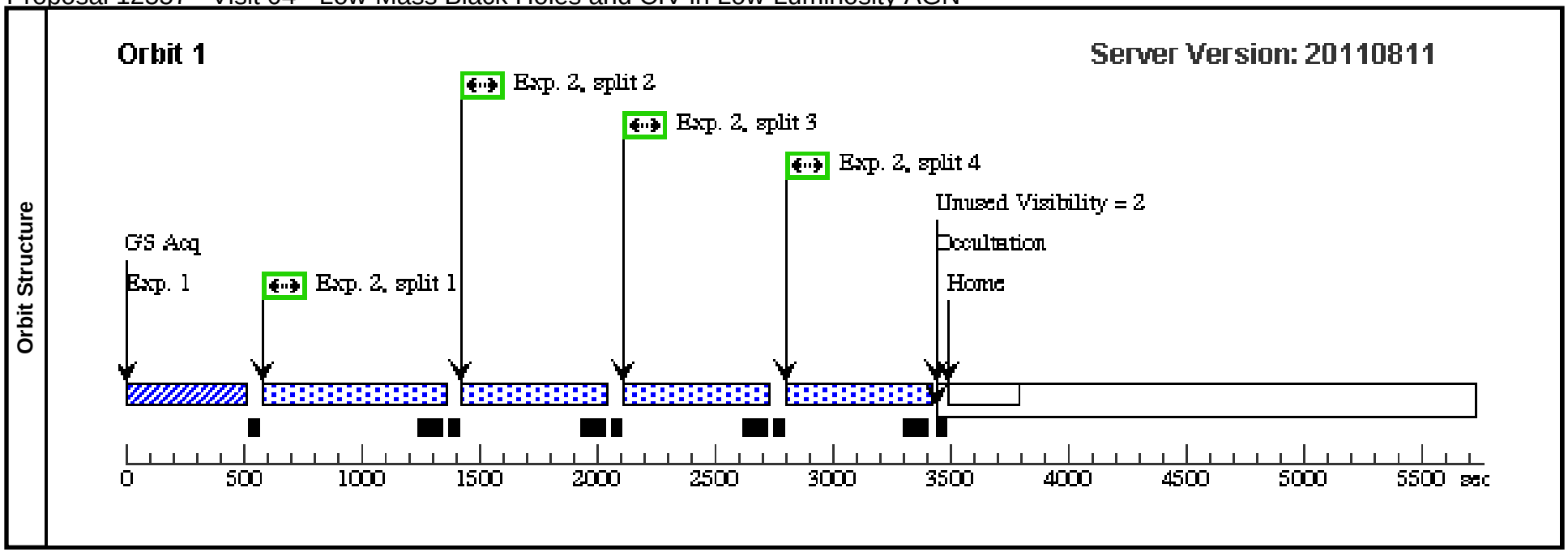
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	MCG-+09-19-078 Alt Name1: SDSSJ112637.74+513423.0 Alt Name2: GH119	RA: 11 26 37.7400 (171.6572500d) Dec: +51 34 23.02 (51.57306d) Equinox: J2000		V=16.023+/-0.004 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 4.12e-16 erg/s/cm^2/A.	Reference Frame: ICRS

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

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	MCG+09-19-078 COS ACQ/Image (COS.ta.183959)	(4) MCG-+09-19-078	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs *[==>]*	*[1]*
2	MCG+09-19-078 COS Science!!! (COS.sp.184067)	(4) MCG-+09-19-078	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FLASH=YES; FP-POS=ALL; SEGMENT=BOTH; BUFFER-TIME=470			570 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*

Comments: Source has z = 0.0264; D_L = 115.4; F_l = 4.12e-16


Orbit Structure
Orbit 1
Server Version: 20110811
Exp. 2, split 2
Exp. 2, split 3
Exp. 2, split 4
Unused Visibility = 2
GS Acq
Occultation
Exp. 1
Exp. 2, split 1
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12557, Visit 05, implementation Wed Sep 14 02:40:52 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: The unknown Bright Object from the GSC2 is the AGN we are observing.

Diagnostics

(Visit 05) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

Fixed Targets

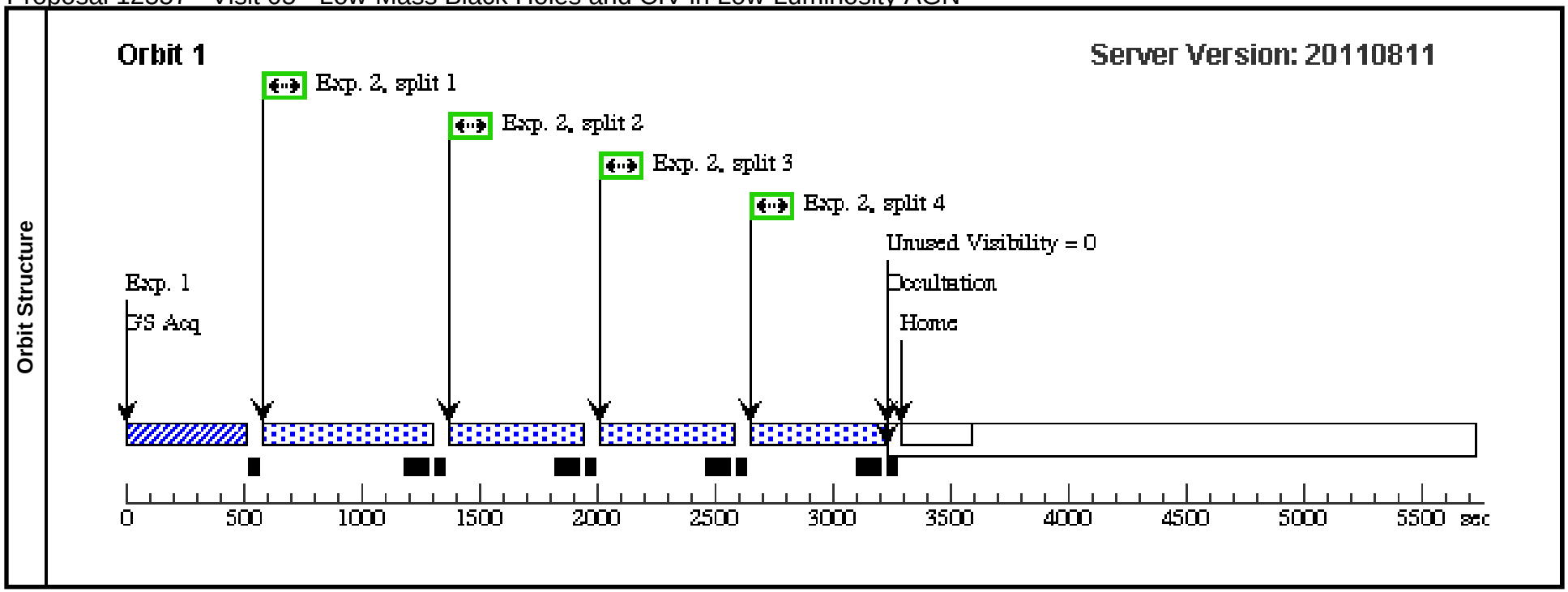
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	2MASX-J13242823+0446298 Alt Name1: SDSSJ132428.24+044629.6 Alt Name2: GH163	RA: 13 24 28.2400 (201.1176667d) Dec: +04 46 29.70 (4.77492d) Equinox: J2000		V=16.205+/-0.010 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 4.7e-16 erg/s/cm^2/A.	Reference Frame: ICRS

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

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	SDSSJ132428.24+044629.6 COS ACQ/Imaging (COS.ta.183962)	(5) 2MASX-J13242823+0446298	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs *[==>]*	*[1]*
2	SDSSJ132428.24+044629.6 COS Science!!! (COS.sp.184069)	(5) 2MASX-J13242823+0446298	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FLASH=YES; FP-POS=ALL; SEGMENT=BOTH; BUFFER-TIME=411			511 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*

Comments: Source has z = 0.0213; D_L = 92.7; F_l = 4.70e-16


Orbit Structure
Orbit 1
Server Version: 20110811
Exp. 2, split 1
Exp. 2, split 2
Exp. 2, split 3
Exp. 2, split 4
Unused Visibility = 0
Occultation
Exp. 1
FS Acq
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12557, Visit 06, implementation Wed Sep 14 02:40:53 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: The unknown Bright Object from GSC2 (Obj ID: N3II006779) is almost certainly a background galaxy and not a worry for the detector. The other unkown source (Obj ID: N3II000154) is the target AGN we are observing.

Diagnostics

(Visit 06) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	2MASX-J17172551+2911075 Alt Name1: SDSSJ171725.53+291107.9 Alt Name2: GH217	RA: 17 17 25.5336 (259.3563900d) Dec: +29 11 8.02 (29.18556d) Equinox: J2000		V=16.656+/-0.023 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 3.66e-16 erg/s/cm^2/A.	Reference Frame: ICRS

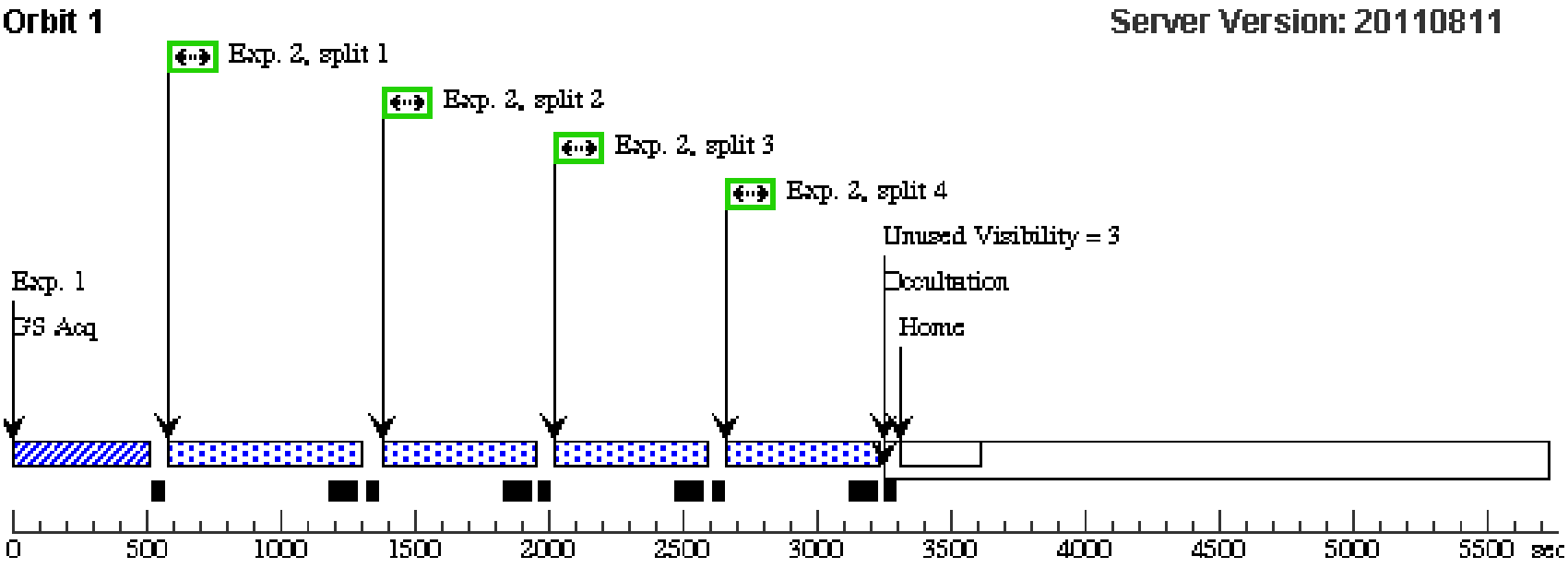
Comments: This object was generated by the targetselector and retrieved from the NED database.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	SDSSJ171725.53+291107.9 COS ACQ/Imaging (COS.ta.183967)	(6) 2MASX-J17172551+2911075	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs *[==>]*	*[1]*
2	SDSSJ171725.53+291107.9 COS Science!!! (COS.sp.184071)	(6) 2MASX-J17172551+2911075	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FLASH=YES; FP-POS=ALL; SEGMENT=BOTH; BUFFER-TIME=416			516 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*

Comments: Source has z = 0.0286; D_L = 125.2; F_l = 3.66e-16

Orbit Structure



Visit

Proposal 12557, Visit 07, implementation Wed Sep 14 02:40:53 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(2)
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

Fixed Targets

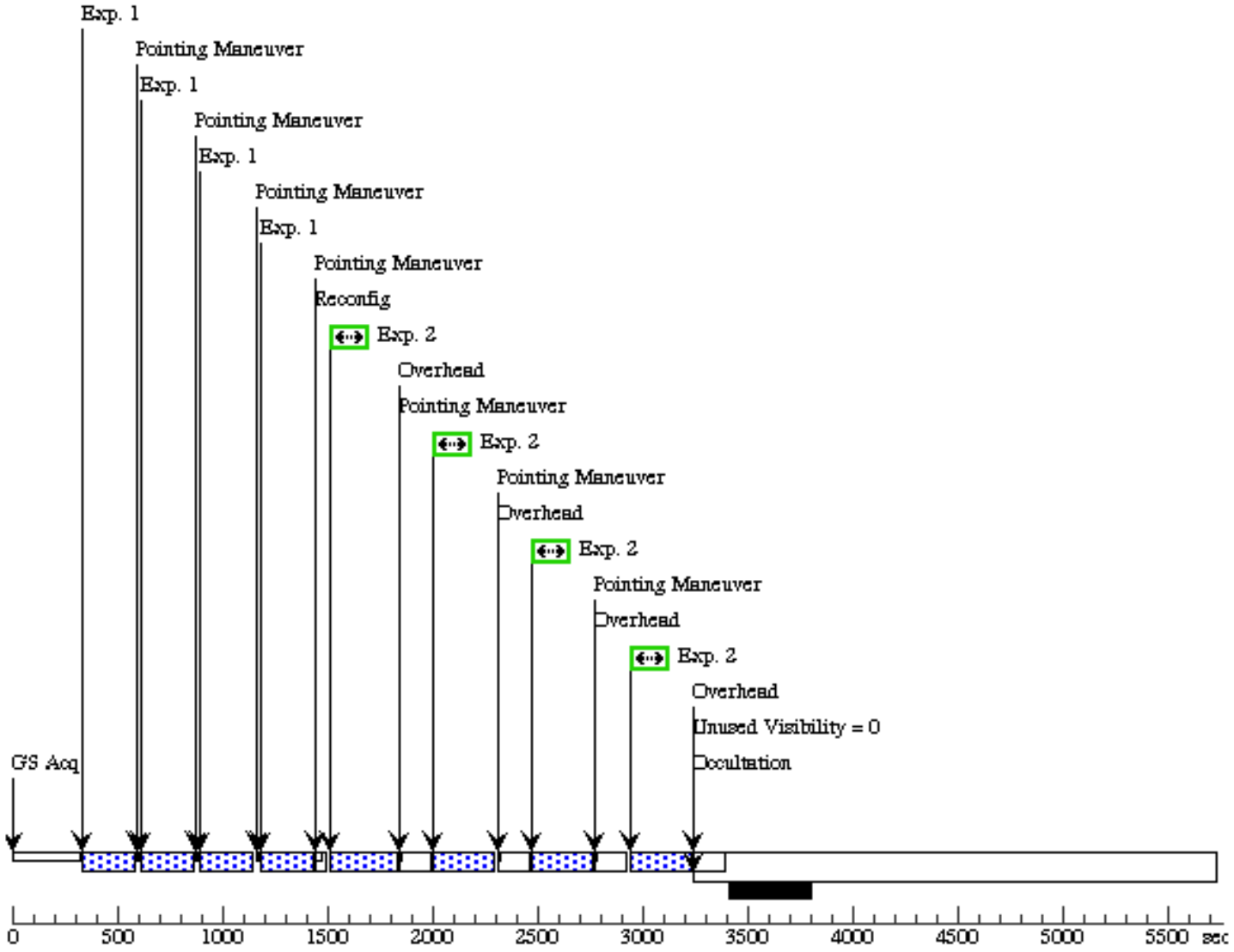
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSS-J004042.09-110957.7 Alt Name1: GH008	RA: 00 40 42.1008 (10.1754200d) Dec: -11 09 57.74 (-11.16604d) Equinox: J2000		V=17.618+/-0.011 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 2.24e-16 erg/s/cm^2/A.	Reference Frame: ICRS

Comments: 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	SDSSJ004042.09-110957.7 WFC3/IR	(2) SDSS-J004042.09-110957.7	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS25; NSAMP=11		Pattern 4, Exps 1-1 in Visit 07 (4)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	SDSSJ004042.09-110957.7 WFC3/UVIS	(2) SDSS-J004042.09-110957.7	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F555W	CR-SPLIT=NO	POS TARG 10.0,-10.5	Pattern 1, Exps 2-2 in Visit 07 (1)	290 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***

Orbit Structure



Visit

Proposal 12557, Visit 08, implementation Wed Sep 14 02:40:53 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(2)
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

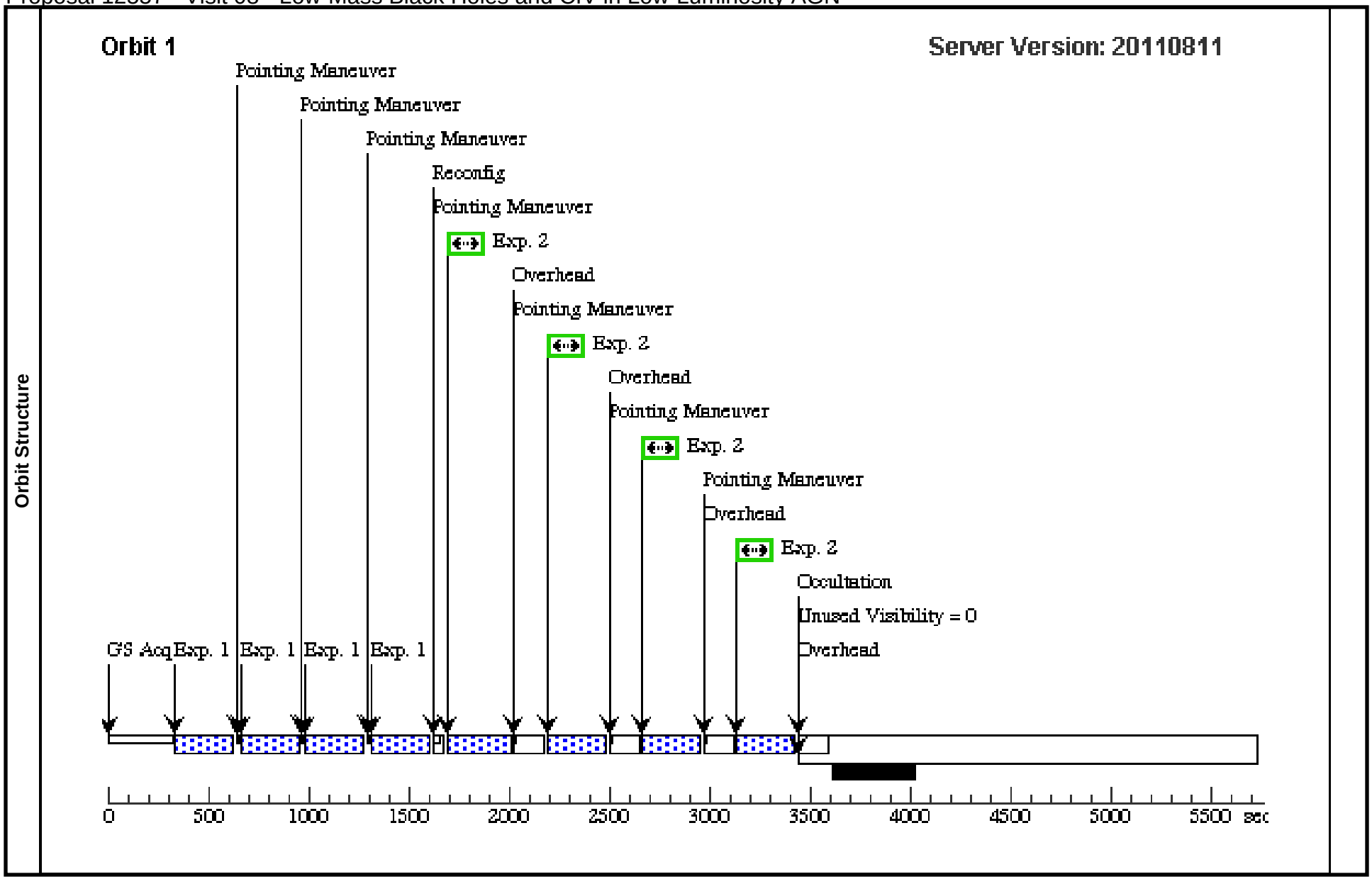
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS-J083803.67+540642.1 Alt Name1: GH053	RA: 08 38 3.6744 (129.5153100d) Dec: +54 06 42.12 (54.11170d) Equinox: J2000		V=18.028+/-0.010 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 2.61e-16 erg/s/cm^2/A.	Reference Frame: ICRS

Comments: 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	SDSSJ083803.67+540642.1 WFC3/IR	(3) SDSS-J083803.67+540642.1	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS25; NSAMP=13		Pattern 4, Exps 1-1 in Visit 08 (4)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	SDSSJ083803.67+540642.1 WFC3/UVIS	(3) SDSS-J083803.67+540642.1	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F555W	CR-SPLIT=NO	POS TARG +10.00,-10.50	Pattern 1, Exps 2-2 in Visit 08 (1)	290 Secs *[==>295.0 Secs (Pattern 1)]* *[==>295.0 Secs (Pattern 2)]* *[==>295.0 Secs (Pattern 3)]* *[==>295.0 Secs (Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20110811
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Reconfig
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Unused Visibility = 0
Overhead
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12557, Visit 09, implementation Wed Sep 14 02:40:54 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(3)
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

Fixed Targets

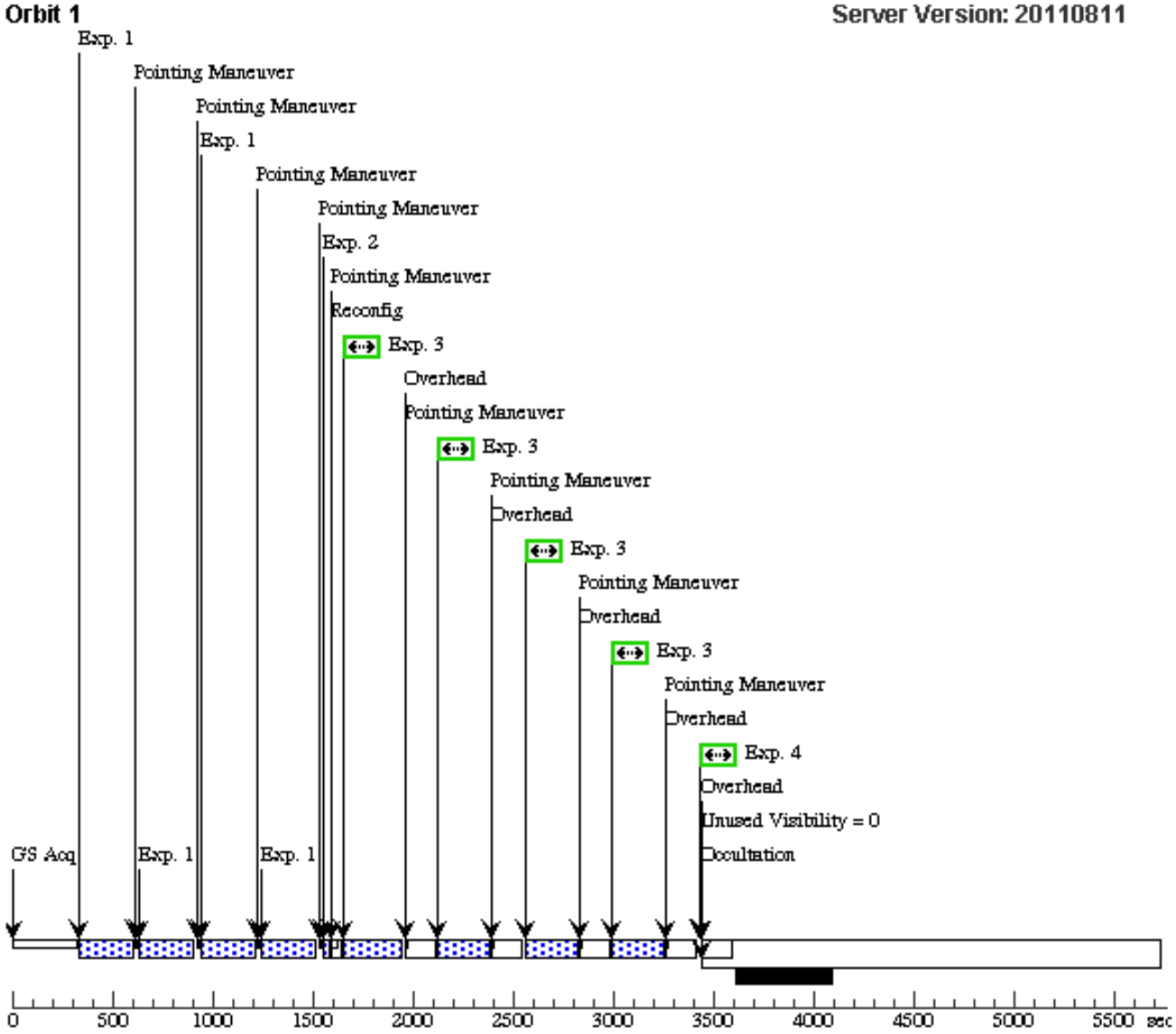
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	MCG-+09-19-078 Alt Name1: SDSSJ112637.74+513423.0 Alt Name2: GH119	RA: 11 26 37.7400 (171.6572500d) Dec: +51 34 23.02 (51.57306d) Equinox: J2000		V=16.023+/-0.004 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 4.12e-16 erg/s/cm^2/A.	Reference Frame: ICRS

Comments: 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	MCG+09-19-078 WFC3/IR	(4) MCG-+09-19-078	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS25; NSAMP=12		Pattern 4, Exps 1-1 in Visit 09 (4)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	Short IR exposure: MCG+09-19-078 WFC3/IR	(4) MCG-+09-19-078	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID; NSAMP=3			*[==>]*	***[1]***
3	MCG+09-19-078 WFC3/UVIS	(4) MCG-+09-19-078	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F555W	CR-SPLIT=NO	POS TARG +10.0,-10.5	Pattern 1, Exps 3-3 in Visit 09 (1)	258 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4	Short UVIS exposure: MCG+09-19-078 WFC3/UVIS	(4) MCG-+09-19-078	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F555W	CR-SPLIT=NO	POS TARG 10.0,-10.5		1 Secs *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 12557, Visit 10, implementation Wed Sep 14 02:40:54 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(2)
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

Fixed Targets

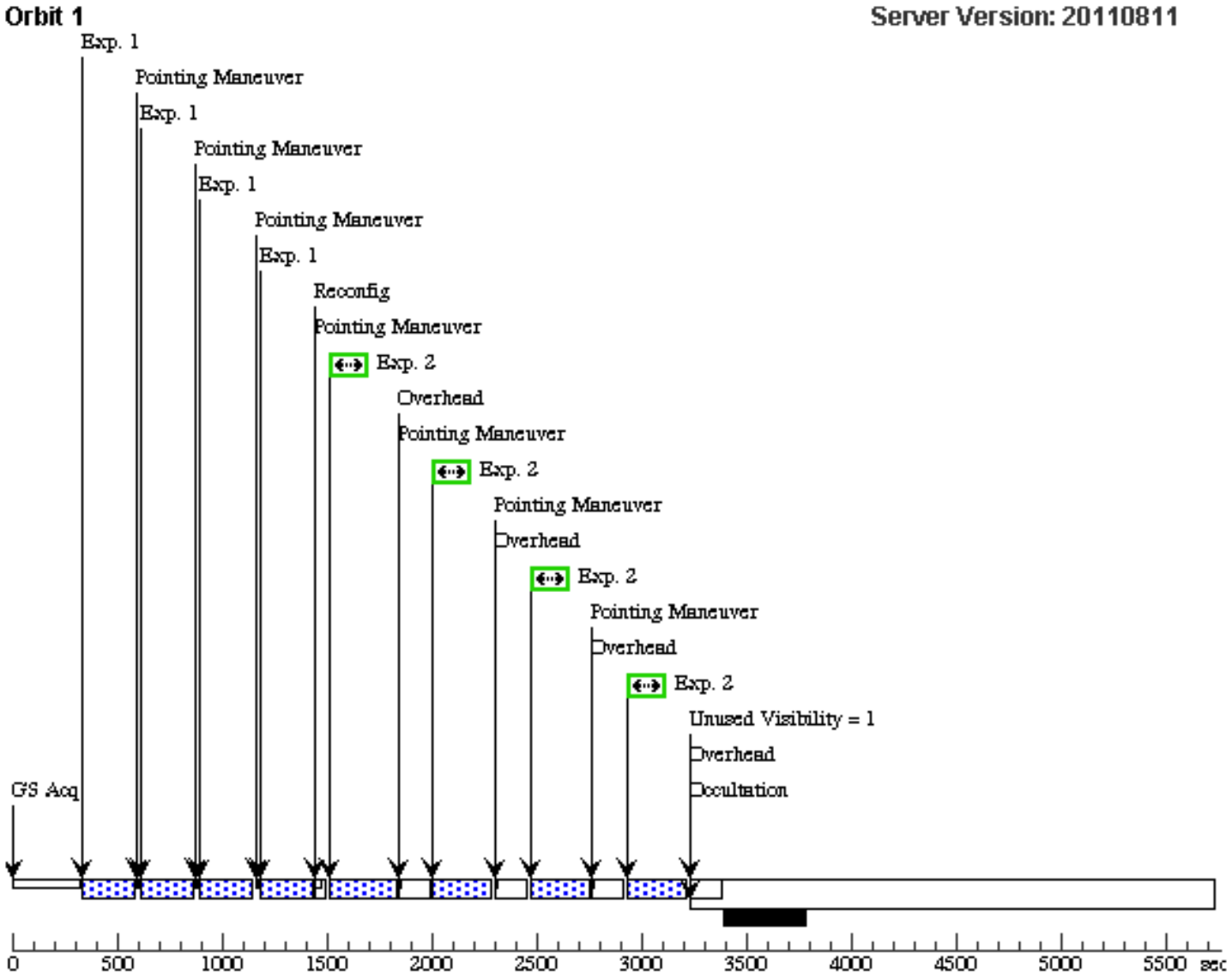
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	2MASX-J13242823+0446298 Alt Name1: SDSSJ132428.24+044629.6 Alt Name2: GH163	RA: 13 24 28.2400 (201.1176667d) Dec: +04 46 29.70 (4.77492d) Equinox: J2000		V=16.205+/-0.010 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 4.7e-16 erg/s/cm^2/A.	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	SDSSJ132428.24+044629.6 WFC3/IR	(5) 2MASX-J13242823+0446298	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS25; NSAMP=11		Pattern 4, Exps 1-1 in Visit 10 (4)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	SDSSJ132428.24+044629.6 WFC3/UVIS	(5) 2MASX-J13242823+0446298	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F555W	CR-SPLIT=NO	POS TARG +10.0,-10.50	Pattern 1, Exps 2-2 in Visit 10 (1)	290 Secs *[==>287.0 Secs (Pattern 1)]* *[==>287.0 Secs (Pattern 2)]* *[==>287.0 Secs (Pattern 3)]* *[==>287.0 Secs (Pattern 4)]*	***[1]***

Orbit Structure



Visit

Proposal 12557, Visit 11, implementation Wed Sep 14 02:40:55 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(2)
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	2MASX-J17172551+2911075 Alt Name1: SDSSJ171725.53+291107.9 Alt Name2: GH217	RA: 17 17 25.5336 (259.3563900d) Dec: +29 11 8.02 (29.18556d) Equinox: J2000		V=16.656+/-0.023 V-band magnitude is SDSS g' Petrosian magnitude. Expected UV flux at 1500 A is 3.66e-16 erg/s/cm^2/A.	Reference Frame: ICRS

Comments: 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	SDSSJ171725.53+291107.9 WFC3/IR	(6) 2MASX-J17172551+2911075	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS25; NSAMP=11		Pattern 4, Exps 1-1 in Visit 11 (4)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	SDSSJ171725.53+291107.9 WFC3/UVIS	(6) 2MASX-J17172551+2911075	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F555W	CR-SPLIT=NO	POS TARG +10.00,-10.50	Pattern 1, Exps 2-2 in Visit 11 (1)	290 Secs *[==>293.0 Secs (Pattern 1)]* *[==>293.0 Secs (Pattern 2)]* *[==>293.0 Secs (Pattern 3)]* *[==>293.0 Secs (Pattern 4)]*	***[1]***

Orbit Structure