13050 - The Most Massive Black Holes in Small Galaxies

Cycle: 20, 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	(5) NGC1270	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:11:00.0	yes
02	(6) NGC1271	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:11:15.0	yes
03	(18) MRK1216	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:11:27.0	yes
04	(10) NGC3990	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:11:39.0	yes
05	(9) NGC2767	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:11:52.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
06	(11) UGC3816	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:12:04.0	yes
07	(12) PGC32873	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:12:21.0	yes
08	(16) ARK575	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:12:32.0	yes
09	(3) NGC0384	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:12:43.0	yes
10	(4) NGC0472	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:12:54.0	yes
11	(7) NGC1281	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:13:06.0	yes
12	(8) NGC1282	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:13:17.0	yes
13	(14) PGC12562	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:13:28.0	yes
14	(13) PGC11179	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:13:39.0	yes
15	(15) PGC1021091	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:13:50.0	yes
16	(2) ARK90	WFC3/IR WFC3/UVIS	1	10-Jul-2012 00:14:01.0	yes

16 Total Orbits Used

ABSTRACT

Massive galaxies represent the extreme of galaxy formation and contain the most massive black holes (BH), as reflected in the scaling relations of BH masses with galaxy velocity dispersions (M-sigma) and luminosities (M-L). Our spectroscopic survey of 600 nearby galaxies revealed 17 galaxies with extremely high velocity dispersions (indicating BH masses of 10^10 solar masses) and at the same time shockingly small sizes (<2

kpc) and (bulge) luminosities. For one of these galaxies archival HST imaging allowed us to measure an extremely big BH mass of 23 billion solar masses, and confirm it is hosted by a small disk-dominated galaxy of only 90 billion solar masses in stars. This demonstrates that the BH in this system did not co-evolve with its host galaxy the way others are thought to have. It is imperative to go beyond a single anecdotal example to a real sample of galaxies with small bulges and suspected monster black holes. Here we propose to obtain HST imaging of the other 16 galaxies. The WFC3 imaging is required to resolve their small bulge and put accurate constraints (in combination with our spectroscopy) on their black hole mass. A significant sample of compact galaxies with very high black hole masses would be in stark conflict with the popular co-evolution picture and could form the missing link between local galaxies and the quiescent compact nugget galaxies found at z~2.

OBSERVING DESCRIPTION

Imaging campaign of 16 nearby (10<D<150 Mpc) early-type galaxies. We expect these systems to be extremely cuspy and have high central surface brightnesses (V~13.7 Mag/arcsec^2), half-light radii of a 3-6 arcseconds and a total diameter of ~60 arcseconds, based on archival HST observations of two proptotypical galaxies (NGC1277 and NGC4486B). The observations are driven by the following:

1 Obtain a high resolution image of the galaxy (nucleus). This allows us to make a stellar luminosity (mass) model of the whole galaxy, which is needed as input for the dynamical model.

2 Obtain an image in a second band to constrain the color (gradient), which allows us to look for nucleur dust & clusters and stellar population gradients.

3 Given the large extent of these systems, we need full frame read outs to determine the background levels, especially in the IR.

4 Obtain a surface brightness fluctuation (SBF) distance to these targets.

CHOICE OF FILTERS:

Given that these targets are further away than the Virgo cluster, we chose F160W in the proposal as the SB fluctuations are strongest in this band (Blakeslee et al.). To augment the F160W band we chose F814W as there are SBF calibrations available in the F814W-F160W color and F814W is a very efficient filter.

EXPOSURE TIMES:
To probe the outer part of the galaxies (~24.7 Vmag/arcsec^2) we need ~500 seconds with F814W.
To determine SBF distances for distances over 80 Mpc, exposure times over 1500 seconds in F160W are needed (Blakeslee priv. comm.).
Saturation in the F160W is a concern. If these galaxies have bright cusps (Like N1277 and N4486B), we expect the IR detector to saturate in ~3 seconds.

OBSERVING PLAN:
3 dithers (100+2*200sec, pattern B3) in F814W to obtain (nearly) diffraction limited of the galaxy.
3 dithers (STEP50,NSAMP=15) with F160W to cover the whole galaxy and estimate the background. To avoid saturation in the subsequent exposures, we use the WFC3-IR-DITHER-BOX-UVIS pattern.
4 RAPID NSAMP=15 SUB128 dithers with the WFC3-IR-DITHER-BOX-MIN pattern to obtain a high resolution, to be able to determine the color-profile of the nucleus.

For the 3 distant galaxies with long orbits (NGC2767, UGC3816 and PGC32873) we add a fourth F160W exposure to strengthen the SBF signal.

REAL TIME JUSTIFICATION
N/A

CALIBRATION JUSTIFICATION
N/A

ADDITIONAL COMMENTS
N/A

Visit

Proposal 13050, NGC1270 (01) Tue Jul 10 04:14:10 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

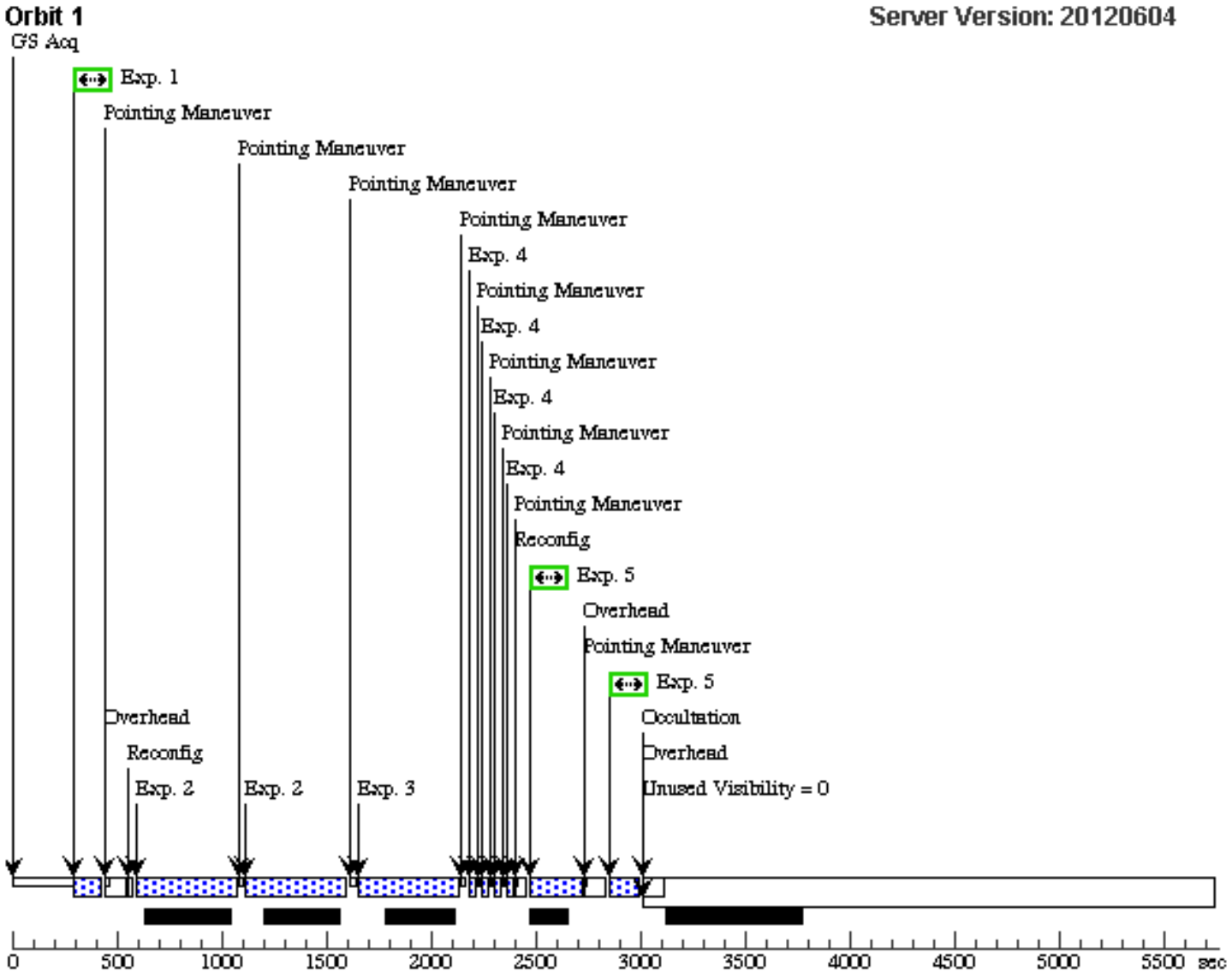
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	NGC1270	RA: 03 18 58.1440 (49.7422667d) Dec: +41 28 12.15 (41.47004d) Equinox: J2000		V=13.3+/-0.2	Reference Frame: SIMBAD

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) NGC1270	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(5) NGC1270	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC1270 (01) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(5) NGC1270	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(5) NGC1270	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC1270 (01) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(5) NGC1270	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC1270 (01) (8)	250 Secs *[==>(Pattern 1)]* *[==>145.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 13050, NGC1271 (02) Tue Jul 10 04:14:12 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

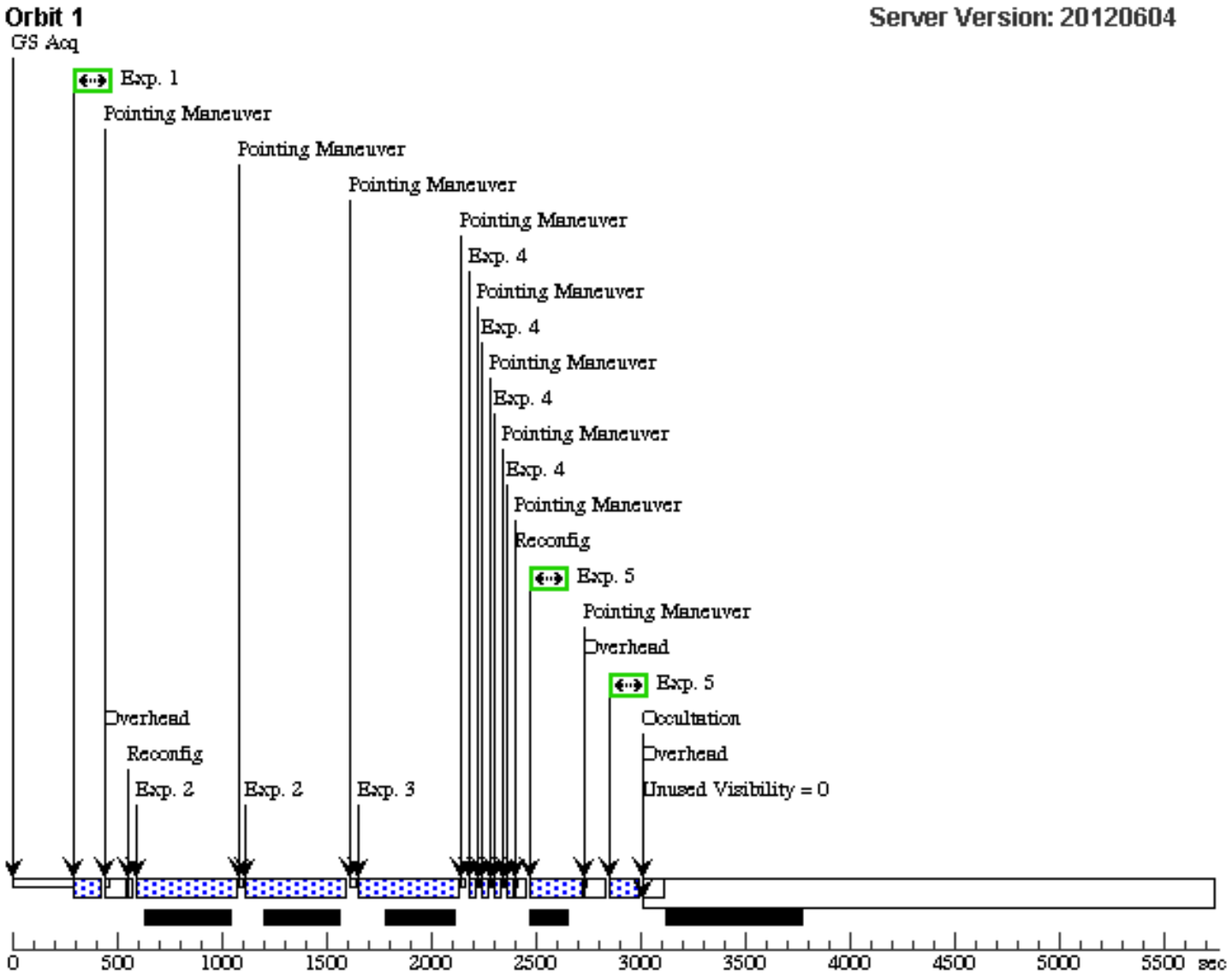
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	NGC1271	RA: 03 19 11.2800 (49.7970000d) Dec: +41 21 11.70 (41.35325d) Equinox: J2000		V=13.2+/-0.3	Reference Frame: SIMBAD

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		(6) NGC1271	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	*[1]*
2		(6) NGC1271	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC1271 (02) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
3		(6) NGC1271	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	*[1]*
4		(6) NGC1271	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC1271 (02) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
5		(6) NGC1271	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC1271 (02) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>145.0 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 13050, MRK1216 (03) Tue Jul 10 04:14:14 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

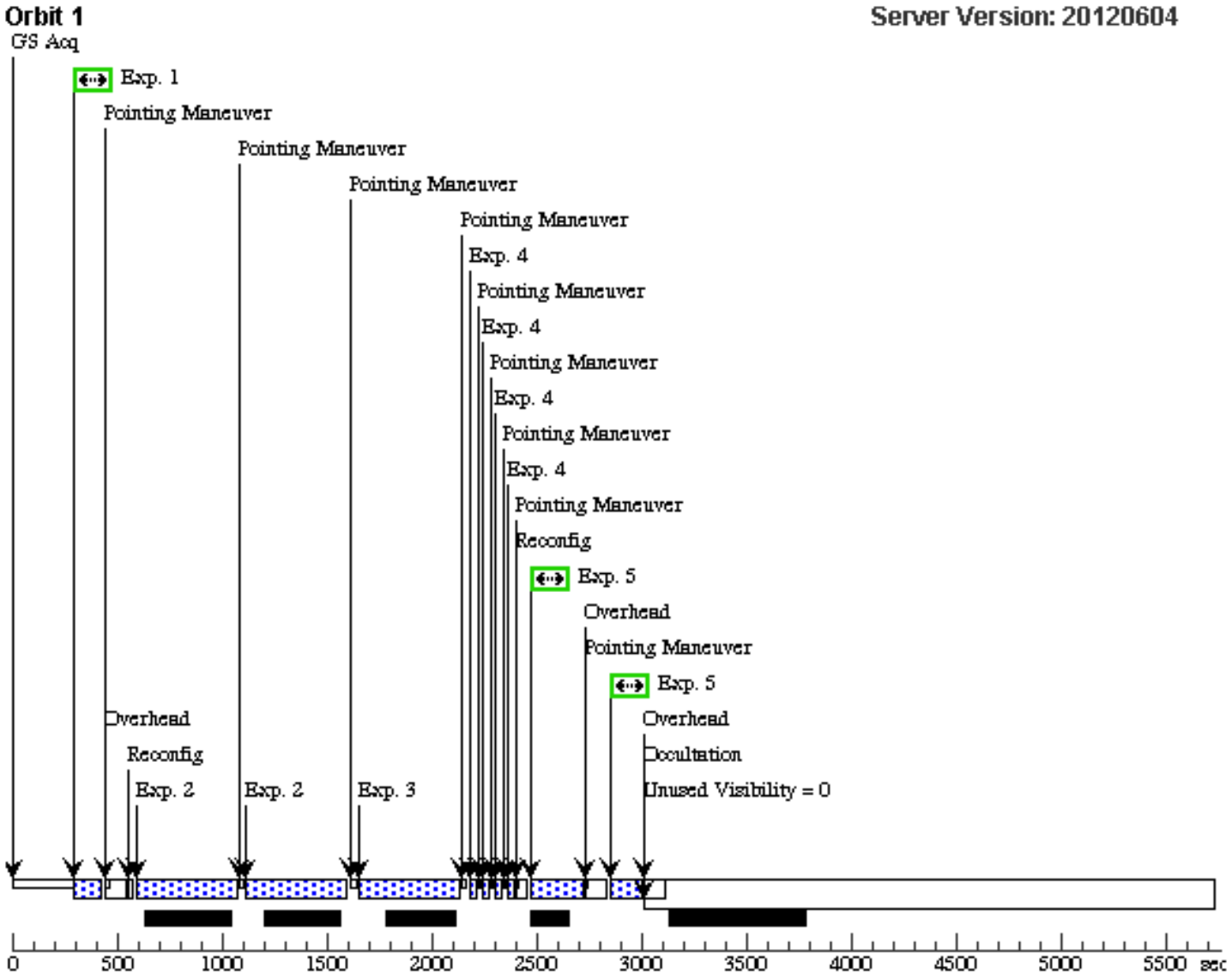
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(18)	MRK1216	RA: 08 28 47.1161 (127.1963171d) Dec: -06 56 24.53 (-6.94015d) Equinox: J2000		V=12.139	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the 2MASS database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(18) MRK1216	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(18) MRK1216	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in MRK1216 (03) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(18) MRK1216	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(18) MRK1216	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in MRK1216 (03) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(18) MRK1216	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in MRK1216 (03) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>150.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 13050, NGC3990 (04) Tue Jul 10 04:14:15 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

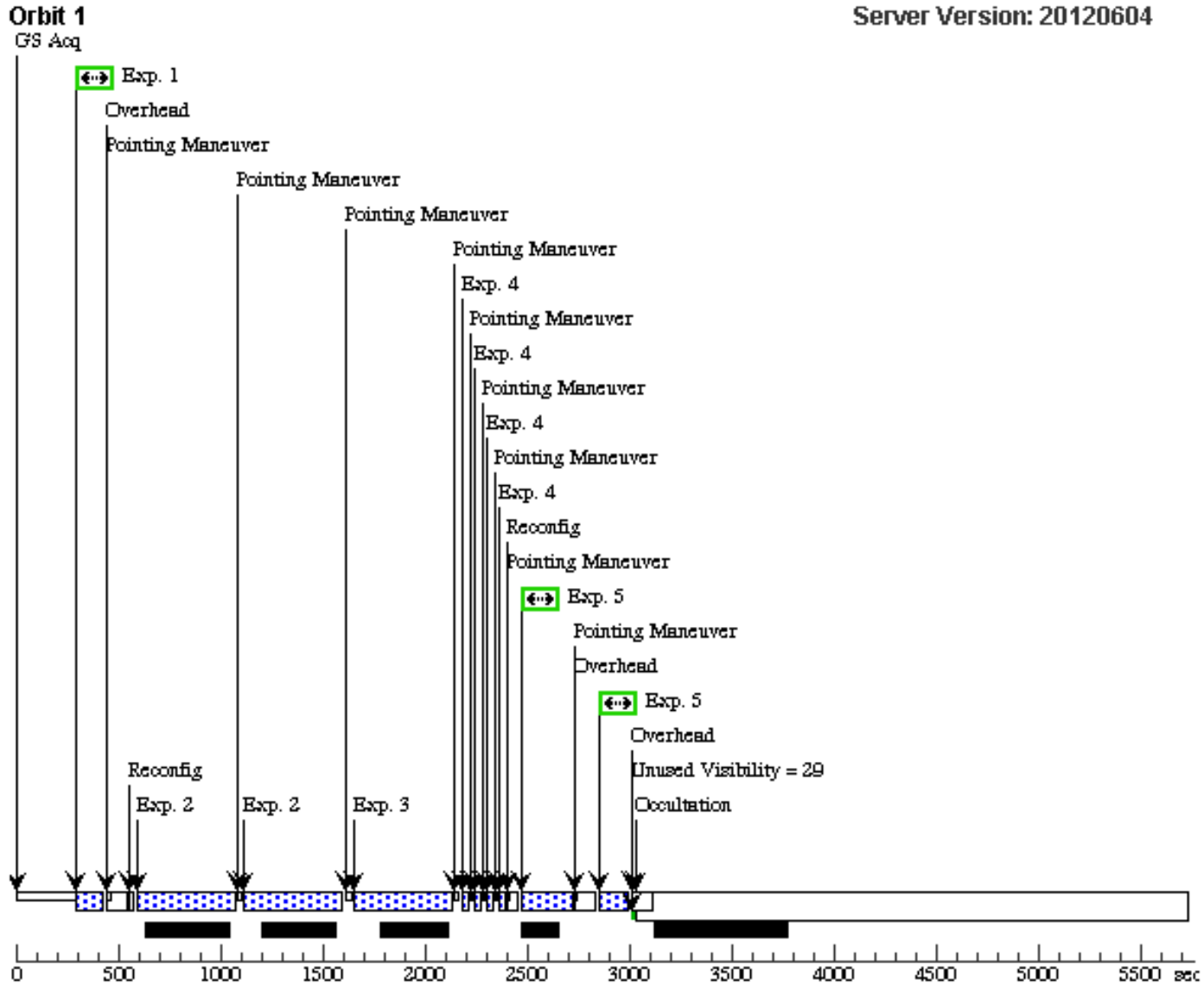
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	NGC3990	RA: 11 57 35.5584 (179.3981600d) Dec: +55 27 31.21 (55.45867d) Equinox: J2000		V=12.5+/-0.3	Reference Frame: SIMBAD

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		(10) NGC3990	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(10) NGC3990	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC3990 (04) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(10) NGC3990	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(10) NGC3990	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC3990 (04) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(10) NGC3990	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC3990 (04) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>145.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 13050, NGC2767 (05) Tue Jul 10 04:14:16 GMT 2012

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-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		(5)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2), (4)

Fixed Targets

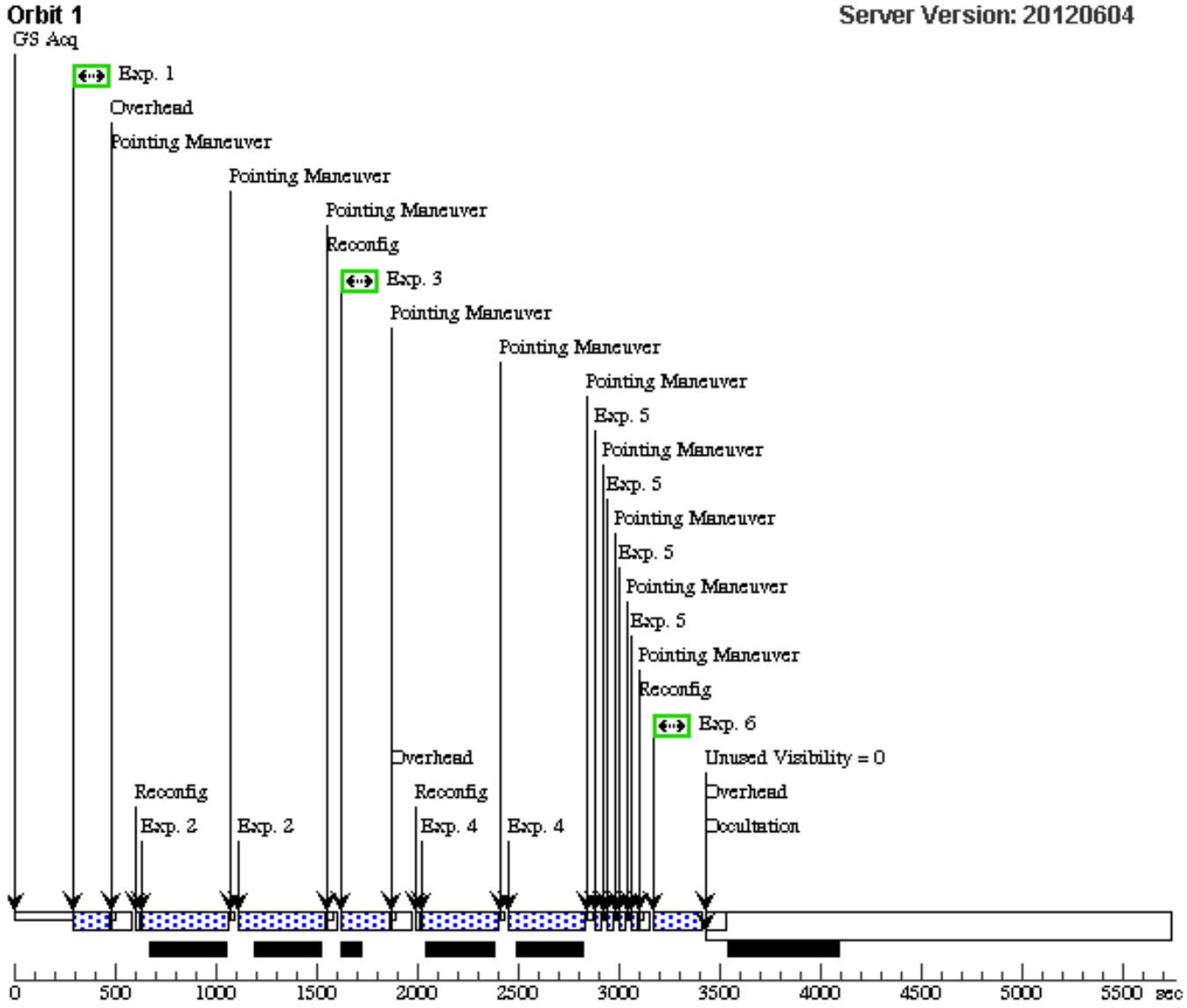
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	NGC2767	RA: 09 10 11.8824 (137.5495100d) Dec: +50 24 4.68 (50.40130d) Equinox: J2000		V=13.3+/-0.3	Reference Frame: SIMBAD

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		(9) NGC2767	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -0.0924, -2.4985		100 Secs *[==>145.0 Secs]*	***[1]***
2		(9) NGC2767	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP100	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC2767 (05) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(9) NGC2767	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0		200 Secs *[==>245.0 Secs]*	***[1]***
4		(9) NGC2767	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457	Pattern 5, Exps 4-4 in NGC2767 (05) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5		(9) NGC2767	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 5-5 in NGC2767 (05) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
6		(9) NGC2767	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0.0924,2.4985		200 Secs *[==>245.0 Secs]*	***[1]***

Orbit Structure



Visit

Proposal 13050, UGC3816 (06) Tue Jul 10 04:14:18 GMT 2012

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-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		(5)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2), (4)

Fixed Targets

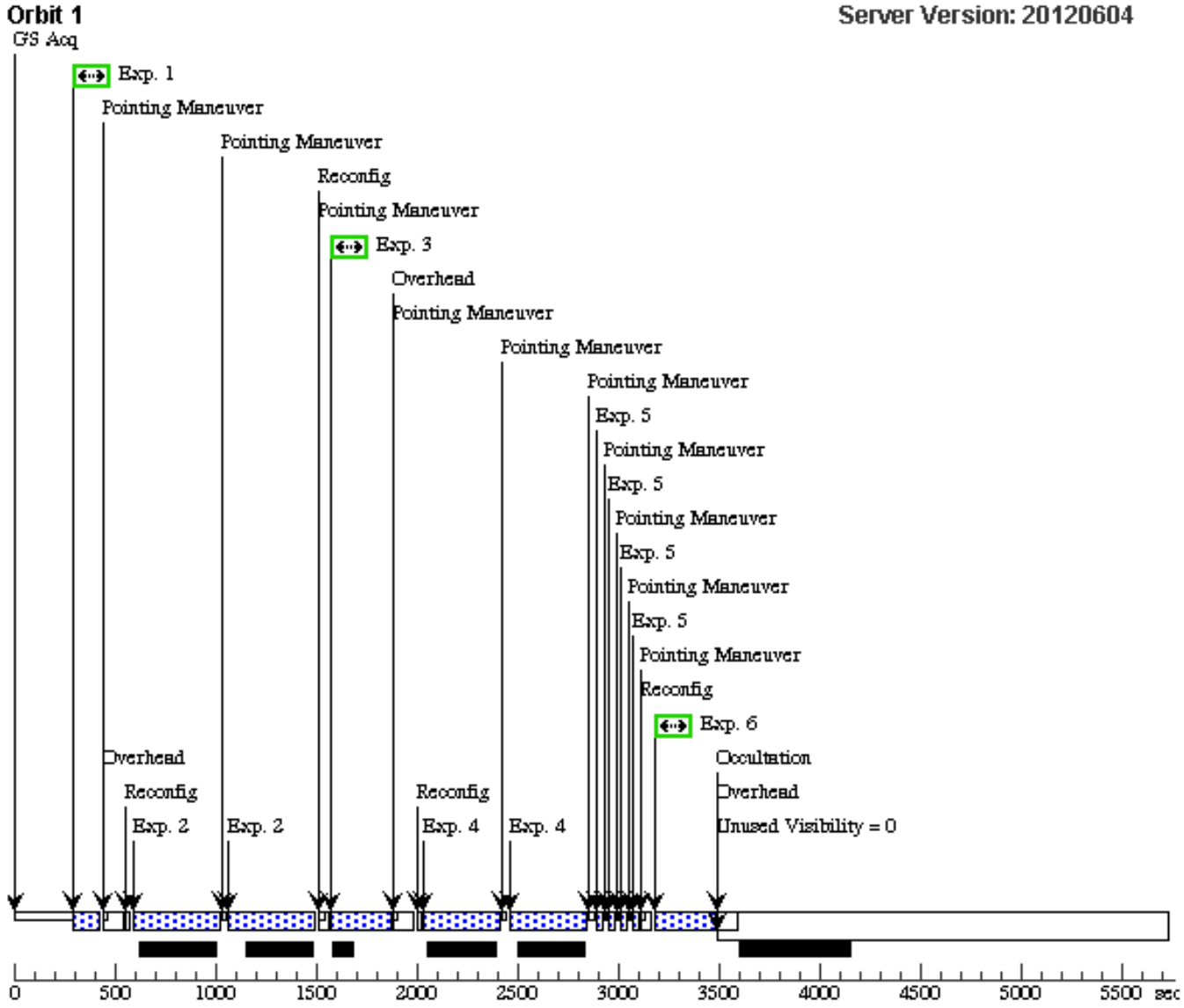
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	UGC3816	RA: 07 23 12.4008 (110.8016700d) Dec: +58 03 53.21 (58.06478d) Equinox: J2000		V=12.3+/-0.3	Reference Frame: SIMBAD

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		(11) UGC3816	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -0.0924, -2.4985		100 Secs *[==>]*	***[1]***
2		(11) UGC3816	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP100	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in UGC3816 (06) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(11) UGC3816	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0		200 Secs *[==>298.0 Secs]*	***[1]***
4		(11) UGC3816	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457	Pattern 5, Exps 4-4 in UGC3816 (06) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5		(11) UGC3816	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 5-5 in UGC3816 (06) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
6		(11) UGC3816	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0.0924,2.4985		200 Secs *[==>298.0 Secs]*	***[1]***

Orbit Structure



Visit

Proposal 13050, PGC32873 (07) Tue Jul 10 04:14:19 GMT 2012

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-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		(5)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2), (4)

Fixed Targets

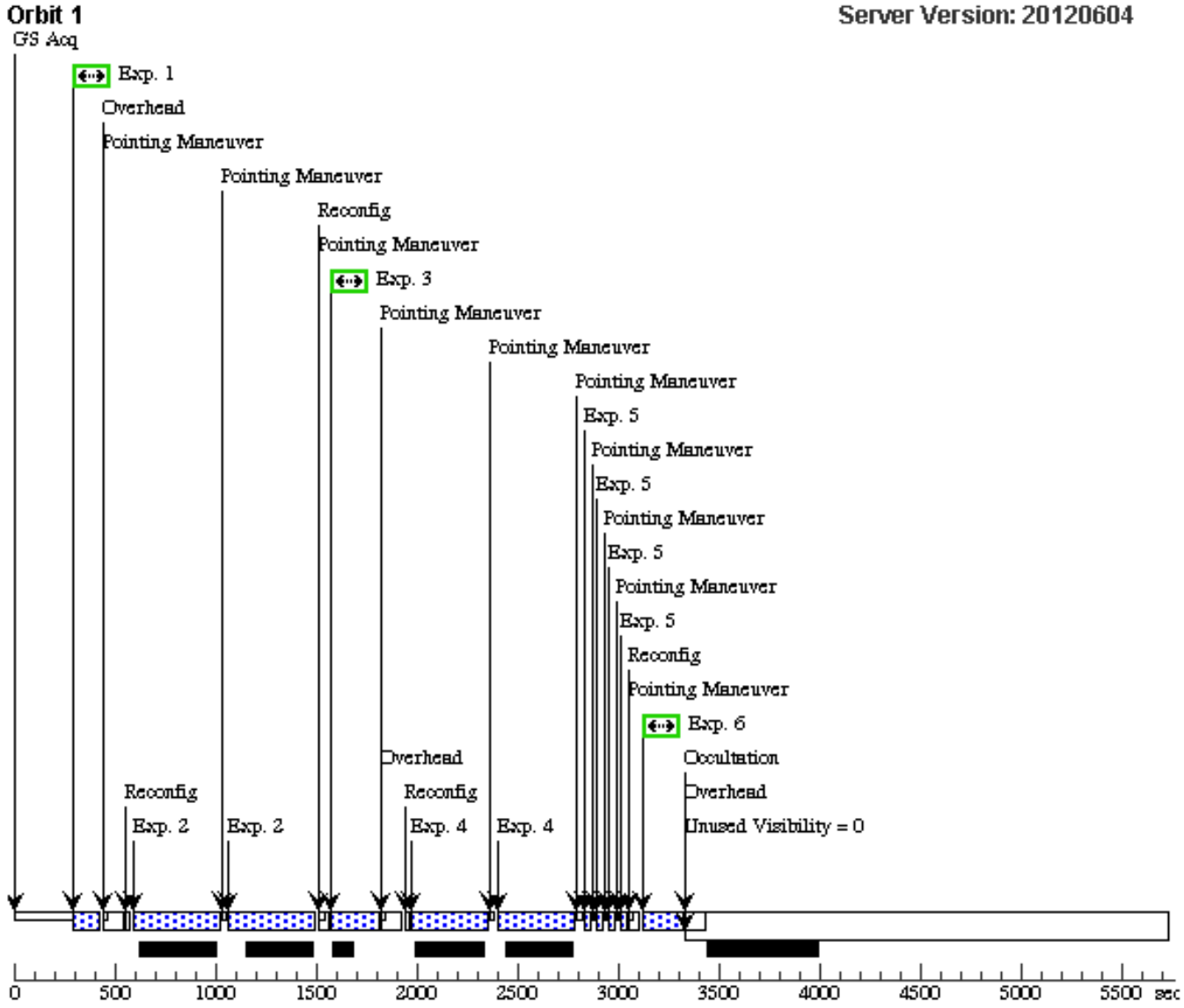
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	PGC32873	RA: 10 56 16.0560 (164.0669000d) Dec: +42 19 59.30 (42.33314d) Equinox: J2000		V=13.7+/-0.3	Reference Frame: SIMBAD

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		(12) PGC32873	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -0.0924, -2.4985		100 Secs *[==>]*	***[1]***
2		(12) PGC32873	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP100	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in PGC32873 (07) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(12) PGC32873	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0		200 Secs *[==>238.0 Secs]*	***[1]***
4		(12) PGC32873	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457	Pattern 5, Exps 4-4 in PGC32873 (07) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5		(12) PGC32873	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 5-5 in PGC32873 (07) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
6		(12) PGC32873	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0.0924,2.4985		200 Secs *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 13050, ARK575 (08) Tue Jul 10 04:14:20 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

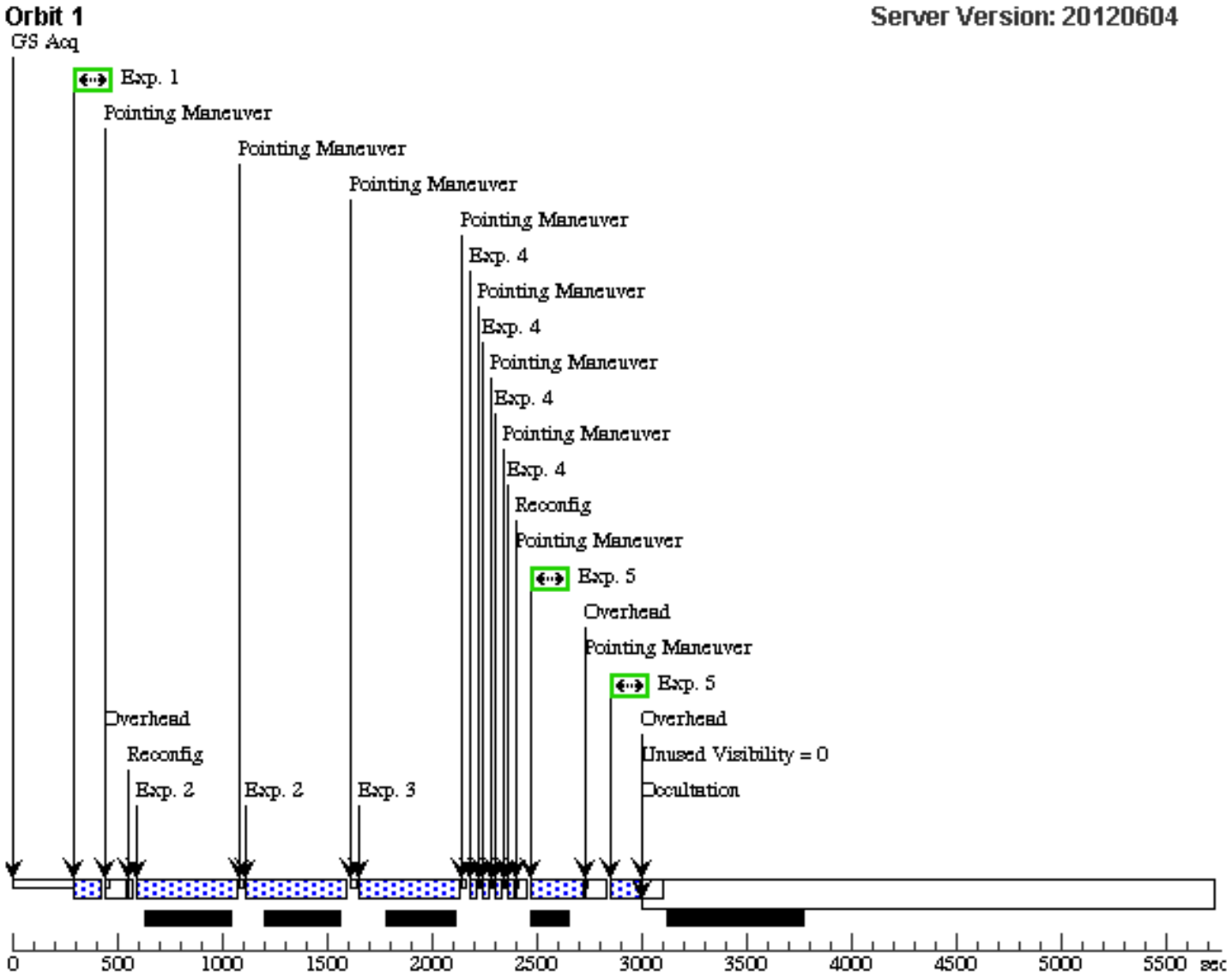
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(16)	ARK575	RA: 23 07 20.1768 (346.8340700d) Dec: +36 21 45.07 (36.36252d) Equinox: J2000		V=13.1+/-0.3	Reference Frame: SIMBAD

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		(16) ARK575	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	*[1]*
2		(16) ARK575	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in ARK575 (08) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
3		(16) ARK575	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	*[1]*
4		(16) ARK575	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in ARK575 (08) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
5		(16) ARK575	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in ARK575 (08) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>139.0 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 13050, NGC384 (09) Tue Jul 10 04:14:22 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

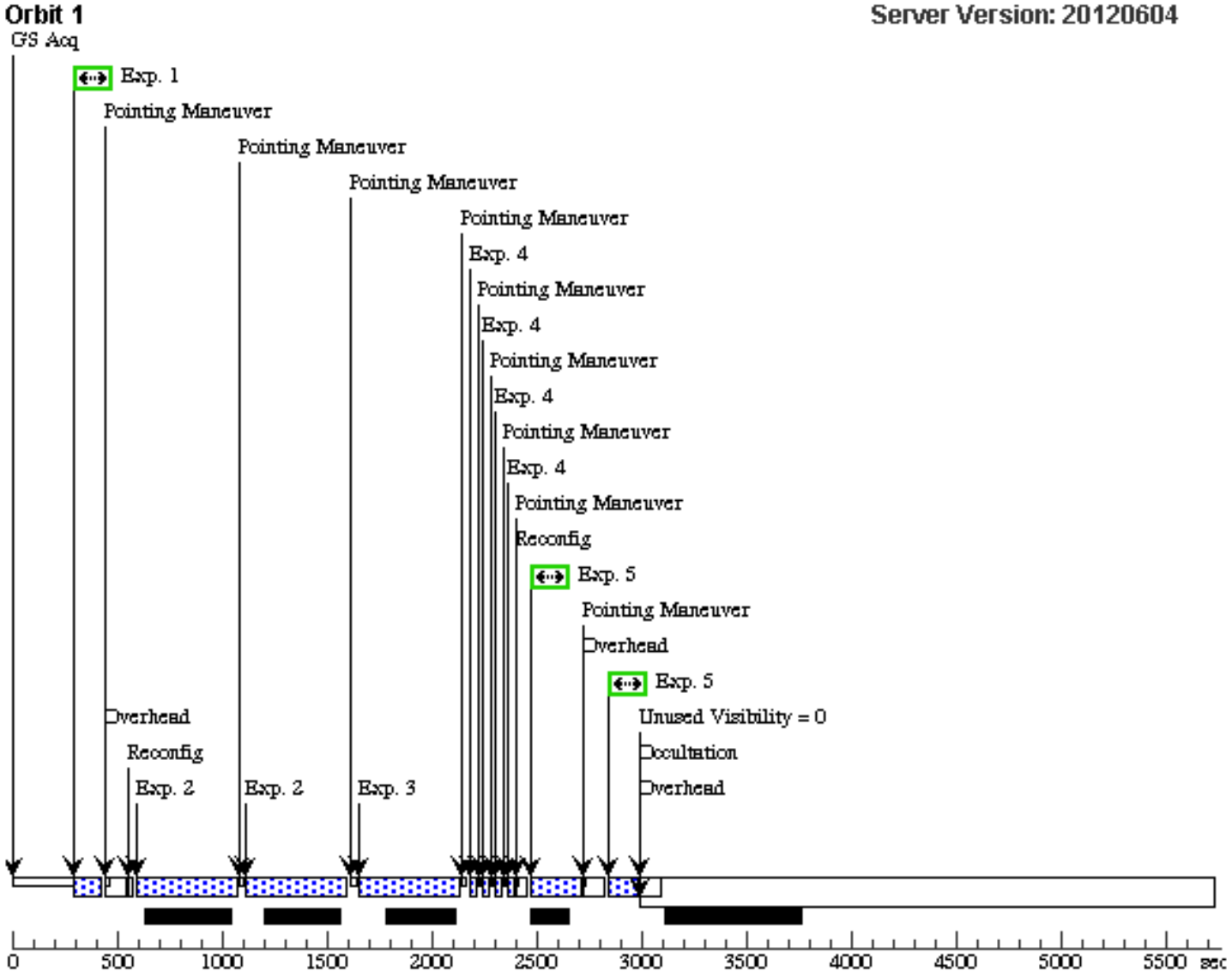
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	NGC0384	RA: 01 07 25.1040 (16.8546000d) Dec: +32 17 32.82 (32.29245d) Equinox: J2000		V=13.0+/-0.3	Reference Frame: SIMBAD

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		(3) NGC0384	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	*[1]*
2		(3) NGC0384	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC384 (09) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
3		(3) NGC0384	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	*[1]*
4		(3) NGC0384	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC384 (09) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
5		(3) NGC0384	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC384 (09) (8)	100 Secs *[==>243.0 Secs (Pattern 1)]* *[==>139.0 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 13050, NGC472 (10) Tue Jul 10 04:14:23 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

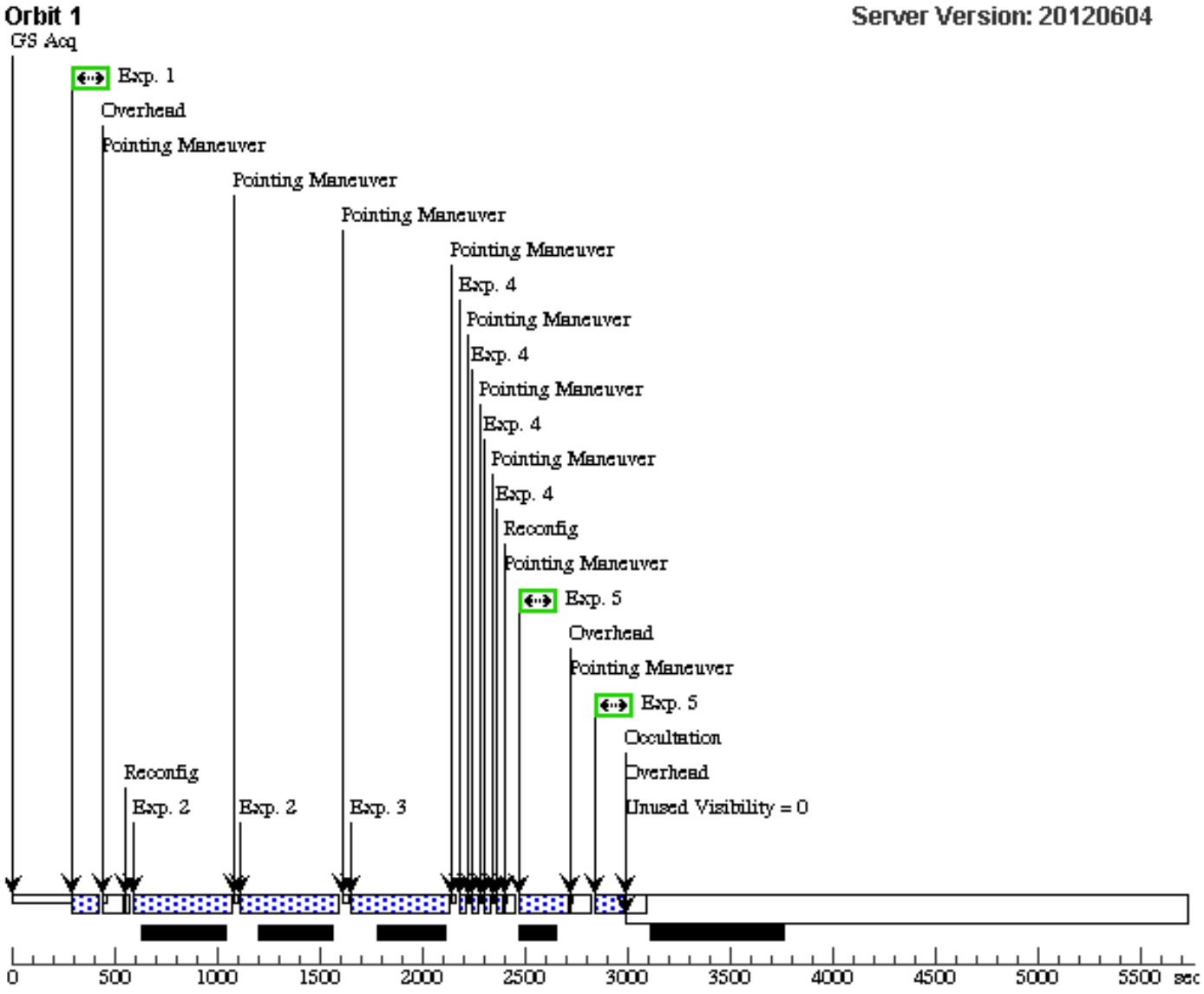
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	NGC0472	RA: 01 20 28.6896 (20.1195400d) Dec: +32 42 32.51 (32.70903d) Equinox: J2000		V=13.1+/-0.3	Reference Frame: SIMBAD

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		(4) NGC0472	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(4) NGC0472	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC472 (10) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(4) NGC0472	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(4) NGC0472	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC472 (10) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(4) NGC0472	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC472 (10) (8)	100 Secs *[==>243.0 Secs (Pattern 1)]* *[==>139.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 13050, NGC1281 (11) Tue Jul 10 04:14:24 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

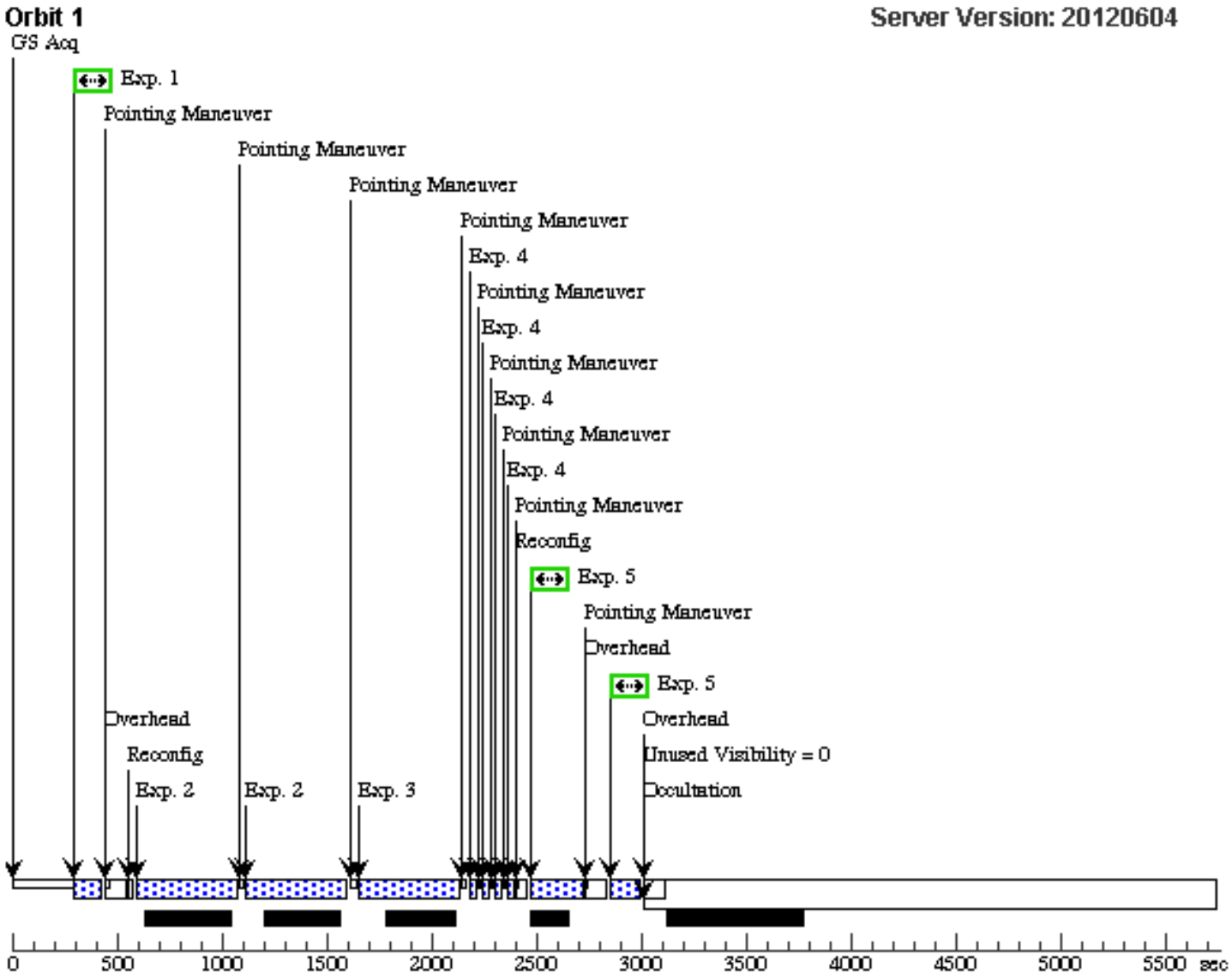
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	NGC1281	RA: 03 20 6.1050 (50.0254375d) Dec: +41 37 48.31 (41.63009d) Equinox: J2000		V=13.0+/-0.3	Reference Frame: SIMBAD

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) NGC1281	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(7) NGC1281	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC1281 (11) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(7) NGC1281	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(7) NGC1281	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC1281 (11) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(7) NGC1281	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC1281 (11) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>145.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 13050, NGC1282 (12) Tue Jul 10 04:14:25 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

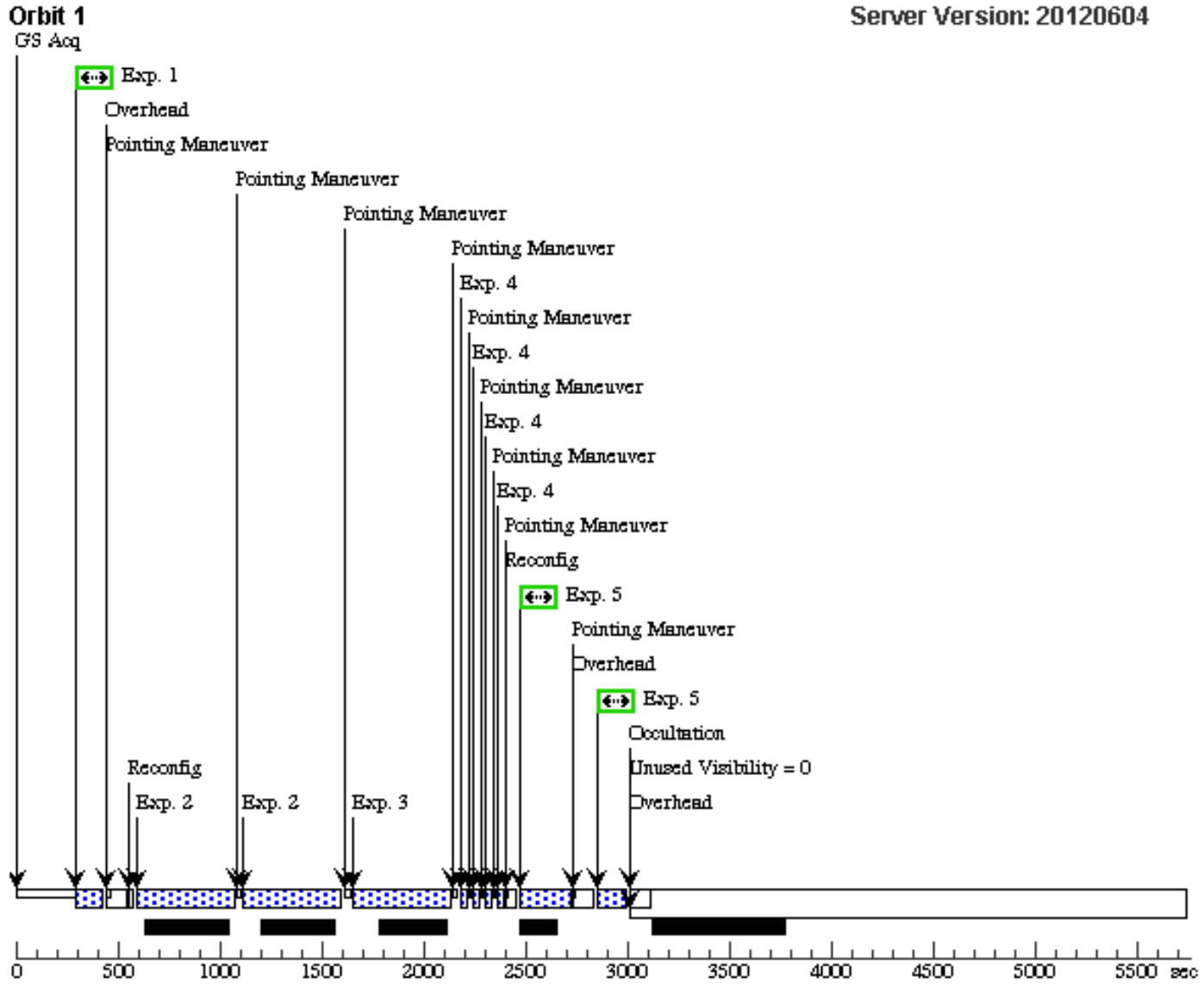
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	NGC1282	RA: 03 20 12.1200 (50.0505000d) Dec: +41 22 1.20 (41.36700d) Equinox: J2000		V=12.6+/-0.3	Reference Frame: SIMBAD

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		(8) NGC1282	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	*[1]*
2		(8) NGC1282	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in NGC1282 (12) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
3		(8) NGC1282	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	*[1]*
4		(8) NGC1282	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in NGC1282 (12) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
5		(8) NGC1282	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in NGC1282 (12) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>145.0 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 13050, PCGC12562 (13) Tue Jul 10 04:14:26 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

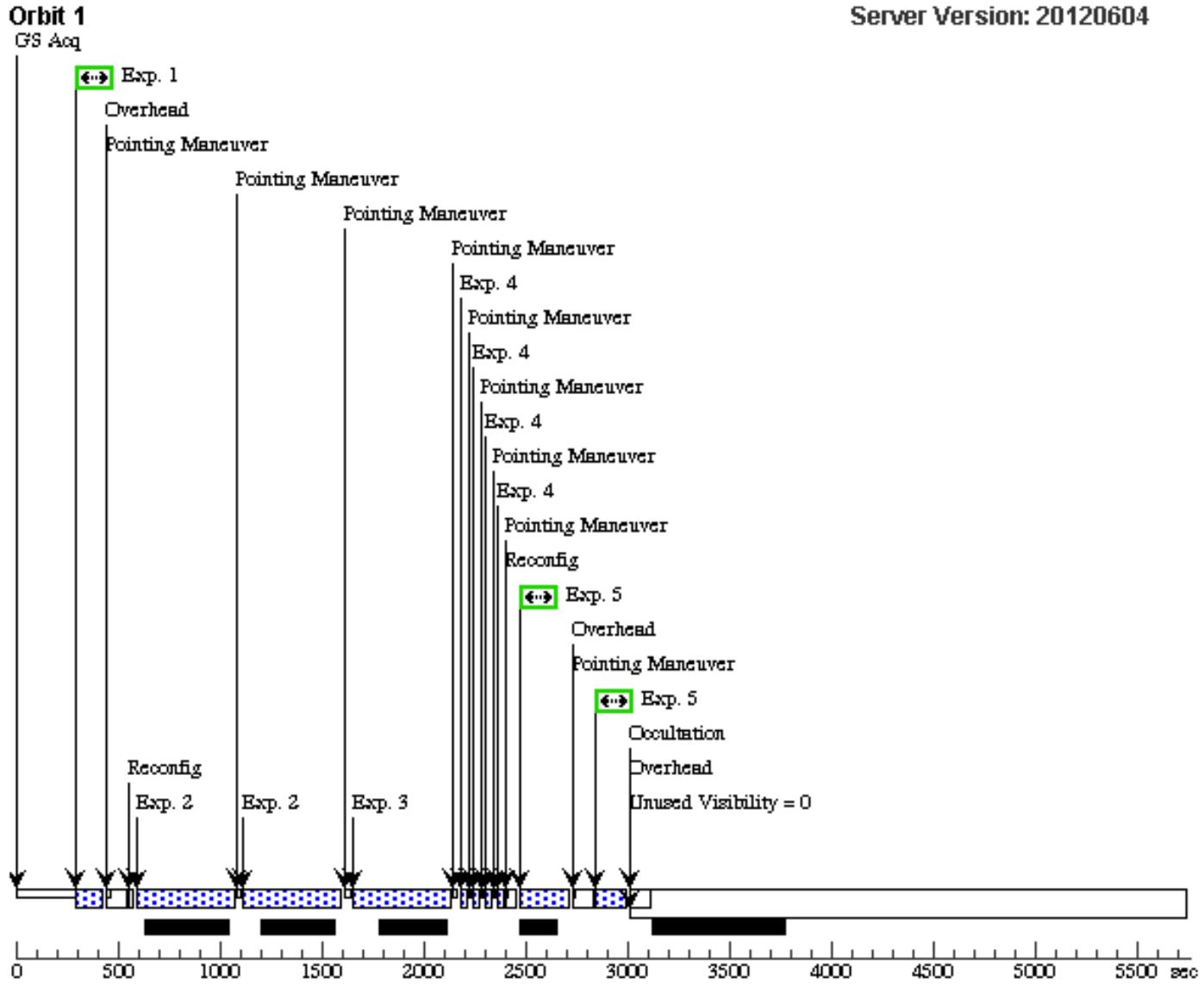
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	PGC12562	RA: 03 21 0.4176 (50.2517400d) Dec: +41 33 44.89 (41.56247d) Equinox: J2000		V=13.6+/-0.3	Reference Frame: SIMBAD

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		(14) PGC12562	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(14) PGC12562	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in PCGC12562 (13) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(14) PGC12562	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(14) PGC12562	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in PCGC12562 (13) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(14) PGC12562	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in PCGC12562 (13) (8)	100 Secs *[==>245.0 Secs (Pattern 1)]* *[==>150.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 13050, PGC11179 (14) Tue Jul 10 04:14:28 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

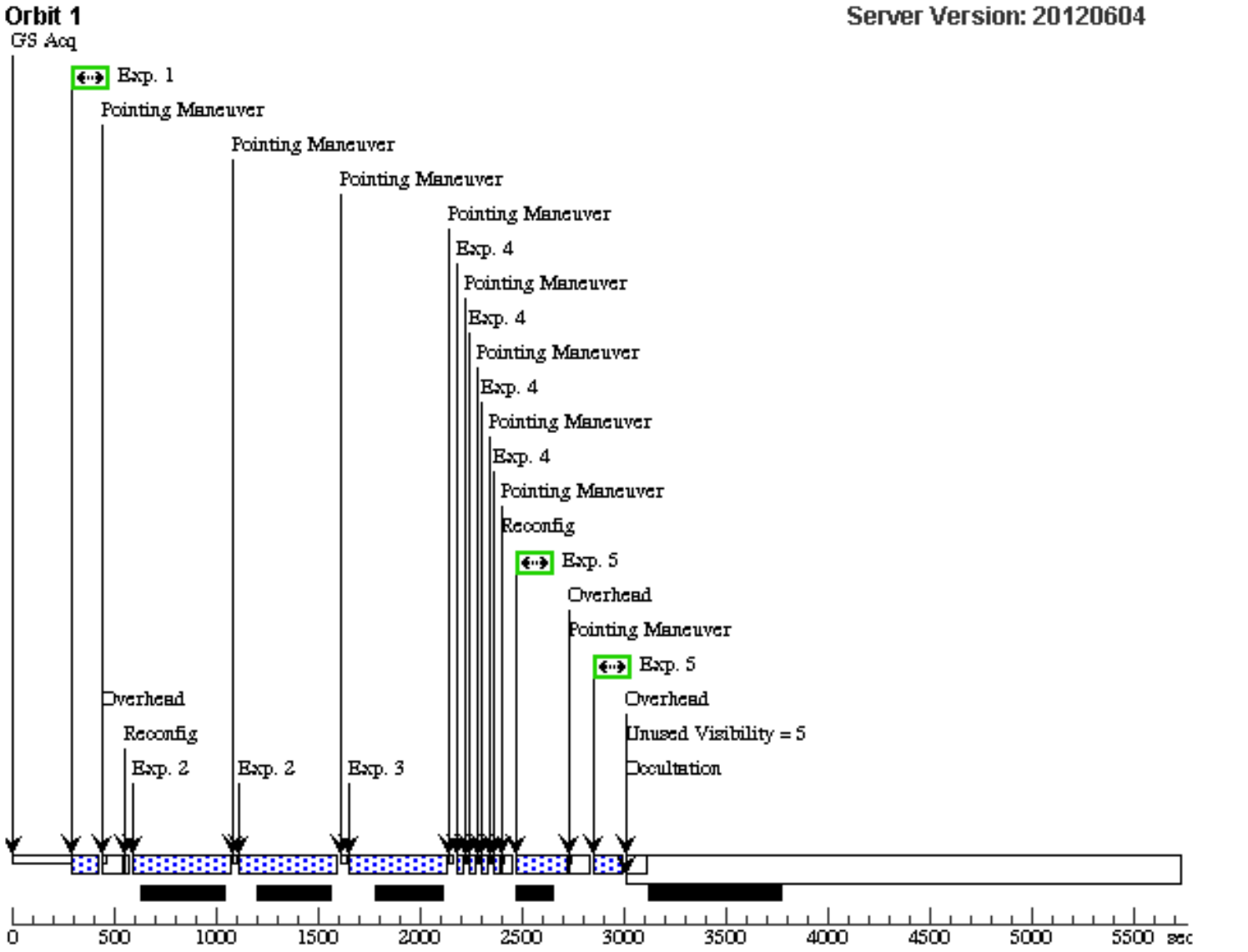
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	PGC11179	RA: 02 57 33.6672 (44.3902800d) Dec: +05 58 36.91 (5.97692d) Equinox: J2000		V=13.3+/-0.3	Reference Frame: SIMBAD

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		(13) PGC11179	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	*[1]*
2		(13) PGC11179	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in PGC11179 (14) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
3		(13) PGC11179	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	*[1]*
4		(13) PGC11179	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in PGC11179 (14) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
5		(13) PGC11179	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in PGC11179 (14) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>145 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 13050, PGC1021091 (15) Tue Jul 10 04:14:29 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

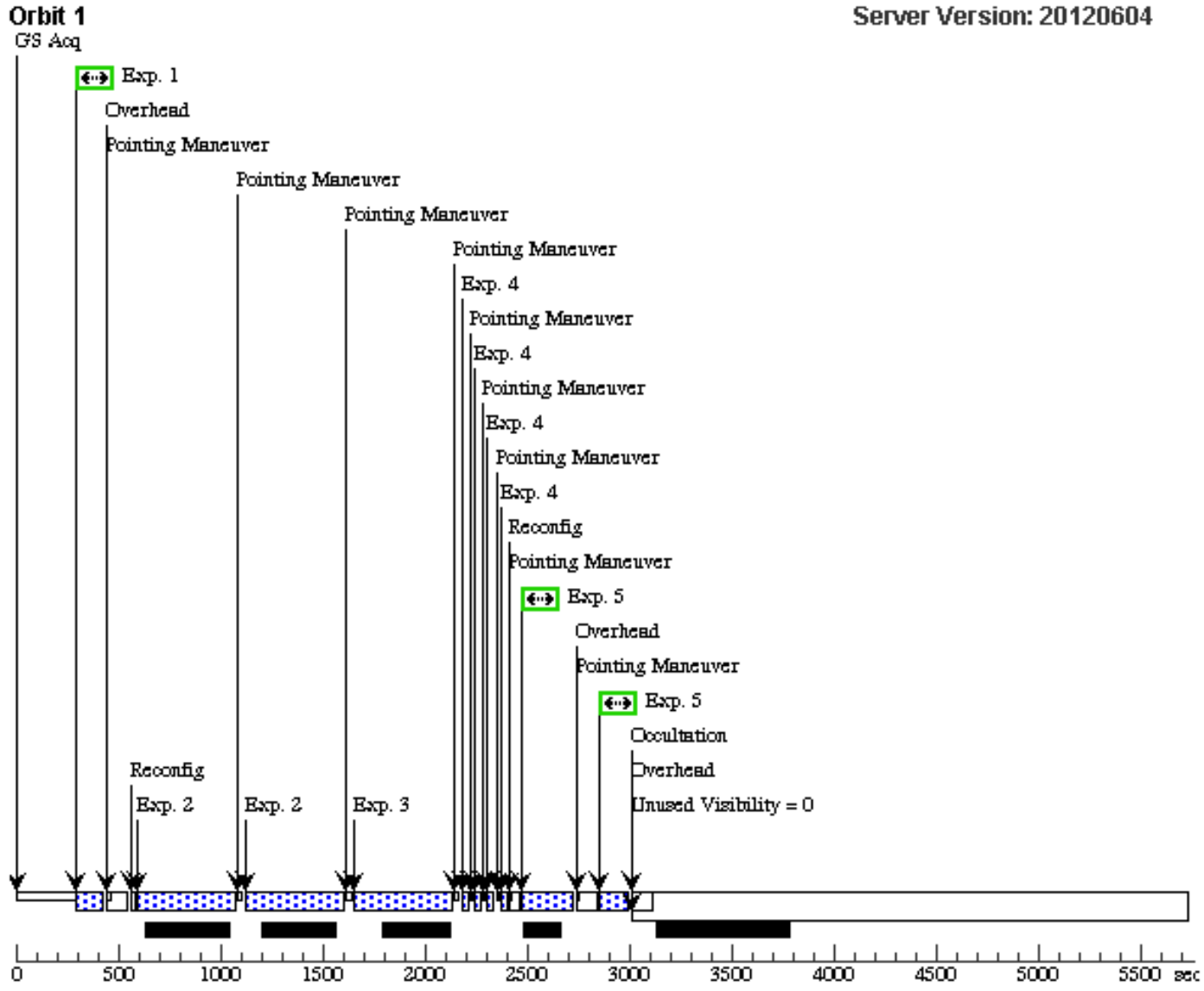
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	PGC1021091	RA: 13 09 27.0000 (197.3625000d) Dec: -07 18 45.00 (-7.31250d) Equinox: J2000		V=13.7	Reference Frame: SIMBAD

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(15) PGC1021091	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>103.0 Secs]*	*[1]*
2		(15) PGC1021091	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in PGC1021091 (15) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
3		(15) PGC1021091	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	*[1]*
4		(15) PGC1021091	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in PGC1021091 (15) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
5		(15) PGC1021091	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in PGC1021091 (15) (8)	100 Secs *[==>253.0 Secs (Pattern 1)]* *[==>144.0 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 13050, ARK90 (16) Tue Jul 10 04:14:30 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	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		(4)
(5)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=23.02 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides= Center Pattern=false		(2)
(8)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=2.6234 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.8195 Angle Between Sides= Center Pattern=false		(5)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ARK90	RA: 02 42 29.0350 (40.6209792d) Dec: +18 09 52.88 (18.16469d) Equinox: J2000		V=13	Reference Frame: SIMBAD

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		(2) ARK90	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -1.7952, -1.9130		100 Secs *[==>]*	***[1]***
2		(2) ARK90	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.071, -17.744	Pattern 5, Exps 2-2 in ARK90 (16) (5)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3		(2) ARK90	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=STEP50	POS TARG -11.947, 17.457		*[==>]*	***[1]***
4		(2) ARK90	WFC3/IR, MULTIACCUM, IRSUB128	F160W	NSAMP=15; SAMP-SEQ=RAPID		Pattern 2, Exps 4-4 in ARK90 (16) (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5		(2) ARK90	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG 0,0	Pattern 8, Exps 5-5 in ARK90 (16) (8)	100 Secs *[==>250.0 Secs (Pattern 1)]* *[==>150.0 Secs (Pattern 2)]*	***[1]***

Orbit Structure