10237 - Low-Ionization BALs: Evolution or Orientation?

Cycle: 13, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Xiaohui Fan (PI)	**University of Arizona**	**fan@as.arizona.edu**
Dr. Patrick Hall (CoI)	Princeton University	pathall@astro.princeton.edu
Dr. Robert Becker (CoI)	University of California - Davis	bob@igpp.ucllnl.org
Dr. Michael Strauss (CoI)	Princeton University	strauss@astro.princeton.edu
Dr. Gordon T. Richards (CoI)	Princeton University	gtr@astro.princeton.edu
Dr. Marianne Vestergaard (CoI) (Contact)	University of Arizona	vester@astronomy.ohio-state.edu
Dr. Richard L. White (CoI)	Space Telescope Science Institute	rlw@stsci.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) SDSSJ0300+0048	ACS/WFC	1	15-Jan-2007 21:00:52.0	yes
02	(1) SDSSJ0300+0048	NIC2	1	15-Jan-2007 21:00:58.0	yes
03	(2) SDSSJ0819+4209	ACS/WFC	3	15-Jan-2007 21:01:04.0	yes
04	(2) SDSSJ0819+4209	NIC2	3	15-Jan-2007 21:01:15.0	yes
05	(3) SDSSJ1154+0300	ACS/WFC	2	15-Jan-2007 21:01:21.0	yes
06	(3) SDSSJ1154+0300	NIC2	2	15-Jan-2007 21:01:27.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(4) SDSSJ1730+5850	ACS/WFC NIC2	4	15-Jan-2007 21:01:35.0	yes
57	(4) SDSSJ1730+5850	ACS/WFC NIC2	4	15-Jan-2007 21:01:43.0	yes

20 Total Orbits Used

ABSTRACT

We propose to test the hypothesis that Low-Ionization Broad Absorption Line Quasars (LoBALs) represent a special stage of quasar evolution: young quasars in systems with strong interaction and star-formation. We will carry out high resolution imaging using ACS/WFC and NICMOS to measure the properties of the host galaxies of four LoBAL quasars at z = 0.9 - 2.0 that show strong overlapping FeII absorption troughs. The ACS imaging will be carried out in the passband with the strongest BAL absorption, acting as a natural coronagraph. This results in a reduction of quasar light by a factor of 15 - 26 in these passbands, providing arguably the best view of the host galaxies of luminous, high-redshift quasars. This method allows efficient detection and detailed modeling of the host galaxy morphology in the rest-frame ultraviolet, which is most sensitive to star formation and galaxy interaction. We will also use NICMOS imaging to measure the rest-frame light from the host galaxy to probe the old stellar populations where the host galaxy is likely to be brighter.

It has been suggested that LoBALs might not be explained simply as an orientation effect but rather as an early phase of quasar evolution. Such a phase is typically associated with large amounts of dust and gas, and young galaxies with strong star formation. With HST observations, we will study the color and morphology of the FeLoBAL quasar host galaxies, and measure the age of their dominant stellar populations. We will also measure the density of close companions, and, in particular, look for signs of ongoing or recent mergers. These measurements will be compared to those of control samples of normal quasars at similar redshift. If LoBALs are indeed young systems, then their host galaxies are expected to show stronger interactions and merger activity, younger stellar ages, and regions with strong star formation. If the LoBAL host galaxies show no significant difference from those of normal quasars, it will support the view that LoBAL quasars are not a distinct population and that all quasars have BAL outflows along some lines of sight.

OBSERVING DESCRIPTION

For a total of 16 orbits we will observe each of the targets using both ACS/WFC and NICMOS2. For each object one restframe UV and one restframe optical image will be obtained. The J and H-band filters (F110W and F160W) will sample roughly the restframe V-band. The ACS filters used are F435W, F550M, and F625W, respectively, chosen to cover the broad absorption line troughs void of strong nuclear emission in each individual target. The observations will be dithered using the ACS-WFC-DITHER-BOX or manually using POS-TARG (so to fit a 4pt dither into 3 orbits) and a 4pt (30+pixel) dither with the NIC-SPIRAL-DITH patterns. POS-TARG is also used to avoid nearby bright stars.

Visit

Proposal 10237, Visit 01, completed Tue Jan 16 02:01:47 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 8.0D TO 39.0 D; ORIENT 45.0D TO 63.0 D; ORIENT 243.0D TO 257.0 D; ORIENT 275.0D TO 320.0 D; ORIENT 330.0D TO 352.0 D

Comments: J0300+0048 ACS/WFC

Diagnostics

(J0300 in ACS F435W (01.001) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.841 Line Spacing=0.795	Coordinate Frame=POS-TARG Pattern Orientation=19.9 Angle Between Sides=97.4 Center Pattern=true		(1)

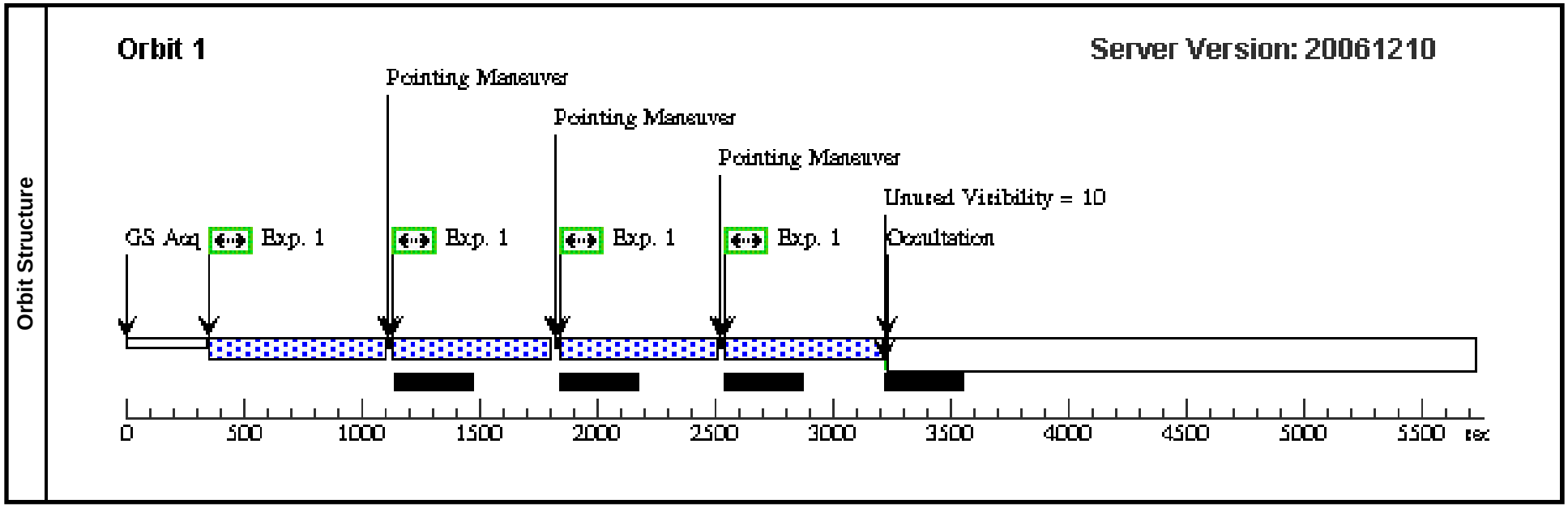
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ0300+0048	RA: 03 00 0.5700 (45.0023750d) Dec: +00 48 28.00 (.80778d) Equinox: J2000		V=16.8 AB(F435W)=20.0; AB(F110W)=16.4	Coordinate Source: Sloan Digital Sky Survey

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J0300 in ACS F435W	(1) SDSSJ0300+0048	ACS/WFC, ACCUM, WFC1-FIX	F435W	GAIN=2; CR-SPLIT=NO	POS TARG -10,-0.766	Pattern 1-1 (1)	2185.0 Secs *[==>546.0 Secs (Pattern 1)]* *[==>546.0 Secs (Pattern 2)]* *[==>546.0 Secs (Pattern 3)]* *[==>547.0 Secs (Pattern 4)]*	***[1]***

Comments: POS-TARG imposed to avoid bright star


Orbit Structure
Orbit 1
Server Version: 20061210
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 10
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10237, Visit 02, completed Tue Jan 16 02:01:48 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: NIC2

Special Requirements: (none)

Comments: J0300+0048 NIC2

Diagnostics

(Visit 02) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

(Visit 02) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

(Visit 02) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

(Visit 02) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

(Visit 02) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

Patterns

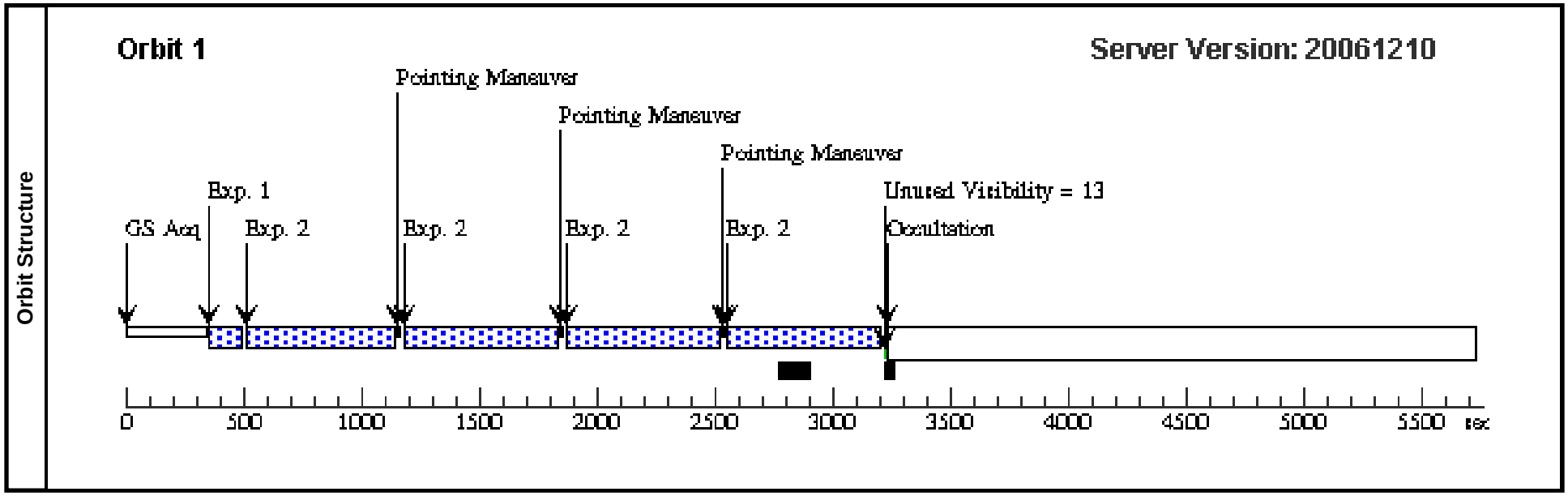
#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=NIC-SPIRAL-DITH	Coordinate Frame=POS-TARG		(2)
	Purpose=DITHER	Pattern Orientation=197		
	Number Of Points=4	Angle Between Sides=		
	Point Spacing=2.509	Center Pattern=false		
	Line Spacing=			

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ0300+0048	RA: 03 00 0.5700 (45.0023750d) Dec: +00 48 28.00 (.80778d) Equinox: J2000		V=16.8 AB(F435W)=20.0; AB(F110W)=16.4	Coordinate Source: Sloan Digital Sky Survey

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J0300 NIC2 F110W Pos A	(1) SDSSJ0300+0048	NIC2, MULTIACCUM, NIC2	F110W	SAMP-SEQ=STEP8; NSAMP=21			*[==>]*	***[1]***
2	J0300 in NIC2 F110W	(1) SDSSJ0300+0048	NIC2, MULTIACCUM, NIC2	F110W	SAMP-SEQ=STEP64; NSAMP=18		Pattern 2-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20061210
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Exp. 1
Unused Visibility = 13
GS Acq
Exp. 2
Exp. 2
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10237, Visit 03, completed Tue Jan 16 02:01:48 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 230.0D TO 306.0 D

Comments: J0819+4209 - ACS/WFC manual pos-targ so to obtain a 4pt-dither in 3 orbits

Diagnostics

(Visit 03) Warning: VISIBILITY OVERRUN

(Visit 03) Warning: VISIBILITY OVERRUN

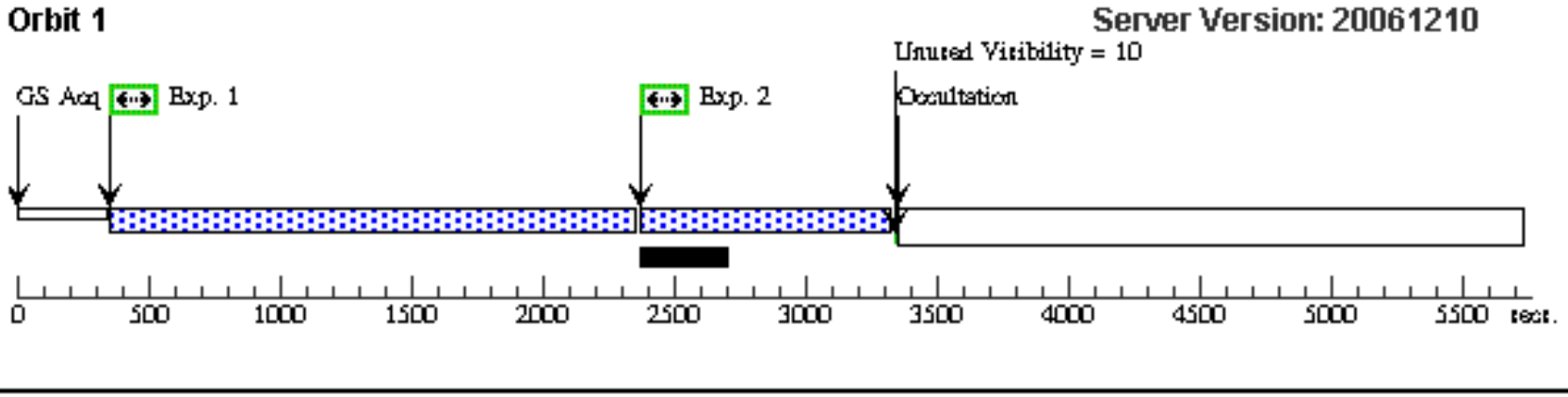
Fixed Targets

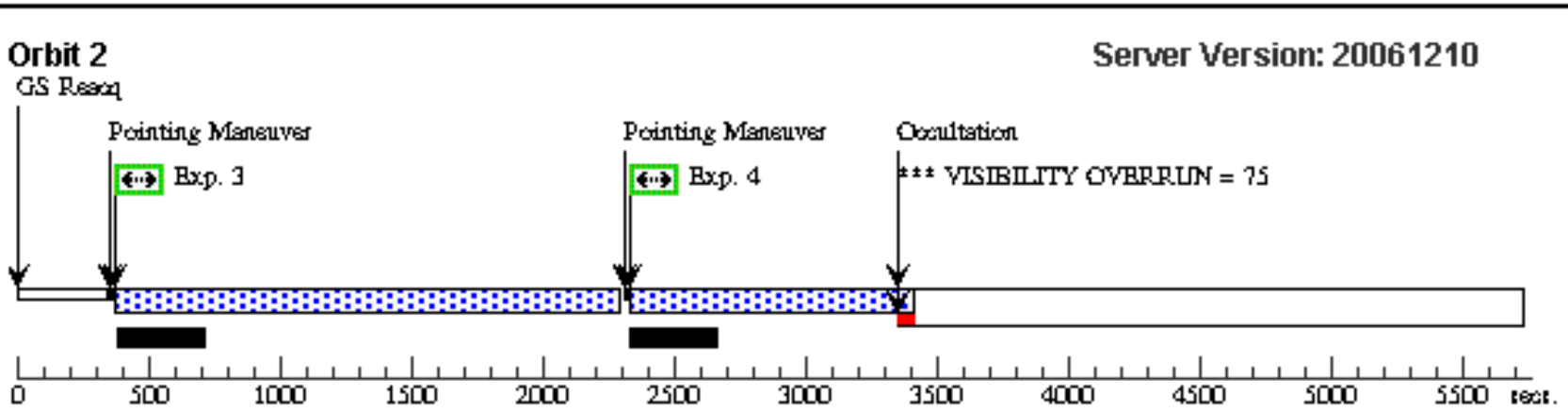
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSSJ0819+4209	RA: 08 19 48.9100 (124.9537917d) Dec: +42 09 30.00 (42.15833d) Equinox: J2000		V=19.6 AB(F625W)=22.7; AB(F160W)=19.2	Coordinate Source: Sloan Digital Sky Survey

Exposures

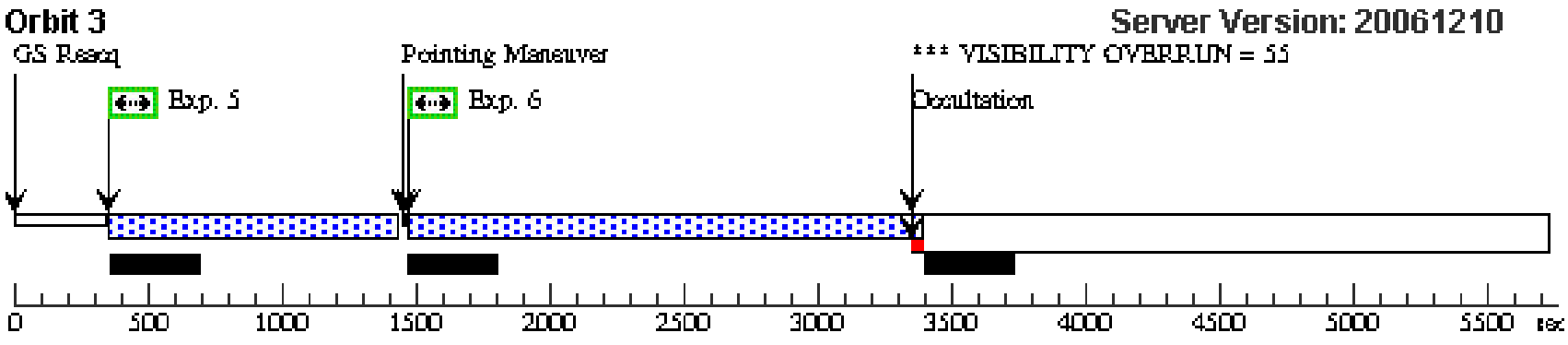
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J0819 ACS pos A	(2) SDSSJ0819+4209	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2			1800.0 Secs *[==>]*	***[1]***
Comments: Position 1 in extended ditherpattern (manual)									
2	J0819 ACS pos A	(2) SDSSJ0819+4209	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2			832.0 Secs *[==>]*	***[1]***
Comments: Position 1 in extended ditherpattern (manual)									
3	J0819 ACS pos B	(2) SDSSJ0819+4209	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2	POS TARG 0.79,0.286		1800.0 Secs *[==>]*	***[2]***
Comments: Position 2: Manual pos-targ, extended pattern									
4	J0819 ACS pos C	(2) SDSSJ0819+4209	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2	POS TARG 0.618,1.063		959.0 Secs *[==>]*	***[2]***
Comments: Position 3: Manual pos-targ, extended pattern									
5	J0819 ACS pos C	(2) SDSSJ0819+4209	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2	POS TARG 0.618,1.063		959.0 Secs *[==>]*	***[3]***
Comments: Position 3: Manual pos-targ, extended pattern									
6	J0819 ACS pos D	(2) SDSSJ0819+4209	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2	POS TARG -0.173,0.776		1800.0 Secs *[==>]*	***[3]***
Comments: Position 4: Manual pos-targ, extended pattern									

Orbit Structure





Orbit Structure (continued)



Visit

Proposal 10237, Visit 04, completed Tue Jan 16 02:01:49 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: NIC2

Special Requirements: ORIENT 45.0D TO 70.0 D; ORIENT 150.0D TO 180.0 D; ORIENT 245.0D TO 290.0 D

Comments: J0819+4209 - NICMOS

Diagnostics

(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: VISIBILITY OVERRUN
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: VISIBILITY OVERRUN
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 04) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=NIC-SPIRAL-DITH Purpose=DITHER Number Of Points=4 Point Spacing=2.509 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=197 Angle Between Sides= Center Pattern=false		(2), (5)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSSJ0819+4209	RA: 08 19 48.9100 (124.9537917d) Dec: +42 09 30.00 (42.15833d) Equinox: J2000		V=19.6 AB(F625W)=22.7; AB(F160W)=19.2	Coordinate Source: Sloan Digital Sky Survey

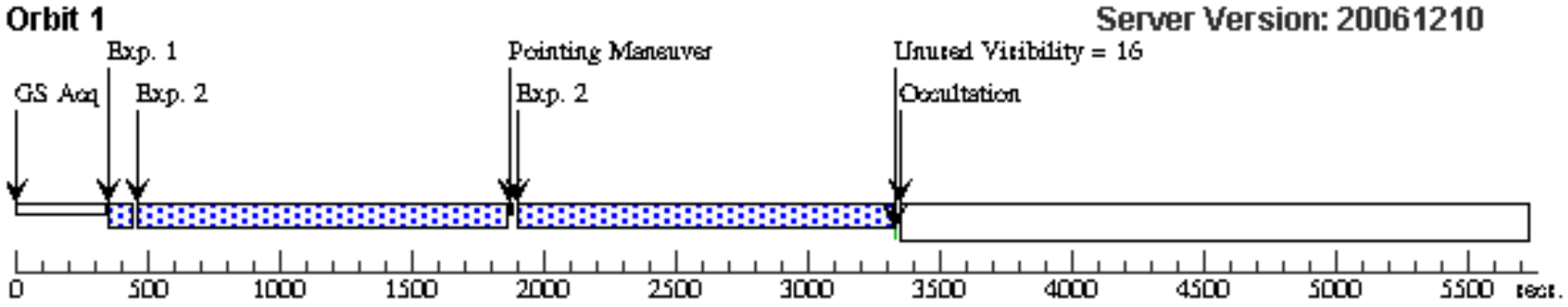
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J0819 NIC2 F160W Pos A	(2) SDSSJ0819+4209	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP8; NSAMP=15			*[==>]*	*[1]*
2	J0819 in NIC2 F160W	(2) SDSSJ0819+4209	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP128; NSAMP=20		Pattern 2-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
								[==>(Pattern 3)] *[==>(Pattern 4)]*	*[2]*

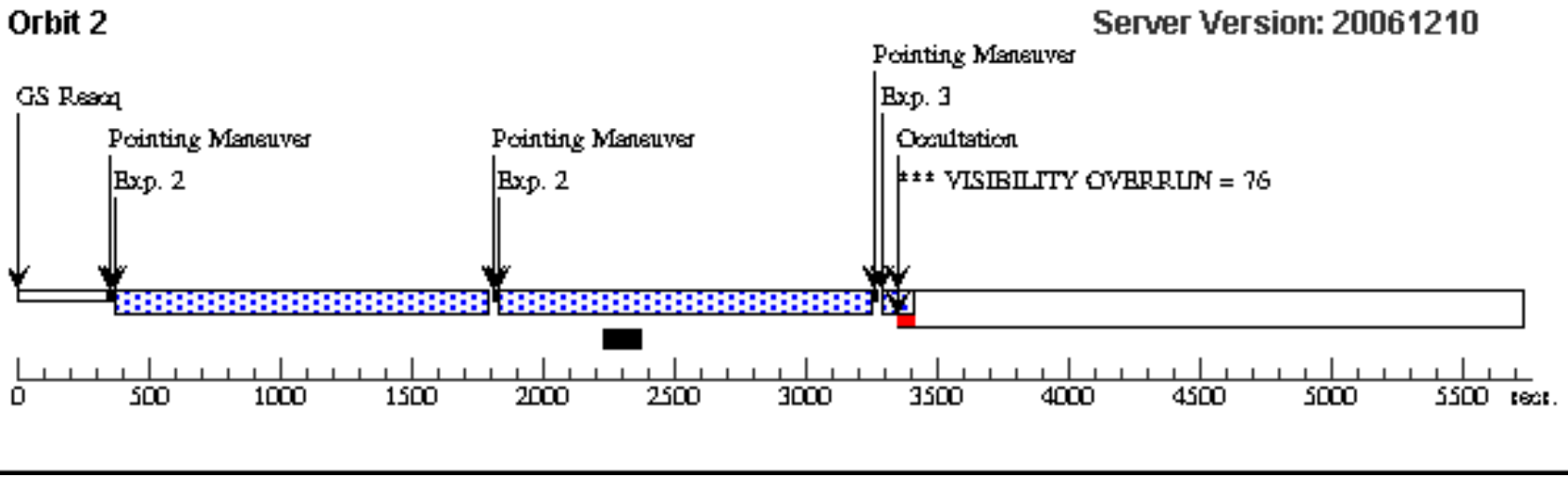
Exposures (continued)

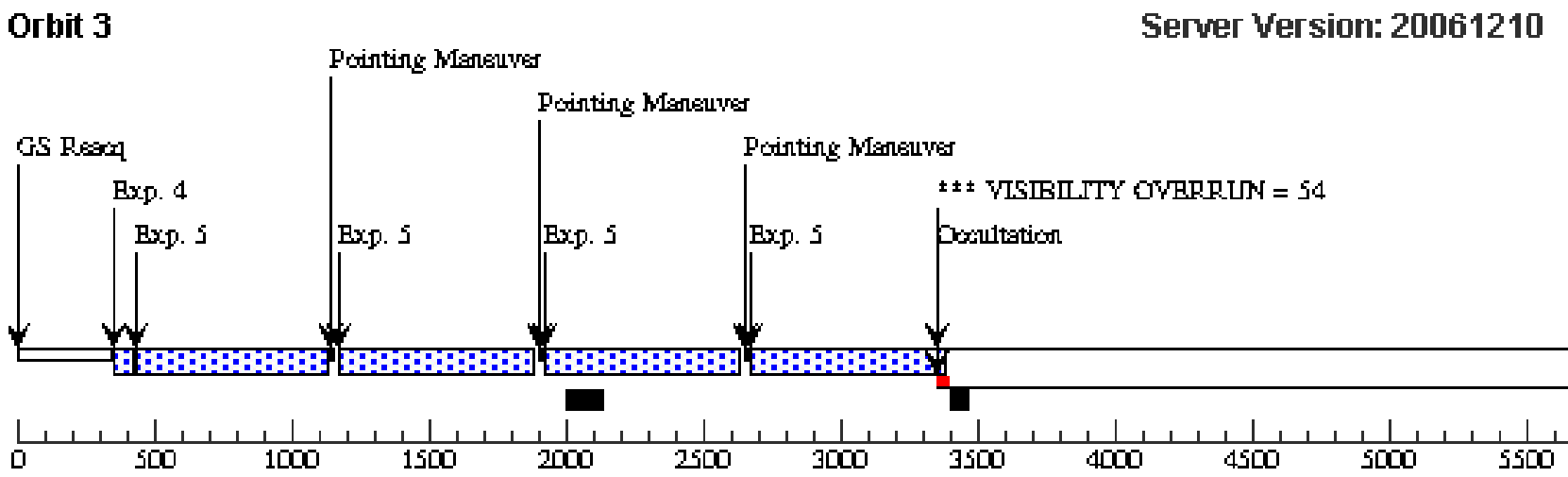
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3	J0819 NIC2 F160W Pos A	(2) SDSSJ0819+4209	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP8; NSAMP=19			*[==>]*	***[2]***
4	J0819 NIC2 F160W Pos A	(2) SDSSJ0819+4209	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP8; NSAMP=12			*[==>]*	***[3]***
5	J0819 in NIC2 F160W	(2) SDSSJ0819+4209	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP64; NSAMP=19		Pattern 5-5 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***

Orbit Structure



Orbit Structure (continued)





Visit

Proposal 10237, Visit 05, completed Tue Jan 16 02:01:51 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 130.0D TO 150.0 D; ORIENT 190.0D TO 195.0 D; ORIENT 220.0D TO 240.0 D; ORIENT 265.0D TO 280.0 D; ORIENT 305.0D TO 323.0 D

Comments: J1154+0300 - ACS/WFC

Diagnostics

(Visit 05) Warning: VISIBILITY OVERRUN

Patterns

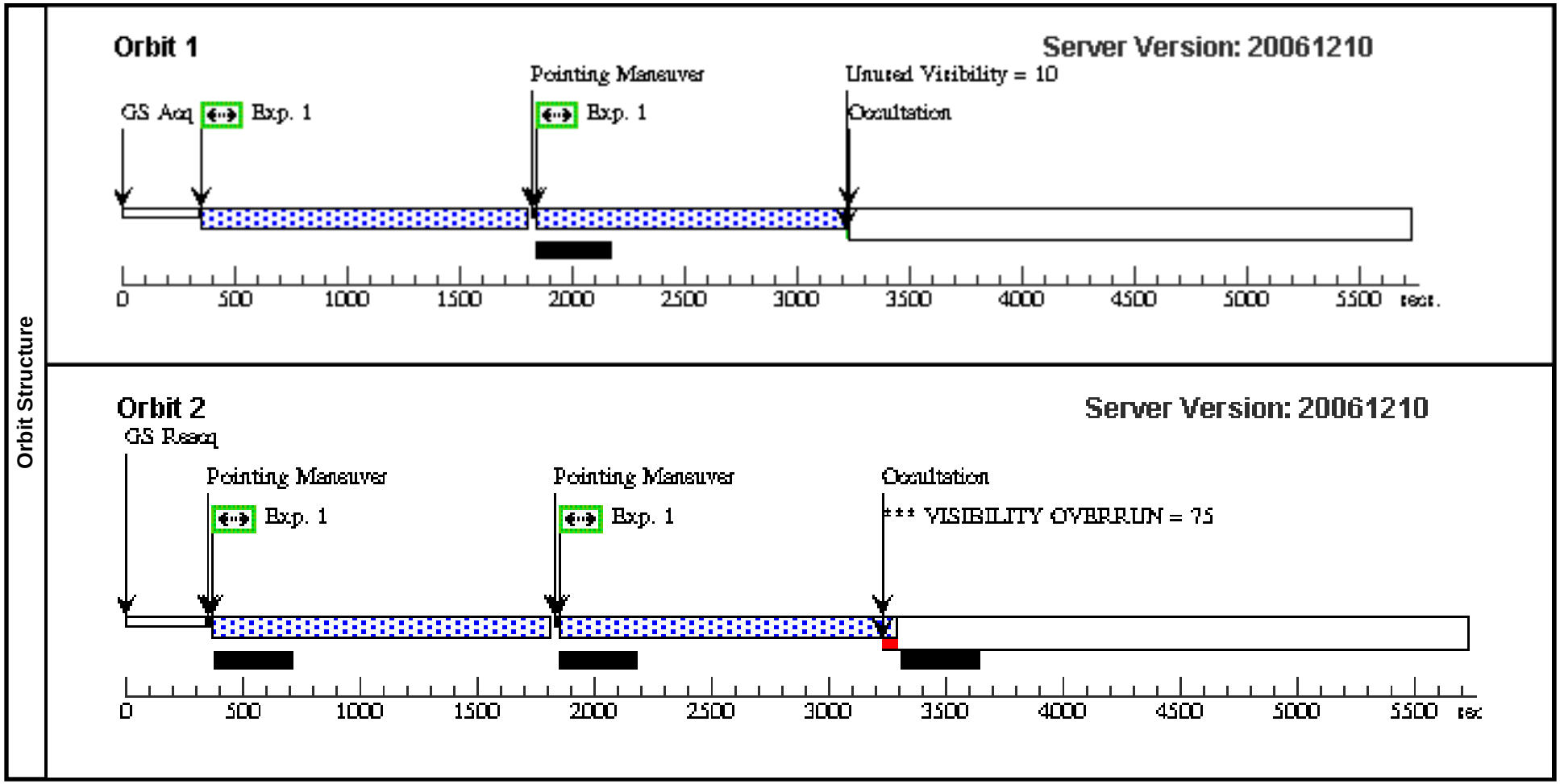
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.841 Line Spacing=0.795	Coordinate Frame=POS-TARG Pattern Orientation=19.9 Angle Between Sides=97.4 Center Pattern=true		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSSJ1154+0300	RA: 11 54 36.6000 (178.6525000d) Dec: +03 00 6.40 (3.00178d) Equinox: J2000		V=17.7 AB(F550M)=21.1; AB(F110W)=17.3	Coordinate Source: Sloan Digital Sky Survey

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J1154+0300 in ACS F550M	(3) SDSSJ1154+0300	ACS/WFC, ACCUM, WFC1	F550M	CR-SPLIT=NO; GAIN=2		Pattern 1-1 (1)	4841.0 Secs	
								[==>1248.0 Secs (Pattern 1)] *[==>1249.0 Secs (Pattern 2)]*	***[1]***
								[==>1322.0 Secs (Pattern 3)] *[==>1322.0 Secs (Pattern 4)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20061210
GS Acq
Exp. 1
Pointing Maneuver
Exp. 1
Unused Visibility = 10
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20061210
GS Reacq
Pointing Maneuver
Exp. 1
Pointing Maneuver
Exp. 1
Occultation
*** VISIBILITY OVERRUN = 75
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10237, Visit 06, scheduling Tue Jan 16 02:01:51 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: NIC2

Special Requirements: (none)

Comments: J1154+0300 - NICMOS

Diagnostics

(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 06) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=NIC-SPIRAL-DITH Purpose=DITHER Number Of Points=4 Point Spacing=2.509 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=197 Angle Between Sides= Center Pattern=false		(2), (4)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSSJ1154+0300	RA: 11 54 36.6000 (178.6525000d) Dec: +03 00 6.40 (3.00178d) Equinox: J2000		V=17.7 AB(F550M)=21.1; AB(F110W)=17.3	Coordinate Source: Sloan Digital Sky Survey

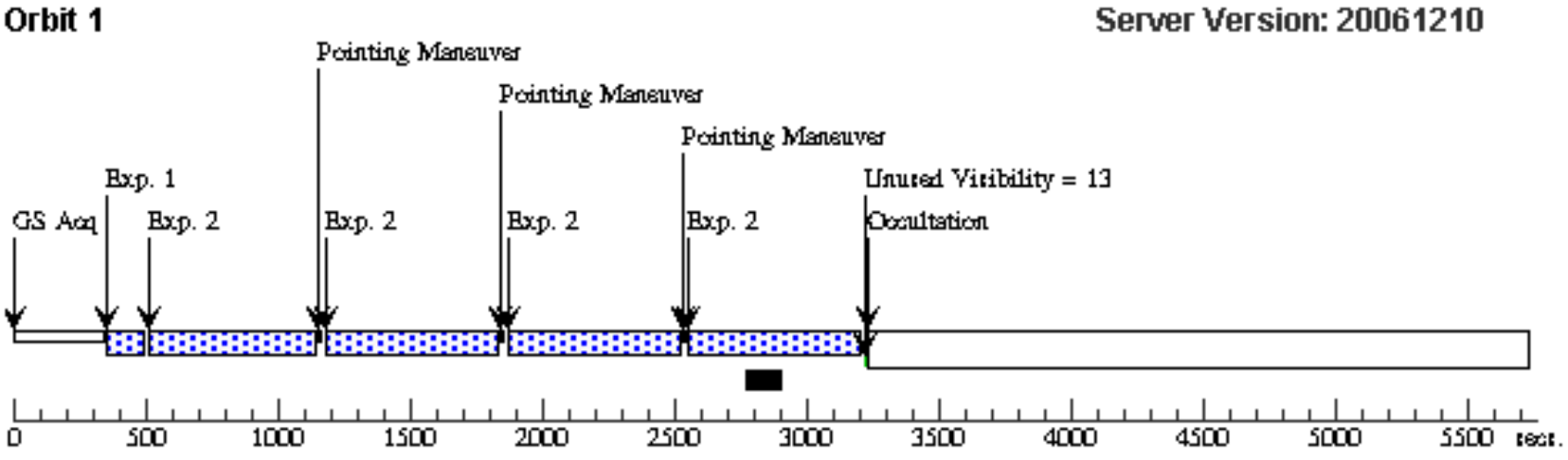
Exposures

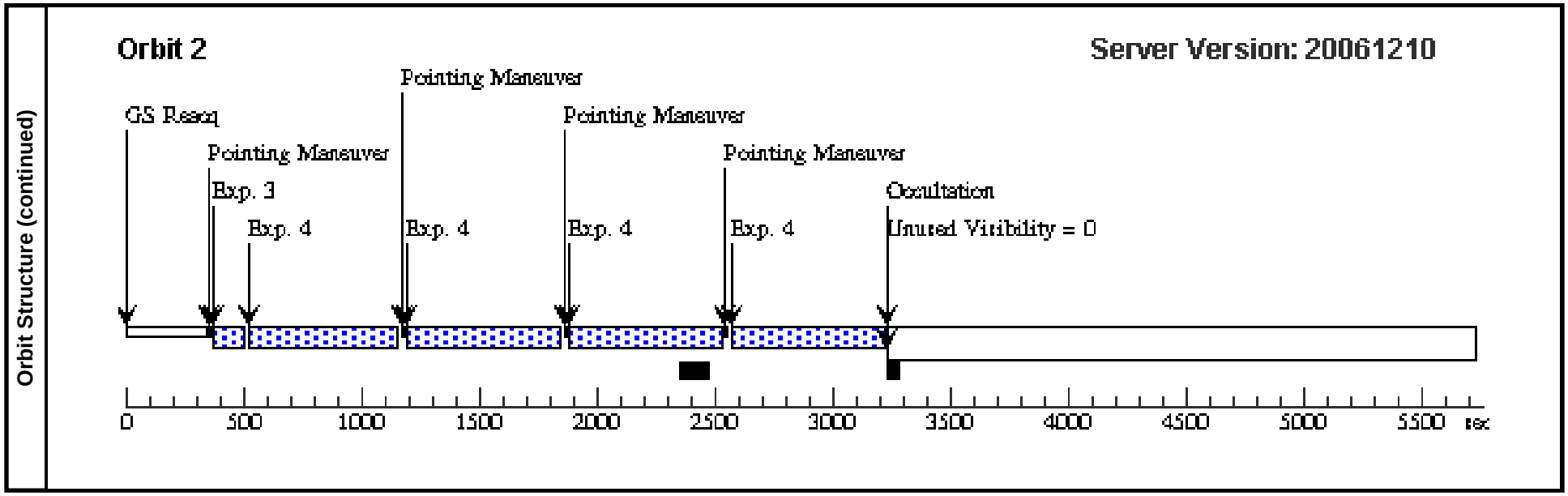
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J1154 NIC2 F110W pos A	(3) SDSSJ1154+0300	NIC2, MULTIACCUM, NIC2	F110W	SAMP-SEQ=STEP8; NSAMP=21			*[==>]*	*[1]*
2	J1154 in NIC2 F110W	(3) SDSSJ1154+0300	NIC2, MULTIACCUM, NIC2	F110W	SAMP-SEQ=STEP64; NSAMP=18		Pattern 2-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*
3	J1154 NIC2 F110W pos A	(3) SDSSJ1154+0300	NIC2, MULTIACCUM, NIC2	F110W	SAMP-SEQ=STEP8; NSAMP=20			*[==>]*	*[2]*

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
4	J1154 in NIC2 F110W	(3) SDSSJ1154+0300	NIC2, MULTIACCUM, NIC2	F110W	SAMP-SEQ=STEP64; NSAMP=18		Pattern 4-4 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***

Orbit Structure




Orbit Structure (continued)
Orbit 2
Server Version: 20061210
GS Reacq
Pointing Maneuver
Exp. 3
Exp. 4
Pointing Maneuver
Exp. 4
Pointing Maneuver
Exp. 4
Pointing Maneuver
Exp. 4
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10237, Visit 07, completed Tue Jan 16 02:01:52 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC, NIC2

Special Requirements: CVZ; ORIENT 285.0D TO 2.0 D; ORIENT 110.0D TO 180.0 D

Comments: J1730+5850 ACS + NICMOS

Diagnostics

(Visit 07) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 07) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 07) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 07) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.841 Line Spacing=0.795	Coordinate Frame=POS-TARG Pattern Orientation=19.9 Angle Between Sides=97.4 Center Pattern=true		(1)
(2)	Pattern Type=NIC-SPIRAL-DITH Purpose=DITHER Number Of Points=4 Point Spacing=2.509 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=197 Angle Between Sides= Center Pattern=false		(2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSSJ1730+5850	RA: 17 30 49.1100 (262.7046250d) Dec: +58 50 59.50 (58.84986d) Equinox: J2000		V=18.4 AB(F625W)=21.9; AB(F160W)=18.0	Coordinate Source: Sloan Digital Sky Survey

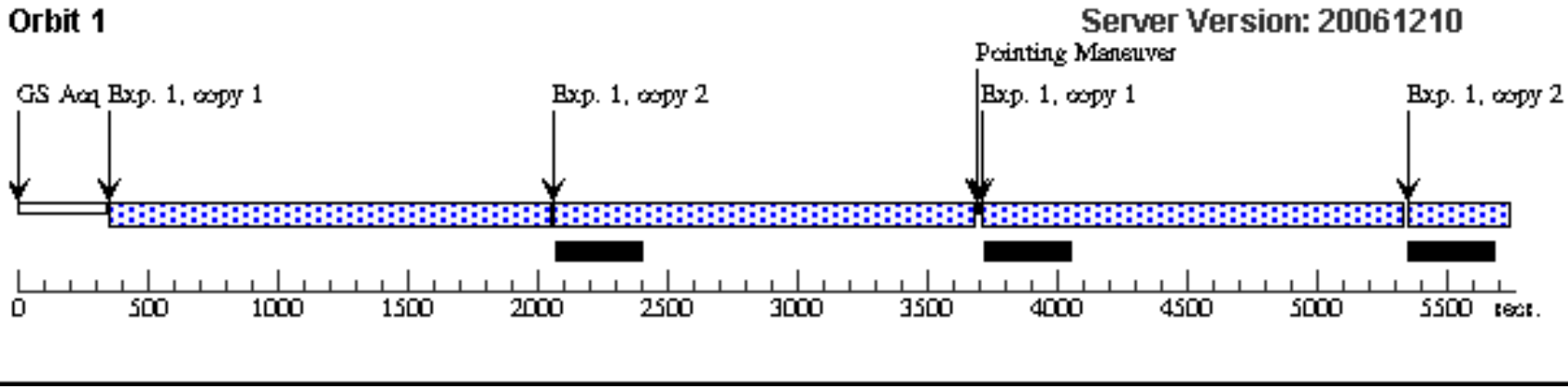
Exposures

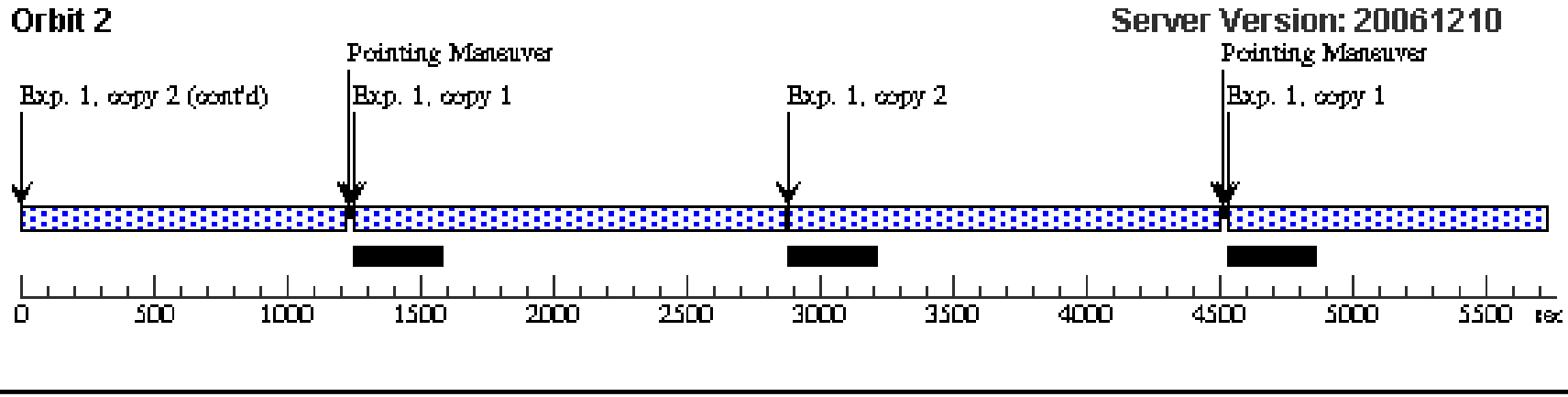
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J1730+5850 in ACS F625W	(4) SDSSJ1730+5850	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2		Pattern 1-1 (1)	1495.0 Secs X 2	
								[==>(Pattern 1, Copy 1)] *[==>(Pattern 1, Copy 2)]* *[==>(Pattern 2, Copy 1)]* *[==>(Pattern 2, Copy 2)]*	***[1]***
								[==>(Pattern 3, Copy 1)] *[==>(Pattern 3, Copy 2)]* *[==>(Pattern 4, Copy 1)]*	***[2]***
								[==>(Pattern 4, Copy 2)]	***[3]***

Exposures (continued)

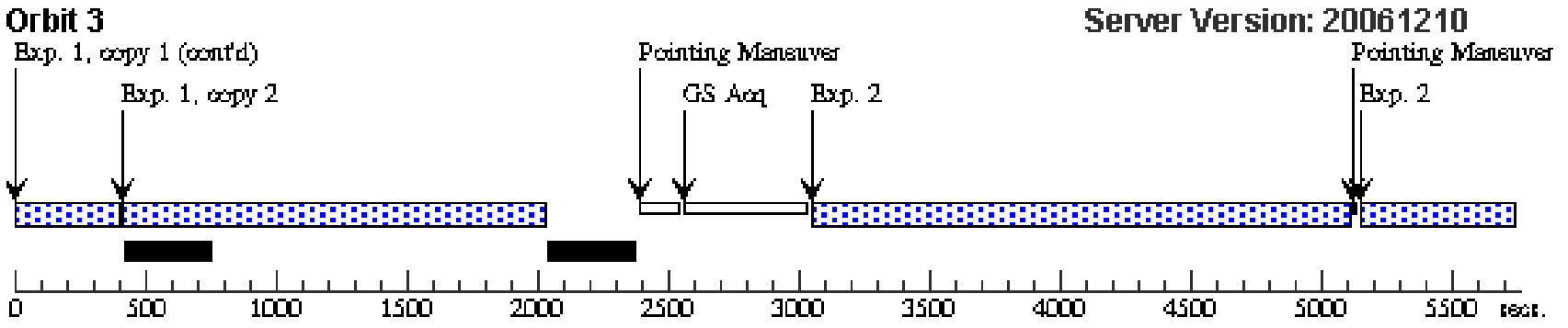
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2	J1730 in NIC2 F160W	(4) SDSSJ1730+5850	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP128; NSAMP=25		Pattern 2-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[3]*
								[==>(Pattern 3)] *[==>(Pattern 4)]*	*[4]*

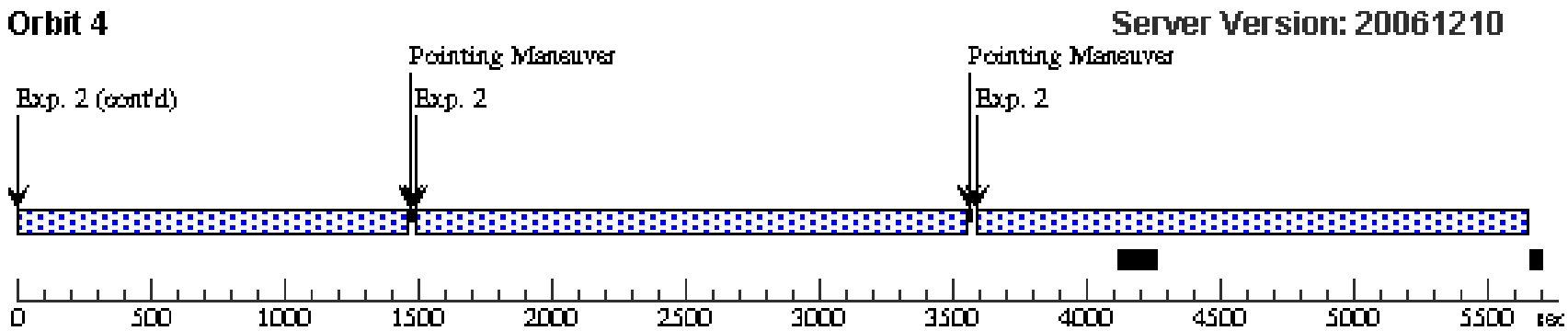
Orbit Structure





Orbit Structure (continued)





Visit

Proposal 10237, Visit 57 Tue Jan 16 02:01:53 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC, NIC2

Special Requirements: CVZ; ORIENT 285.0D TO 2.0 D; ORIENT 110.0D TO 180.0 D

Comments: J1730+5850 ACS + NICMOS

Diagnostics

(Visit 57) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 57) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 57) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE
(Visit 57) Warning: COORDINATE-SOURCE OF OTHER-SOURCE FOR SMALL APERTURE

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.841 Line Spacing=0.795	Coordinate Frame=POS-TARG Pattern Orientation=19.9 Angle Between Sides=97.4 Center Pattern=true		(1)
(2)	Pattern Type=NIC-SPIRAL-DITH Purpose=DITHER Number Of Points=4 Point Spacing=2.509 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=197 Angle Between Sides= Center Pattern=false		(2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSSJ1730+5850	RA: 17 30 49.1100 (262.7046250d) Dec: +58 50 59.50 (58.84986d) Equinox: J2000		V=18.4 AB(F625W)=21.9; AB(F160W)=18.0	Coordinate Source: Sloan Digital Sky Survey

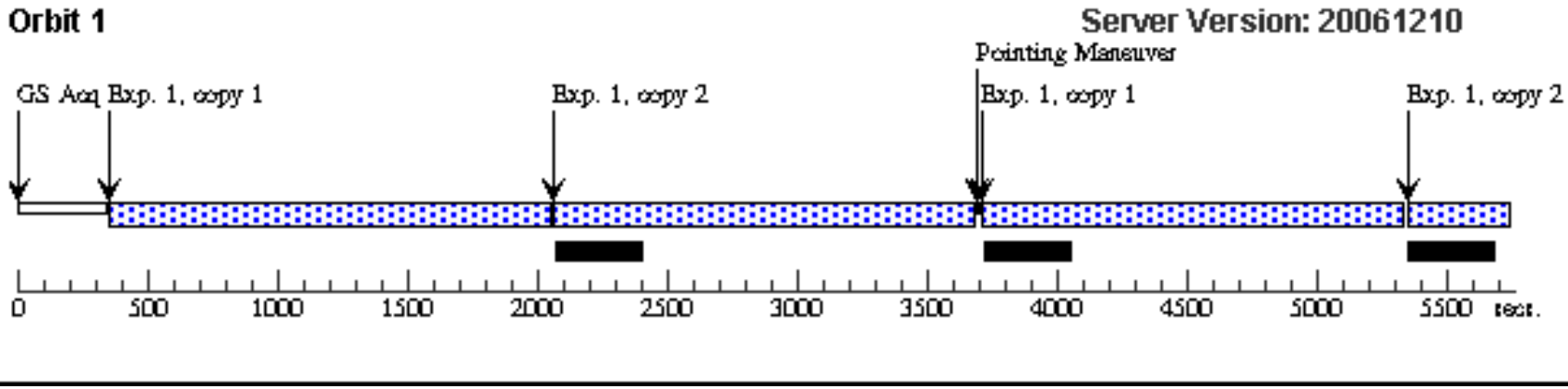
Exposures

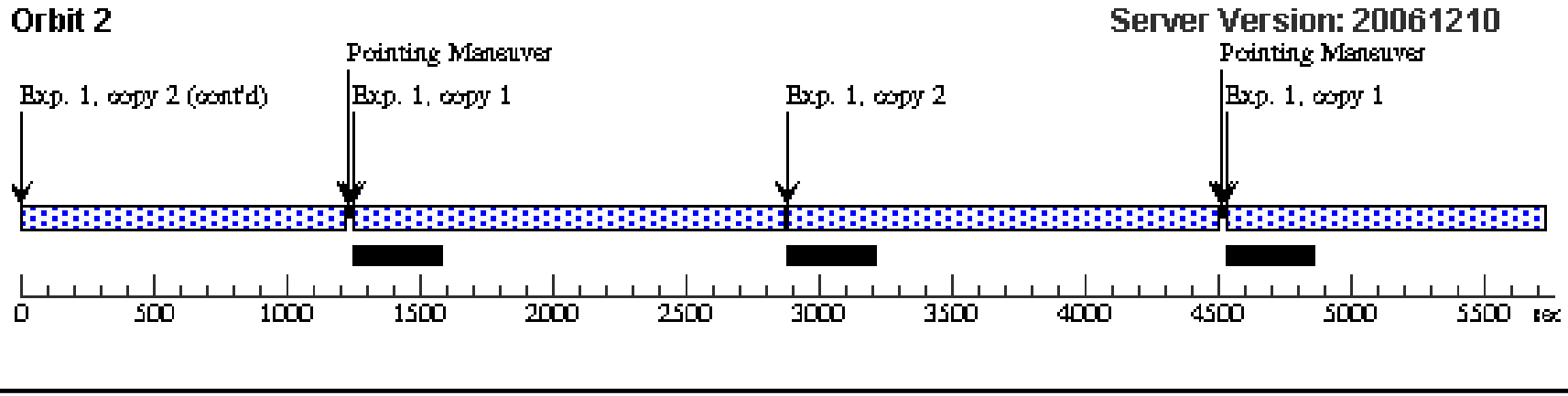
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	J1730+5850 in ACS F625W	(4) SDSSJ1730+5850	ACS/WFC, ACCUM, WFC1	F625W	CR-SPLIT=NO; GAIN=2		Pattern 1-1 (1)	1495.0 Secs X 2	
								[==>(Pattern 1, Copy 1)] *[==>(Pattern 1, Copy 2)]* *[==>(Pattern 2, Copy 1)]* *[==>(Pattern 2, Copy 2)]*	***[1]***
								[==>(Pattern 3, Copy 1)] *[==>(Pattern 3, Copy 2)]* *[==>(Pattern 4, Copy 1)]*	***[2]***
								[==>(Pattern 4, Copy 2)]	***[3]***

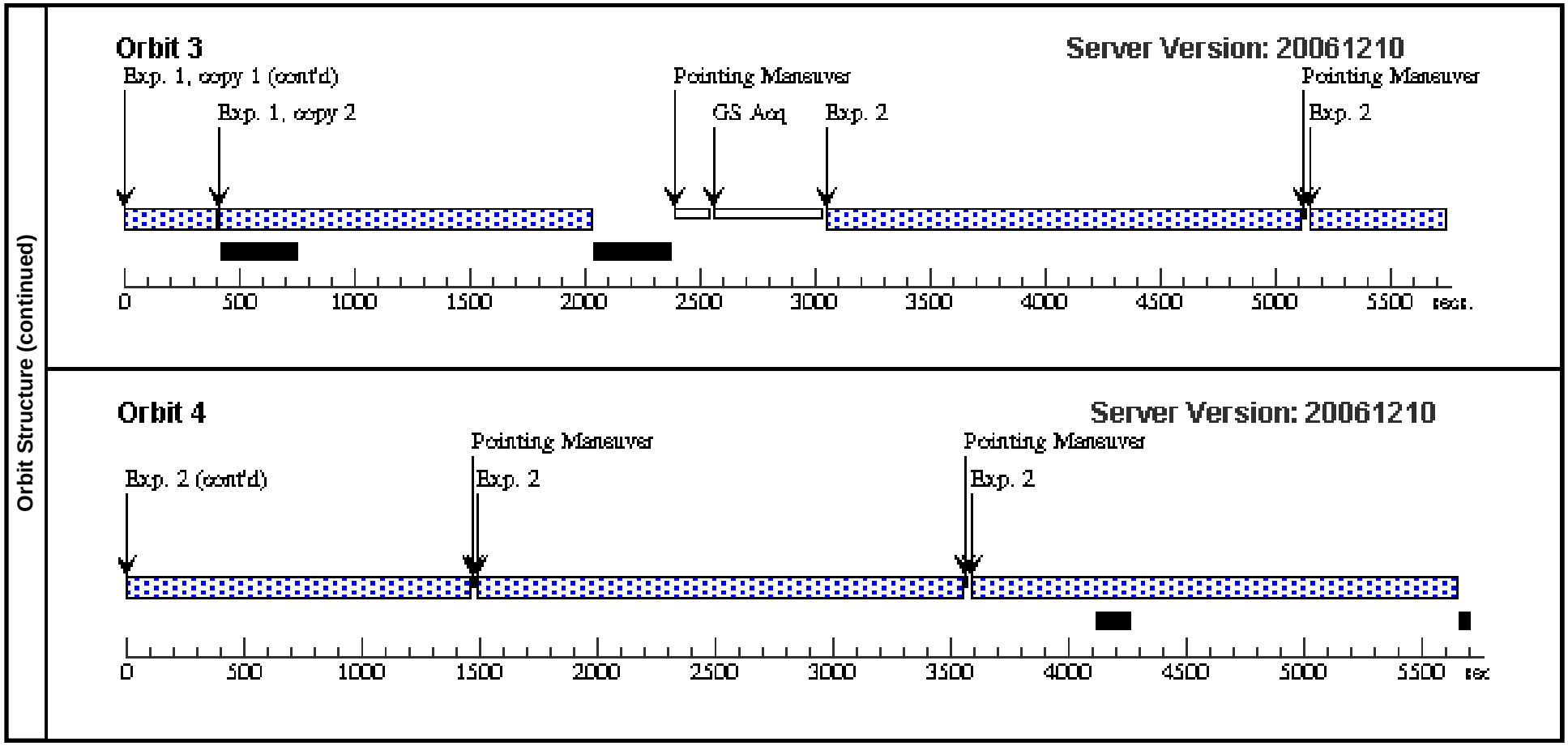
Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2	J1730 in NIC2 F160W	(4) SDSSJ1730+5850	NIC2, MULTIACCUM, NIC2	F160W	SAMP-SEQ=STEP128; NSAMP=25		Pattern 2-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[3]*
								[==>(Pattern 3)] *[==>(Pattern 4)]*	*[4]*

Orbit Structure






Orbit Structure (continued)
Orbit 3
Server Version: 20061210
Exp. 1, copy 1 (cont'd)
Exp. 1, copy 2
Pointing Maneuver
GS Acq
Exp. 2
Pointing Maneuver
Exp. 2
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 4
Server Version: 20061210
Exp. 2 (cont'd)
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec