12608 - Small-scale Morphology and Continuum Colors of Giant Lya Nebulae

Cycle: 19, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Moire Prescott (PI) (ESA Member) (Contact)	**University of Copenhagen, Niels Bohr Institute**	**mkmprescott@gmail.com**
Dr. Arjun Dey (CoI)	National Optical Astronomy Observatory, AURA	dey@noao.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) PRG1	WFC3/UVIS	3	28-Feb-2013 02:46:53.0	yes
02	(1) PRG1	WFC3/UVIS	4	28-Feb-2013 02:47:04.0	yes
03	(1) PRG1	WFC3/UVIS	2	28-Feb-2013 02:47:12.0	yes
04	(1) PRG1	WFC3/IR	5	28-Feb-2013 02:47:35.0	yes
05	(2) PRG2 ANY	ACS/WFC WFC3/UVIS	2	28-Feb-2013 02:47:50.0	yes
06	(2) PRG2 ANY	ACS/WFC WFC3/UVIS	4	28-Feb-2013 02:48:04.0	yes
07	(2) PRG2	WFC3/IR	4	28-Feb-2013 02:48:30.0	yes
09	(3) PRG3 ANY	ACS/WFC WFC3/UVIS	5	28-Feb-2013 02:48:51.0	yes
10	(3) PRG3	WFC3/IR	3	28-Feb-2013 02:49:11.0	yes

32 Total Orbits Used

ABSTRACT

The power mechanism responsible for giant Lya nebulae is a subject of intense debate. These enormous (~100 kpc) and extremely luminous (L_Lya~1E44 erg/s) systems are thought to be regions of ongoing massive galaxy formation. A number of physical mechanisms have been investigated, but observational studies have thus far been unable to unambiguously pinpoint the underlying power source in these rare systems. Up until now, one important aspect of Lya nebulae has yet to be fully explored: namely, the small-scale (sub-kpc) morphology and properties of the spatially extended UV continuum light. The morphology and color of this diffuse continuum provides a complementary means for discriminating between competing ionization scenarios --- spatially extended star formation, AGN scattered light, and gravitational cooling --- but most of the well-studied Lya nebulae lie at redshifts beyond 3 where the crucial constraint on the region of the Balmer break is difficult to obtain and existing low spatial resolution observations from the ground suffer from contamination by compact sources within these complex systems. We propose to image a new sample of systematically selected ``low'' redshift (z<2.5) Lya nebulae using ACS and WFC3 in order to disentangle the diffuse and compact continuum components in these complex sources, provide the first spatially resolved, uncontaminated measurements the color of this diffuse continuum component, assess the evolutionary state of the galaxies within the nebula, and put new constraints on the power source responsible for giant Lya nebulae.

OBSERVING DESCRIPTION

The primary goals of this program are to study the internal structure and environments of a sample of 3 Lya nebulae - a class of high redshift sources that are thought to be regions of ongoing galaxy formation - in order to understand the powering mechanisms and physical conditions responsible for these rare sources. The core of the original project was the combined HST primary and parallel orbit datasets: optical and near-infrared narrow- and broad-band imaging (with ACS/WFC, WFC3/UVIS, and WFC3/IR) as well as near-infrared grism spectroscopy (with WFC3/IR) in order to correct the reddest band (F140W) for potential emission line contamination. Together these observations provide the basis for a coordinated program to (a) understand the small-scale morphology and color of diffuse UV continuum emission in a sample of Lya nebulae, providing a unique constraint on the dominant powering mechanism, (b) measure the properties of compact galaxies residing within Lya nebulae, and (c) study the large-scale environment of these systems by searching for companion Lya nebulae and Lya-emitting galaxies in the vicinity of our primary targets.

After the initial Phase II submission, we were alerted by the ACS team that the existing CTE correction software may not be sufficient to correct our extended sources and that either we should shift our targets to the edge of the detector to minimize CTE problems or switch to WFC3-UVIS. Moving

the targets to the detector edge was not tenable as it would cut out roughly half of the surrounding galaxy environment, thereby undermining an important part of our science program. We therefore filed a Change Request and were approved to switch our ACS primary observations to WFC3-UVIS and our parallel observations to ACS. The change to WFC3-UVIS does result in lower SNR measurements, particularly in the F814W filter; however, our estimates showed that the data will still allow us to disentangle potential power sources responsible for the diffuse continuum emission in Lya nebulae. For the parallel program, since the narrow-band Lya filters we had originally chosen do not exist on ACS, we have substituted the same broad-band filters as the concurrent primary observations. The goal of the parallels remains finding nearby Lya nebulae, but in this case via the extended continuum emission rather than Lya. As we argued in our original proposal, the proposed integration times are sufficient to detect diffuse continuum from Lya nebulae similar to our primary targets at good SNR.

Total Orbits:
Primary - 32
Parallel - 11

The details of the observing for each target, instrument, and spectral element are below:

Target: PRG1

1. WFC3-UVIS Imaging F475W - 3 orbits

We will take 6 exposures - 2 exposures per orbit (approximately 1400s per exposure). We will use the default WFC3-UVIS-GAP-LINE pattern (to dither over the chip gap) and WFC3-UVIS-DITHER-LINE-3PT (to sample the PSF) for these 6 exposures centered on aperture "UVIS" plus an additional POS-TARG offset of (-3,0) arcsec to move this extended target completely off the amplifier edge. We have no orientation restrictions for these exposures.

2. WFC3-UVIS Imaging F814W - 6 orbits

We will take 12 exposures - 2 exposures per orbit (approximately 1400s per exposure). We will use the default WFC3-UVIS-GAP-LINE as the primary pattern (to dither over the chip gap) and WFC3-UVIS-DITHER-BOX as the secondary pattern (to sample the PSF) for the first 8 exposures

centered on aperture "UVIS" plus an additional POS-TARG offset of (-3,0) arcsec to move this extended target completely off the amplifier edge. The final 4 exposures will use the default WFC3-UVIS-GAP-LINE as the primary pattern and WFC3-UVIS-DITHER-LINE as the secondary pattern centered on the "UVIS" aperture plus an additional POS-TARG offset of (-3,0) arcsec from the "UVIS" aperture. We require the orientation to be the same as the F475W observations for this target (#1).

3. WFC3/IR Grism G141 - 1 orbit

We will first take a direct image through the "GRISM1024" aperture with the F140W filter (NSAMP=15, SPARS25, approximately 370s). We will then take 6 grism exposures (NSAMP=15, SPARS25, approximately 370s). We will use the default WFC3-IR-DITHER-BLOB as the primary dither pattern to dither over detector defects and the WFC3-IR-DITHER-3PT as a secondary dither pattern to provide subpixel sampling. The grism observations will use aperture "GRISM1024". We require the orientation to be the same as the F475W observations for this target (#1).

4. WFC3/IR Imaging F140W - 4 orbits

We will take 16 exposures - 4 exposures per orbit (NSAMP=15, SPARS50, approximately 750s per exposure). We will use the default WFC3-IR-DITHER-BLOB as the primary dither pattern to dither over detector defects ("blobs") and the WFC3-IR-DITHER-BOX-MIN as a secondary dither pattern to provide subpixel sampling. Both patterns will be centered on aperture "IR". We require the orientation to be the same as the F475W observations for this target (#1).

Target: PRG2

5. WFC3-UVIS Imaging F606W - 2 orbits

We will take 4 exposures - 2 exposures per orbit (approximately 1400s per exposure). We will use the default WFC3-UVIS-GAP-LINE as the primary pattern (to dither over the chip gap) and WFC3-UVIS-DITHER-LINE as the secondary pattern (to sample the PSF) for these 4 exposures centered on aperture "UVIS" plus an additional POS-TARG offset of (-3,0) arcsec to move this extended target completely off the amplifier edge. We have no orientation restrictions for these exposures.

6. WFC3-UVIS Imaging F814W - 4 orbits

We will take 8 exposures - 2 exposures per orbit (approximately 1400s per exposure). We will use the default WFC3-UVIS-GAP-LINE as the primary pattern (to dither over the chip gap) and WFC3-UVIS-DITHER-BOX (to sample the PSF) for these 8 exposures centered on aperture "UVIS" plus an additional POS-TARG offset of (-3,0) arcsec to move this extended target completely off the amplifier edge. We require the orientation to be the same as the F606W observations for this target (#5).

7. WFC3/IR Grism - 1 orbit

We will first take a direct image through the "GRISM1024" aperture with the F140W filter (NSAMP=15, SPARS25, approximately 370s). We will then take 6 grism exposures (NSAMP=15, SPARS25, approximately 370s). We will use the default WFC3-IR-DITHER-BLOB as the primary dither pattern to dither over detector defects and the WFC3-IR-DITHER-3PT as a secondary dither pattern to provide subpixel sampling. The grism observations will use aperture "GRISM1024". We require the orientation to be the same as the F606W observations for this target (#5).

8. WFC3/IR Imaging F140W - 3 orbits

We will take 12 exposures - 4 exposures per orbit (NSAMP=15, SPARS50, approximately 750s per exposure). We will use the default WFC3-IR-DITHER-BLOB as the primary dither pattern to dither over detector defects and the WFC3-IR-DITHER-BOX-MIN as a secondary dither pattern to provide subpixel sampling. The first 8 exposures will use the dither pattern centered on aperture "IR". The remaining 4 exposures will use the WFC3-IR-DITHER-BOX-MIN pattern offset by an amount similar to that used in the WFC3-IR-DITHER-BLOB pattern but in a different direction - (-14.25,14.25) pixels or (-1.931,1.726) arcsec. We require the orientation to be the same as the F606W observations for this target (#5).

Target: PRG3

9. WFC3-UVIS Imaging F475W - 2 orbits

We will take 4 exposures - 2 exposures per orbit (approximately 1400s per exposure). We will use the default WFC3-UVIS-GAP-LINE as the

primary pattern (to dither over the chip gap) and WFC3-UVIS-DITHER-LINE as the secondary pattern (to sample the PSF) for these 4 exposures centered on aperture "UVIS" plus an additional POS-TARG offset of (-3,0) arcsec to move this extended target completely off the amplifier edge. We have no orientation restrictions for these exposures.

10. WFC3-UVIS Imaging F814W - 3 orbits

We will take 6 exposures - 2 exposures per orbit (approximately 1400s per exposure). We will use the default WFC3-UVIS-GAP-LINE pattern (to dither over the chip gap) and WFC3-UVIS-DITHER-LINE-3PT (to sample the PSF) for these 6 exposures centered on aperture "UVIS" plus an additional POS-TARG offset of (-3,0) arcsec to move this extended target completely off the amplifier edge. We require the orientation to be the same as the F475W observations for this target (#9).

11. WFC3/IR Grism - 1 orbit

We will first take a direct image through the "GRISM1024" aperture with the F140W filter (NSAMP=15, SPARS25, approximately 370s). We will then take 6 grism exposures (NSAMP=15, SPARS25, approximately 370s). We will use the default WFC3-IR-DITHER-BLOB as the primary dither pattern to dither over detector defects and the WFC3-IR-DITHER-3PT as a secondary dither pattern to provide subpixel sampling. The grism observations will use aperture "GRISM1024". We require the orientation to be the same as the F475W observations for this target (#9).

12. WFC3/IR Imaging F140W - 2 orbits

We will take 8 exposures - 4 exposures per orbit (NSAMP=15, SPARS50, approximately 750s per exposure). We will use the default WFC3-IR-DITHER-BLOB as the primary dither pattern to dither over detector defects and the WFC3-IR-DITHER-BOX-MIN as a secondary dither pattern to provide subpixel sampling. The dither pattern will be centered on aperture "IR". We require the orientation to be the same as the F475W observations for this target (#9).

Parallel Observations for PRG2 and PRG3:

For two of our targets, narrowband WFC3-UVIS filters exist at the wavelength of Lya (F395N for PRG2 and FQ378N for PRG3). As Lya nebulae

are known to be highly clustered [e.g., 22], we originally planned to use coordinated parallels with WFC3-UVIS (6 and 5 orbits, respectively, during ACS prime orbits) to obtain Lya imaging and look for companion Lya nebulae in regions near these two targets.

In changing our ACS primary program to WFC3-UVIS and our WFC3-UVIS parallel program to ACS, doing parallel Lya imaging is no longer possible since the narrow-band filters we had chosen do not exist on ACS. Instead we will use the same broad-band filters as the concurrent WFC3-UVIS primary observations (F606W - 2 orbits, F814W - 4 orbits for PRG2; F475W - 2 orbits, F814W - 3 orbits for PRG3) in order to search for companion Lya nebulae in regions near these two targets via diffuse continuum emission rather than Lya. As we argued in our original proposal, the proposed integration times are sufficient to detect diffuse continuum from Lya nebulae similar to our primary targets at good SNR.

Visit

Proposal 12608, Visit 01, scheduled Thu Feb 28 02:49:20 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Diagnostics

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

(PRG1 F475W (01.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(7)	Pattern Type=WFC3-UVIS-GAP-LINE	Coordinate Frame=POS-TARG	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT	Coordinate Frame=POS-TARG	(1)
	Purpose=MOSAIC	Pattern Orientation=85.759	Purpose=DITHER	Pattern Orientation=46.84	
	Number Of Points=2	Angle Between Sides=	Number Of Points=3	Angle Between Sides=	
	Point Spacing=2.414	Center Pattern=true	Point Spacing=0.135	Center Pattern=false	
	Line Spacing=		Line Spacing=		

Fixed Targets

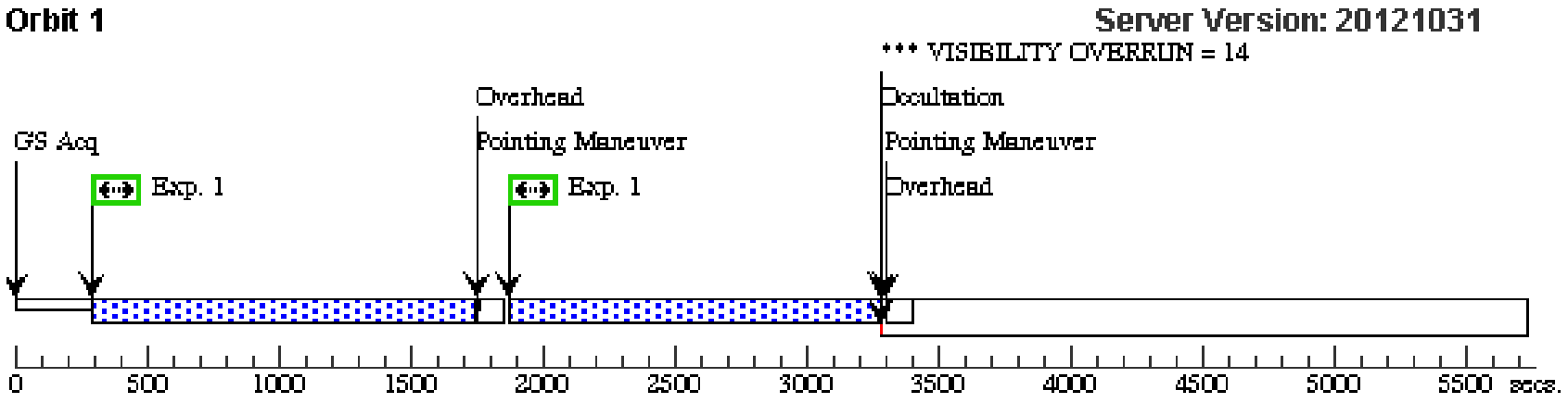
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PRG1	RA: 14 35 12.5000 (218.8020833d)		V=(?)	Reference Frame: NOAO Deep Wide-Field Survey
		Dec: +35 11 8.10 (35.18558d)		Bw=23	
		Equinox: J2000			

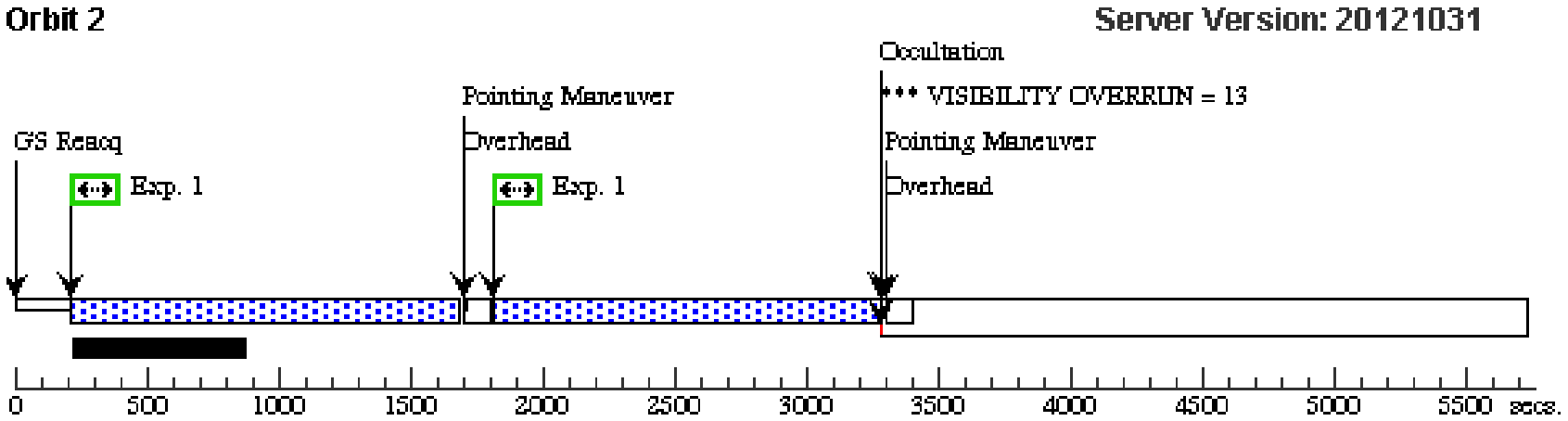
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 94 stars in the field of PRG1. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (0.11, 0.04) arcsec in the sense that the NDWFS astrometric system is east and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

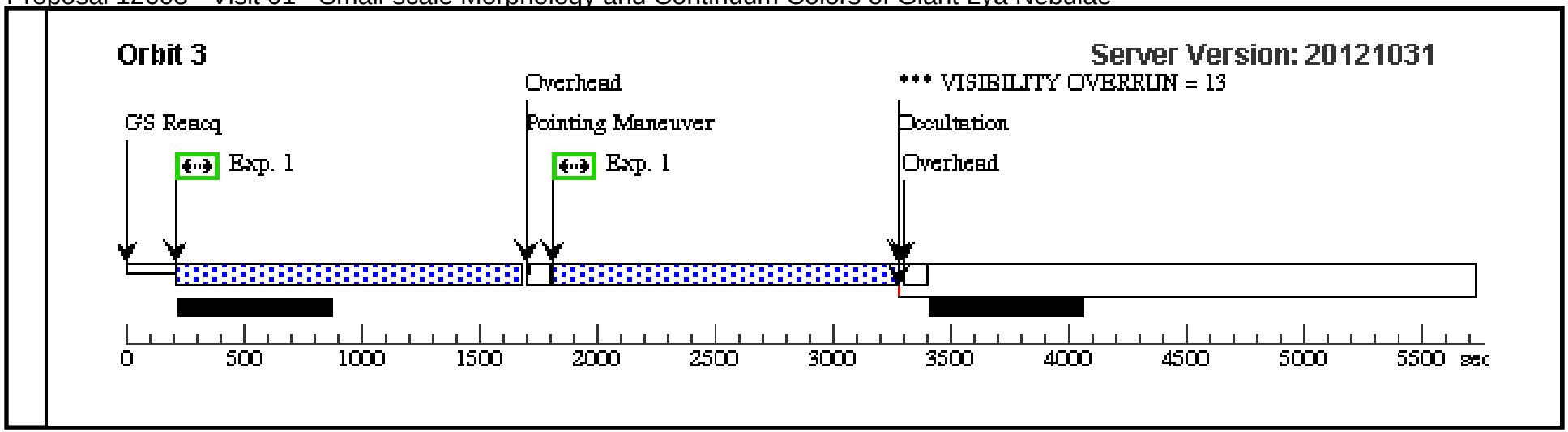
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG1 F475W	(1) PRG1	WFC3/UVIS, ACCUM, UVIS	F475W		POS TARG -3,null	Pattern 7, Exps 1-1 in Visit 01 (7)	1200 Secs	
								[==>1416.0 Secs (Pattern 1,1)]	***[1]***
								[==>1416.0 Secs (Pattern 1,2)]	
								[==>1471.0 Secs (Pattern 1,3)]	***[2]***
								[==>1471.0 Secs (Pattern 2,1)]	
								[==>1471.0 Secs (Pattern 2,2)]	***[3]***
								[==>1471.0 Secs (Pattern 2,3)]	

Orbit Structure






Orbit 3
Server Version: 20121031
GS Reacq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
*** VISIBILITY OVERRUN = 13
Occultation
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12608, Visit 02, scheduled Thu Feb 28 02:49:26 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SAME ORIENT AS 01

Diagnostics

(Visit 02) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 02) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 02) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 02) Warning (Orbit Planner): VISIBILITY OVERRUN

(PRG1 F814W (02.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(8)	Pattern Type=WFC3-UVIS-GAP-LINE	Coordinate Frame=POS-TARG	Pattern Type=WFC3-UVIS-DITHER-BOX	Coordinate Frame=POS-TARG	(1)
	Purpose=MOSAIC	Pattern Orientation=85.759	Purpose=DITHER	Pattern Orientation=23.884	
	Number Of Points=2	Angle Between Sides=	Number Of Points=4	Angle Between Sides=81.785	
	Point Spacing=2.414	Center Pattern=true	Point Spacing=0.173	Center Pattern=false	
	Line Spacing=		Line Spacing=0.112		

Fixed Targets

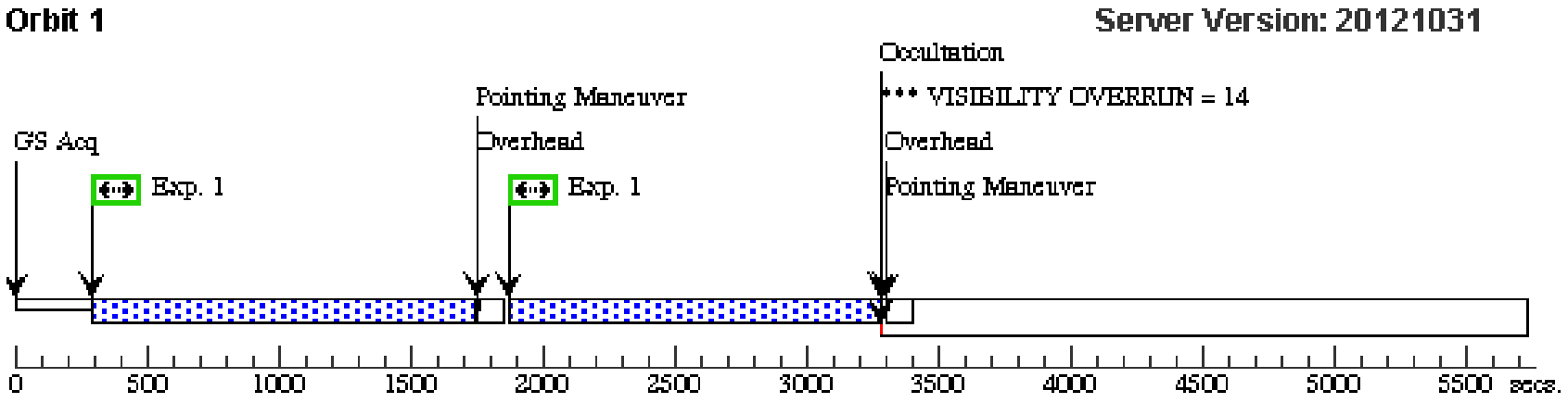
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PRG1	RA: 14 35 12.5000 (218.8020833d)		V=(?)	Reference Frame: NOAO Deep Wide-Field Survey
		Dec: +35 11 8.10 (35.18558d)		Bw=23	
		Equinox: J2000			

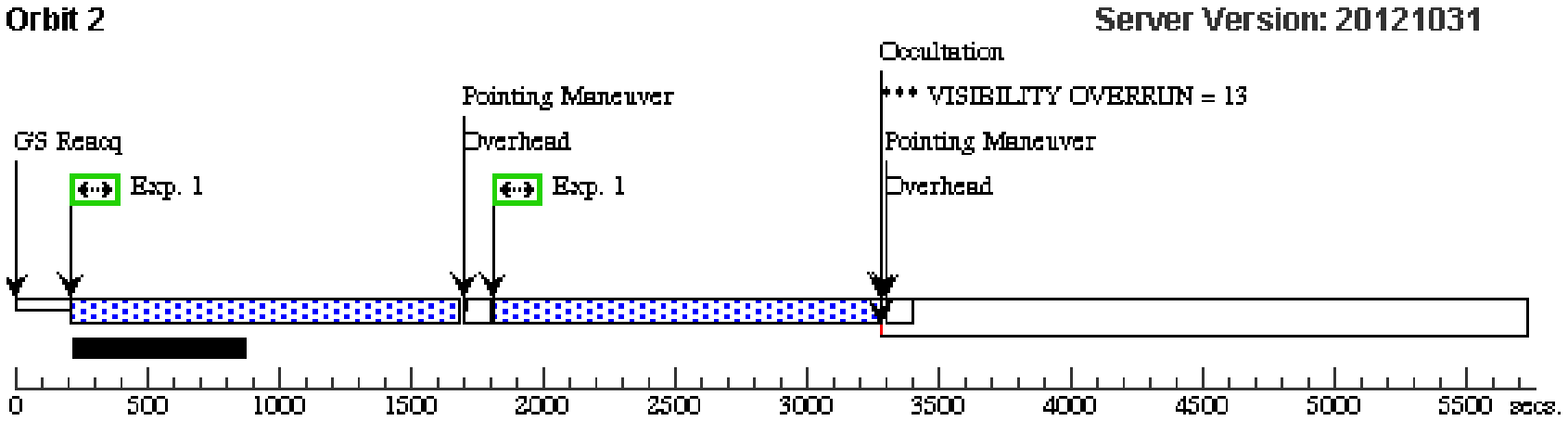
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 94 stars in the field of PRG1. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (0.11, 0.04) arcsec in the sense that the NDWFS astrometric system is east and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

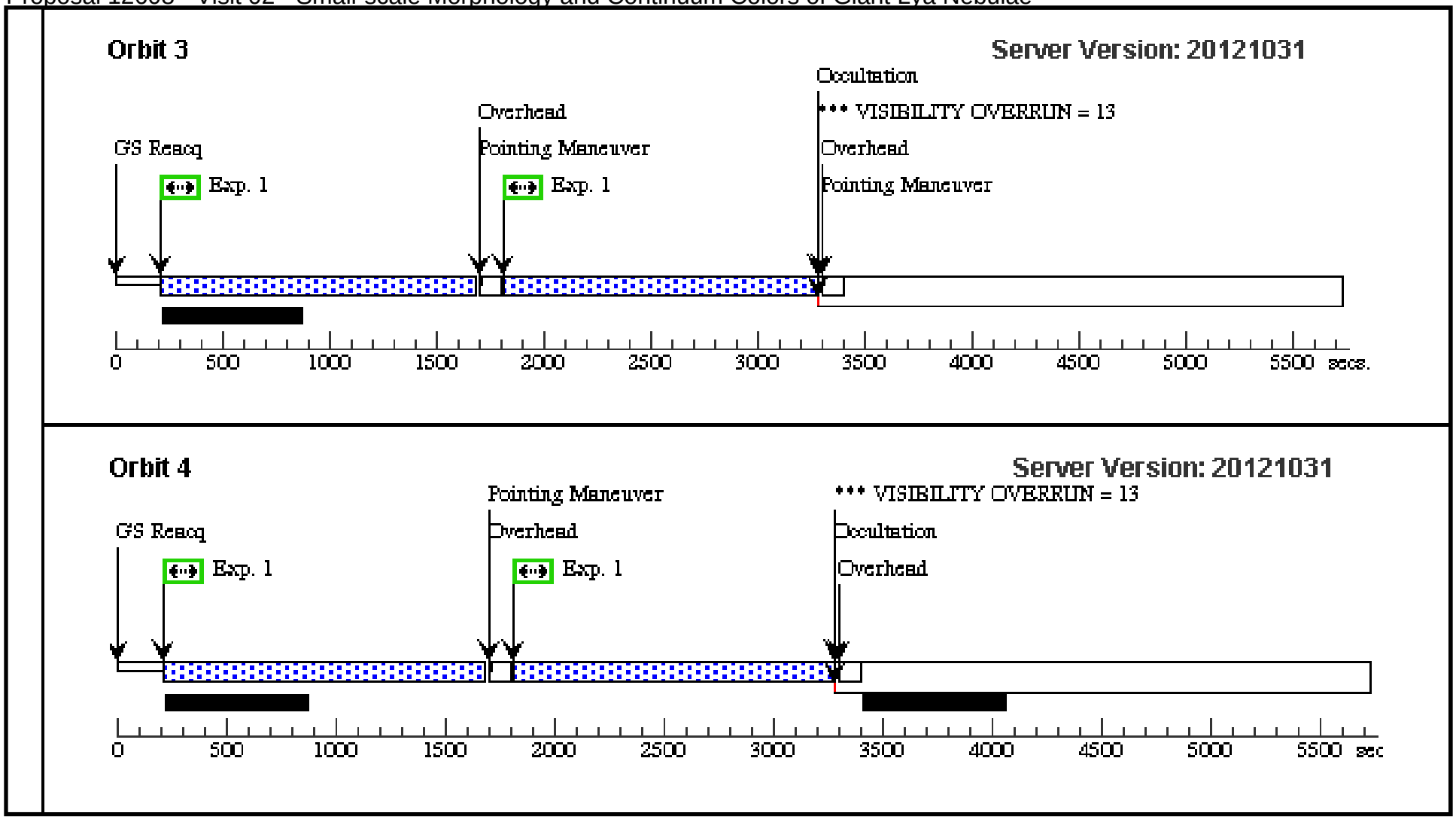
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG1 F814W	(1) PRG1	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -3,null	Pattern 8, Exps 1-1 in Visit 02 (8)	1200 Secs	
								[==>1416.0 Secs (Pattern 1,1)]	***[1]***
								[==>1416.0 Secs (Pattern 1,2)]	
								[==>1471.0 Secs (Pattern 1,3)]	***[2]***
								[==>1471.0 Secs (Pattern 1,4)]	
								[==>1471.0 Secs (Pattern 2,1)]	***[3]***
								[==>1471.0 Secs (Pattern 2,2)]	
								[==>1471.0 Secs (Pattern 2,3)]	***[4]***
								[==>1471.0 Secs (Pattern 2,4)]	

Orbit Structure






Orbit 3
Server Version: 20121031
Occultation
*** VISIBILITY OVERRUN = 13
Overhead
Pointing Maneuver
GS Reacq
Exp. 1
Exp. 1
Overhead
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 4
Server Version: 20121031
Pointing Maneuver
*** VISIBILITY OVERRUN = 13
GS Reacq
Overhead
Occultation
Exp. 1
Exp. 1
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12608, Visit 03, implementation Thu Feb 28 02:49:29 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SAME ORIENT AS 01

Diagnostics

(PRG1 F814W (03.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(6)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=MOSAIC Number Of Points=2 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false	(1)

Fixed Targets

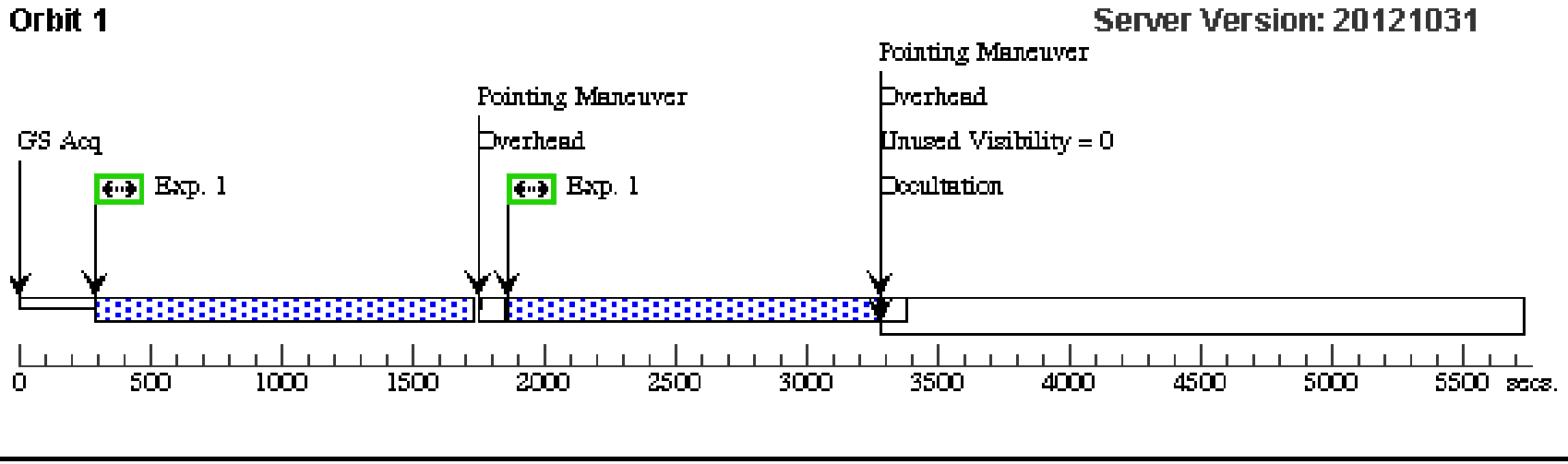
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PRG1	RA: 14 35 12.5000 (218.8020833d) Dec: +35 11 8.10 (35.18558d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

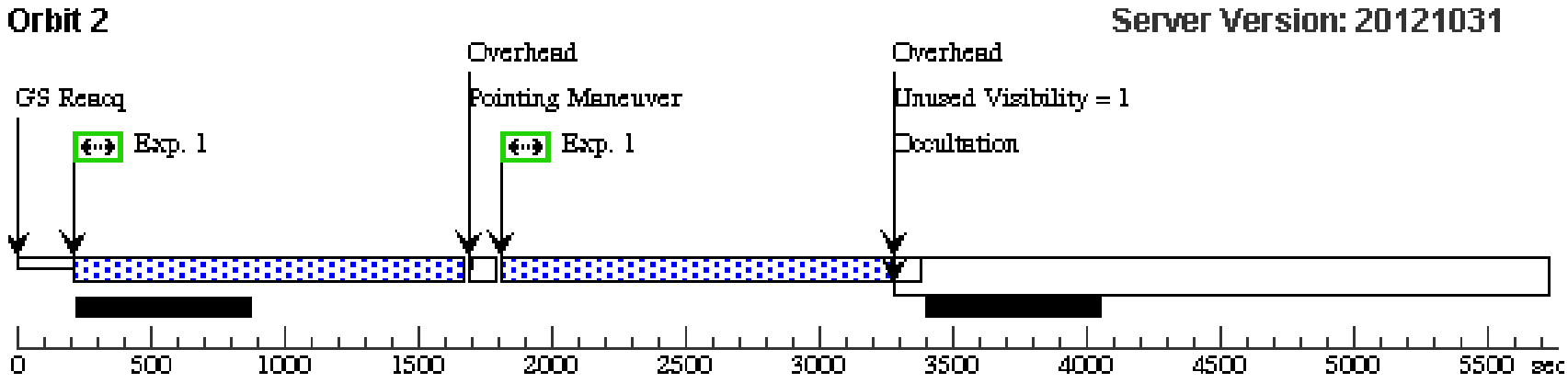
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 94 stars in the field of PRG1. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (0.11, 0.04) arcsec in the sense that the NDWFS astrometric system is east and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG1 F814W	(1) PRG1	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -3,null	Pattern 6, Exps 1-1 in Visit 03 (6)	1200 Secs	
								[==>1409.0 Secs (Pattern 1,1)] *[==>1409.0 Secs (Pattern 1,2)]*	***[1]***
								[==>1464.0 Secs (Pattern 2,1)] *[==>1464.0 Secs (Pattern 2,2)]*	***[2]***

Orbit Structure





Visit

Proposal 12608, Visit 04, scheduled Thu Feb 28 02:49:31 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 01

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	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	(3), (4)
(4)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

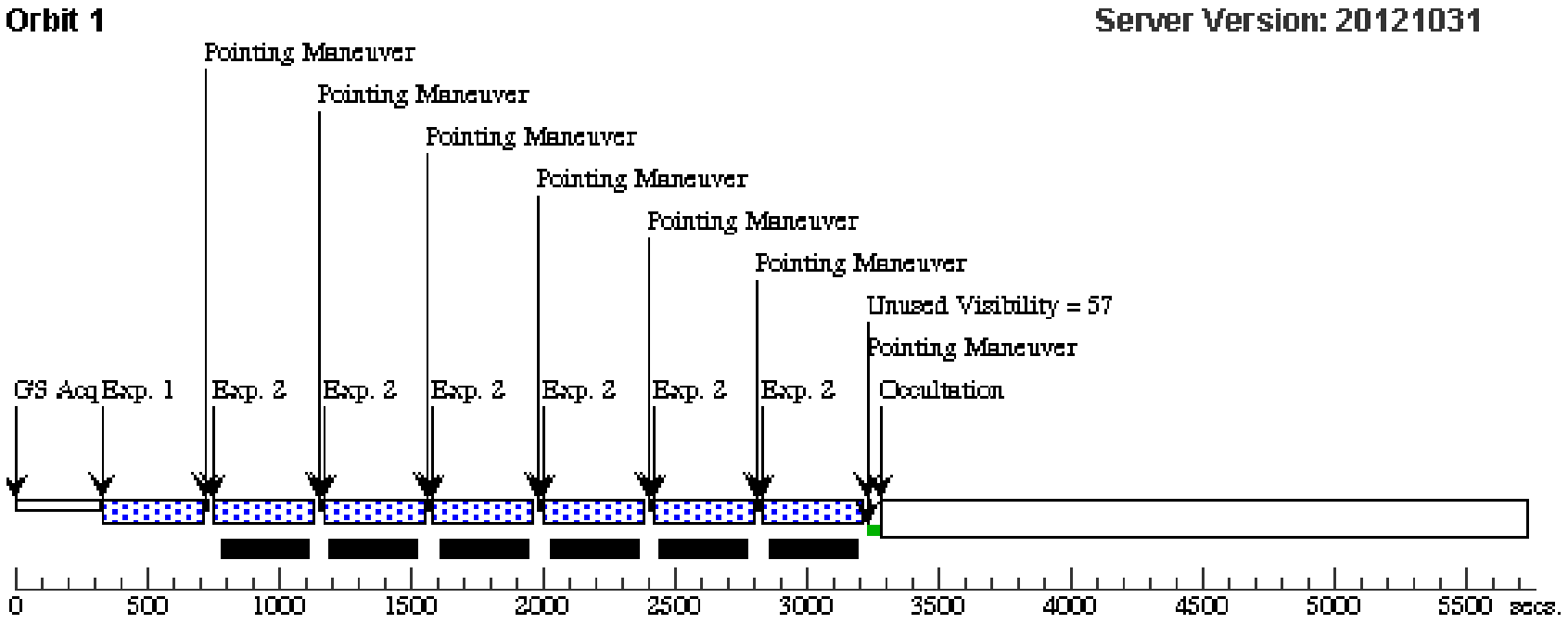
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PRG1	RA: 14 35 12.5000 (218.8020833d) Dec: +35 11 8.10 (35.18558d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

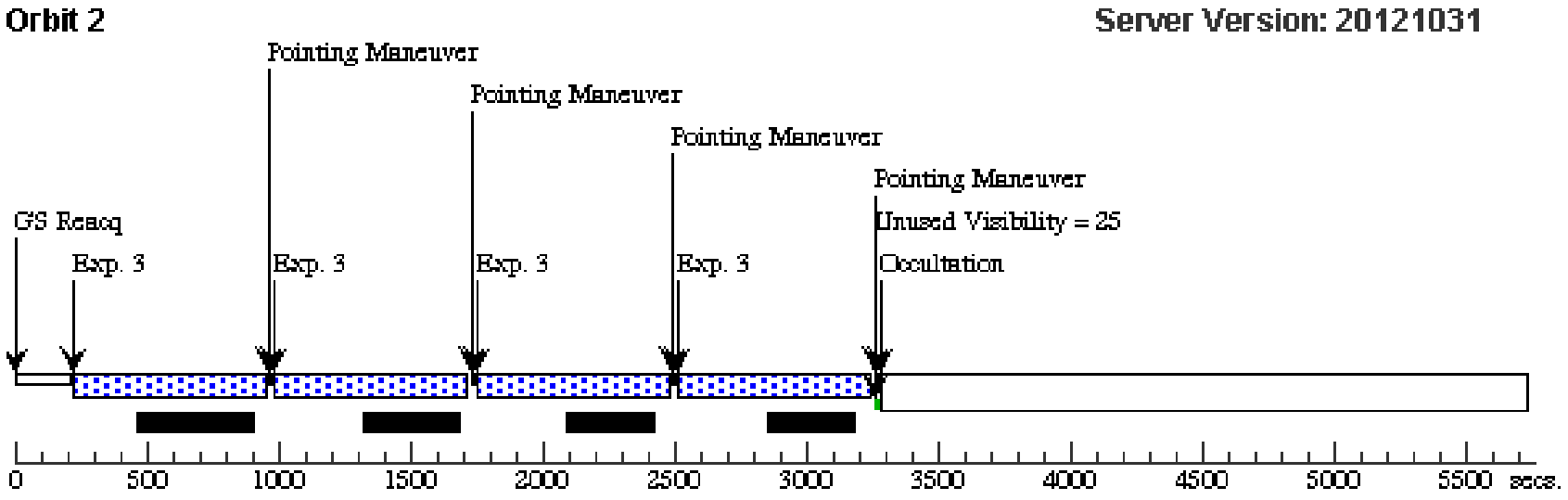
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 94 stars in the field of PRG1. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (0.11, 0.04) arcsec in the sense that the NDWFS astrometric system is east and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

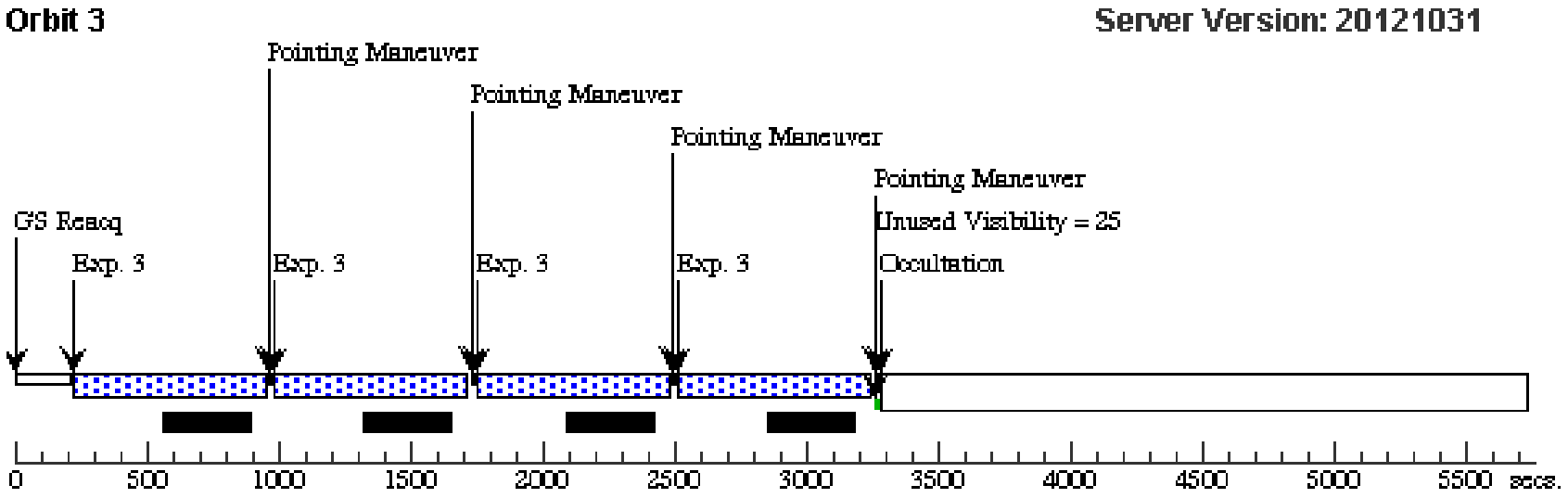
Exposures

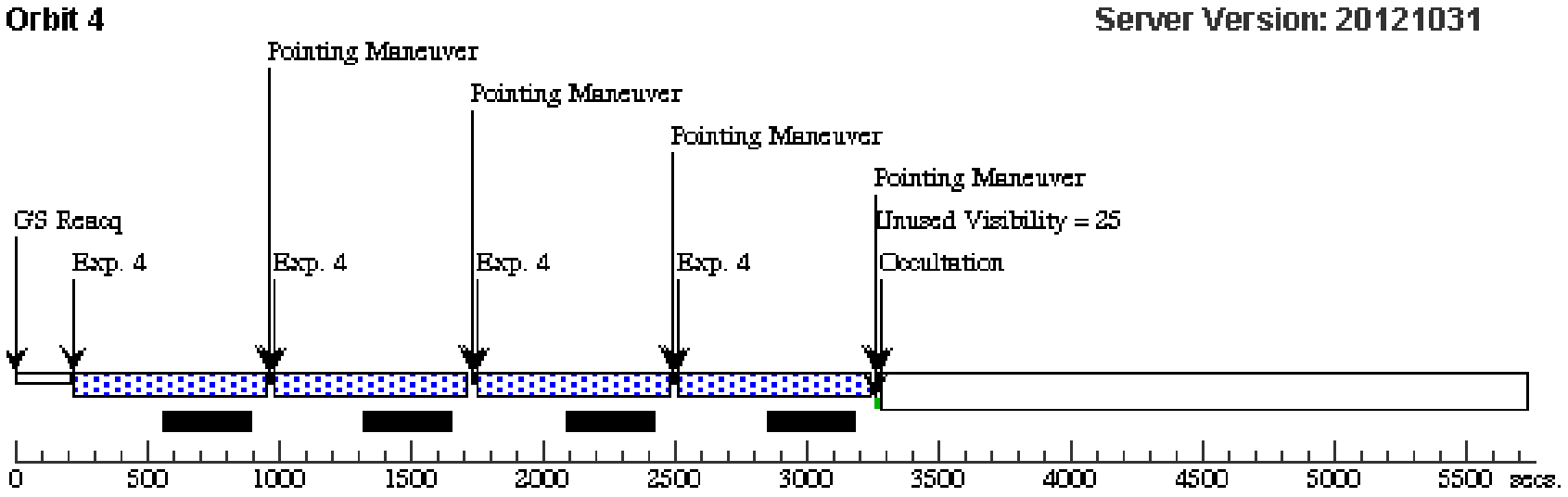
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG1 grism image	(1) PRG1	WFC3/IR, MULTIACCUM, GRISM1024	F140W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 1.931,1.726		*[==>]*	***[1]***
2	PRG1 grism	(1) PRG1	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=SPARS25		Pattern 4, Exps 2-2 in Visit 04 (4)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]*	***[1]***
3	PRG1 F140W	(1) PRG1	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=15; SAMP-SEQ=SPARS50		Pattern 2, Exps 3-3 in Visit 04 (2)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 1,4)]*	***[2]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]* *[==>(Pattern 2,4)]*	***[3]***
4	PRG1 F140W	(1) PRG1	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=15; SAMP-SEQ=SPARS50		Pattern 2, Exps 4-4 in Visit 04 (2)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 1,4)]*	***[4]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]* *[==>(Pattern 2,4)]*	***[5]***

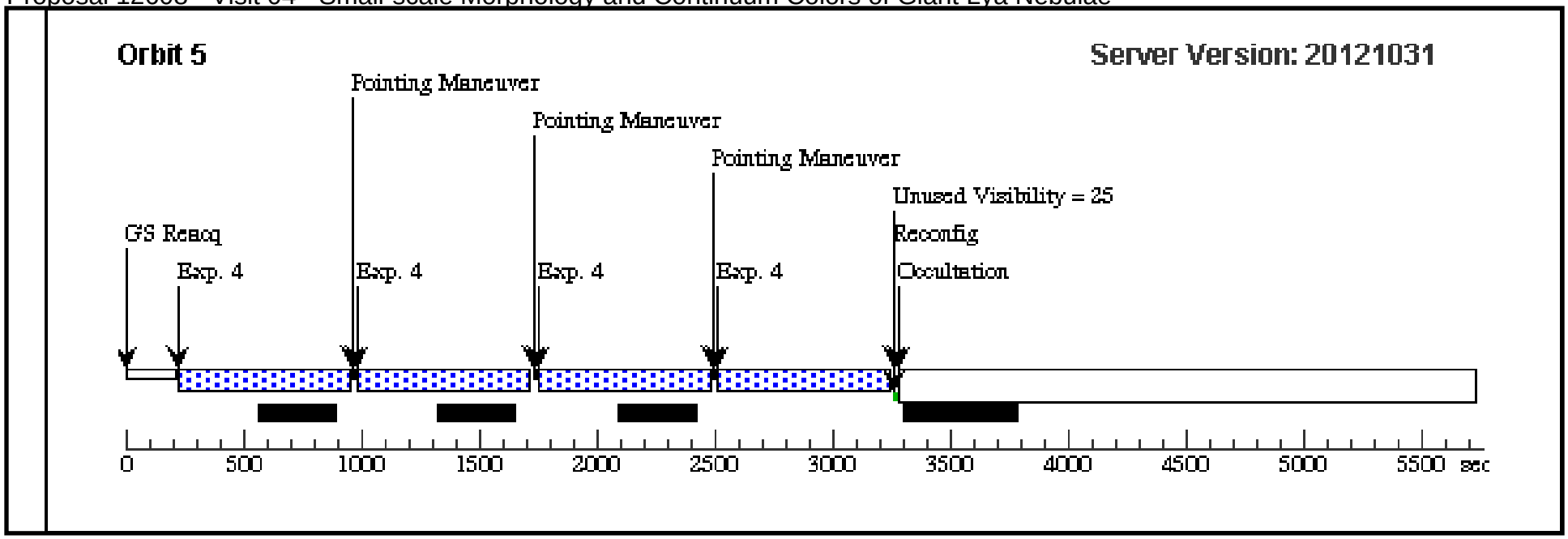
Orbit Structure






Orbit 3
Server Version: 20121031
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
GS Reacq
Exp. 3
Exp. 3
Exp. 3
Exp. 3
Unused Visibility = 25
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.


Orbit 4
Server Version: 20121031
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
GS Reacq
Exp. 4
Exp. 4
Exp. 4
Exp. 4
Unused Visibility = 25
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.


Orbit 5
Server Version: 20121031
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 25
GS Reacq
Reconfig
Exp. 4
Exp. 4
Exp. 4
Exp. 4
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12608, Visit 05, completed Thu Feb 28 02:49:36 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS, ACS/WFC

Special Requirements: (none)

Diagnostics

(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

(Primary PRG2 F606W (05.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(6)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=MOSAIC Number Of Points=2 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false	(1-2)

Fixed Targets

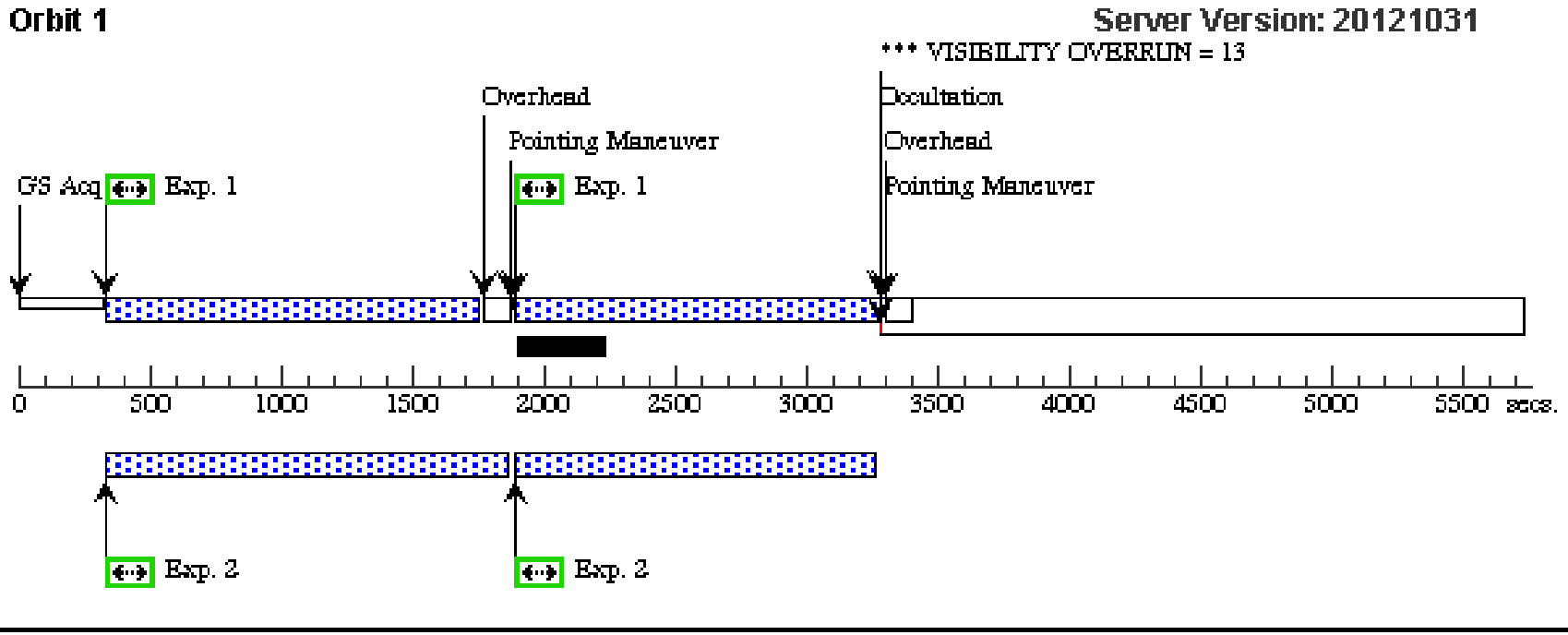
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	PRG2	RA: 14 26 22.8480 (216.5952000d) Dec: +35 14 21.41 (35.23928d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

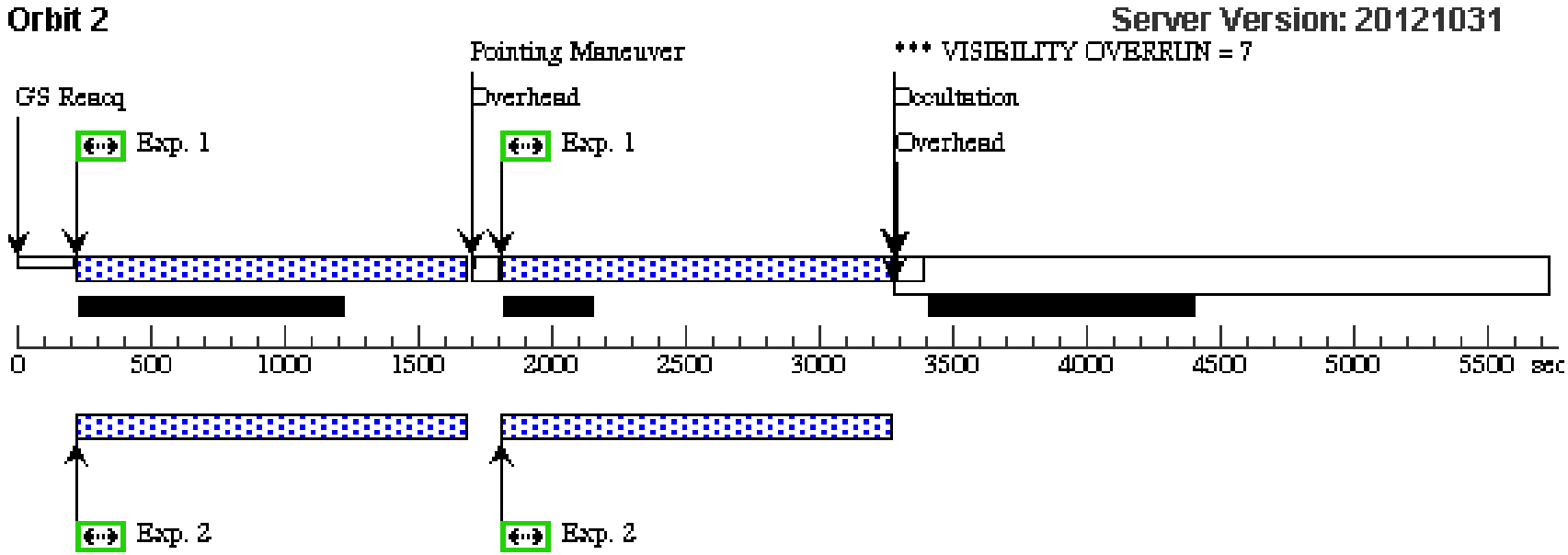
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 65 stars in the field of PRG2. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (-0.15, 0.11) arcsec in the sense that the NDWFS astrometric system is west and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG2 F606W	(2) PRG2	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG -3,null	Pattern 6, Exps 1-2 in Visit 05 (6) Prime + Parallel Group 1-2 in Pattern 6, Exps 1-2 in Visit 05	1200 Secs *[==>1395.0 Secs (Pattern 1,1)]* *[==>1395.0 Secs (Pattern 1,2)]* *[==>1466.0 Secs (Pattern 2,1)]* *[==>1466.0 Secs (Pattern 2,2)]*	 ***[1]*** ***[2]***
2	PRG2 acs f606w parallel	ANY	ACS/WFC, ACCUM, WFC	F606W			Pattern 6, Exps 1-2 in Visit 05 (6) Prime + Parallel Group 1-2 in Pattern 6, Exps 1-2 in Visit 05	1200 Secs *[==>1320.0 Secs (Pattern 1,1)]* *[==>1250.0 Secs (Pattern 1,2)]* *[==>1340.0 Secs (Pattern 2,1)]* *[==>1340.0 Secs (Pattern 2,2)]*	 ***[1]*** ***[2]***

Orbit Structure





Visit

Proposal 12608, Visit 06, completed Thu Feb 28 02:49:38 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS, ACS/WFC

Special Requirements: SAME ORIENT AS 05

Diagnostics

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

(Primary PRG2 F814W (06.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(8)	Pattern Type=WFC3-UVIS-GAP-LINE	Coordinate Frame=POS-TARG	Pattern Type=WFC3-UVIS-DITHER-BOX	Coordinate Frame=POS-TARG	(1-2)
	Purpose=MOSAIC	Pattern Orientation=85.759	Purpose=DITHER	Pattern Orientation=23.884	
	Number Of Points=2	Angle Between Sides=	Number Of Points=4	Angle Between Sides=81.785	
	Point Spacing=2.414	Center Pattern=true	Point Spacing=0.173	Center Pattern=false	
	Line Spacing=		Line Spacing=0.112		

Fixed Targets

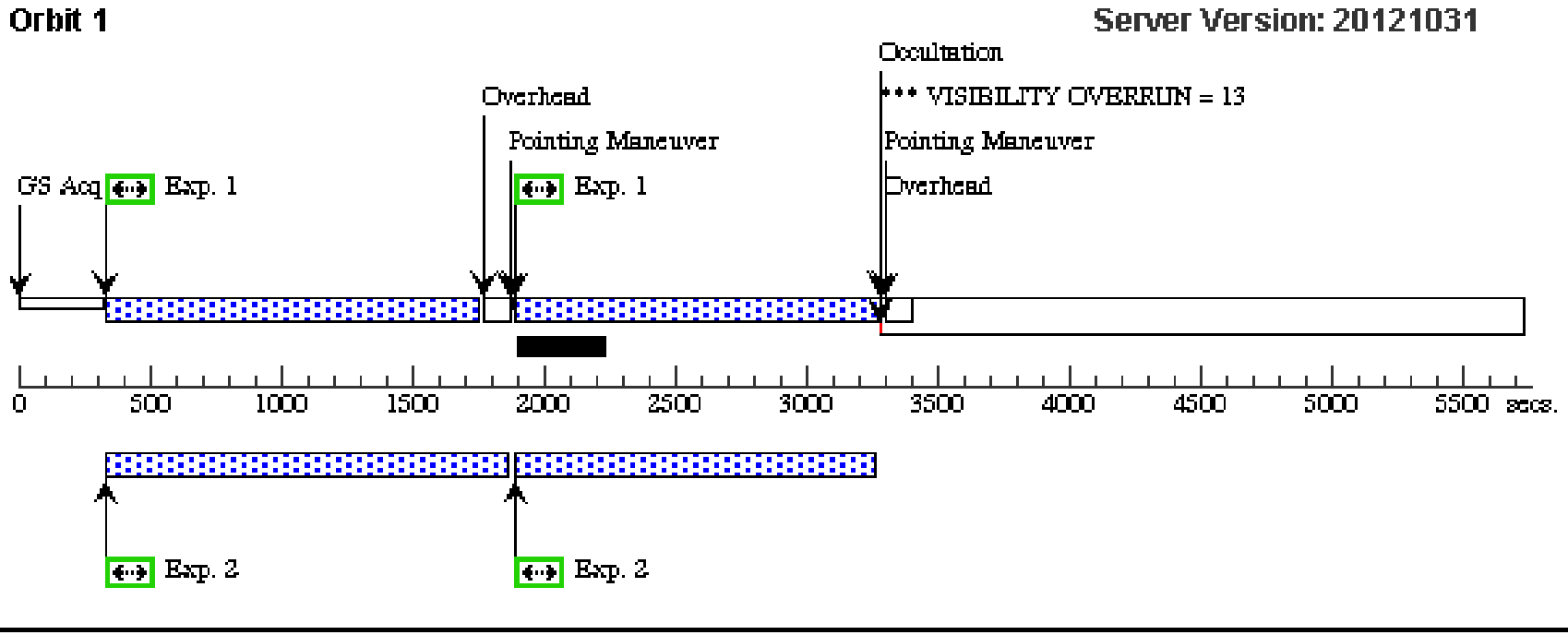
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	PRG2	RA: 14 26 22.8480 (216.5952000d) Dec: +35 14 21.41 (35.23928d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

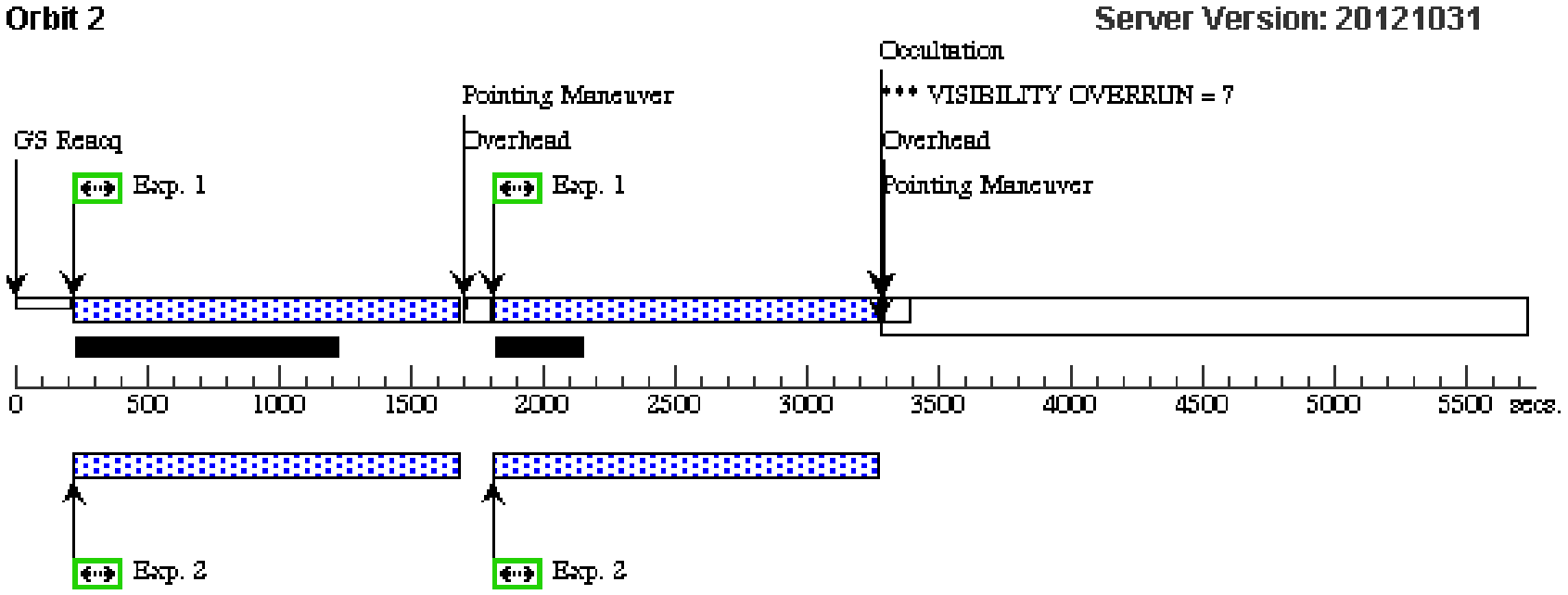
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 65 stars in the field of PRG2. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (-0.15, 0.11) arcsec in the sense that the NDWFS astrometric system is west and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

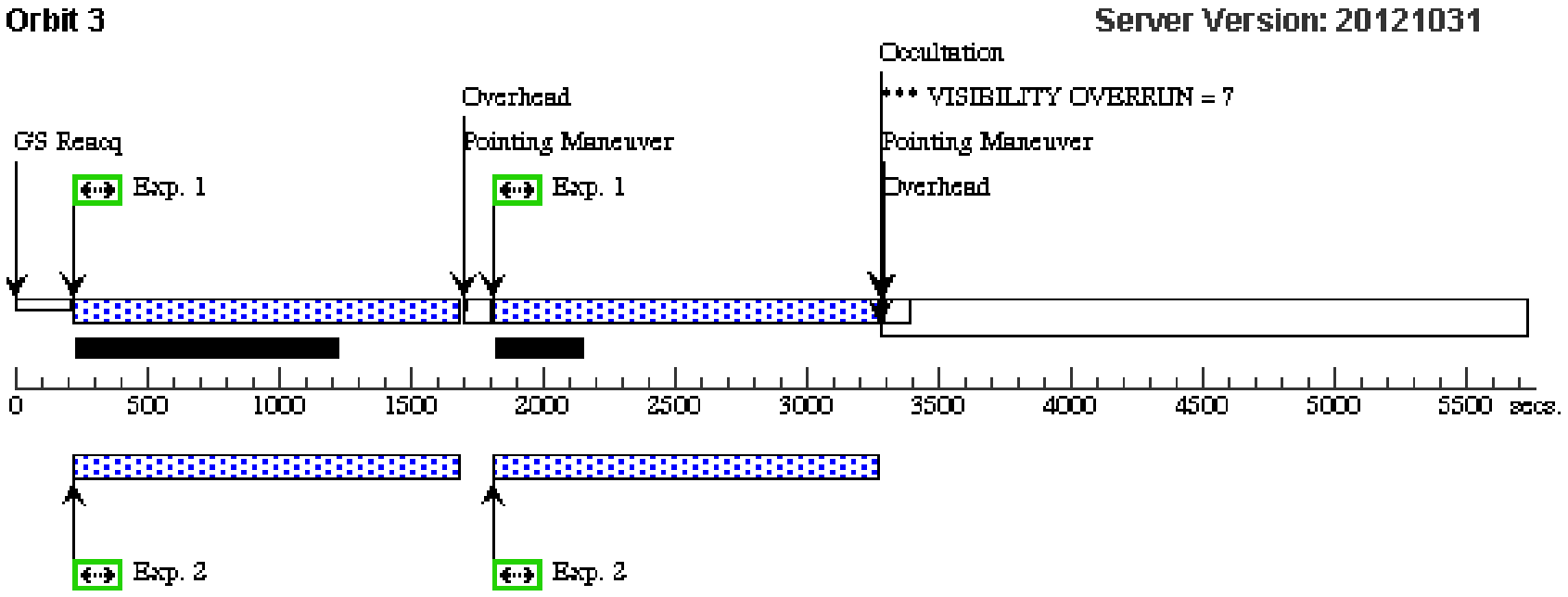
Exposures

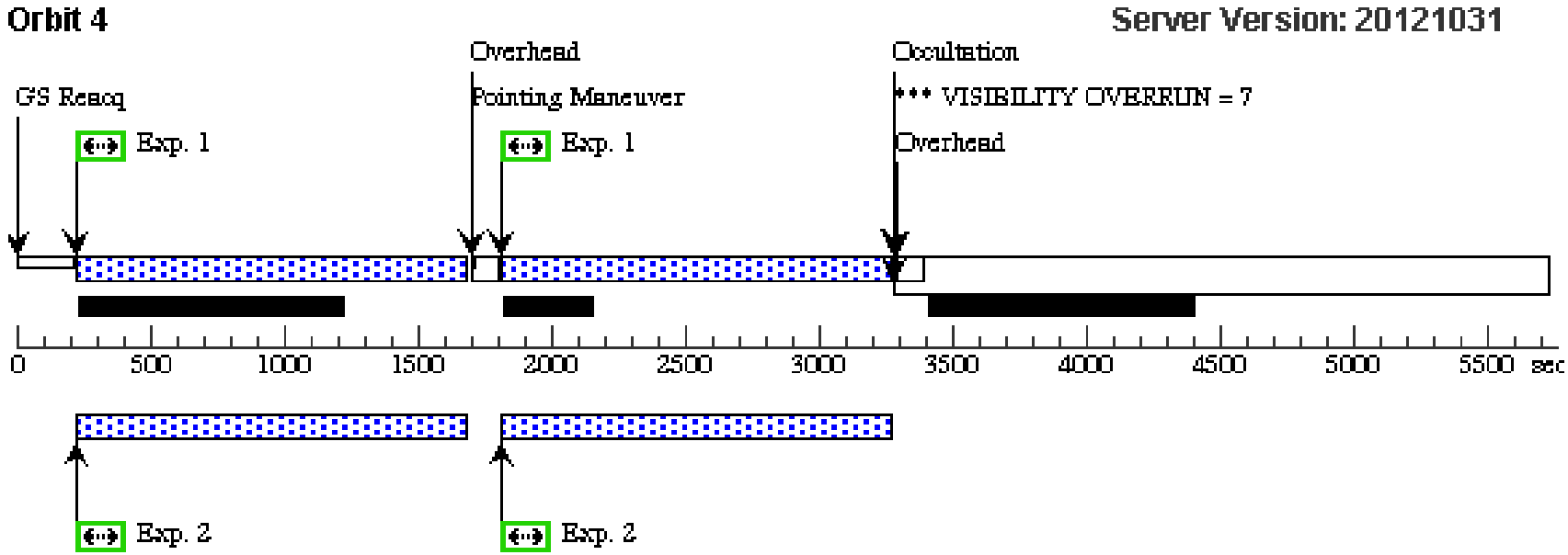
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG2 F814W	(2) PRG2	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -3,null	Pattern 8, Exps 1-2 in Visit 06 (8) Prime + Parallel Group 1-2 in Pattern 8, Exps 1-2 in Visit 06	1200 Secs	
								[==>1395.0 Secs (Pattern 1,1)] *[==>1395.0 Secs (Pattern 1,2)]*	***[1]***
								[==>1466.0 Secs (Pattern 1,3)] *[==>1466.0 Secs (Pattern 1,4)]*	***[2]***
								[==>1466.0 Secs (Pattern 2,1)] *[==>1466.0 Secs (Pattern 2,2)]*	***[3]***
								[==>1466.0 Secs (Pattern 2,3)] *[==>1466.0 Secs (Pattern 2,4)]*	***[4]***
2	PRG2 acs f814w parallel	ANY	ACS/WFC, ACCUM, WFC	F814W			Pattern 8, Exps 1-2 in Visit 06 (8) Prime + Parallel Group 1-2 in Pattern 8, Exps 1-2 in Visit 06	1200 Secs	
								[==>1320.0 Secs (Pattern 1,1)] *[==>1250.0 Secs (Pattern 1,2)]*	***[1]***
								[==>1340.0 Secs (Pattern 1,3)] *[==>1340.0 Secs (Pattern 1,4)]*	***[2]***
								[==>1340.0 Secs (Pattern 2,1)] *[==>1340.0 Secs (Pattern 2,2)]*	***[3]***
								[==>1340.0 Secs (Pattern 2,3)] *[==>1340.0 Secs (Pattern 2,4)]*	***[4]***

Orbit Structure






Orbit 3
Server Version: 20121031
Occultation
*** VISIBILITY OVERRUN = 7
Overhead
Pointing Maneuver
GS Reacq
Exp. 1
Exp. 1
Pointing Maneuver
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Exp. 2
Exp. 2


Orbit 4
Server Version: 20121031
Overhead
Occultation
Pointing Maneuver
*** VISIBILITY OVERRUN = 7
GS Reacq
Exp. 1
Exp. 1
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 2
Exp. 2

Visit

Proposal 12608, Visit 07, completed Thu Feb 28 02:49:41 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 05

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	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	(3)
(3)	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)
(4)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

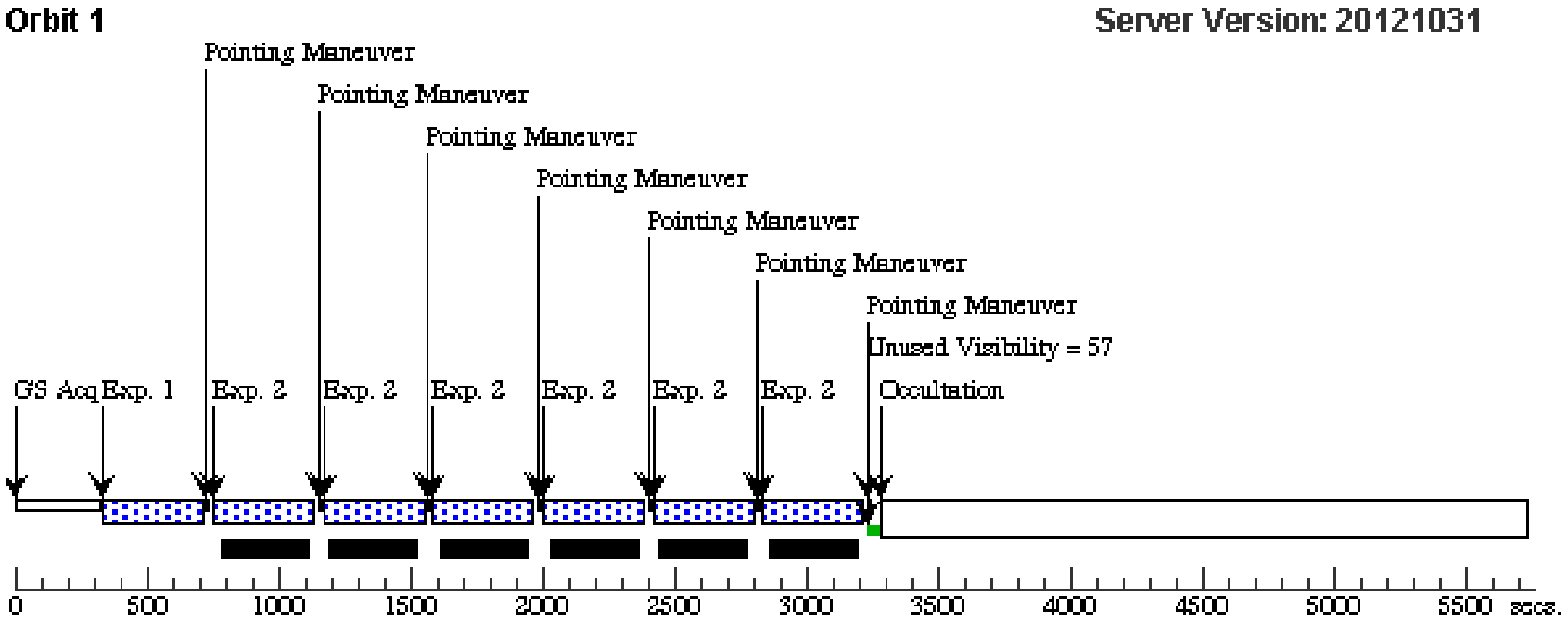
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	PRG2	RA: 14 26 22.8480 (216.5952000d) Dec: +35 14 21.41 (35.23928d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

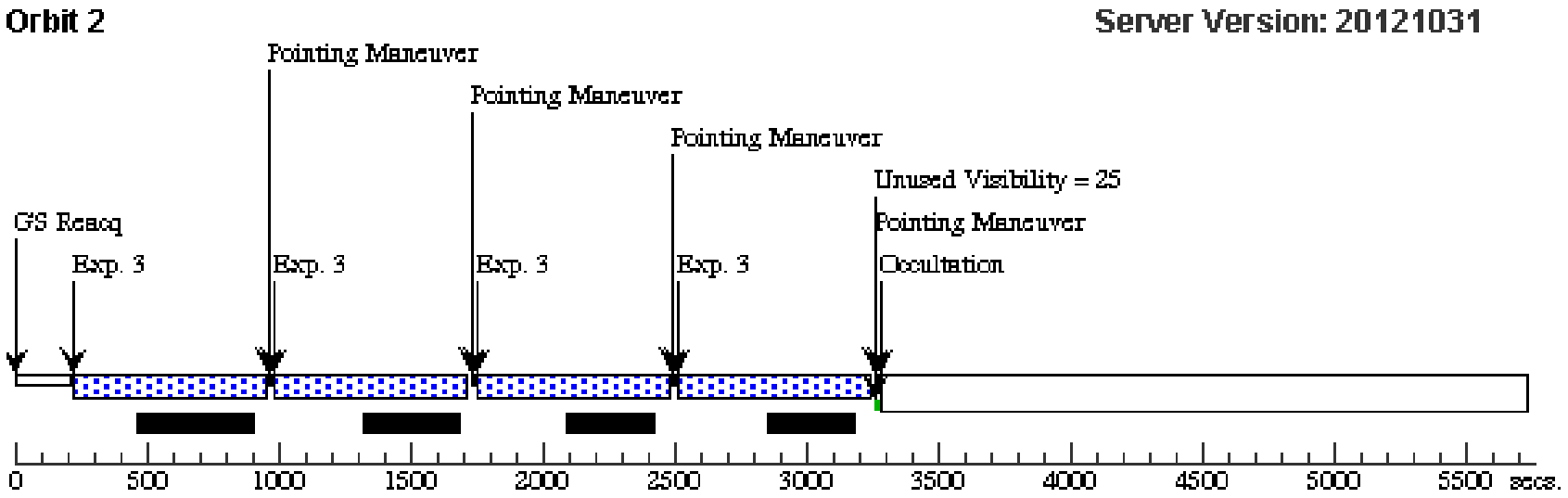
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 65 stars in the field of PRG2. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (-0.15, 0.11) arcsec in the sense that the NDWFS astrometric system is west and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

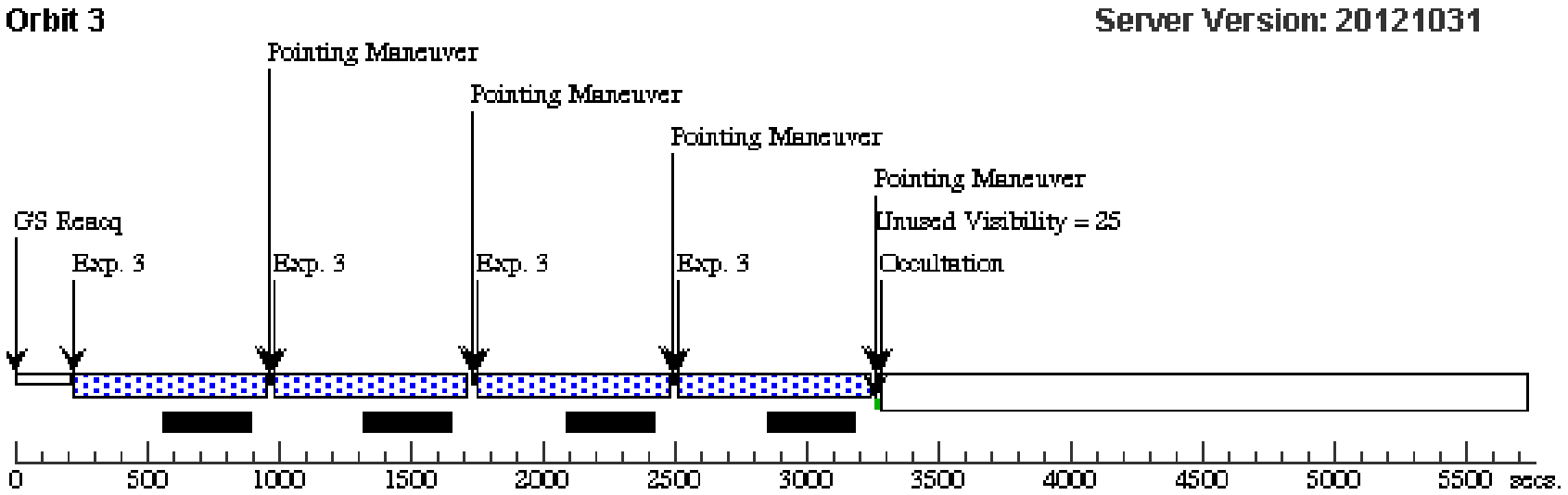
Exposures

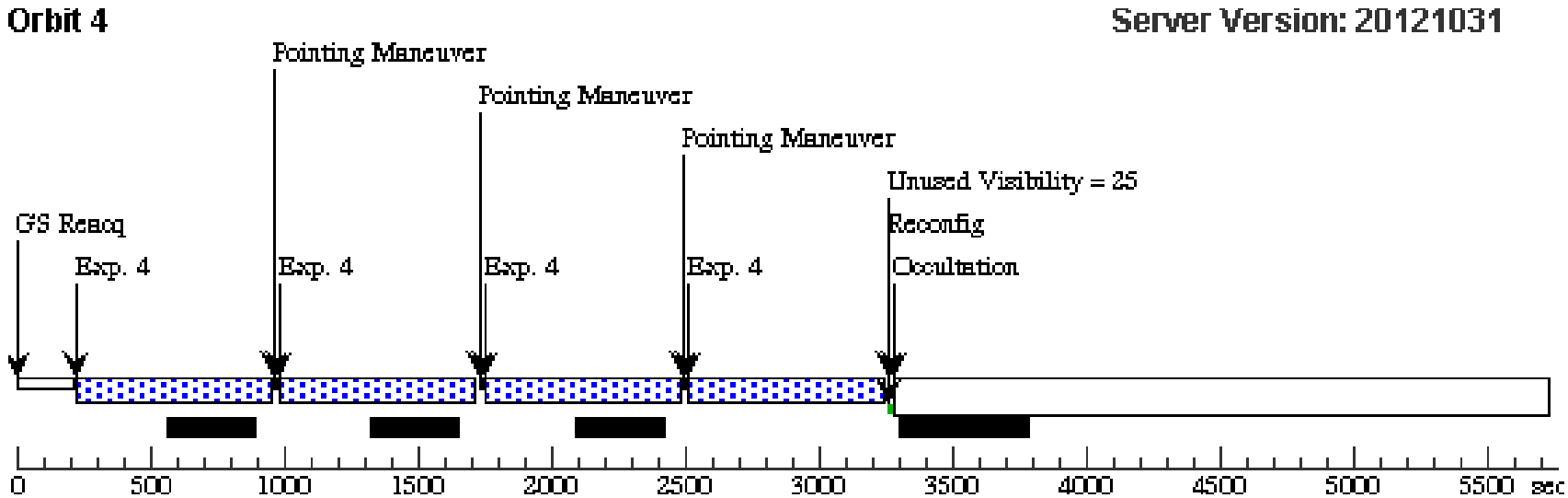
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG2 grism image	(2) PRG2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 1.931,1.726		*[==>]*	***[1]***
2	PRG2 grism	(2) PRG2	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=SPARS25		Pattern 4, Exps 2-2 in Visit 07 (4)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]*	***[1]***
3	PRG2 F140W	(2) PRG2	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=15; SAMP-SEQ=SPARS50		Pattern 2, Exps 3-3 in Visit 07 (2)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 1,4)]*	***[2]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]* *[==>(Pattern 2,4)]*	***[3]***
4	PRG2 F140W	(2) PRG2	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=15; SAMP-SEQ=SPARS50	POS TARG -1.931,1.726	Pattern 3, Exps 4-4 in Visit 07 (3)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***

Orbit Structure






Orbit 3
Server Version: 20121031
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
GS Reacq
Exp. 3
Exp. 3
Exp. 3
Exp. 3
Unused Visibility = 25
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.


Orbit 4
Server Version: 20121031
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 25
GS Reacq
Exp. 4
Exp. 4
Exp. 4
Exp. 4
Reconfig
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12608, Visit 09, completed Thu Feb 28 02:49:45 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS, ACS/WFC

Special Requirements: (none)

Diagnostics

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Primary PRG3 F475W (09.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

(Primary PRG3 F814W (09.003) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(6)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=MOSAIC Number Of Points=2 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false	(1-2)
(7)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=MOSAIC Number Of Points=2 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false	(3-4)

Fixed Targets

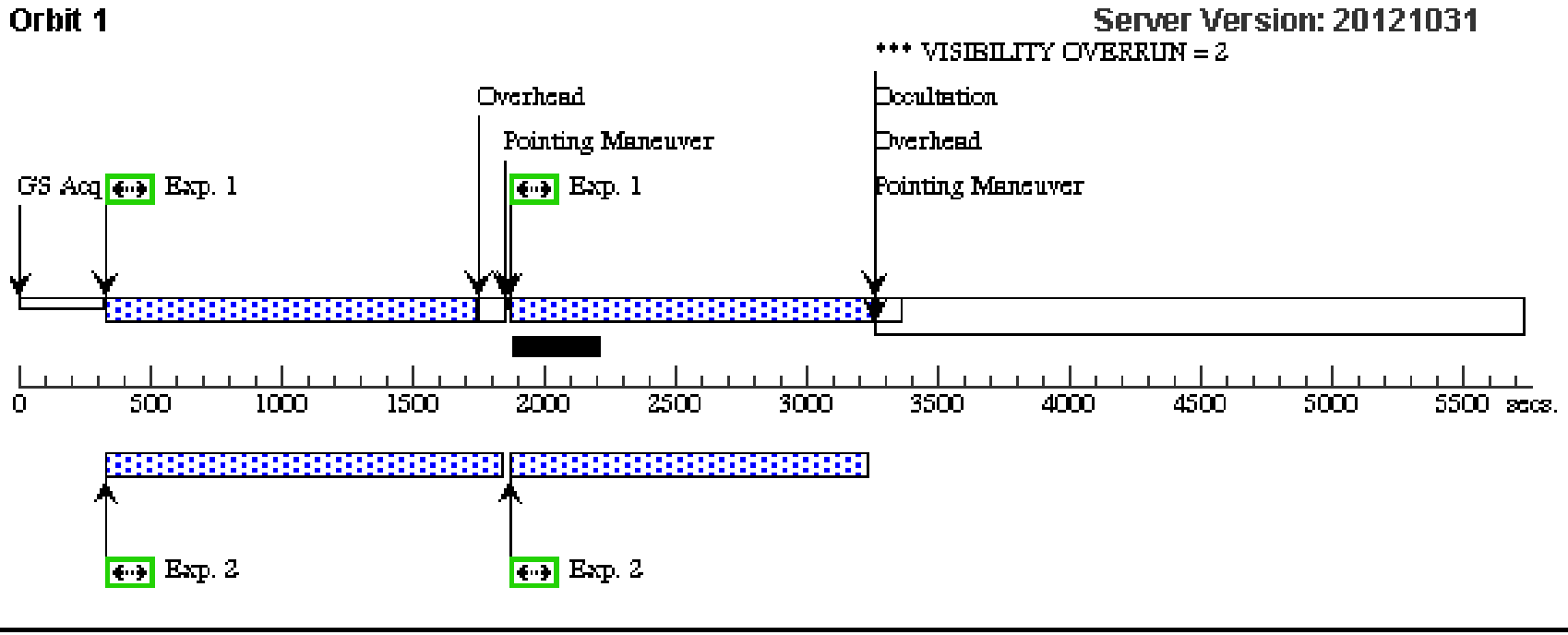
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	PRG3	RA: 14 34 12.7200 (218.5530000d) Dec: +33 29 39.88 (33.49441d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

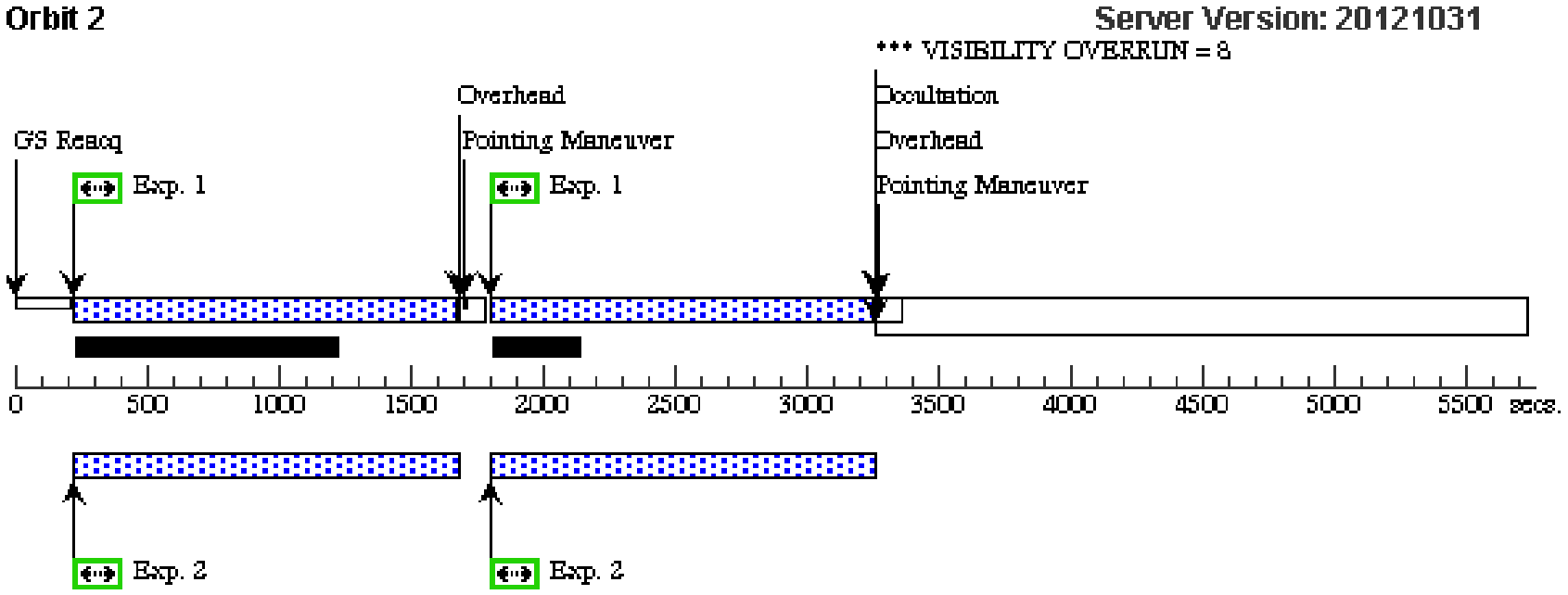
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 55 stars in the field of PRG3. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (-0.10, 0.14) arcsec in the sense that the NDWFS astrometric system is west and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

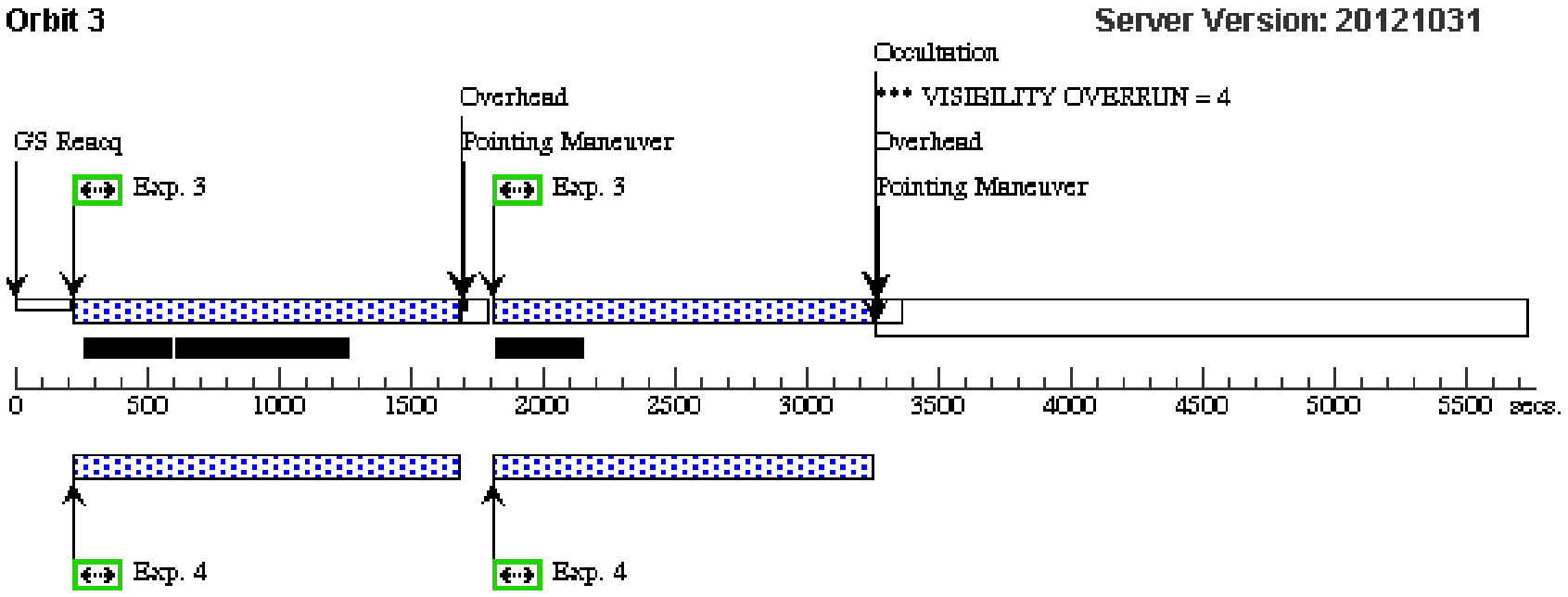
Exposures

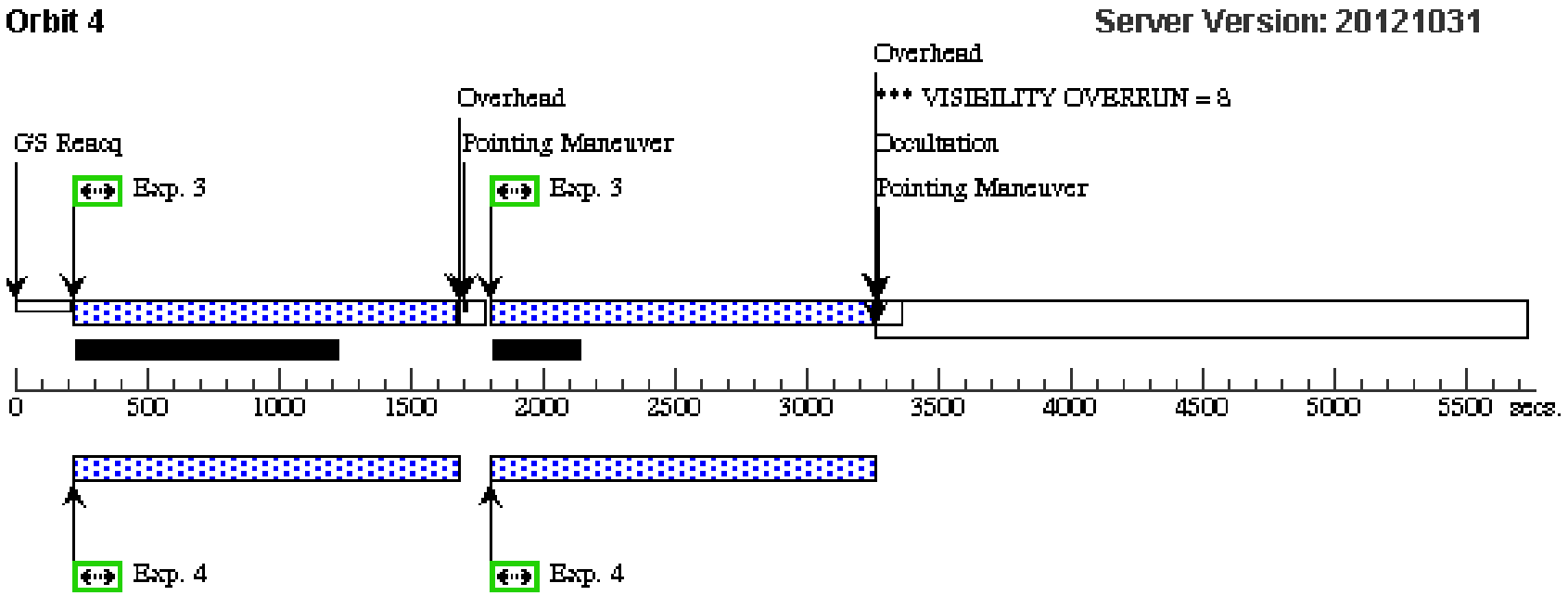
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG3 F475W	(3) PRG3	WFC3/UVIS, ACCUM, UVIS	F475W		POS TARG -3,null	Pattern 6, Exps 1-2 in Visit 09 (6) Prime + Parallel Group 1-2 in Pattern 6, Exps 1-2 in Visit 09	1200 Secs	
								[==>1382.0 Secs (Pattern 1,1)] *[==>1382.0 Secs (Pattern 1,2)]*	***[1]***
								[==>1453.0 Secs (Pattern 2,1)] *[==>1453.0 Secs (Pattern 2,2)]*	***[2]***
2	PRG3 acs f475w parallel	ANY	ACS/WFC, ACCUM, WFC	F475W			Pattern 6, Exps 1-2 in Visit 09 (6) Prime + Parallel Group 1-2 in Pattern 6, Exps 1-2 in Visit 09	1200 Secs	
								[==>1300.0 Secs (Pattern 1,1)] *[==>1240.0 Secs (Pattern 1,2)]*	***[1]***
								[==>1340.0 Secs (Pattern 2,1)] *[==>1334.0 Secs (Pattern 2,2)]*	***[2]***
3	PRG3 F814W	(3) PRG3	WFC3/UVIS, ACCUM, UVIS	F814W		POS TARG -3,null	Pattern 7, Exps 3-4 in Visit 09 (7) Prime + Parallel Group 3-4 in Pattern 7, Exps 3-4 in Visit 09	1200 Secs	
								[==>1443.0 Secs (Pattern 1,1)] *[==>1443.0 Secs (Pattern 1,2)]*	***[3]***
								[==>1452.0 Secs (Pattern 1,3)] *[==>1452.0 Secs (Pattern 2,1)]*	***[4]***
								[==>1453.0 Secs (Pattern 2,2)] *[==>1453.0 Secs (Pattern 2,3)]*	***[5]***
4	PRG3 acs f814w parallel	ANY	ACS/WFC, ACCUM, WFC	F814W			Pattern 7, Exps 3-4 in Visit 09 (7) Prime + Parallel Group 3-4 in Pattern 7, Exps 3-4 in Visit 09	1200 Secs	
								[==>1301.0 Secs (Pattern 1,1)] *[==>1320.0 Secs (Pattern 1,2)]*	***[3]***
								[==>1340.0 Secs (Pattern 1,3)] *[==>1335.0 Secs (Pattern 2,1)]*	***[4]***
								[==>1340.0 Secs (Pattern 2,2)] *[==>1334.0 Secs (Pattern 2,3)]*	***[5]***

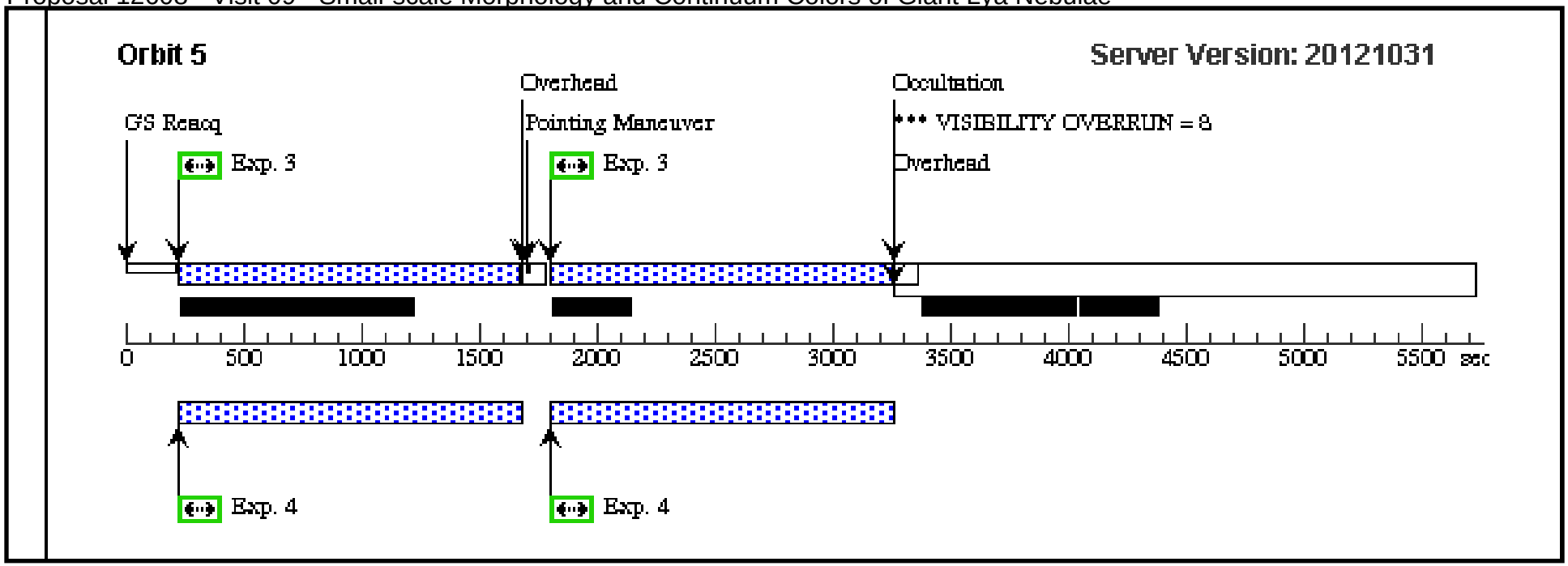
Orbit Structure






Orbit 3
Server Version: 20121031
Occultation
*** VISIBILITY OVERRUN = 4
Overhead
Pointing Maneuver
GS Reacq
Exp. 3
Exp. 3
Overhead
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Exp. 4
Exp. 4


Orbit 4
Server Version: 20121031
Overhead
*** VISIBILITY OVERRUN = 8
Occultation
Pointing Maneuver
GS Reacq
Exp. 3
Exp. 3
Overhead
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Exp. 4
Exp. 4


Orbit 5
Server Version: 20121031
GS Reacq
Exp. 3
Overhead
Pointing Maneuver
Exp. 3
Occultation
*** VISIBILITY OVERRUN = 8
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 4
Exp. 4

Visit

Proposal 12608, Visit 10, completed Thu Feb 28 02:49:49 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 09

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	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	(3)
(4)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

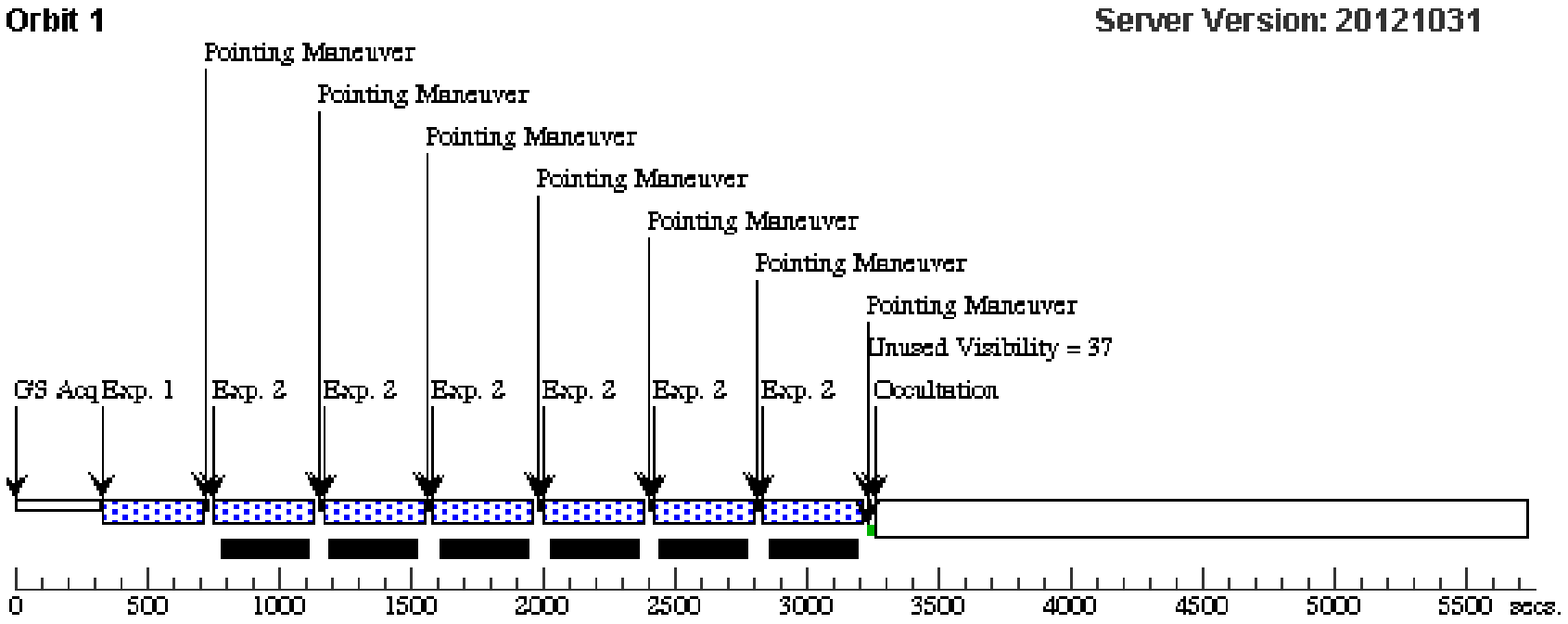
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	PRG3	RA: 14 34 12.7200 (218.5530000d) Dec: +33 29 39.88 (33.49441d) Equinox: J2000		V=(?) Bw=23	Reference Frame: NOAO Deep Wide-Field Survey

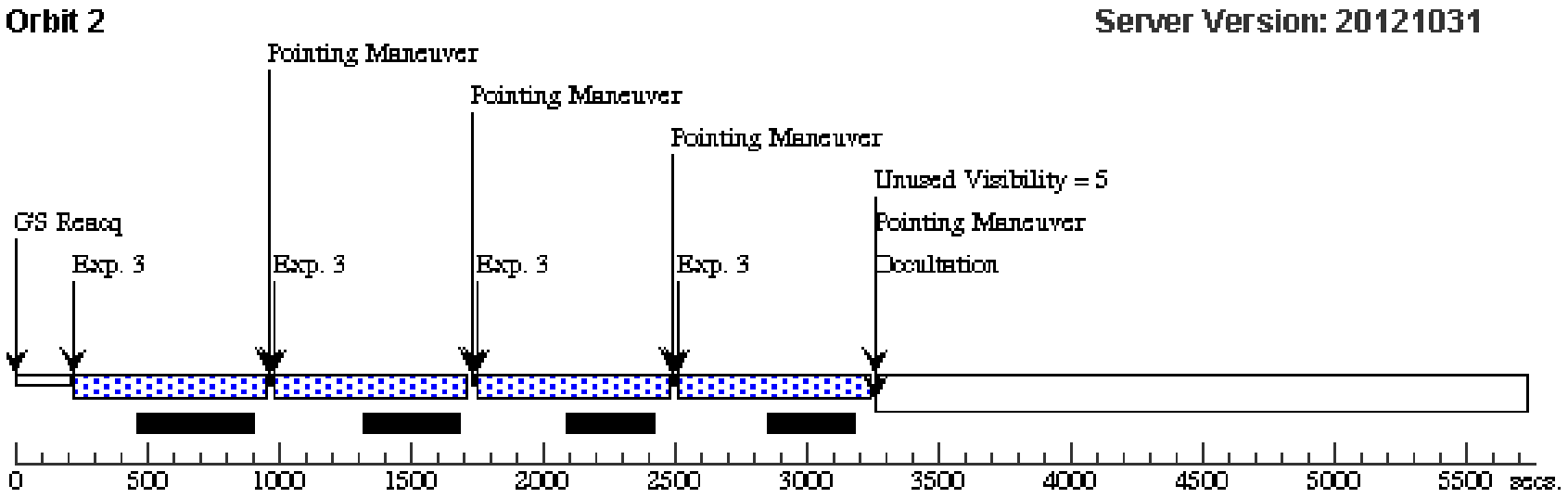
Comments: We have carried out a comparison between the NDWFS coordinates and GSC2.3.3 coordinates for 55 stars in the field of PRG3. We found the median offsets between the two frames to be (deltaRA, deltaDEC) = (-0.10, 0.14) arcsec in the sense that the NDWFS astrometric system is west and north of the GSC2.3.3 astrometric system. This difference is so small that we chose not to apply any correction to the NDWFS astrometry.

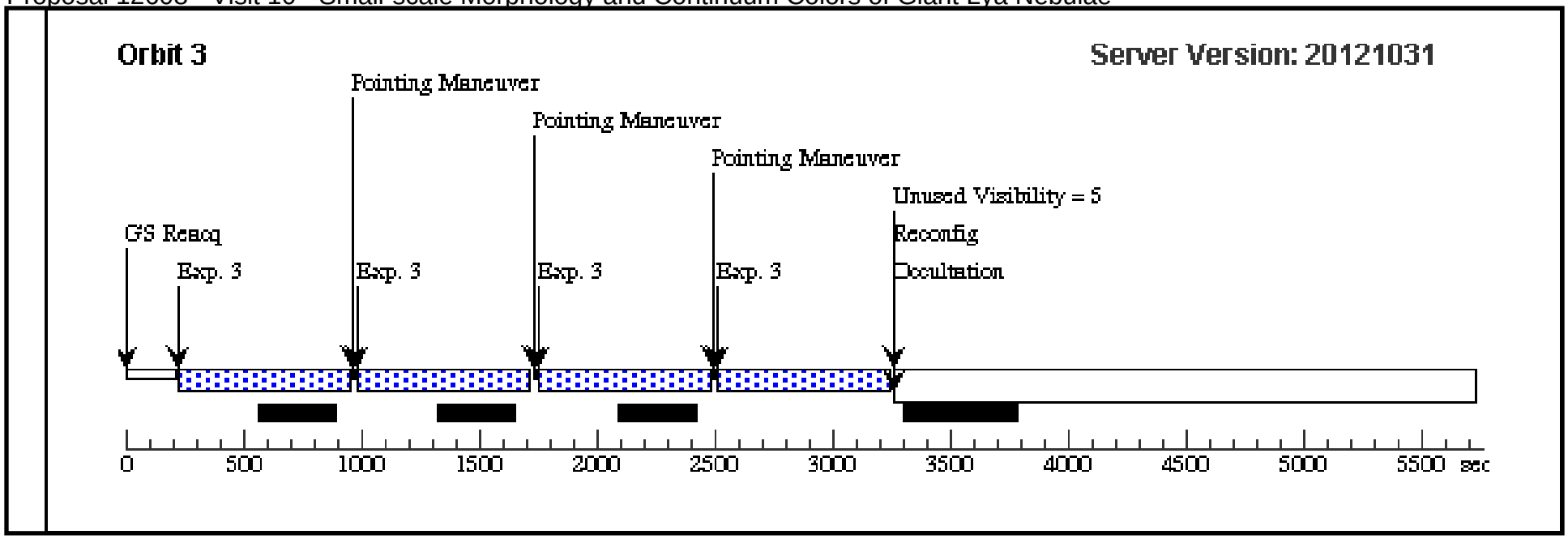
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PRG3 grism image	(3) PRG3	WFC3/IR, MULTIACCUM, GRISM1024	F140W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 1.931,1.726		*[==>]*	***[1]***
2	PRG3 grism	(3) PRG3	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=SPARS25		Pattern 4, Exps 2-2 in Visit 10 (4)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]*	***[1]***
3	PRG3 F140W	(3) PRG3	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=15; SAMP-SEQ=SPARS50		Pattern 2, Exps 3-3 in Visit 10 (2)	*[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 1,4)]*	***[2]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]* *[==>(Pattern 2,4)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20121031
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 5
GS Reacq
Reconfig
Occultation
Exp. 3
Exp. 3
Exp. 3
Exp. 3
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec