



11595 - Turning out the Light: A WFC3 Program to Image $z > 2$ Damped Lyman

Alpha Systems

Cycle: 17, Proposal Category: GO
(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. John M. O'Meara (PI)	Saint Michaels College	jmo14@psu.edu
Dr. Jason X. Prochaska (CoI)	University of California - Santa Cruz	xavier@ucolick.org
Dr. Nissim Kanekar (CoI)	Associated Universities, Inc.	nkanekar@aoc.nrao.edu
Prof. J. Christopher Howk (CoI)	University of Notre Dame	jhowk@nd.edu

VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
02	(2) J152413+430537	WFC3/UVIS	2	22-Feb-2010 21:04:08.0	yes
03	(3) J122021+092135	WFC3/UVIS	2	22-Feb-2010 21:04:12.0	yes
04	(5) Q0841+12	WFC3/UVIS	2	22-Feb-2010 21:04:15.0	yes
05	(6) J081618+4823	WFC3/UVIS	2	22-Feb-2010 21:04:19.0	yes
06	(7) J150851.94+515627	WFC3/UVIS	2	22-Feb-2010 21:04:22.0	yes
07	(8) J115538.60+053050	WFC3/UVIS	2	22-Feb-2010 21:04:24.0	yes
08	(9) J081813.14+072054	WFC3/UVIS	2	22-Feb-2010 21:04:27.0	yes
09	(10) CTQ247	WFC3/UVIS	2	22-Feb-2010 21:04:30.0	yes
10	(11) J144233.01+495242	WFC3/UVIS	2	22-Feb-2010 21:04:33.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
11	(13) J105430.07+491947	WFC3/UVIS	2	22-Feb-2010 21:04:36.0	yes
12	(14) J025518.58+0048	WFC3/UVIS	2	22-Feb-2010 21:04:39.0	yes
13	(15) J090810.35+023818	WFC3/UVIS	2	22-Feb-2010 21:04:42.0	yes
14	(16) J081813.05+263136	WFC3/UVIS	2	22-Feb-2010 21:04:44.0	yes
15	(17) J093051.93+602301	WFC3/UVIS	2	22-Feb-2010 21:04:47.0	yes
16	(18) J081114.33+393633	WFC3/UVIS	2	22-Feb-2010 21:04:50.0	yes
17	(19) J132006.64+131015	WFC3/UVIS	2	22-Feb-2010 21:04:52.0	yes
18	(24) PC0953+47	WFC3/UVIS	2	22-Feb-2010 21:04:54.0	yes
19	(25) J144147.52+541538	WFC3/UVIS	2	22-Feb-2010 21:04:56.0	yes
20	(26) J075155.10+451619	WFC3/UVIS	2	22-Feb-2010 21:04:59.0	yes
21	(27) J212357.56-005350	WFC3/UVIS	2	22-Feb-2010 21:05:02.0	yes

40 Total Orbits Used

ABSTRACT

We propose to directly image the star-forming regions of $z > 2$ damped Ly α systems (DLAs) using the WFC3/UVIS camera on the Hubble Space Telescope. In contrast to all previous attempts to detect the galaxies giving rise to high redshift DLAs, we will use a novel technique that completely removes the glare of the background quasar. Specifically, we will target quasar sightlines with multiple DLAs and use the higher redshift DLA as a "blocking filter" (via Lyman limit absorption) to eliminate all FUV emission from the quasar. This will allow us to carry out a deep search for FUV emission from the lower redshift DLA, shortward of the Lyman limit of the higher redshift absorber. The unique filter set and high spatial resolution afforded by WFC3/UVIS will then enable us to directly image the lower redshift DLA and thus estimate its size, star-formation rate and impact parameter from the QSO sightline. We propose to observe a sample of 20 sightlines, selected primarily from the SDSS database, requiring a total of 40 HST orbits. The observations will allow us to determine the first FUV luminosity function of high redshift DLA galaxies and to correlate the DLA galaxy properties with the ISM characteristics inferred from standard absorption-line analysis to significantly improve our understanding of the

general DLA population.

OBSERVING DESCRIPTION

We propose to obtain WFC3 images through various filters of galaxies responsible for damped Lyman alpha absorption observed in SDSS spectra of high redshift quasars. We have a total of 20 candidate galaxy sightlines, each allocated 2 orbits, for a total of 40 orbits in the program.

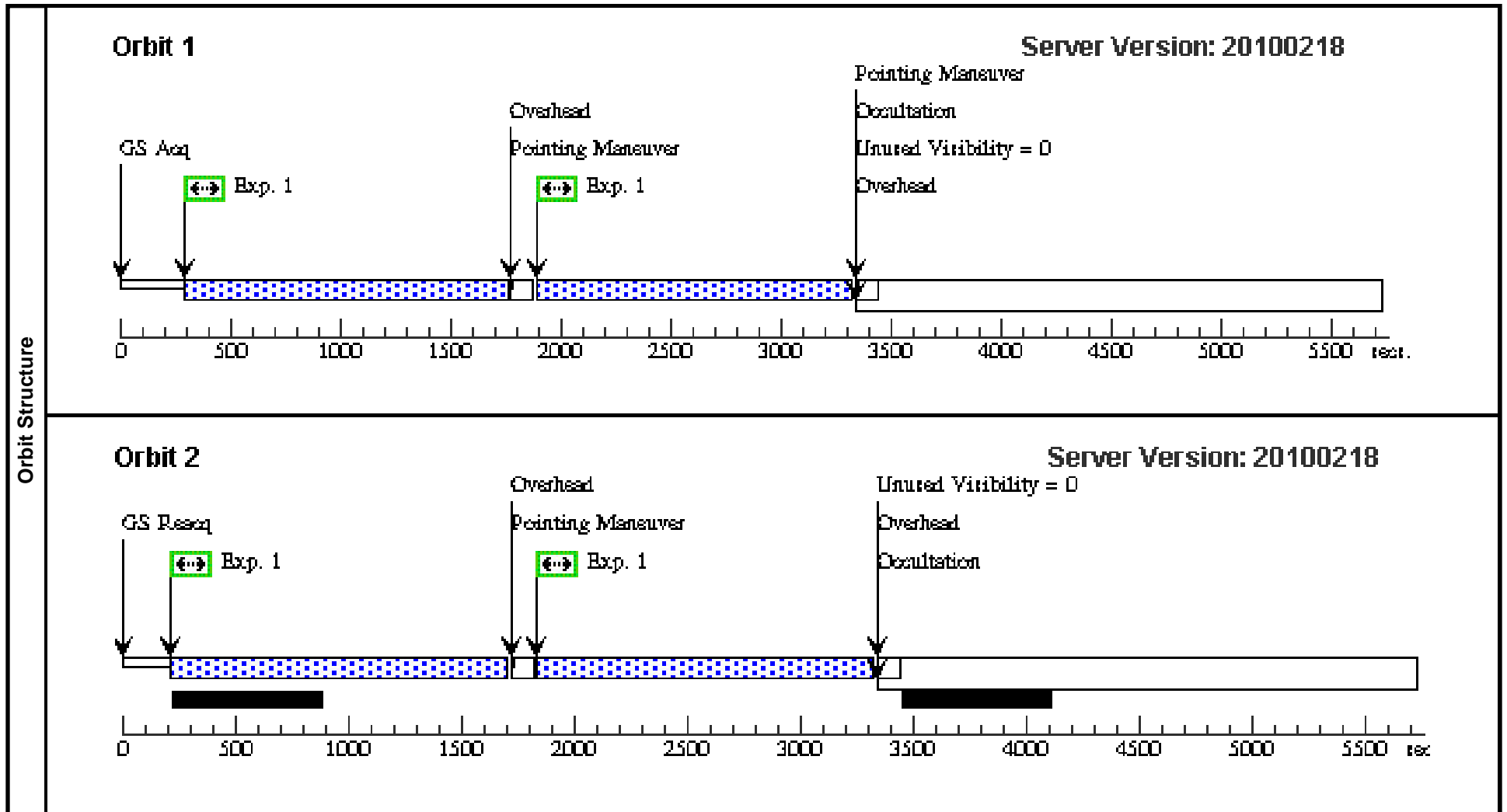
Each galaxy is assigned its own visit spanning 2 orbits. All exposures within a particular visit are taken with the same WFC3 filter. Each visit is dithered using the WFC-UVIS-DITHER-BOX pattern, with a CRSPLIT at each pointing, giving a total of 8 exposures per visit, with each exposure lasting between 600 and 800 seconds.

The exposures all use the UVIS1 aperture, so as to remove any possibility that the candidate galaxy lies on the inter-chip gap. The exact position of the galaxy is not known, but will lie within a few arcseconds of the coordinates given, which are the SDSS coordinates of the background QSO. It should be noted that due to high redshift absorption, the QSO flux will be zero in the bandpass of the filter chosen in the observation, so any bright object concerns from the QSO itself are negated.

Proposal 11595 - Visit 02 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:09 GMT 2010

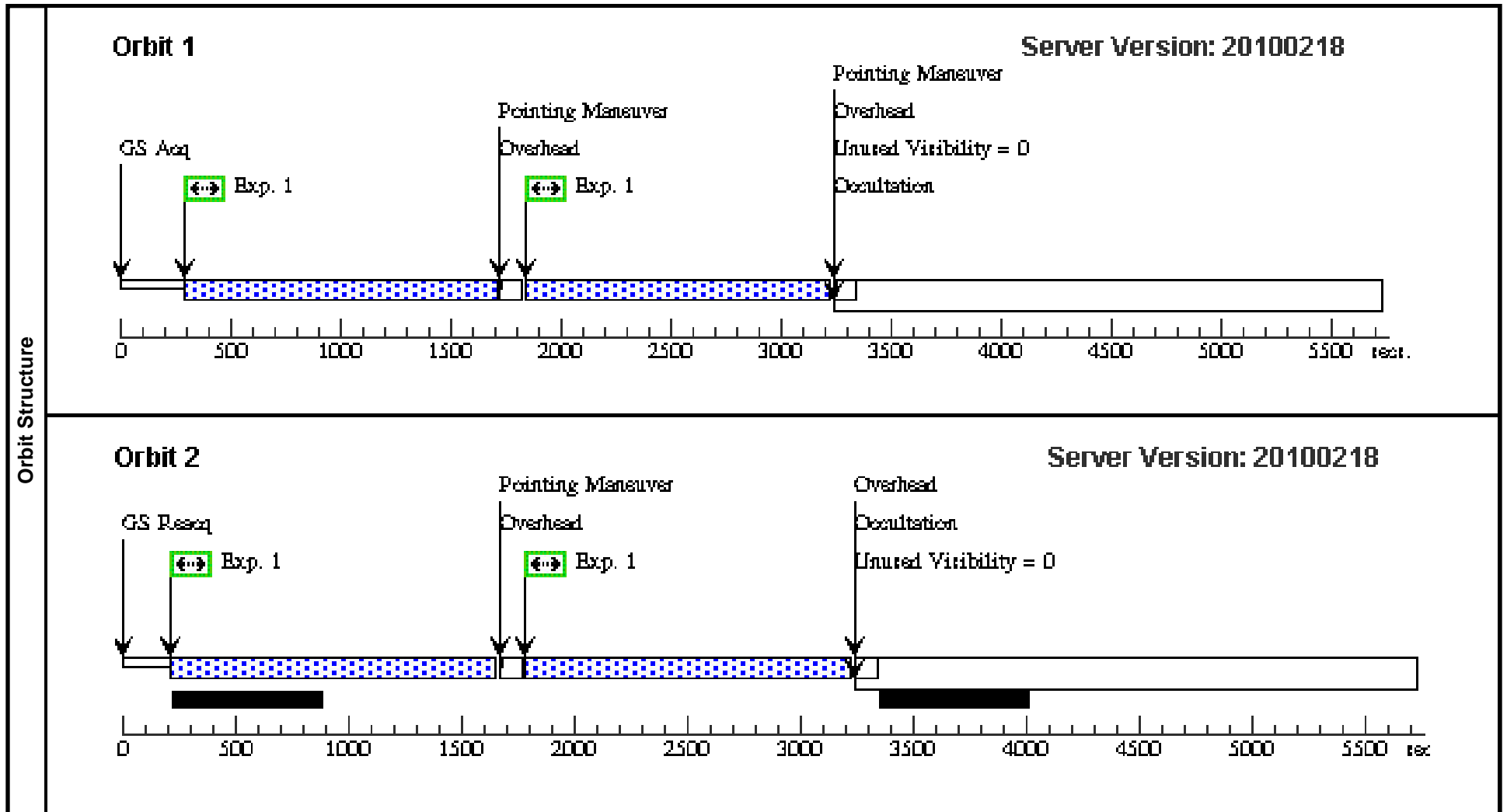
Visit	Proposal 11595, Visit 02, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	J152413+430537	RA: 15 24 13.3500 (231.0556250d) Dec: +43 05 37.40 (43.09372d) Equinox: J2000	Redshift: 2.870	V=27.0	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) J152413+430537	WFC3/UVIS, ACCUM, UVIS1	F390W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1436.0 Secs (Pattern 1)]	[1]
									[==>1436.0 Secs (Pattern 2)]	
								[==>1491.0 Secs (Pattern 3)]		
								[==>1492.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 03 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:09 GMT 2010

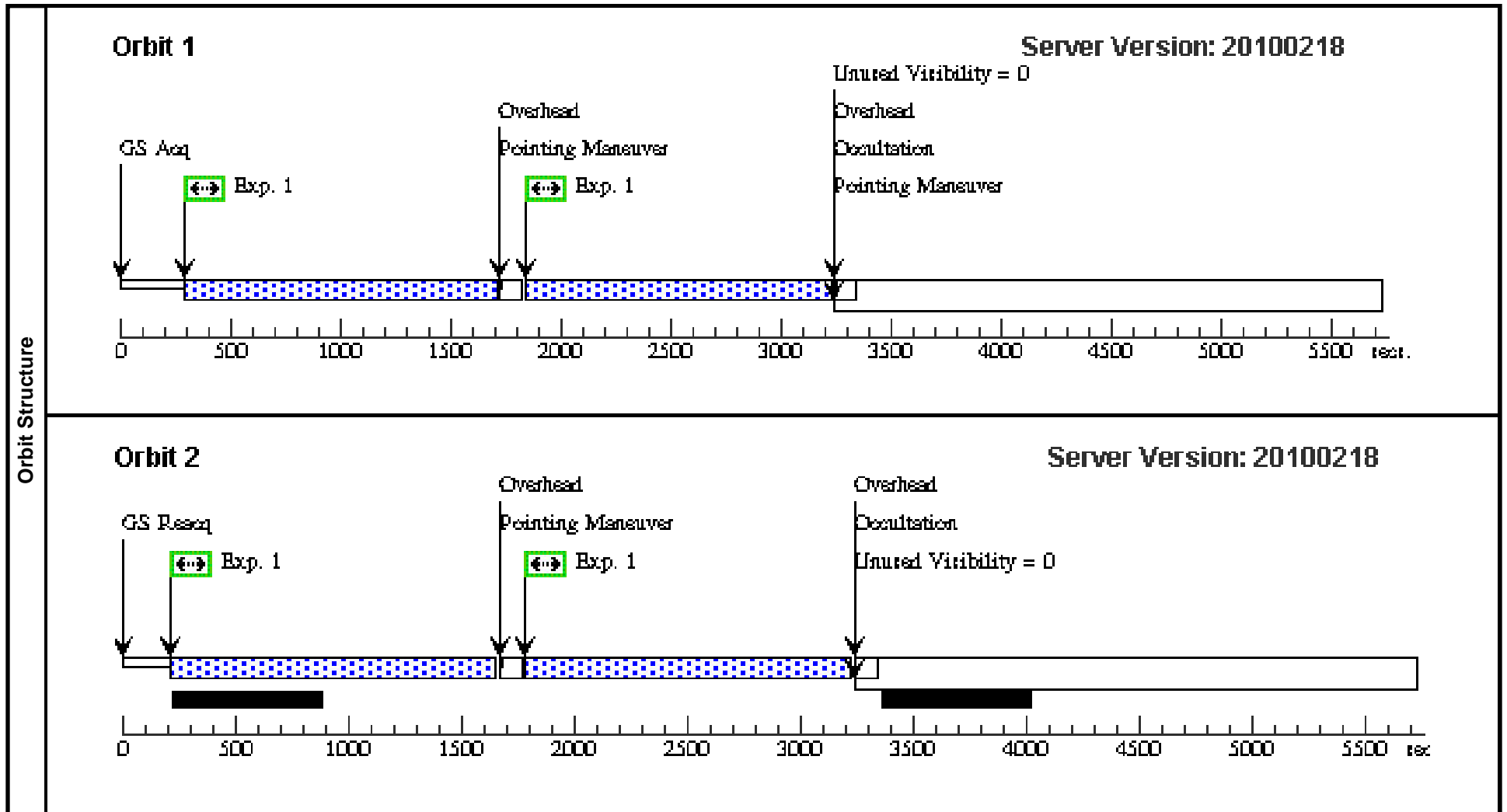
Visit	Proposal 11595, Visit 03, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)			
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	J122021+092135	RA: 12 20 21.3900 (185.0891250d) Dec: +09 21 35.00 (9.35972d) Equinox: J2000					V=27.0	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(3) J122021+092135	WFC3/UVIS, ACCUM, UVIS1	F438W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1386.0 Secs (Pattern 1)]		[1]
									[==>1387.0 Secs (Pattern 2)]		
								[==>1442.0 Secs (Pattern 3)]			
								[==>1442.0 Secs (Pattern 4)]		[2]	



Proposal 11595 - Visit 04 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:10 GMT 2010

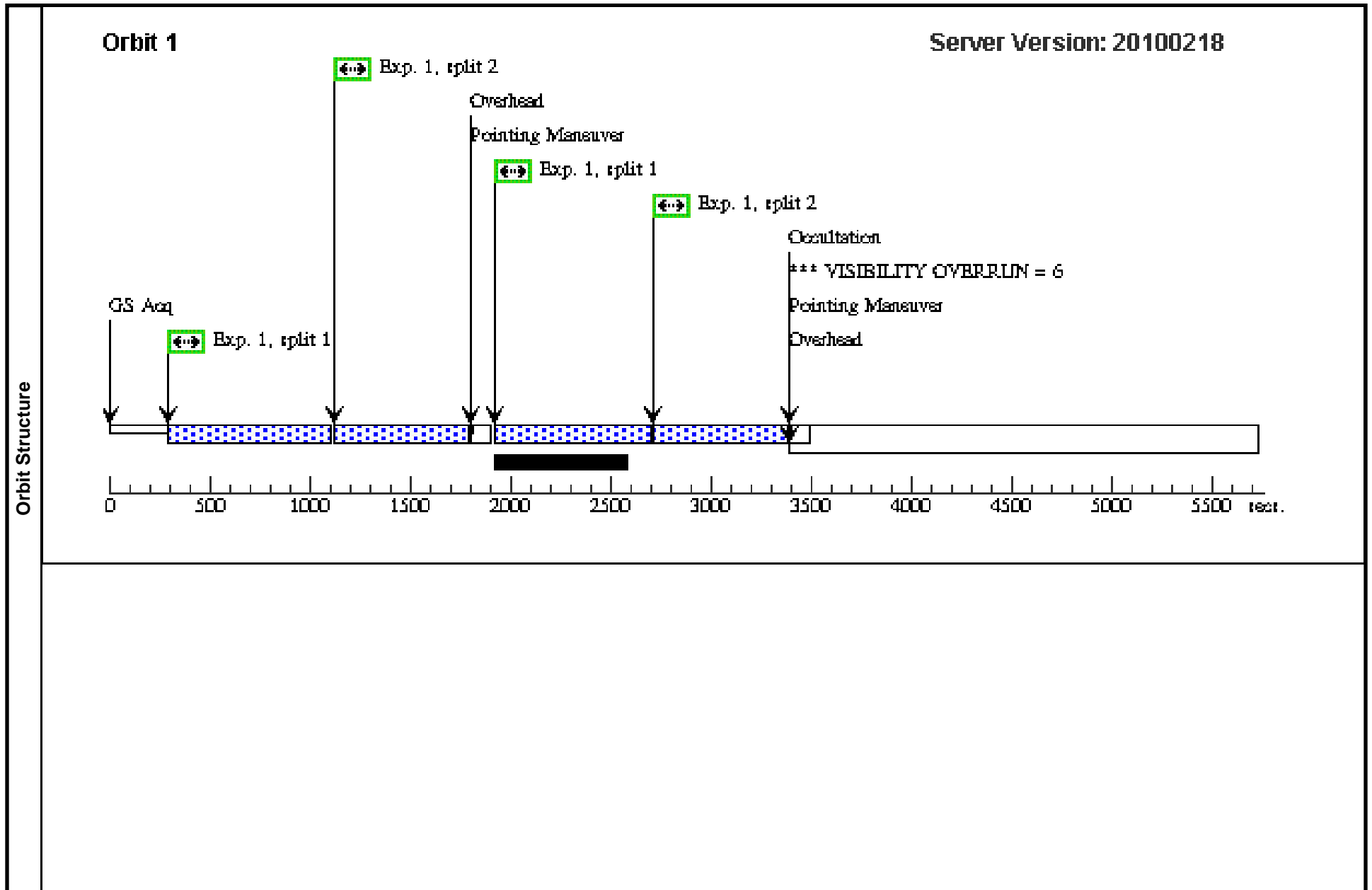
Visit	Proposal 11595, Visit 04, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)			
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	Q0841+12	RA: 08 44 24.2800 (131.1011667d) Dec: +12 45 48.70 (12.76353d) Equinox: J2000					V=27.0	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(5) Q0841+12	WFC3/UVIS, ACCUM, UVIS1	F275W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1388.0 Secs (Pattern 1)]		[1]
									[==>1388.0 Secs (Pattern 2)]		
									[==>1443.0 Secs (Pattern 3)]		[2]
									[==>1444.0 Secs (Pattern 4)]		

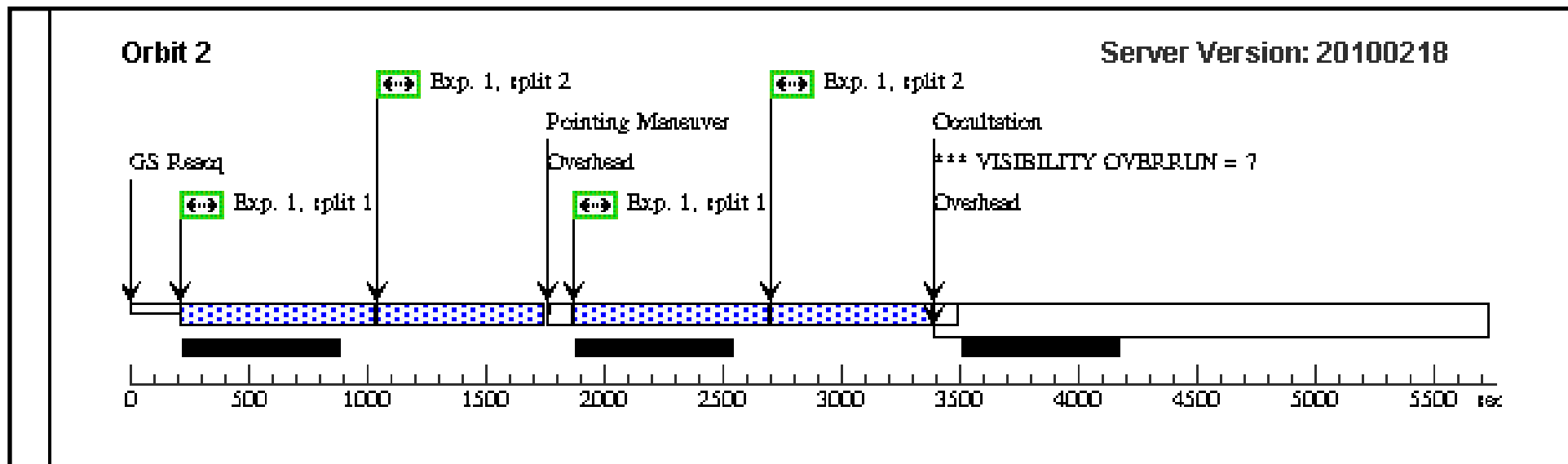


Proposal 11595 - Visit 05 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:10 GMT 2010

Visit	Proposal 11595, Visit 05, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN (Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern			Exposures		
	(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(6)	J081618+4823	RA: 08 16 18.9900 (124.0791250d) Dec: +48 23 28.00 (48.39111d) Equinox: J2000				V=27.0	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(6) J081618+4823	WFC3/UVIS, ACCUM, UVIS1	F390M	CR-SPLIT=2		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>668.0 Secs (Pattern 1, Split 1)]		[1]
									[==>668.0 Secs (Pattern 1, Split 2)]		
									[==>668.0 Secs (Pattern 2, Split 1)]		
									[==>668.0 Secs (Pattern 2, Split 2)]		
									[==>702.0 Secs (Pattern 3, Split 1)]		[2]
									[==>702.0 Secs (Pattern 3, Split 2)]		
									[==>702.0 Secs (Pattern 4, Split 1)]		
									[==>678.0 Secs (Pattern 4, Split 2)]		

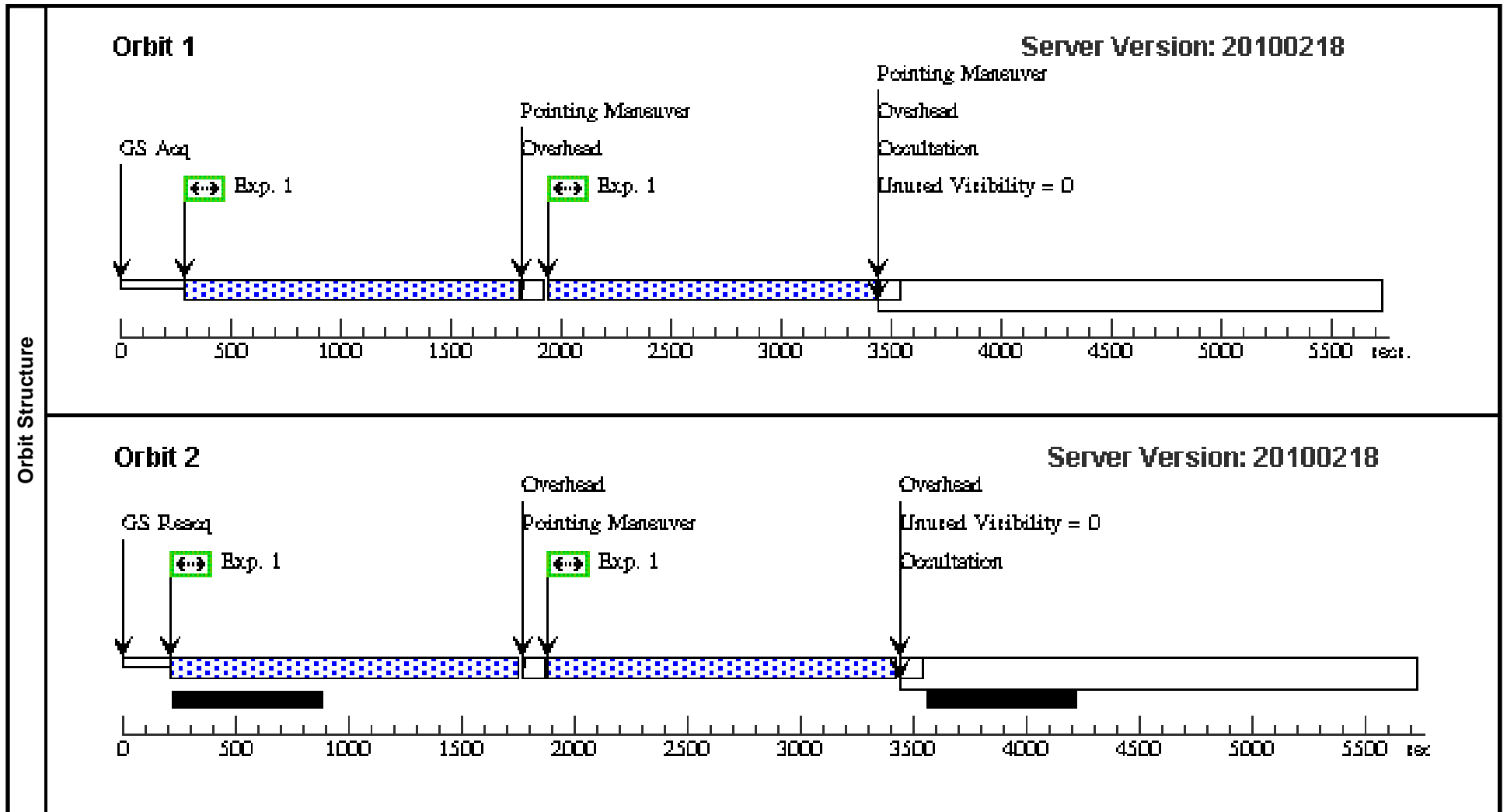




Proposal 11595 - Visit 06 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:11 GMT 2010

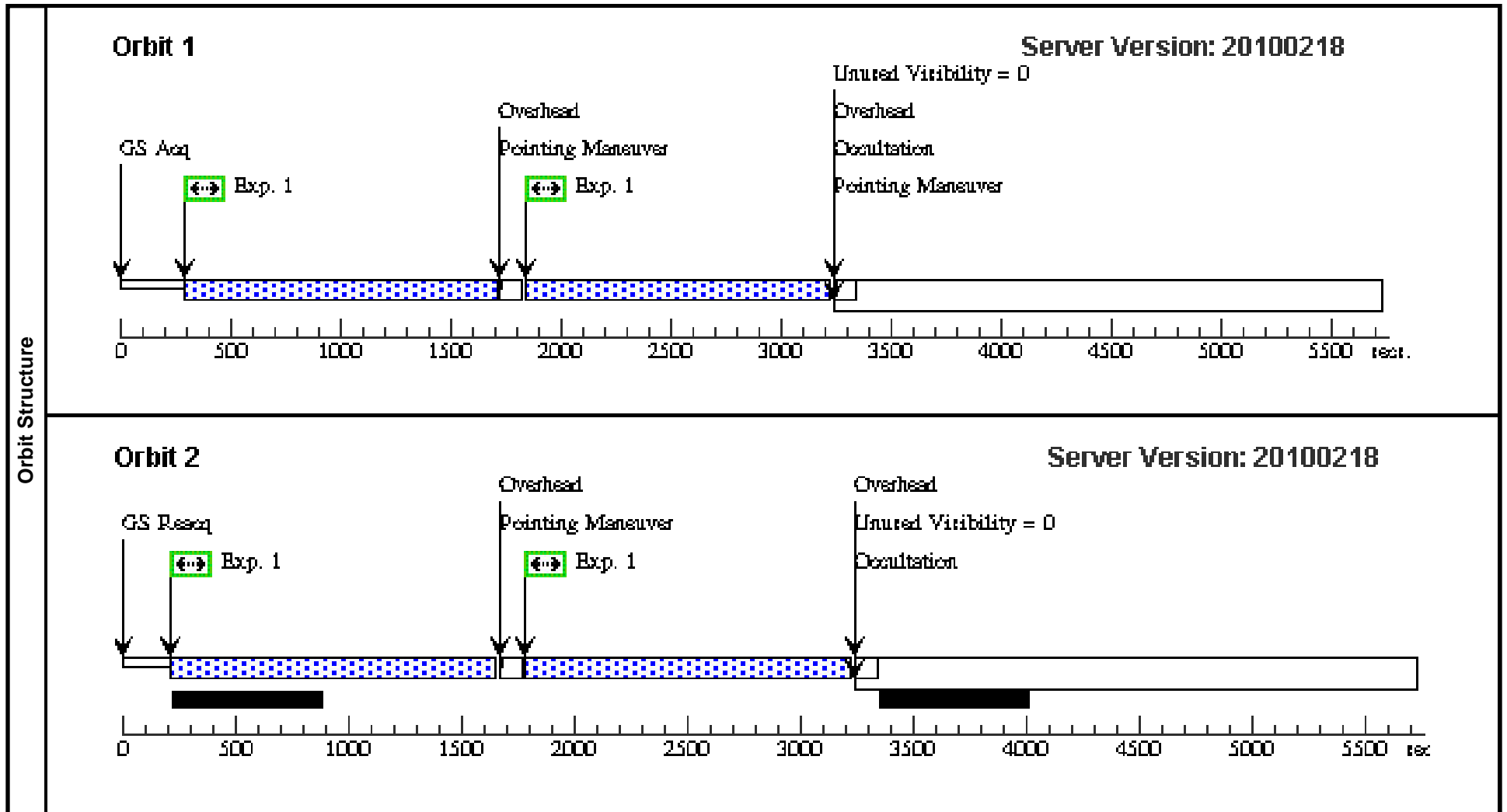
Visit	Proposal 11595, Visit 06, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
(2)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(7)	J150851.94+515627	RA: 15 08 51.9400 (227.2164167d) Dec: +51 56 27.00 (51.94083d) Equinox: J2000				V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(7) J150851.94+515627	WFC3/UVIS, ACCUM, UVIS1	F390M	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1488.0 Secs (Pattern 1)]		[1]
									[==>1488.0 Secs (Pattern 2)]		
									[==>1543.0 Secs (Pattern 3)]		
									[==>1544.0 Secs (Pattern 4)]		[2]



Proposal 11595 - Visit 07 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:11 GMT 2010

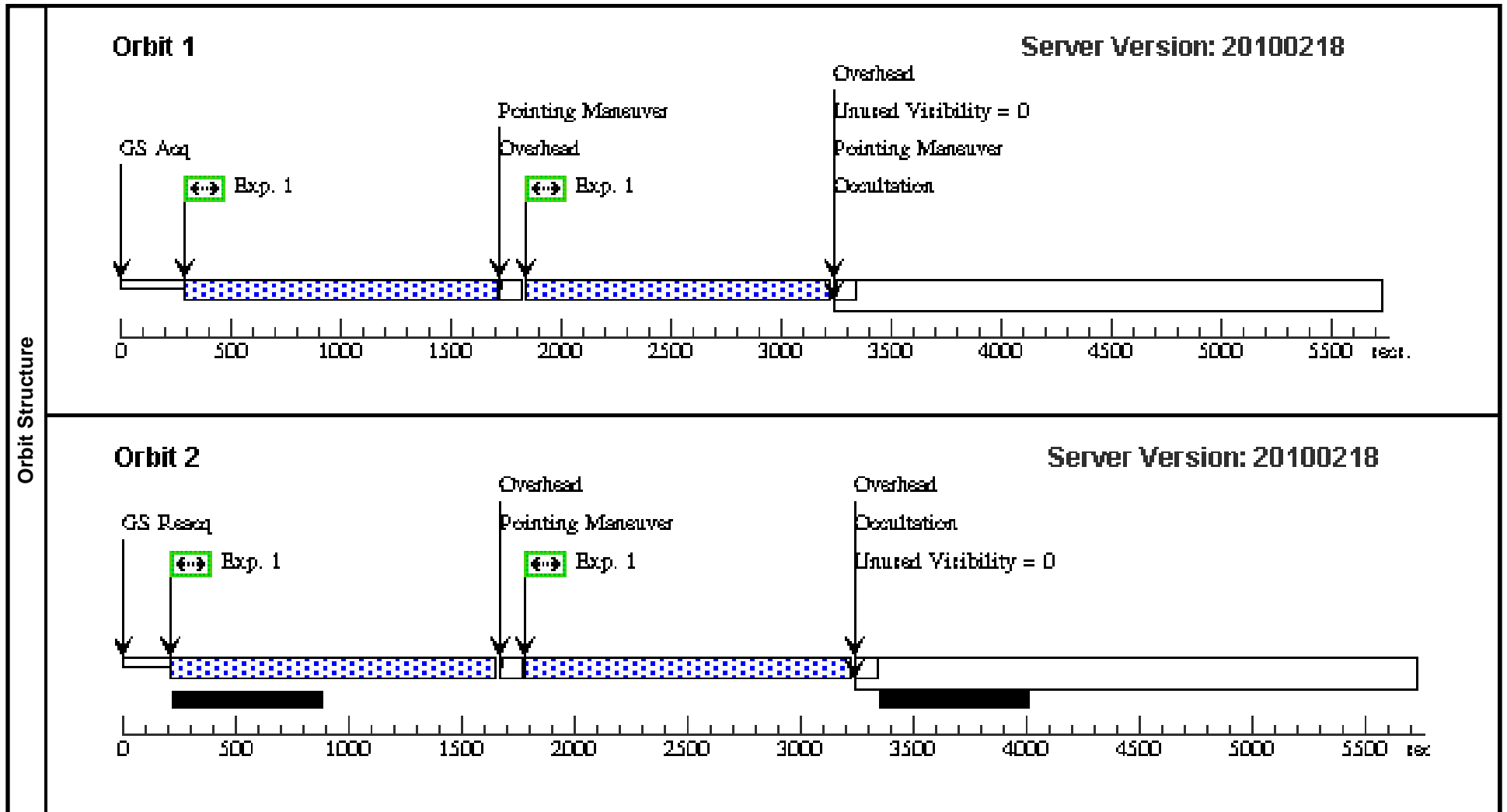
Visit	Proposal 11595, Visit 07, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	J115538.60+053050	RA: 11 55 38.6000 (178.9108333d) Dec: +05 30 50.00 (5.51389d) Equinox: J2000		V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(8) J115538.60+053050	WFC3/UVIS, ACCUM, UVIS1	F343N	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1386.0 Secs (Pattern 1)]	[1]
									[==>1387.0 Secs (Pattern 2)]	
								[==>1442.0 Secs (Pattern 3)]		
								[==>1442.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 08 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:12 GMT 2010

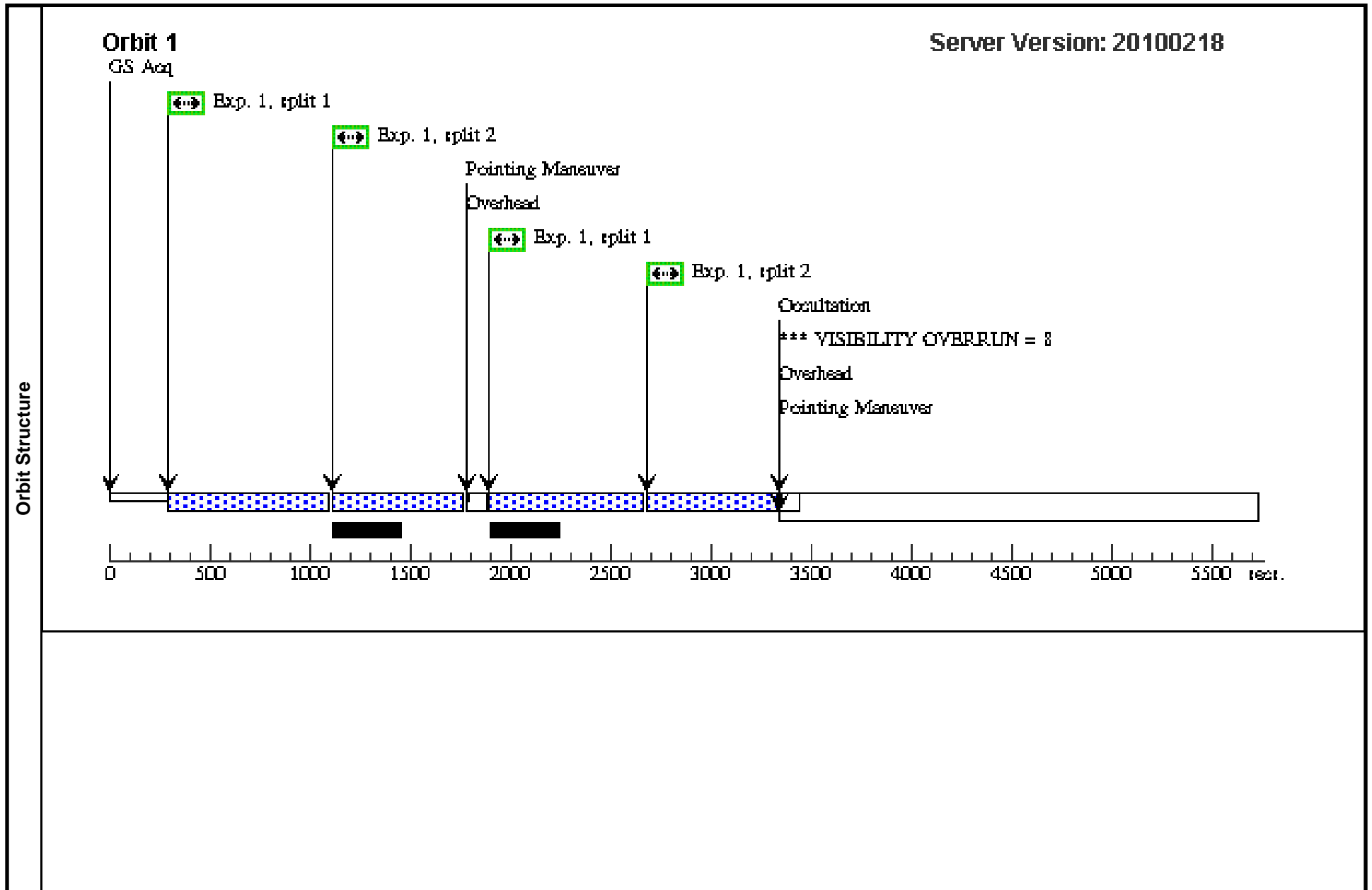
Visit	Proposal 11595, Visit 08, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern				Exposures		
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(9)	J081813.14+072054	RA: 08 18 13.1400 (124.5547500d) Dec: +07 20 54.00 (7.34833d) Equinox: J2000			V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(9) J081813.14+072054	WFC3/UVIS, ACCUM, UVIS1	F390W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1386.0 Secs (Pattern 1)]	[1]
									[==>1387.0 Secs (Pattern 2)]	
								[==>1442.0 Secs (Pattern 3)]		
								[==>1442.0 Secs (Pattern 4)]	[2]	

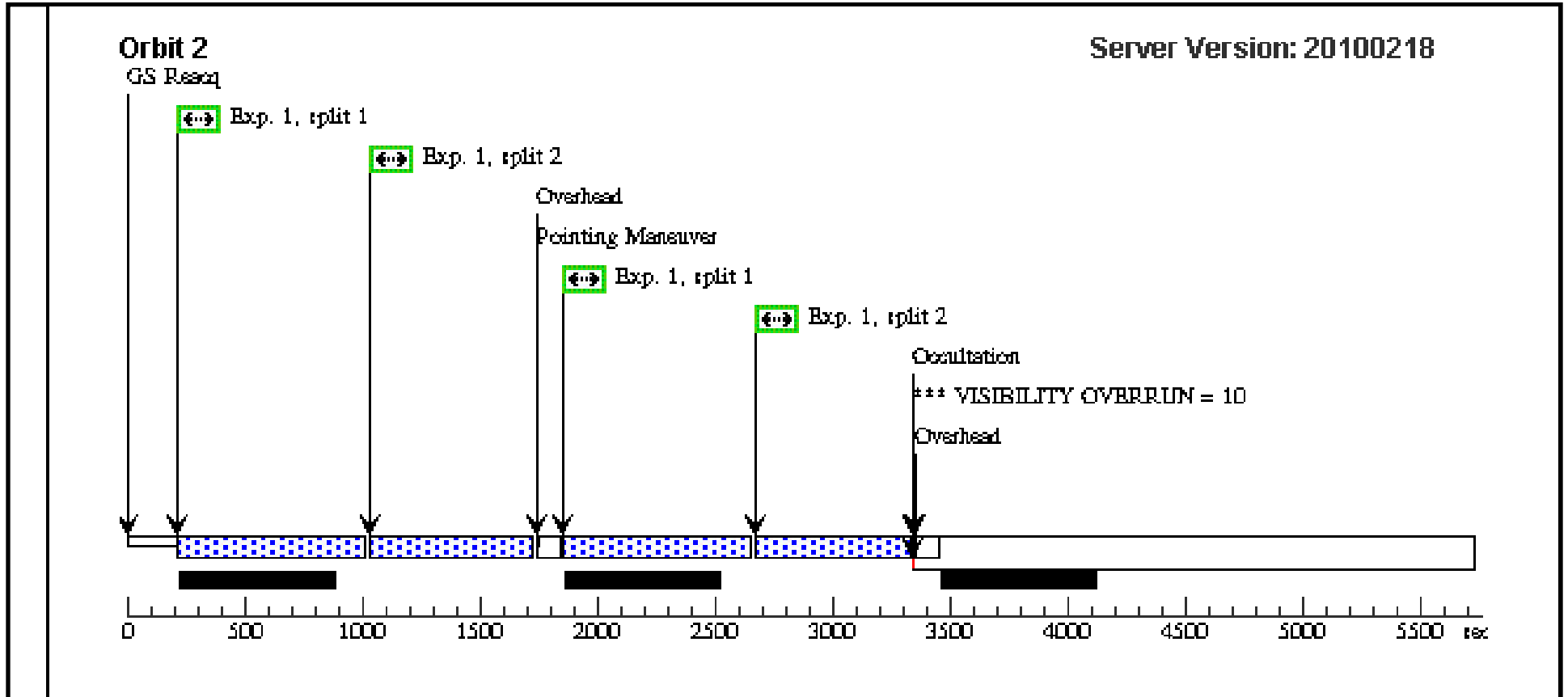


Proposal 11595 - Visit 09 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:12 GMT 2010

Visit	Proposal 11595, Visit 09, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Diagnostics	(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN (Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN									
Patterns		#	Primary Pattern				Secondary Pattern			Exposures	
	(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(10)	CTQ247	RA: 04 07 18.0000 (61.8250000d) Dec: -44 10 13.00 (-44.17028d) Equinox: J2000				V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(10) CTQ247	WFC3/UVIS, ACCUM, UVIS1	F275W	CR-SPLIT=2		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>656.0 Secs (Pattern 1, Split 1)]		[1]
									[==>656.0 Secs (Pattern 1, Split 2)]		
									[==>656.0 Secs (Pattern 2, Split 1)]		
									[==>656.0 Secs (Pattern 2, Split 2)]		
								[==>691.0 Secs (Pattern 3, Split 1)]		[2]	
								[==>691.0 Secs (Pattern 3, Split 2)]			
								[==>691.0 Secs (Pattern 4, Split 1)]			
								[==>664.0 Secs (Pattern 4, Split 2)]			

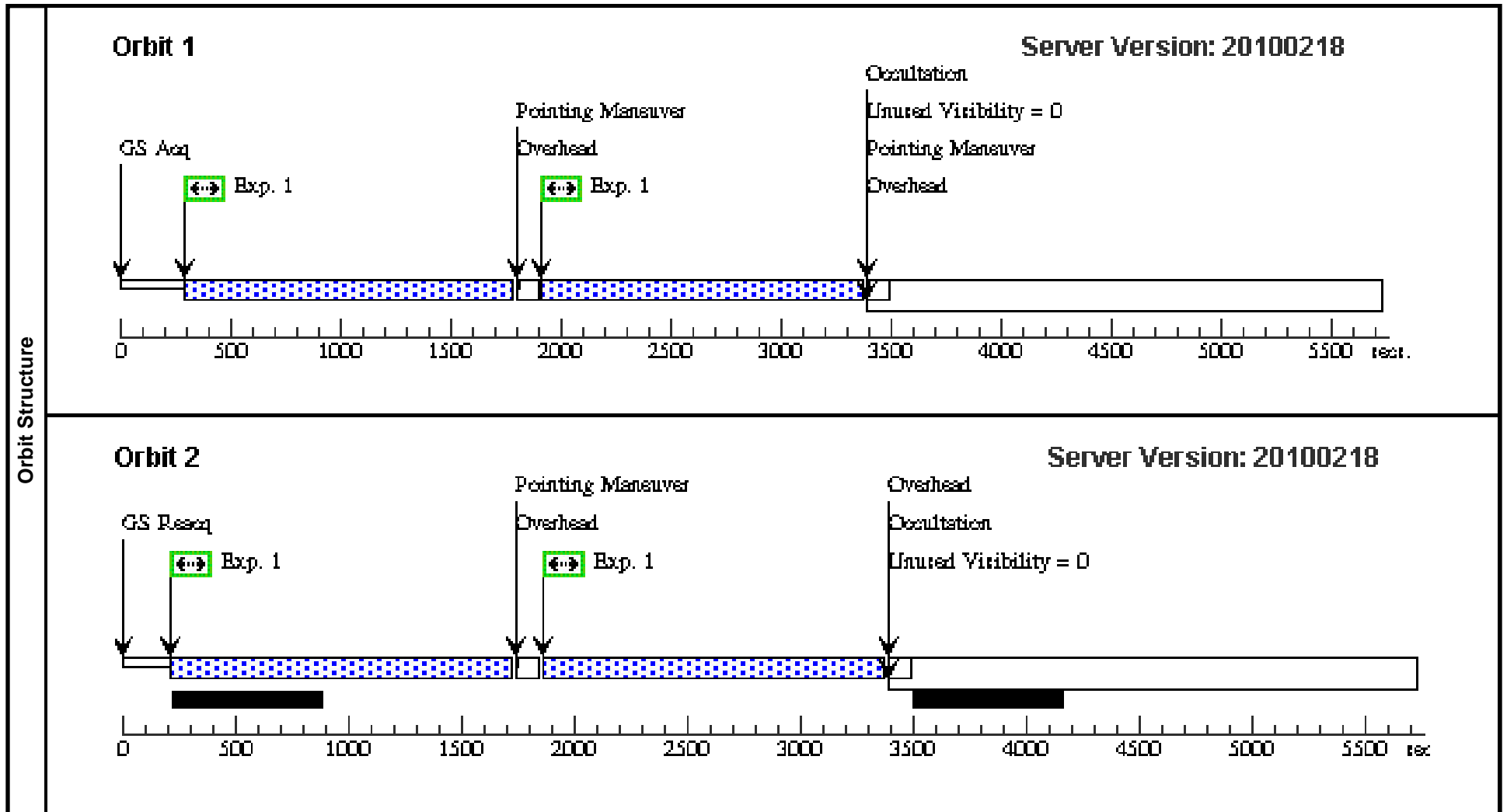




Proposal 11595 - Visit 10 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:12 GMT 2010

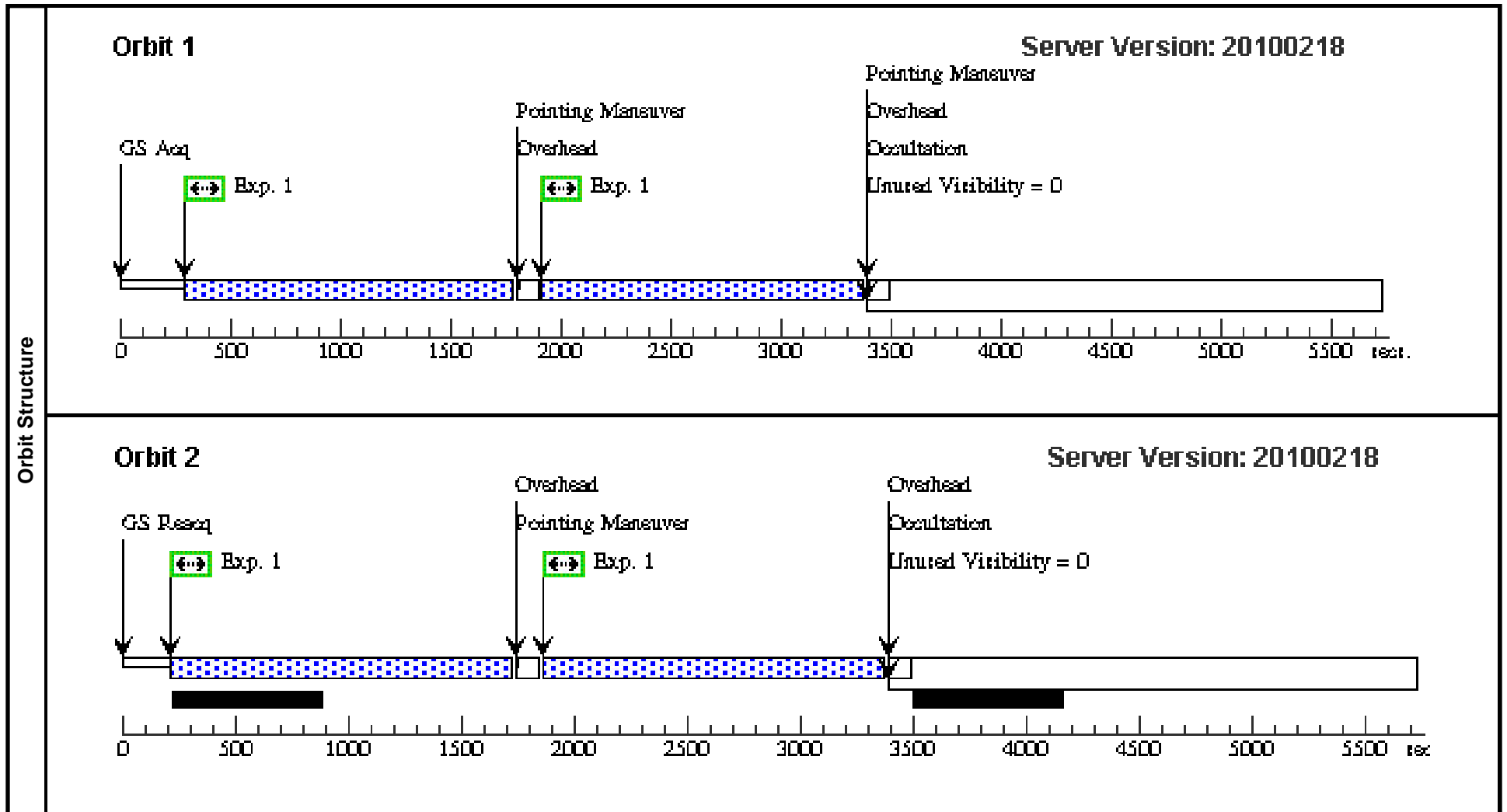
Visit	Proposal 11595, Visit 10, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(11)	J144233.01+495242	RA: 14 42 33.0100 (220.6375417d) Dec: +49 52 42.00 (49.87833d) Equinox: J2000		V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(11) J144233.01+495242	WFC3/UVIS, ACCUM, UVIS1	F343N	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1461.0 Secs (Pattern 1)]	[1]
									[==>1461.0 Secs (Pattern 2)]	
								[==>1516.0 Secs (Pattern 3)]		
								[==>1517.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 11 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:12 GMT 2010

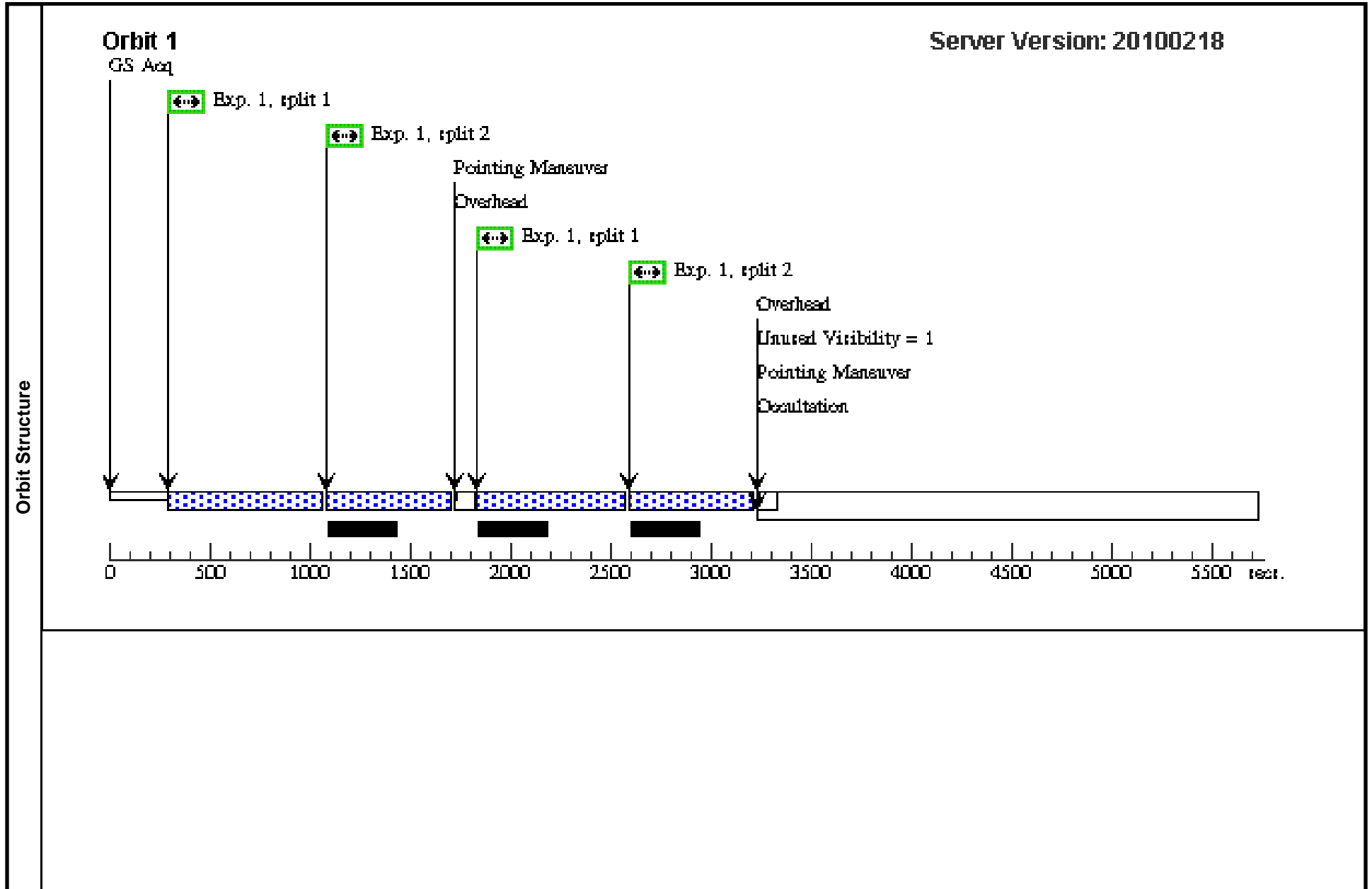
Visit	Proposal 11595, Visit 11, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)			
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(13)	J105430.07+491947	RA: 10 54 30.0700 (163.6252917d) Dec: +49 19 47.00 (49.32972d) Equinox: J2000					V=27	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(13) J105430.07+491947	WFC3/UVIS, ACCUM, UVIS1	F390M	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1461.0 Secs (Pattern 1)]		[1]
									[==>1461.0 Secs (Pattern 2)]		
									[==>1516.0 Secs (Pattern 3)]		[2]
									[==>1517.0 Secs (Pattern 4)]		

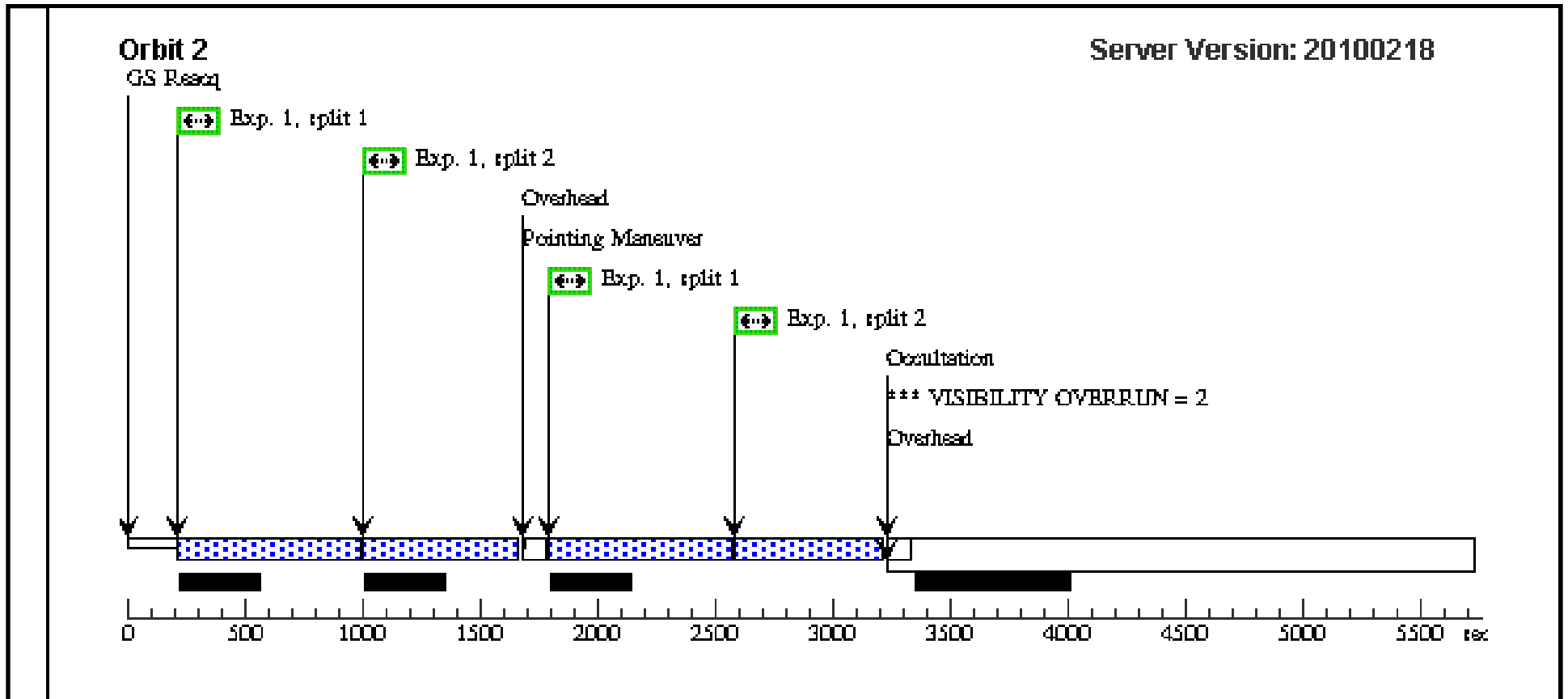


Proposal 11595 - Visit 12 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:13 GMT 2010

Visit	Proposal 11595, Visit 12, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	(Visit 12) Warning (Orbit Planner): VISIBILITY OVERRUN										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures	
	(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(14)	J025518.58+0048	RA: 02 55 18.5800 (43.8274167d) Dec: +00 48 47.00 (.81306d) Equinox: J2000				V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(14) J025518.58+0048	WFC3/UVIS, ACCUM, UVIS1	F390W	CR-SPLIT=2		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>627.0 Secs (Pattern 1, Split 1)]		[1]
									[==>627.0 Secs (Pattern 1, Split 2)]		
									[==>627.0 Secs (Pattern 2, Split 1)]		
									[==>627.0 Secs (Pattern 2, Split 2)]		
									[==>662.0 Secs (Pattern 3, Split 1)]		
									[==>662.0 Secs (Pattern 3, Split 2)]		
									[==>662.0 Secs (Pattern 4, Split 1)]		[2]
									[==>636.0 Secs (Pattern 4, Split 2)]		

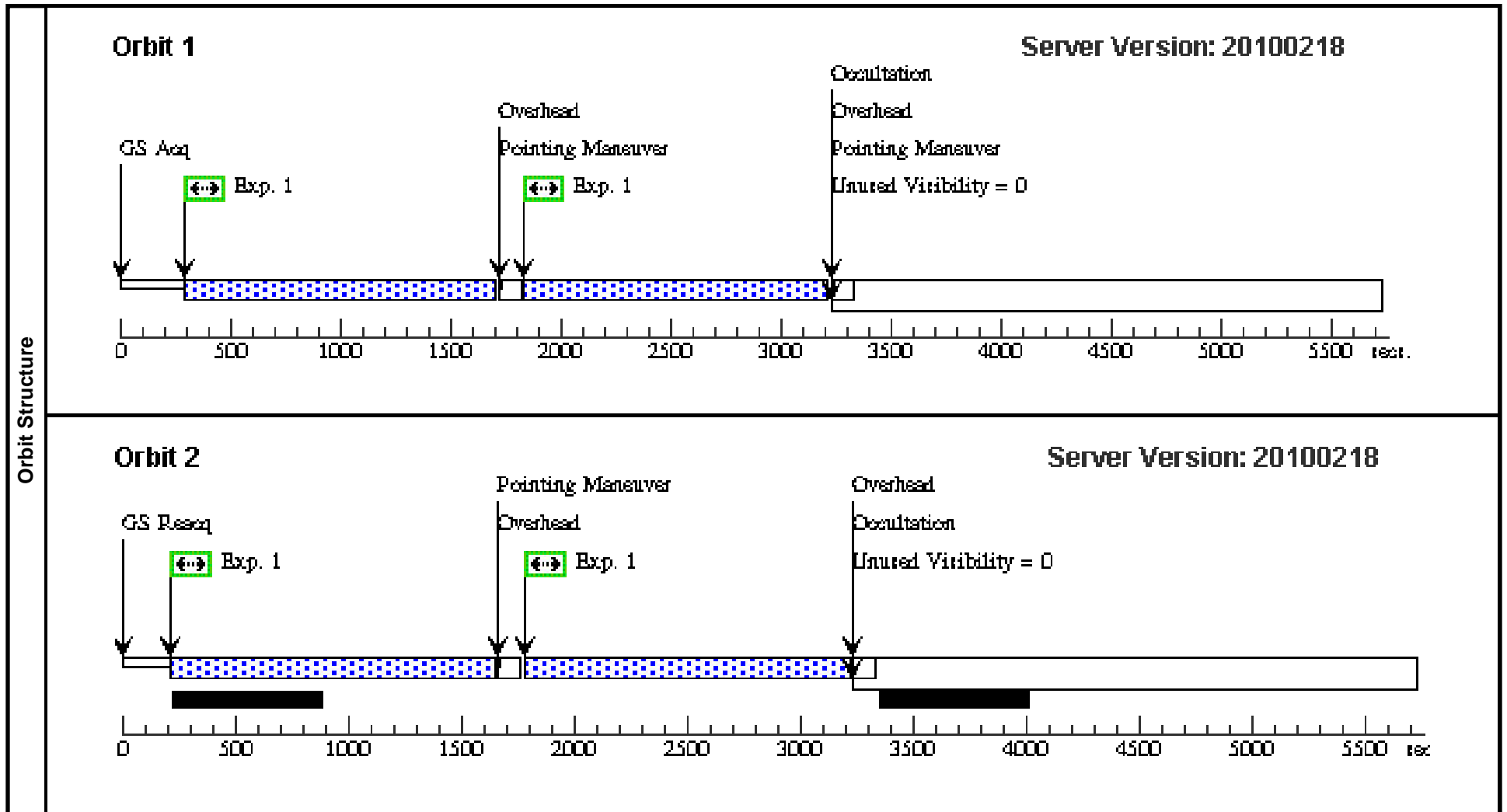




Proposal 11595 - Visit 13 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:13 GMT 2010

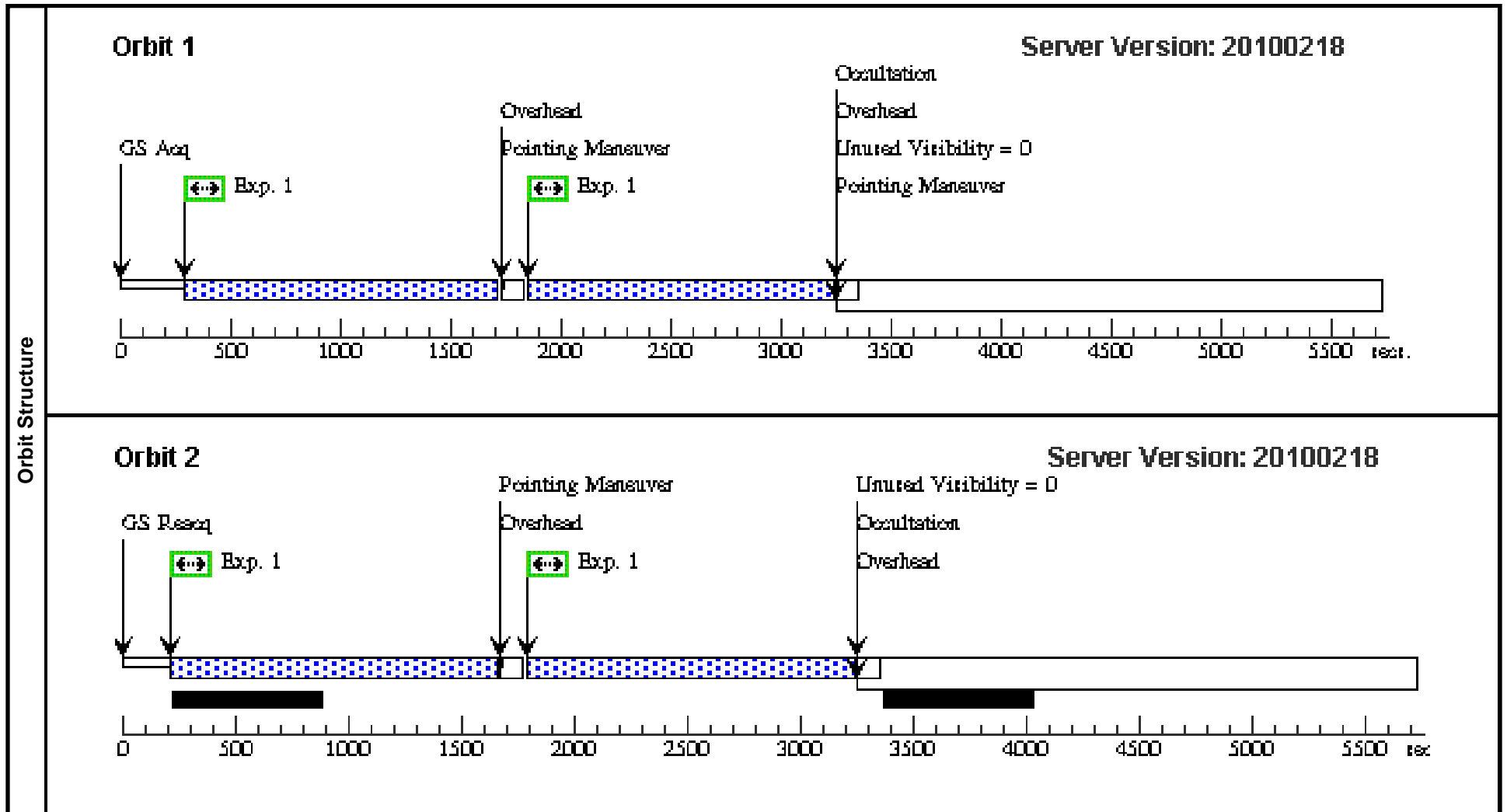
Visit	Proposal 11595, Visit 13, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)			
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous				
	(15)	J090810.35+023818	RA: 09 08 10.3500 (137.0431250d) Dec: +02 38 18.00 (2.63833d) Equinox: J2000			V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(15) J090810.35+023818	WFC3/UVIS, ACCUM, UVIS1	F390M	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1382.0 Secs (Pattern 1)]		[1]
									[==>1383.0 Secs (Pattern 2)]		
									[==>1438.0 Secs (Pattern 3)]		[2]
									[==>1438.0 Secs (Pattern 4)]		



Proposal 11595 - Visit 14 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:14 GMT 2010

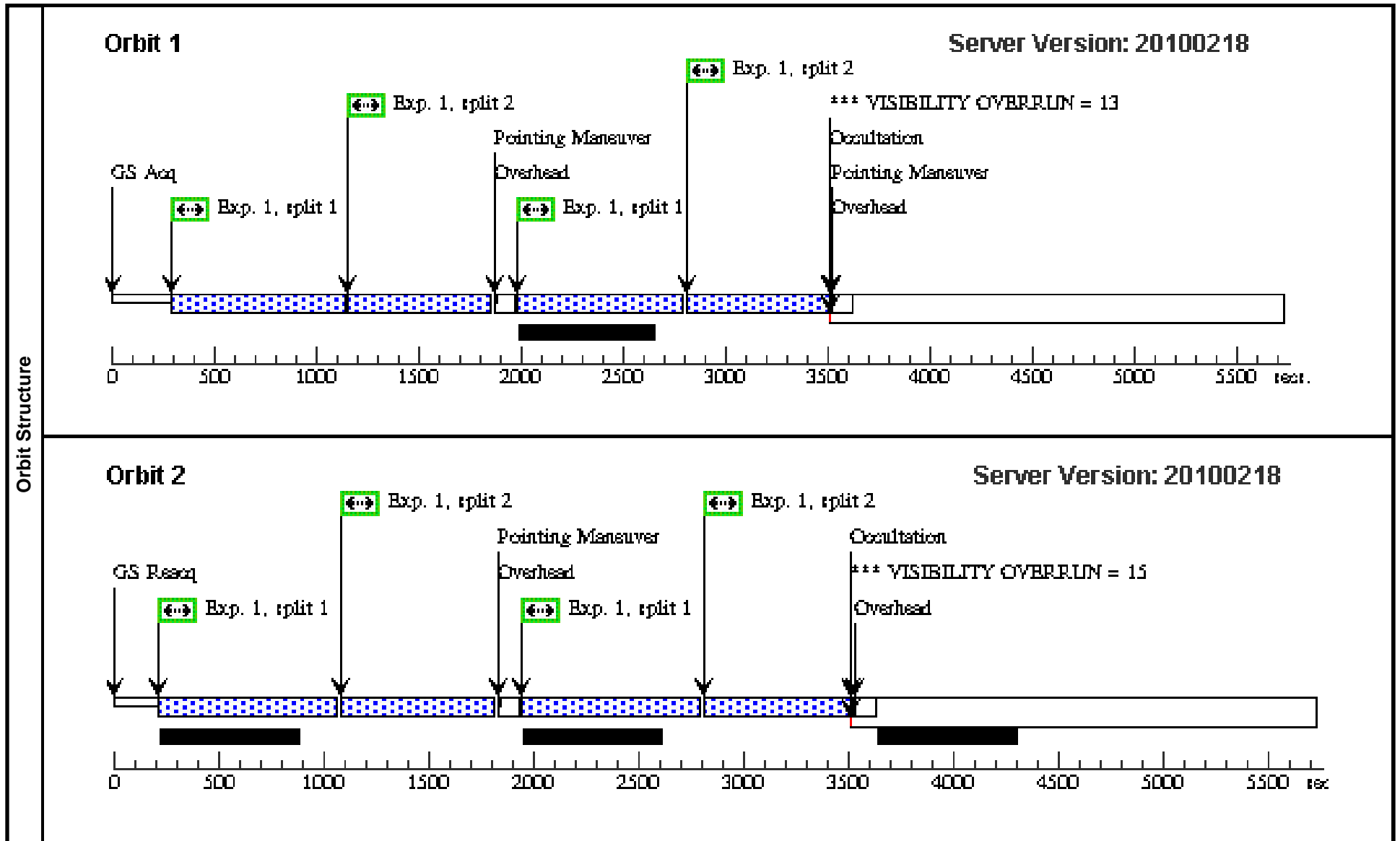
Visit	Proposal 11595, Visit 14, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(16)	J081813.05+263136	RA: 08 18 13.0500 (124.5543750d) Dec: +26 31 36.00 (26.52667d) Equinox: J2000		V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(16) J081813.05+263136	WFC3/UVIS, ACCUM, UVIS1	F438W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1394.0 Secs (Pattern 1)]	[1]
									[==>1394.0 Secs (Pattern 2)]	
								[==>1449.0 Secs (Pattern 3)]		
								[==>1450.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 15 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:14 GMT 2010

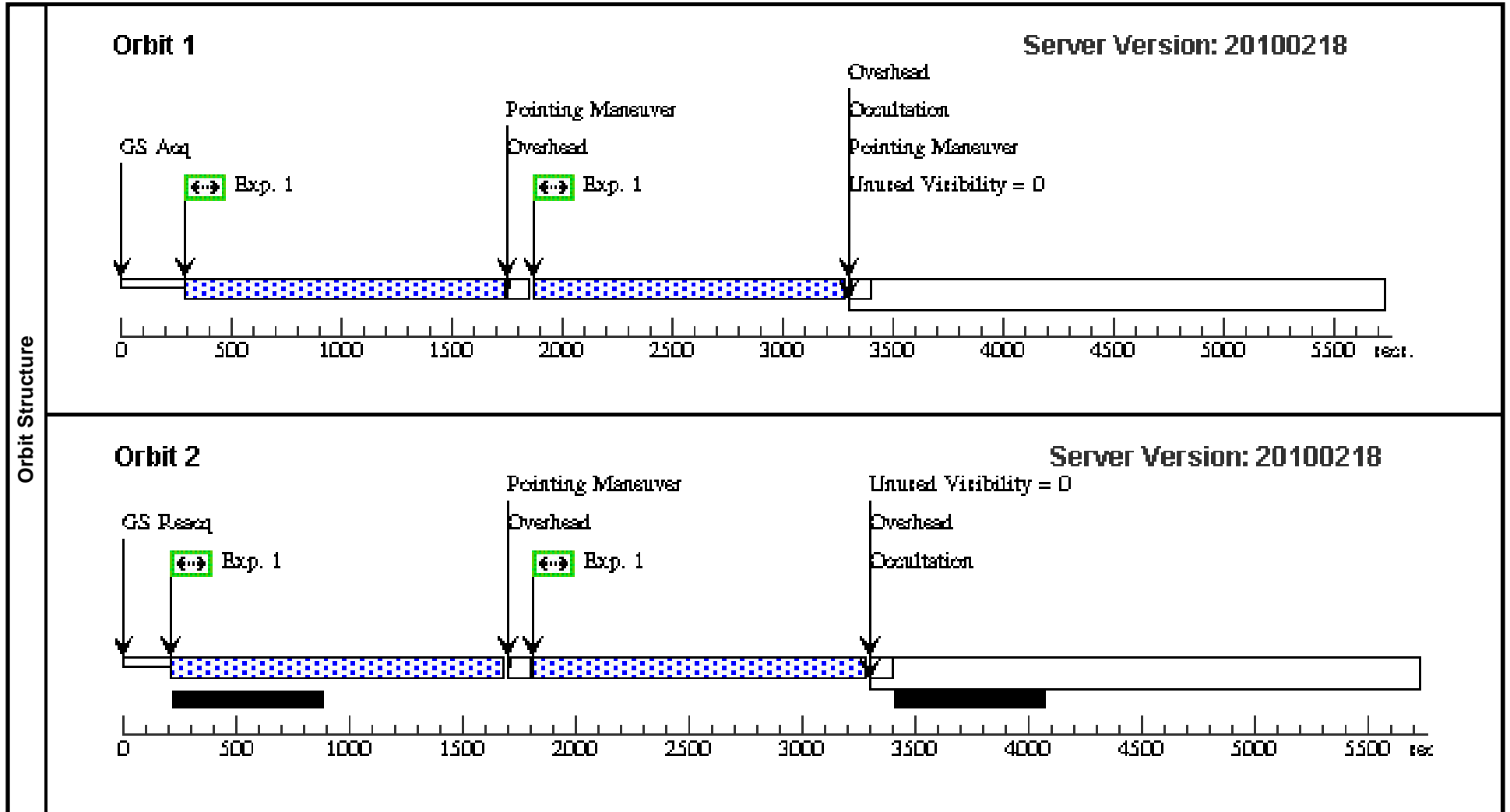
Visit	Proposal 11595, Visit 15, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	(Visit 15) Warning (Orbit Planner): VISIBILITY OVERRUN (Visit 15) Warning (Orbit Planner): VISIBILITY OVERRUN										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern			Exposures		
	(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(17)	J093051.93+602301	RA: 09 30 51.9300 (142.7163750d) Dec: +60 23 1.00 (60.38361d) Equinox: J2000				V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(17) J093051.93+602301	WFC3/UVIS, ACCUM, UVIS1	F390M	CR-SPLIT=2		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>701.0 Secs (Pattern 1, Split 1)]		[1]
									[==>701.0 Secs (Pattern 1, Split 2)]		
									[==>701.0 Secs (Pattern 2, Split 1)]		
									[==>701.0 Secs (Pattern 2, Split 2)]		
									[==>736.0 Secs (Pattern 3, Split 1)]		[2]
									[==>736.0 Secs (Pattern 3, Split 2)]		
									[==>736.0 Secs (Pattern 4, Split 1)]		
									[==>709.0 Secs (Pattern 4, Split 2)]		



Proposal 11595 - Visit 15 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:14 GMT 2010

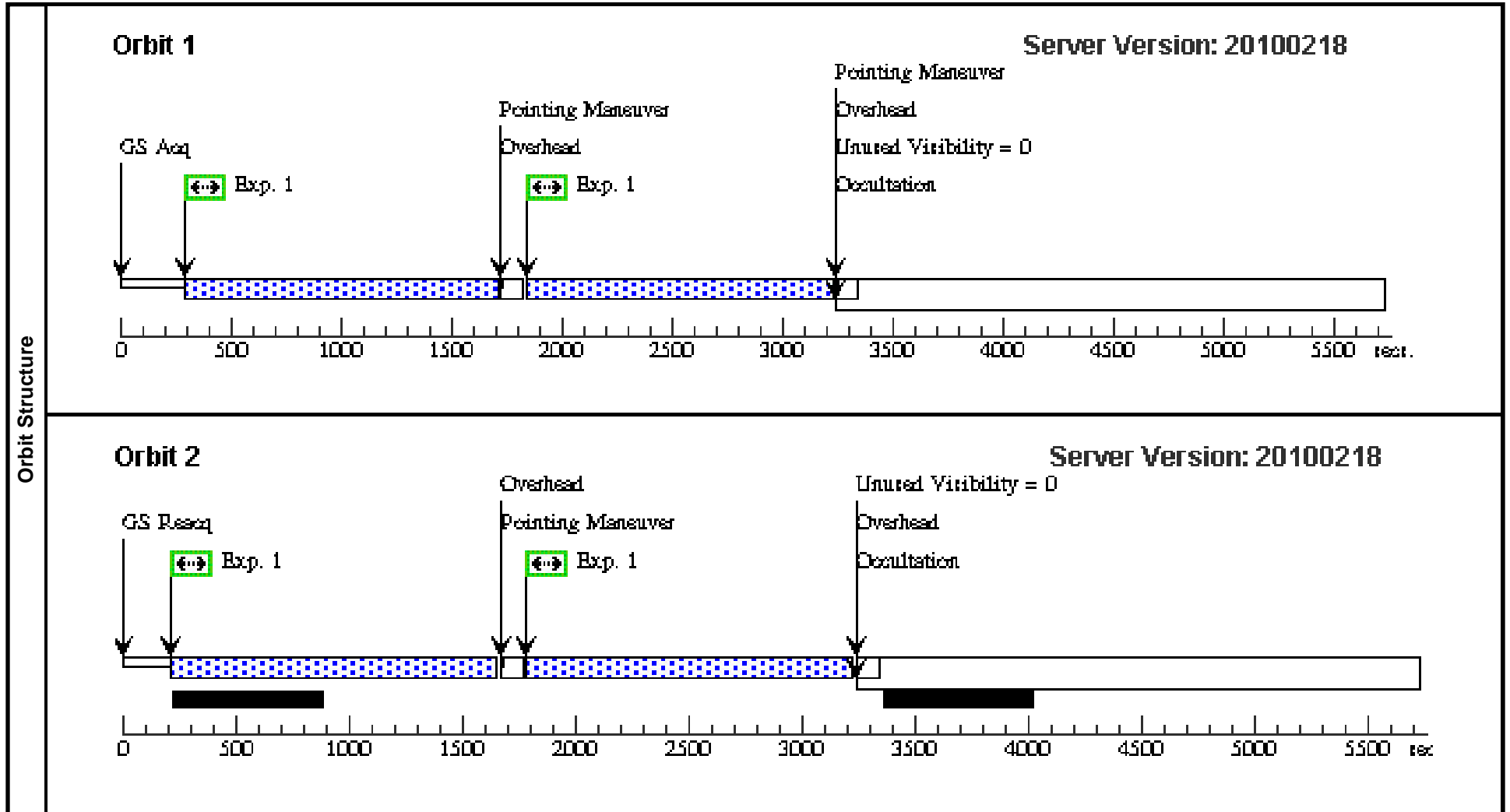
Visit	Proposal 11595, Visit 16, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)			
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(18)	J081114.33+393633	RA: 08 11 14.3300 (122.8097083d) Dec: +39 36 33.00 (39.60917d) Equinox: J2000			V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(18) J081114.33+393633	WFC3/UVIS, ACCUM, UVIS1	F343N	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1416.0 Secs (Pattern 1)]		[1]
									[==>1416.0 Secs (Pattern 2)]		
									[==>1471.0 Secs (Pattern 3)]		
									[==>1472.0 Secs (Pattern 4)]		[2]



Proposal 11595 - Visit 17 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:15 GMT 2010

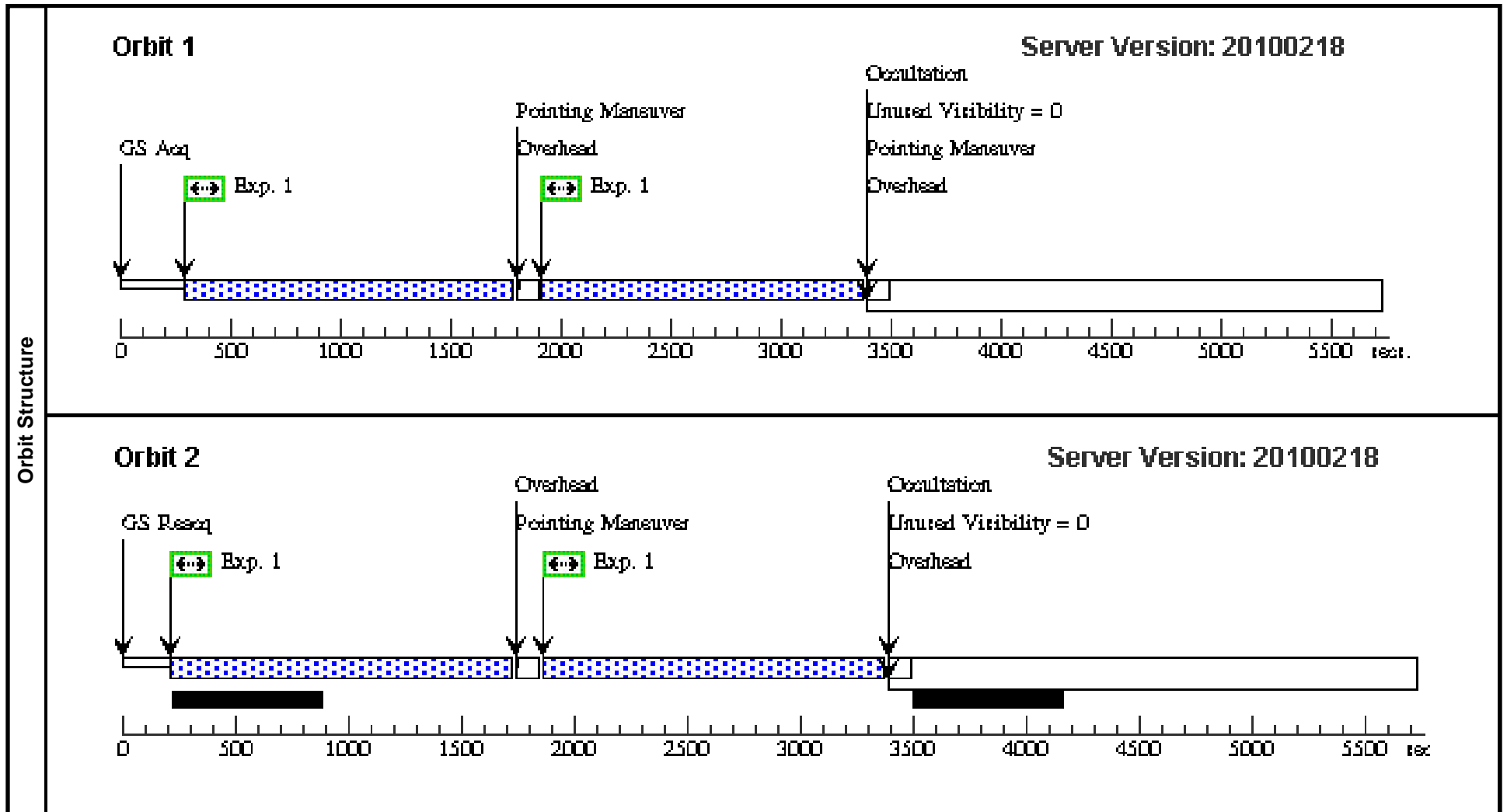
Visit	Proposal 11595, Visit 17, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(19)	J132006.64+131015	RA: 13 20 6.6400 (200.0276667d) Dec: +13 10 15.00 (13.17083d) Equinox: J2000		V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(19) J132006.64+131015	WFC3/UVIS, ACCUM, UVIS1	F336W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1388.0 Secs (Pattern 1)]	[1]
									[==>1388.0 Secs (Pattern 2)]	
								[==>1443.0 Secs (Pattern 3)]		
								[==>1444.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 18 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:15 GMT 2010

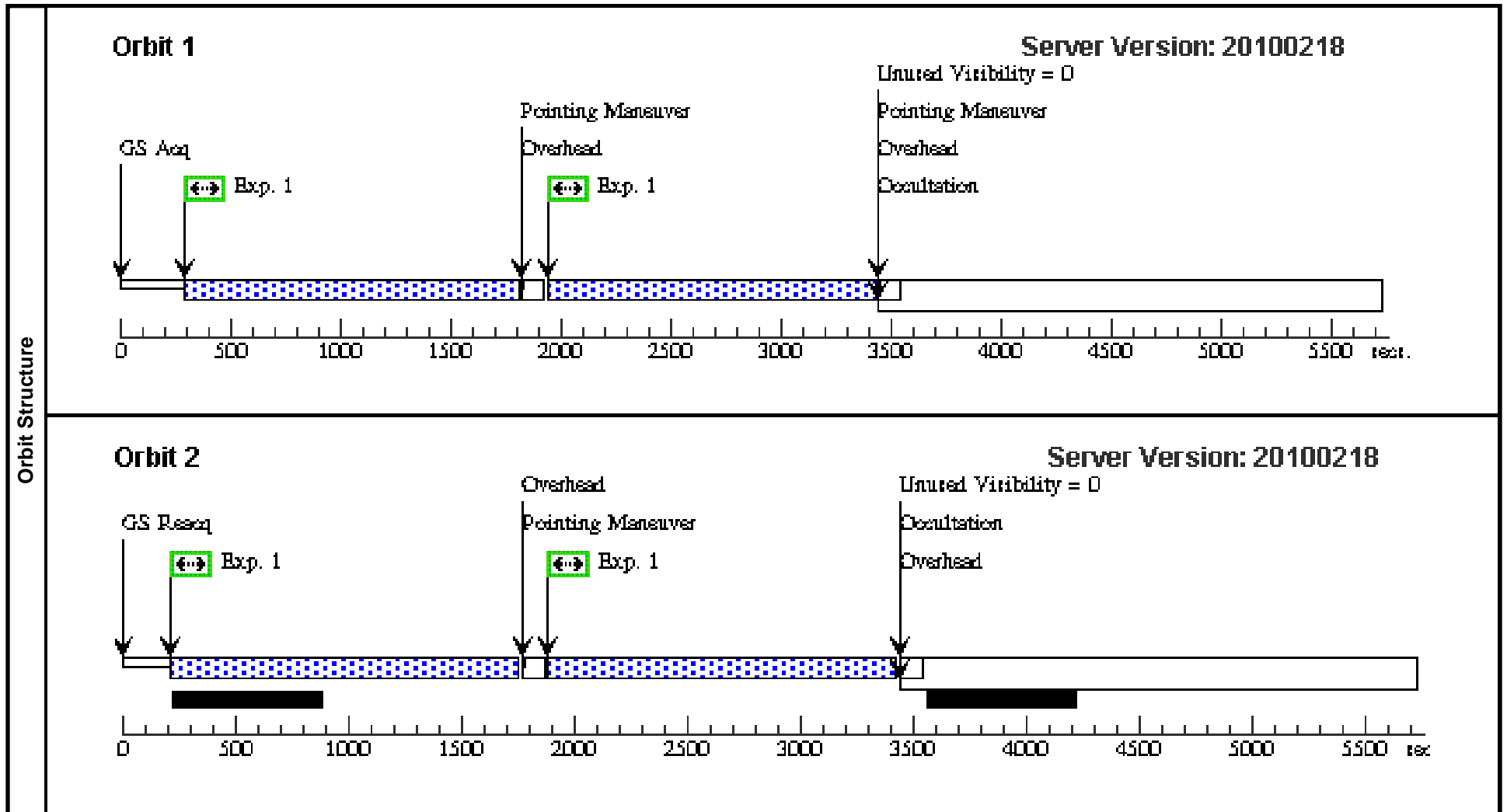
Visit	Proposal 11595, Visit 18, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
(2)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112			Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(24)	PC0953+47	RA: 09 56 25.1700 (149.1048750d) Dec: +47 34 43.60 (47.57878d) Equinox: J2000			V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(24) PC0953+47	WFC3/UVIS, ACCUM, UVIS1	F438W	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1461.0 Secs (Pattern 1)]	[1]
									[==>1461.0 Secs (Pattern 2)]	
								[==>1516.0 Secs (Pattern 3)]		
								[==>1517.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 19 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:15 GMT 2010

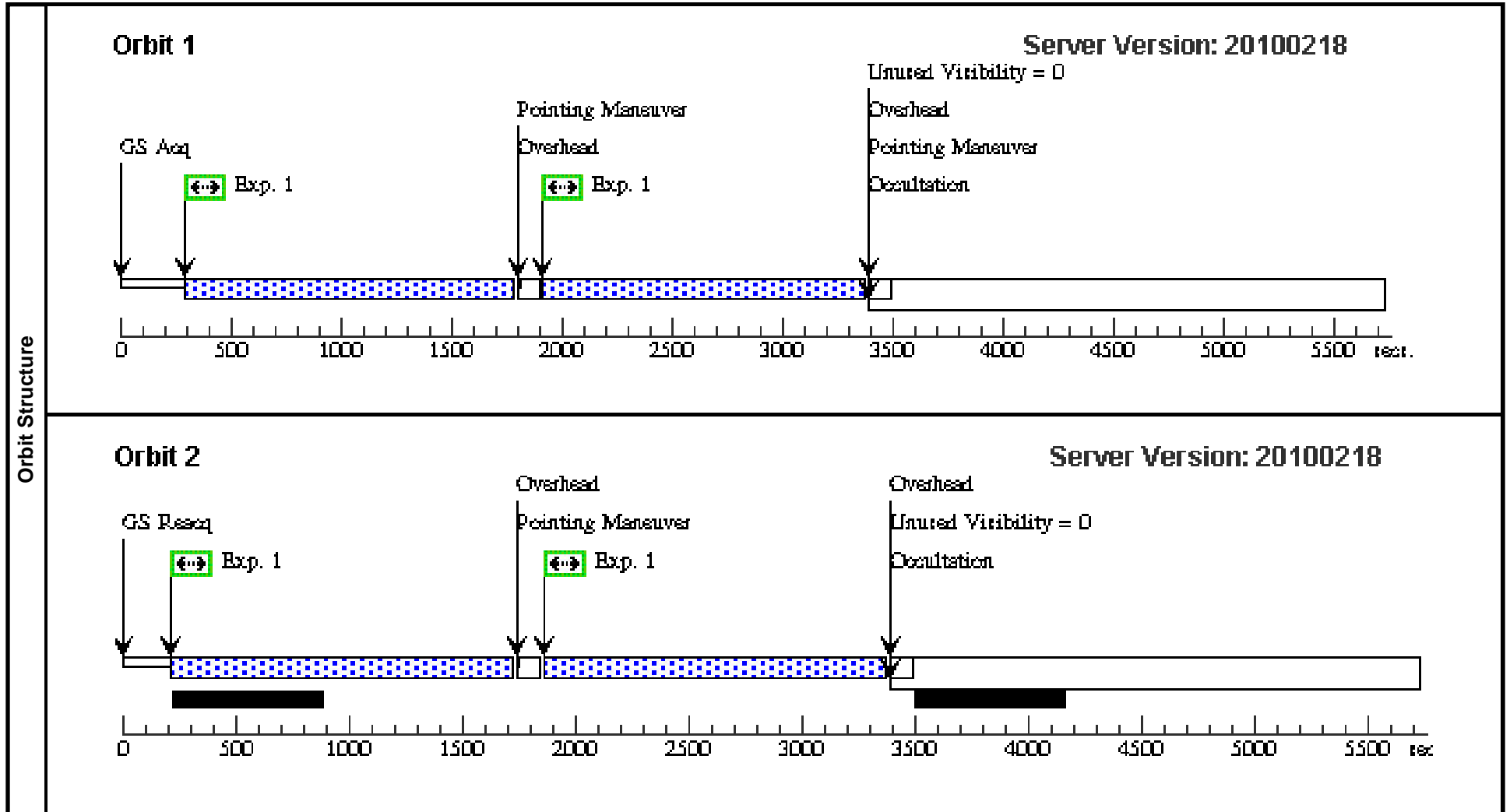
Visit	Proposal 11595, Visit 19, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(25)	J144147.52+541538	RA: 14 41 47.5200 (220.4480000d) Dec: +54 15 38.00 (54.26056d) Equinox: J2000		V=27	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(25) J144147.52+541538	WFC3/UVIS, ACCUM, UVIS1	F343N	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs	
									[==>1488.0 Secs (Pattern 1)]	[1]
									[==>1488.0 Secs (Pattern 2)]	
								[==>1543.0 Secs (Pattern 3)]		
								[==>1544.0 Secs (Pattern 4)]	[2]	



Proposal 11595 - Visit 20 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:16 GMT 2010

Visit	Proposal 11595, Visit 20, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
(2)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(26)	J075155.10+451619	RA: 07 51 55.1000 (117.9795833d) Dec: +45 16 19.00 (45.27194d) Equinox: J2000				V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(26) J075155.10+451619	WFC3/UVIS, ACCUM, UVIS1	F343N	CR-SPLIT=NO		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>1461.0 Secs (Pattern 1)]		[1]
									[==>1461.0 Secs (Pattern 2)]		
									[==>1516.0 Secs (Pattern 3)]		
									[==>1517.0 Secs (Pattern 4)]		[2]



Proposal 11595 - Visit 21 - Turning out the Light: A WFC3 Program to Image z>2 Damped Lyman Alpha Systems

Tue Feb 23 02:05:16 GMT 2010

Visit	Proposal 11595, Visit 21, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: (none)										
	(Visit 21) Warning (Orbit Planner): VISIBILITY OVERRUN										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern			Exposures		
	(2)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(27)	J212357.56-005350	RA: 21 23 57.5600 (320.9898333d) Dec: -00 53 50.00 (-.89722d) Equinox: J2000				V=27	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(27) J212357.56-005350	WFC3/UVIS, ACCUM, UVIS1	F390M	CR-SPLIT=2		Pattern 2, Exps 1-1 (2)	1200 Secs		
									[==>627.0 Secs (Pattern 1, Split 1)]		[1]
									[==>627.0 Secs (Pattern 1, Split 2)]		
									[==>627.0 Secs (Pattern 2, Split 1)]		
									[==>627.0 Secs (Pattern 2, Split 2)]		
									[==>662.0 Secs (Pattern 3, Split 1)]		[2]
									[==>662.0 Secs (Pattern 3, Split 2)]		
									[==>662.0 Secs (Pattern 4, Split 1)]		
									[==>636.0 Secs (Pattern 4, Split 2)]		

