



11188 - First Resolved Imaging of Escaping Lyman Continuum

Cycle: 16, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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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>
01	(1) SSA22A-N	NIC3 WFPC2	1	18-Jan-2008 02:26:31.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
02	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:26:37.0	yes
03	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:26:43.0	yes
04	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:26:50.0	yes
05	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:26:54.0	yes
06	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:26:59.0	yes
07	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:03.0	yes
08	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:07.0	yes
09	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:11.0	yes
10	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:15.0	yes
11	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:19.0	yes
12	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:23.0	yes
13	(1) SSA22A-N	NIC3 WFPC2	2	18-Jan-2008 02:27:27.0	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>
14	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:27:34.0	yes
15	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:27:38.0	yes
16	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:27:41.0	yes
17	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:27:45.0	yes
18	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:27:49.0	yes
19	(2) SSA22A-S	NIC3 WFPC2	2	18-Jan-2008 02:27:53.0	yes

37 Total Orbits Used

ABSTRACT

The emission from star-forming galaxies appears to be responsible for reionization of the universe at $z > 6$. However, the models that attempt to describe the detailed impact of high-redshift galaxies on the surrounding inter-galactic medium (IGM) are strongly dependent upon several uncertain parameters. Perhaps the most uncertain is the fraction of HI-ionizing photons produced by young stars which escape into the IGM. Most attempts to measure this "escape fraction" (f_{esc}) have produced null results. Recently, a small subset of $z \sim 3$ Lyman Break Galaxies (LBGs) has been found exhibiting large escape fractions. It remains unclear however, what differentiates them from other LBGs. Several models attempt to explain how such a large fraction of ionizing continuum can escape through the HI and dust in the ISM (eg. "chimneys" created by SNe winds, globular cluster formation, etc.), each producing unique signatures which can be observed with resolved imaging of the escaping Lyman continuum. We propose a deep, high resolution WFPC2 image of the ionizing continuum (F336W) and the rest-frame 1500 Angstrom continuum (F606W) of five of the six known LBGs with large escape fractions. These LBGs all fit within a single WFPC2 pointing, yielding high observing efficiency. Additionally, they

all have $z \sim 3.1$ or higher, the optimal redshift range for probing the Lyman Continuum region with available WFPC2 filters. These factors make our proposed sample especially suitable for follow-up. With these data we will discern the mechanisms responsible for producing large escape fractions, and therefore gain insight into the process of reionization.

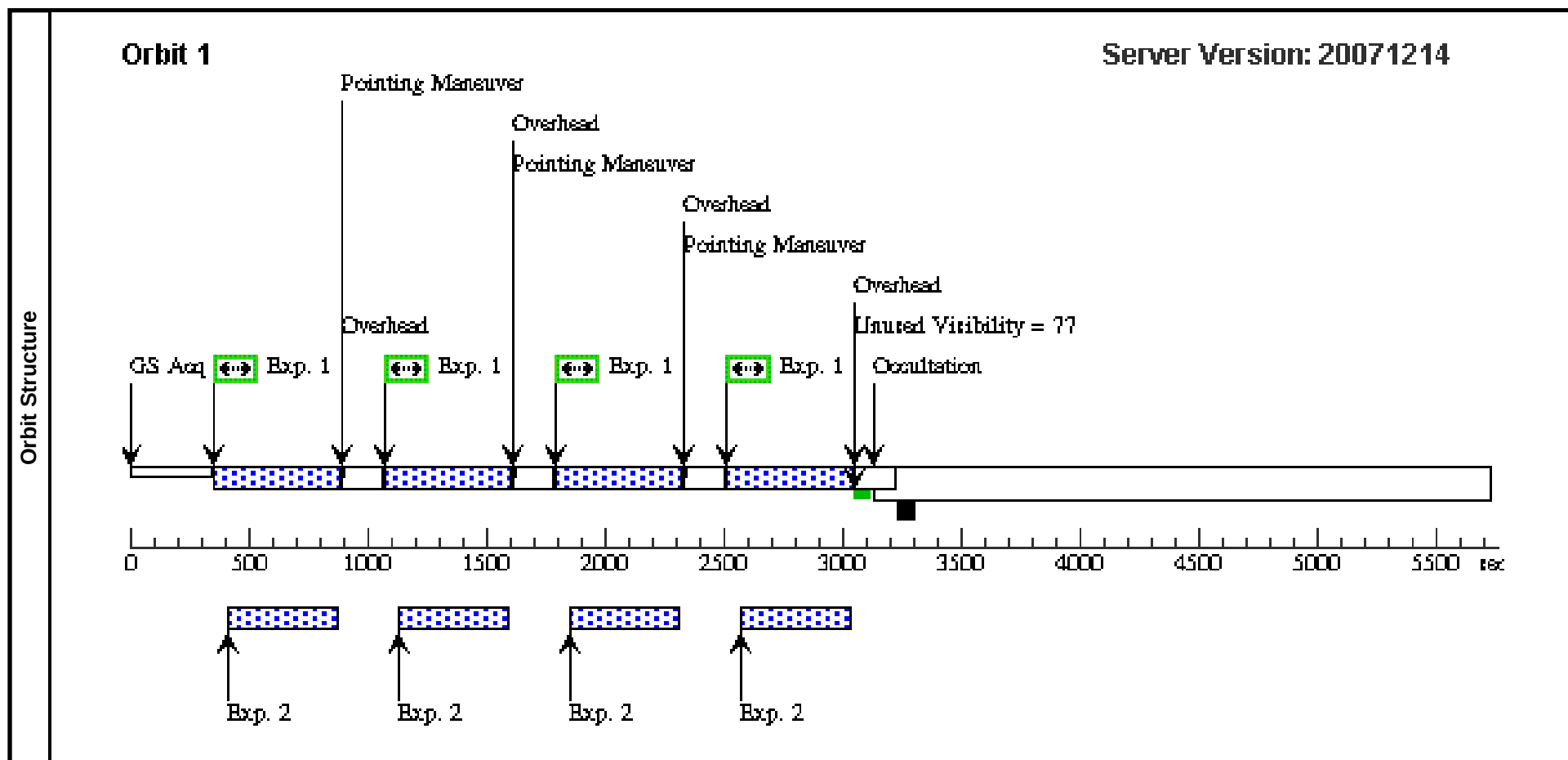
OBSERVING DESCRIPTION

We were allocated 37 orbits of WFPC2 imaging to get deep F336W (U-band) and F606W imaging of the SSA-22 field with sub-pixel resolution. In order to mitigate charge trap issues, which are of particular concern for this program, we have split the observations into two pointings to put the targets at the lowest y-coordinates possible. The northern field, SSA-22aN, has 3 (of 5) targets which are brighter so we've allocated 22 F336W orbits to that pointing and 11 F336W orbits to the southern pointing. In addition, 1 orbit of F606W is needed for the northern field and two orbits of F606W for the southern field. We divide the imaging into 2-orbit visits. Within each 2-orbit visit we will employ a 4-point dither pattern (WFPC2-BOX) to sample at 1/2 pixel resolution. Each position in the dither pattern will have only 1 exposure (exptime ~ 1000 s). For each visit, we will use POS_TARGs to offset the start of the dither pattern over an area 4" x 4". This will allow for removal of cosmetic artifacts and better pixel sampling. We will also be imaging three orbits of F606W of the same field. This will also use the same dither pattern, but with a CR-SPLIT at each position for help with cosmic ray removal. The ORIENT angles are constrained to allow the objects to sit at low y-coordinates and to avoid bright objects on the NICMOS parallels.

We also have coordinated NICMOS (NIC3) parallels. Since all of the primary observations are at the same ORIENT, these NIC3 images will all be on the same area. The dither patterns, combined with the POS_TARGs, allow sufficiently large dithers and offsets for these parallels as well. We choose to do the bulk of our observations (27 orbits) in F110W with the remaining 10 orbits in F160W.

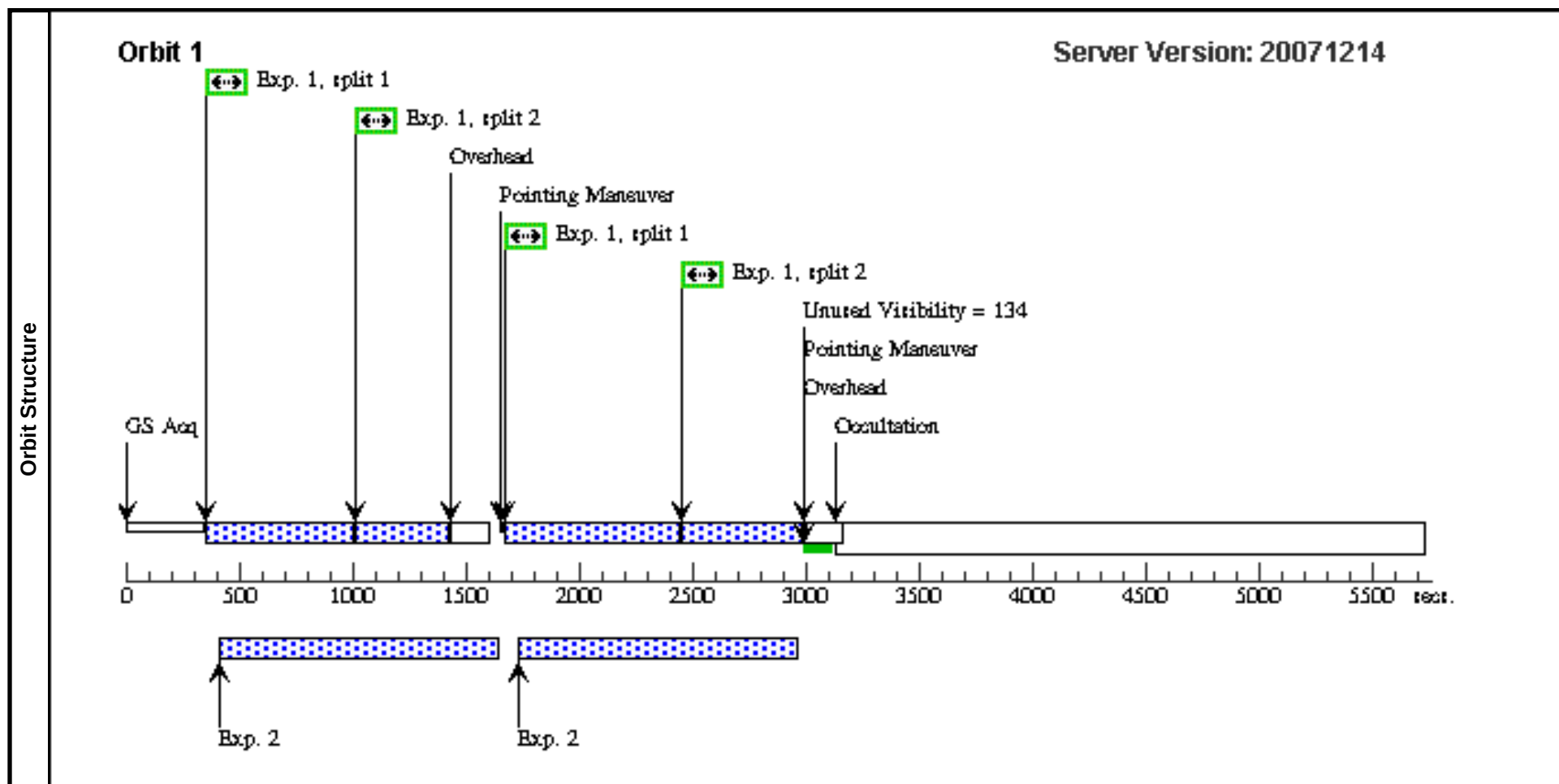
Proposal 11188 - Visit 01 - First Resolved Imaging of Escaping Lyman Continuum

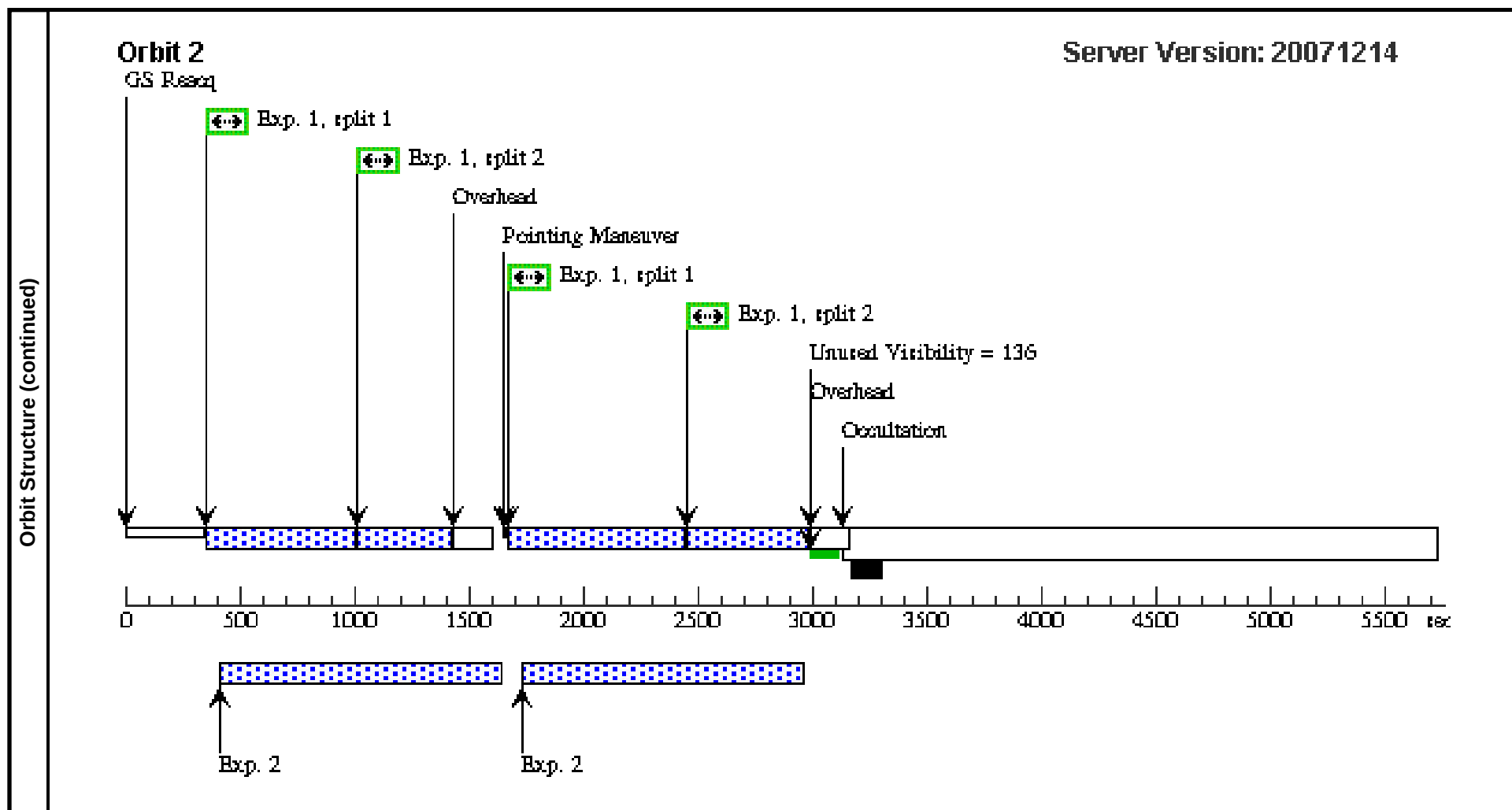
Visit	Proposal 11188, Visit 01										Fri Jan 18 07:27:56 GMT 2008	
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	Scientific Instruments: WFPC2, NIC3											
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Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017		Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false						(1-2)		
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F606W			Pattern 1-2 (1)	400.0 Secs		
									Prime + Parallel Group 1-2	[==>400.0 Secs (Pattern 1)] [==>400.0 Secs (Pattern 2)] [==>400.0 Secs (Pattern 3)] [==>400.0 Secs (Pattern 4)]		[1]
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=9		Pattern 1-2 (1)	[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]		[1]
									Prime + Parallel Group 1-2			



Proposal 11188 - Visit 02 - First Resolved Imaging of Escaping Lyman Continuum

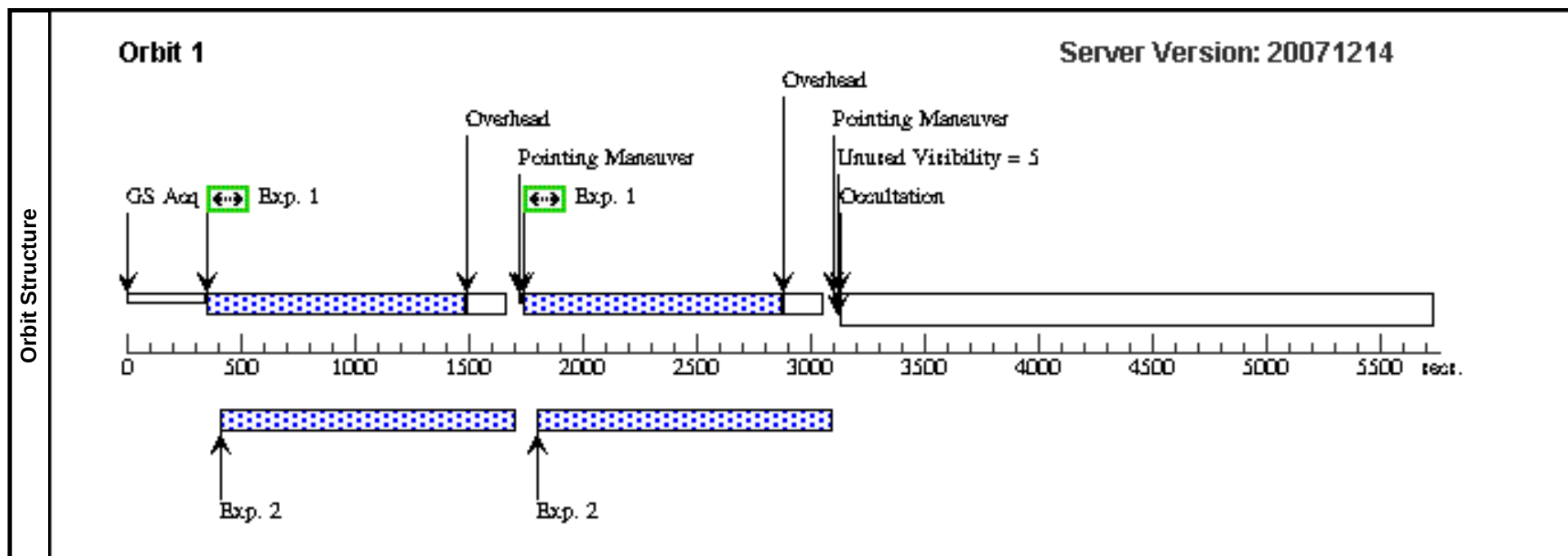
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	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: ORIENT 230.0D TO 230.0 D												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
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Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(2)	SSA22A-S	RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit		
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL	F606W			Pattern 1-2 (1) Prime + Parallel Group 1-2	900.0 Secs				
									[==>400.0 Secs (Pattern 1, Split 1)]		[1]		
									[==>400.0 Secs (Pattern 1, Split 2)]				
									[==>500.0 Secs (Pattern 2, Split 1)]				
										[==>500.0 Secs (Pattern 2, Split 2)]			
										[==>400.0 Secs (Pattern 3, Split 1)]		[2]	
										[==>400.0 Secs (Pattern 3, Split 2)]			
									[==>500.0 Secs (Pattern 4, Split 1)]				
									[==>500.0 Secs (Pattern 4, Split 2)]				
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX	F110W	SAMP-SEQ=SPARS 64; NSAMP=21		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]		
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

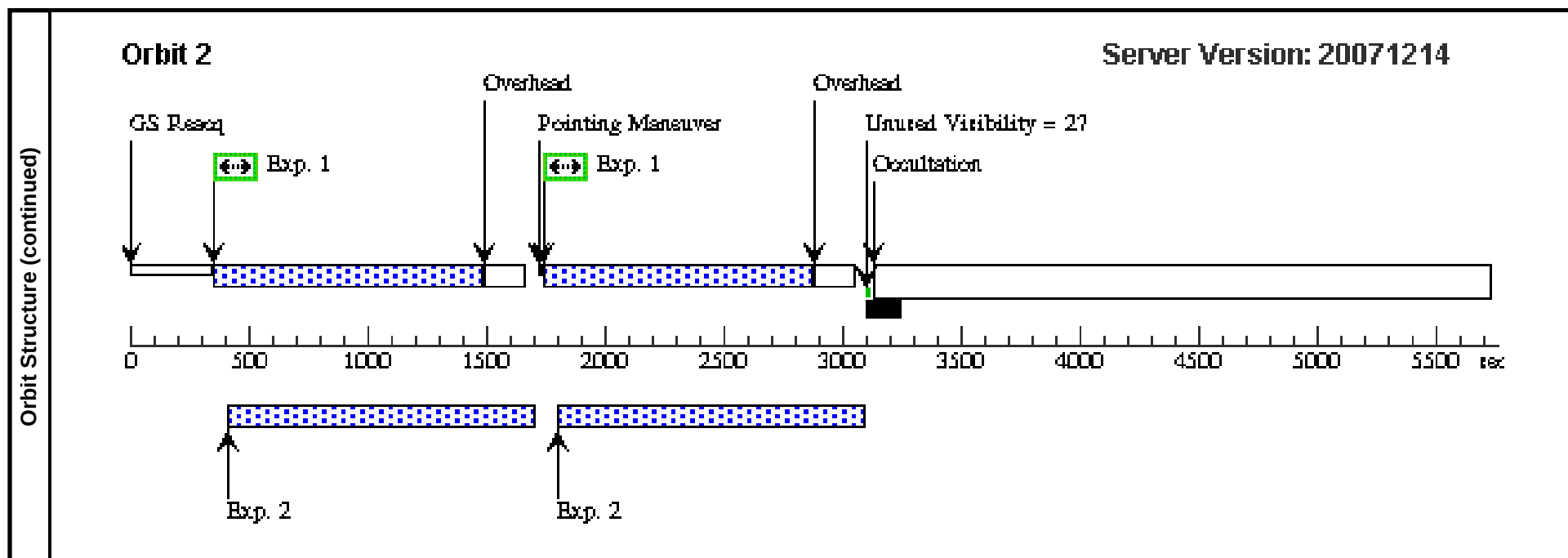




Proposal 11188 - Visit 03 - First Resolved Imaging of Escaping Lyman Continuum

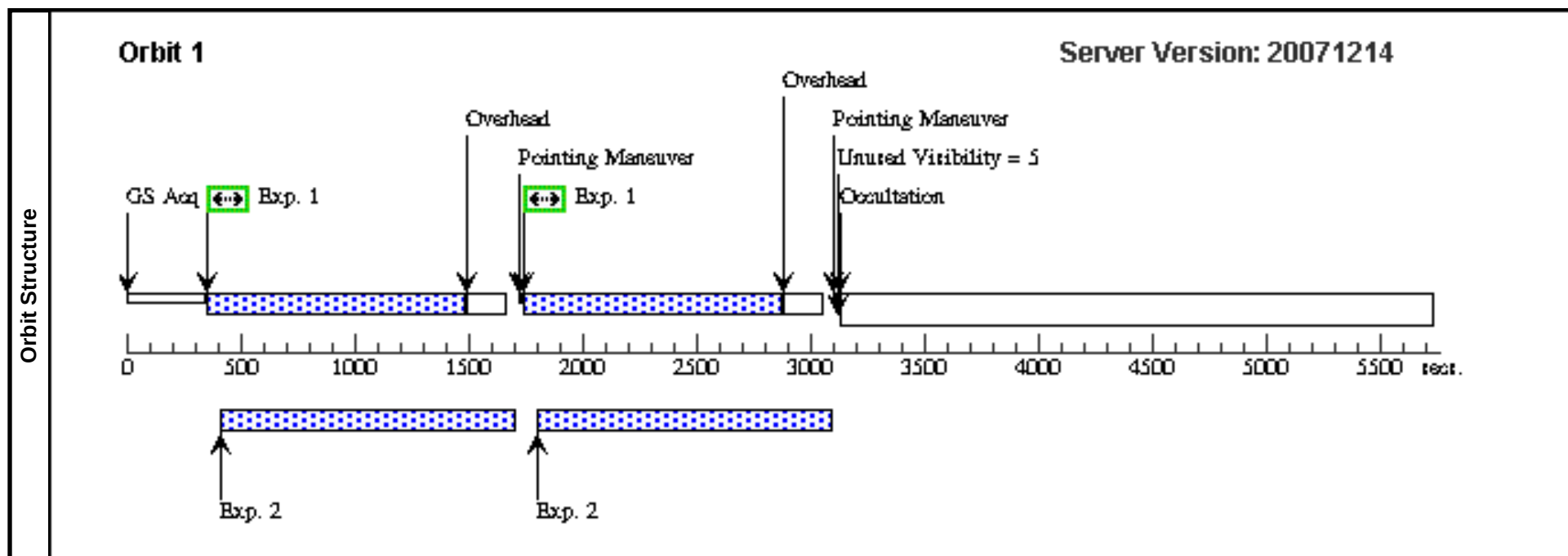
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Purpose=DITHER		Pattern Orientation=26.56505										
Number Of Points=4		Angle Between Sides=143.1301										
Point Spacing=0.559017		Center Pattern=false										
Line Spacing=0.559017												
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N	RA: 22 17 23.5422 (334.3480925d)				V=24.5+/-0.1		Reference Frame: ICRS			
		Dec: +00 18 27.10 (.30753d)										
		Equinox: J2000										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL	F336W	CR-SPLIT=NO	POS TARG -2.6667, 1.3333	Pattern 1-2 (1)	1000.0 Secs			
								Prime + Parallel Gro	[==>(Pattern 1)]		[1]	
								up 1-2	[==>(Pattern 2)]			
									[==>(Pattern 3)]		[2]	
									[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX	F160W	SAMP-SEQ=SPARS 64;		Pattern 1-2 (1)	[==>(Pattern 1)]		[1]	
							NSAMP=22	Prime + Parallel Gro	[==>(Pattern 2)]			
								up 1-2	[==>(Pattern 3)]		[2]	
									[==>(Pattern 4)]			

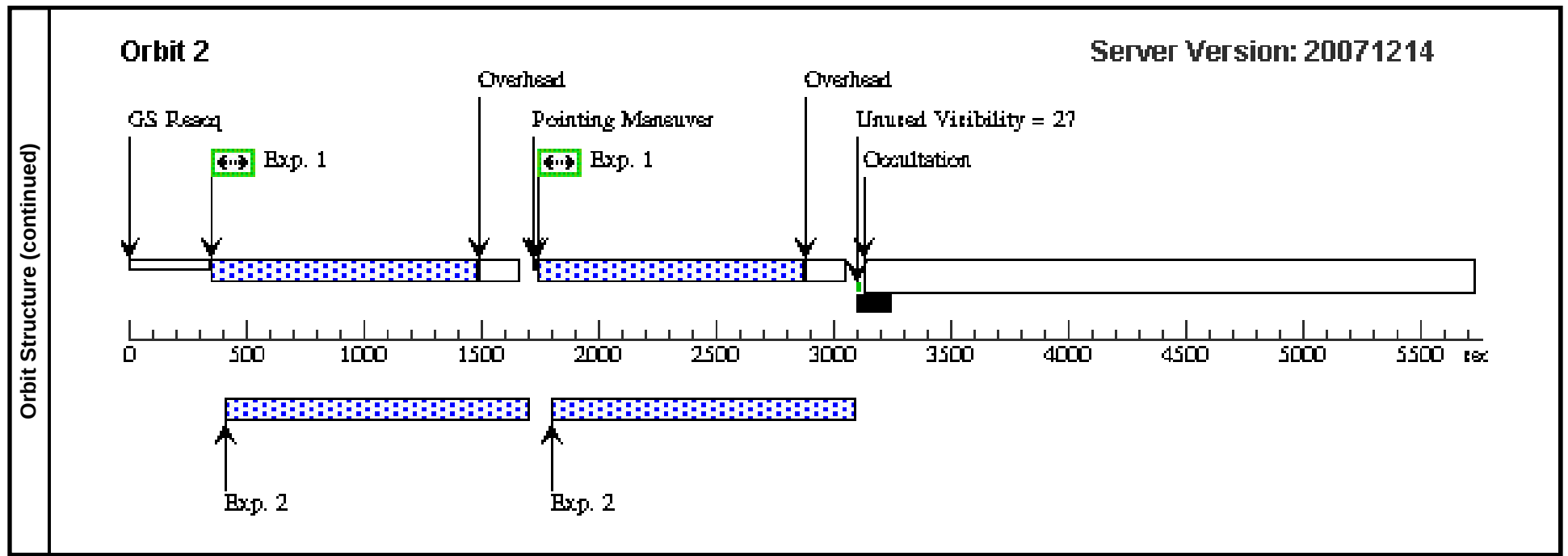




Proposal 11188 - Visit 04 - First Resolved Imaging of Escaping Lyman Continuum

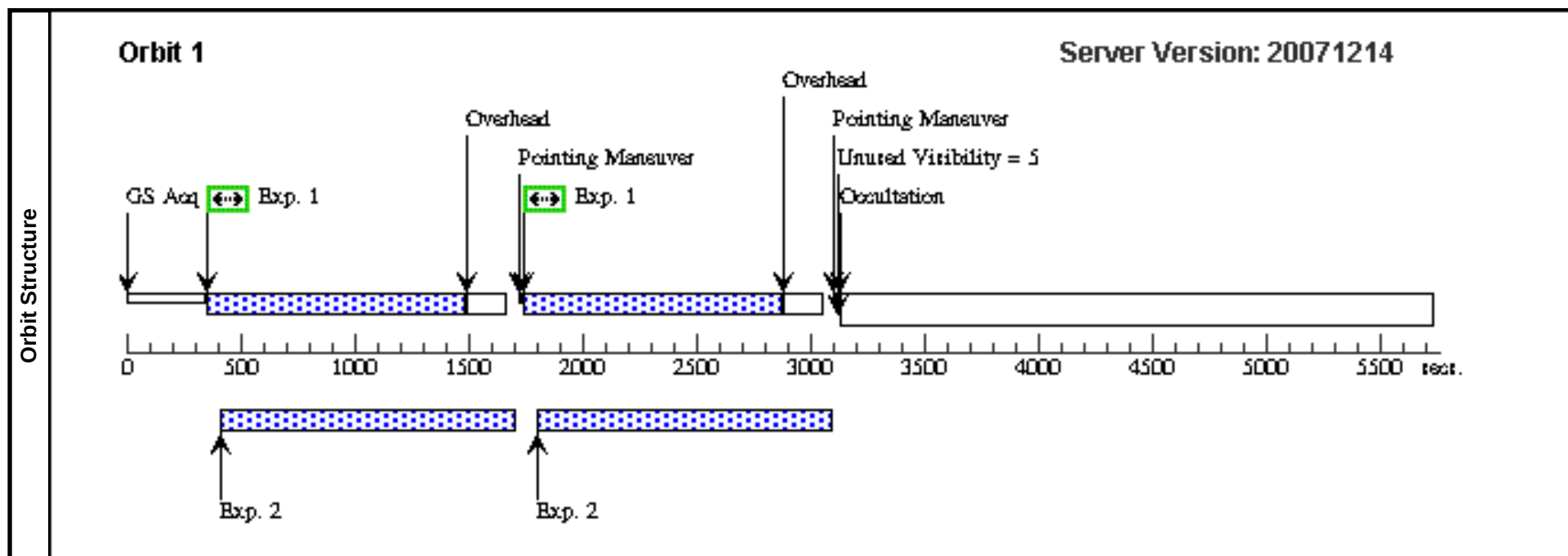
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Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
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Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG -0.6667, 2.0	Pattern 1-2 (1) Prime + Parallel Gro up 1-2	1000.0 Secs		
										[==>(Pattern 1)]		[1]
										[==>(Pattern 2)]		
										[==>(Pattern 3)]		[2]
										[==>(Pattern 4)]		
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Gro up 1-2	[==>(Pattern 1)]		[1]
									[==>(Pattern 2)]			
									[==>(Pattern 3)]		[2]	
									[==>(Pattern 4)]			

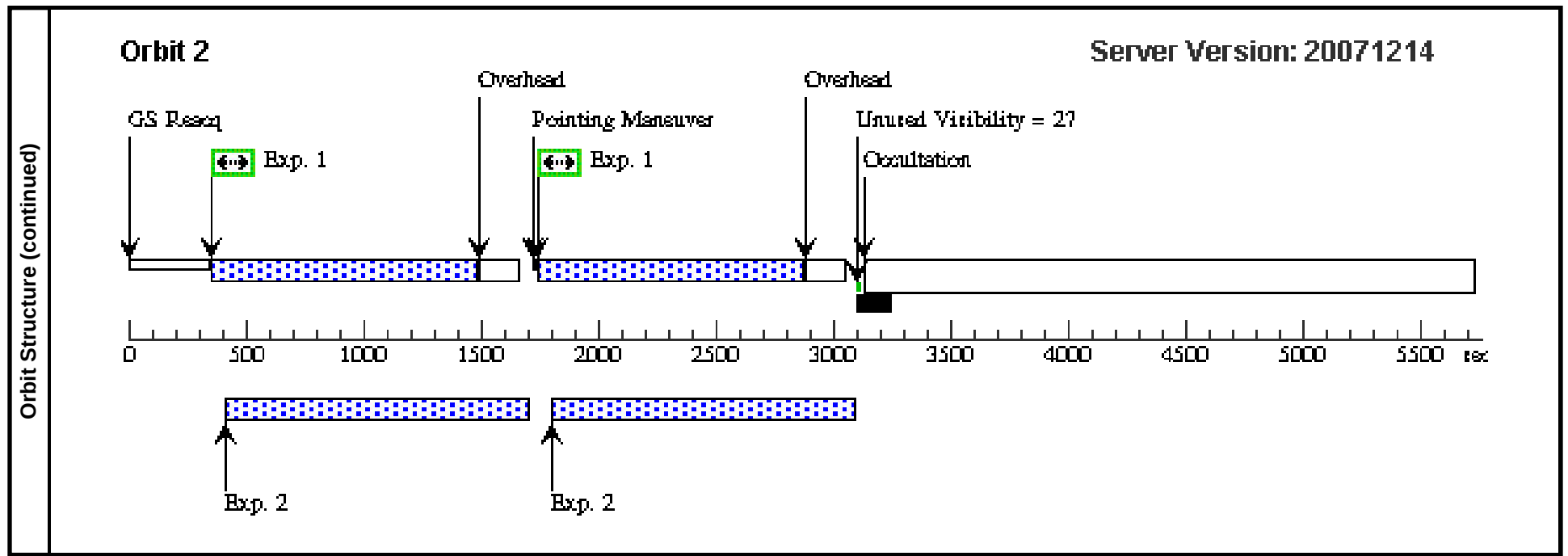




Proposal 11188 - Visit 05 - First Resolved Imaging of Escaping Lyman Continuum

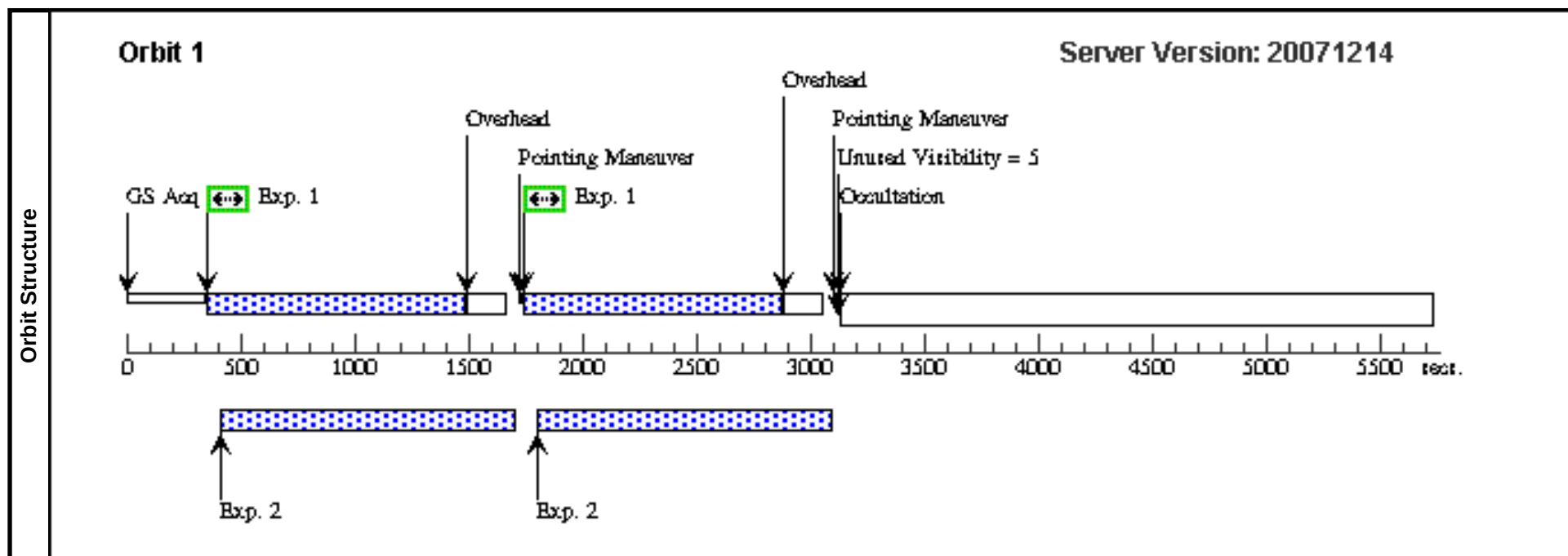
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	Special Requirements: SAME ORIENT AS 01											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
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Purpose=DITHER		Pattern Orientation=26.56505										
Number Of Points=4		Angle Between Sides=143.1301										
Point Spacing=0.559017		Center Pattern=false										
Line Spacing=0.559017												
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N	RA: 22 17 23.5422 (334.3480925d)				V=24.5+/-0.1		Reference Frame: ICRS			
		Dec: +00 18 27.10 (.30753d)										
		Equinox: J2000										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL	F336W	CR-SPLIT=NO	POS TARG 1.3333,2 .6667	Pattern 1-2 (1)	1000.0 Secs			
								Prime + Parallel Group 1-2	[==>(Pattern 1)]	[1]		
									[==>(Pattern 2)]			
									[==>(Pattern 3)]	[2]		
									[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX	F160W	SAMP-SEQ=SPARS 64;		Pattern 1-2 (1)	[==>(Pattern 1)]	[1]		
							NSAMP=22	Prime + Parallel Group 1-2	[==>(Pattern 2)]			
									[==>(Pattern 3)]	[2]		
									[==>(Pattern 4)]			

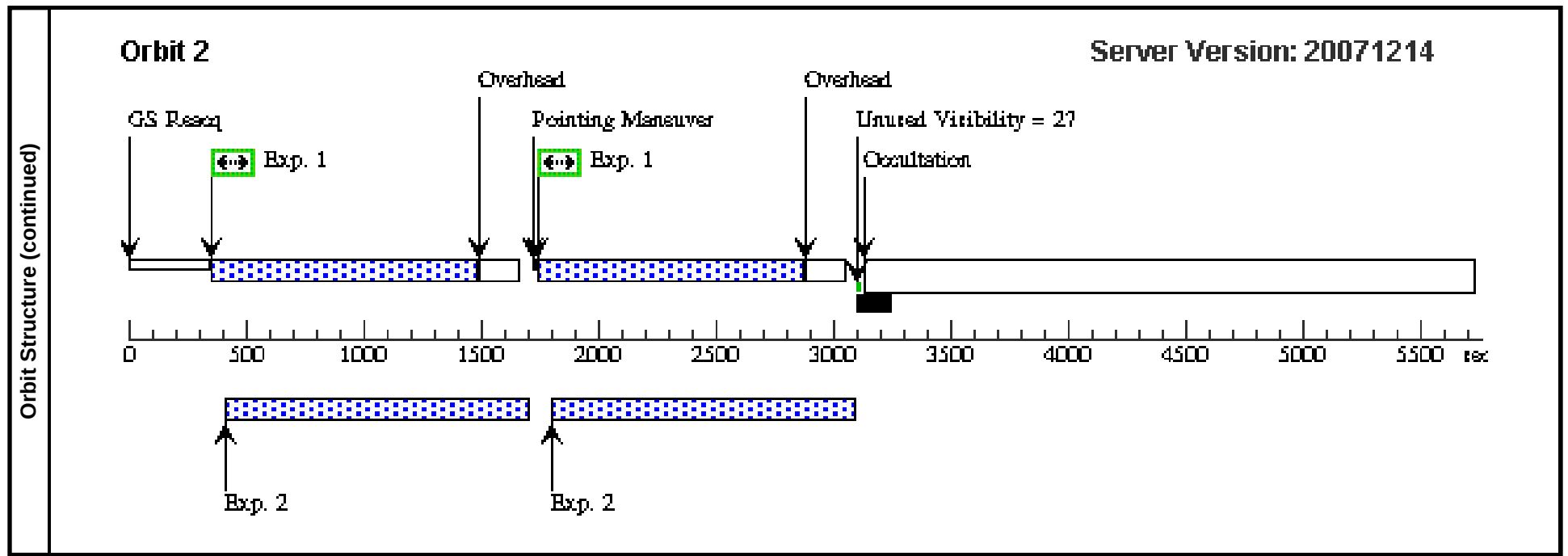




Proposal 11188 - Visit 06 - First Resolved Imaging of Escaping Lyman Continuum

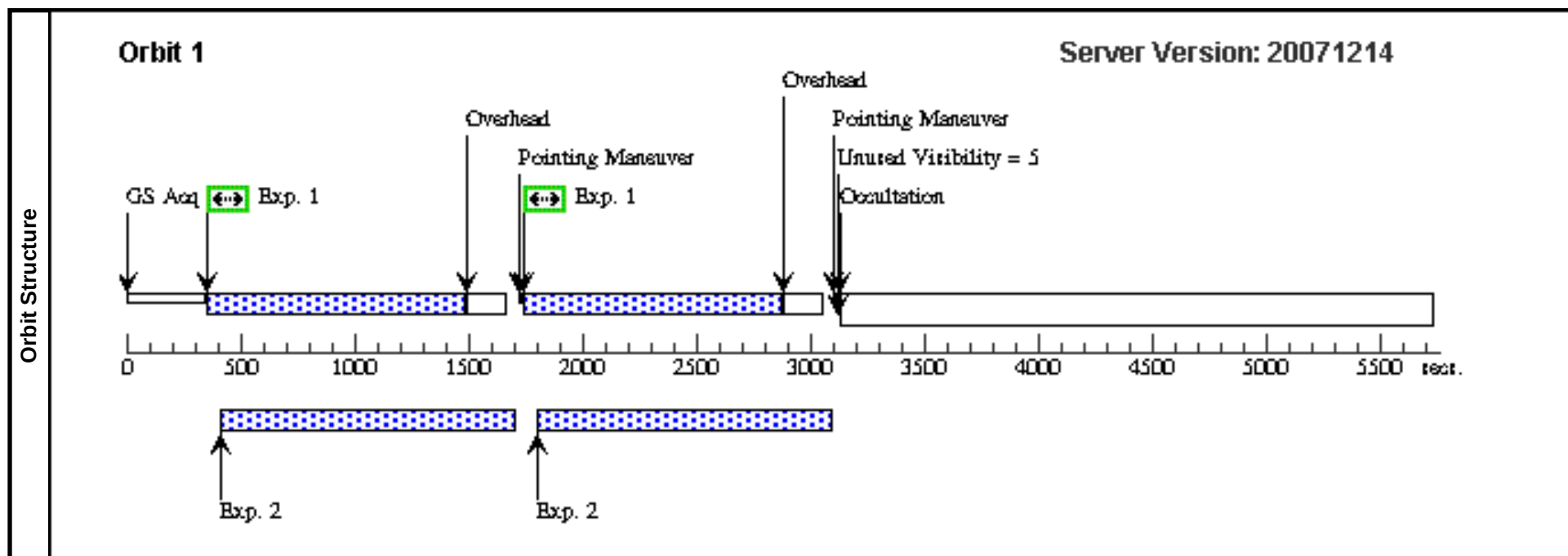
Visit	Proposal 11188, Visit 06, implementation										Fri Jan 18 07:27:59 GMT 2008		
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Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
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Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG -2.0,-0.6 667	Pattern 1-2 (1) Prime + Parallel Gro up 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Gro up 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

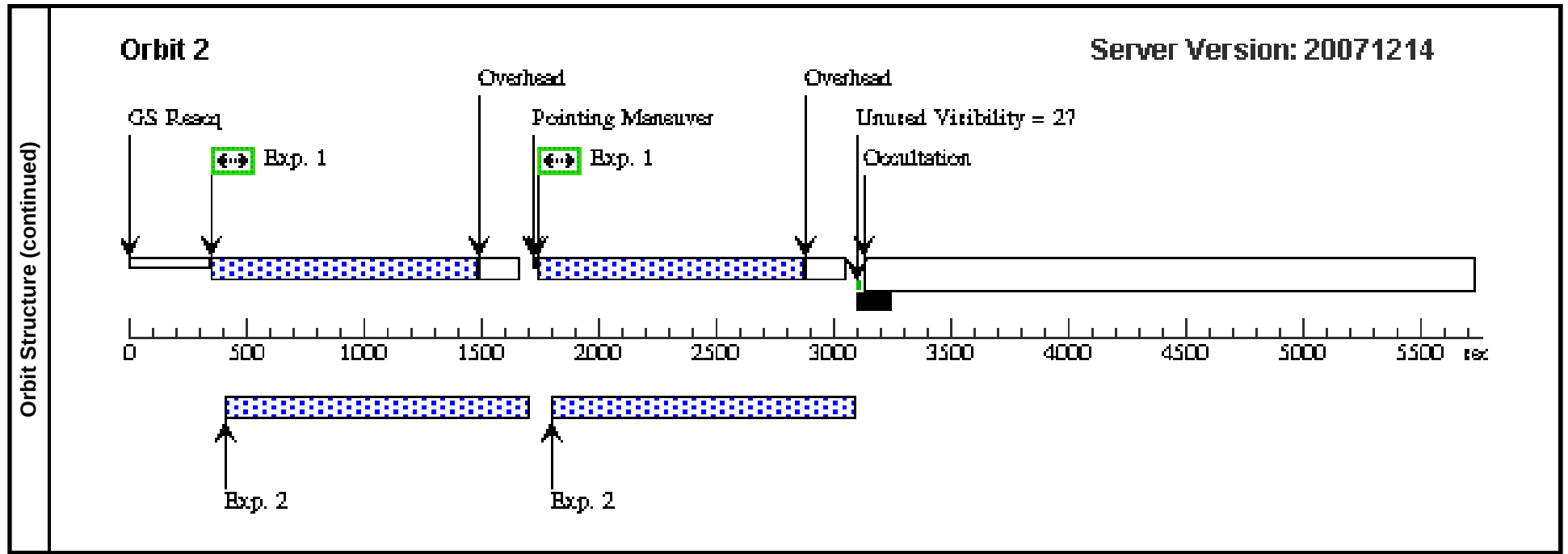




Proposal 11188 - Visit 07 - First Resolved Imaging of Escaping Lyman Continuum

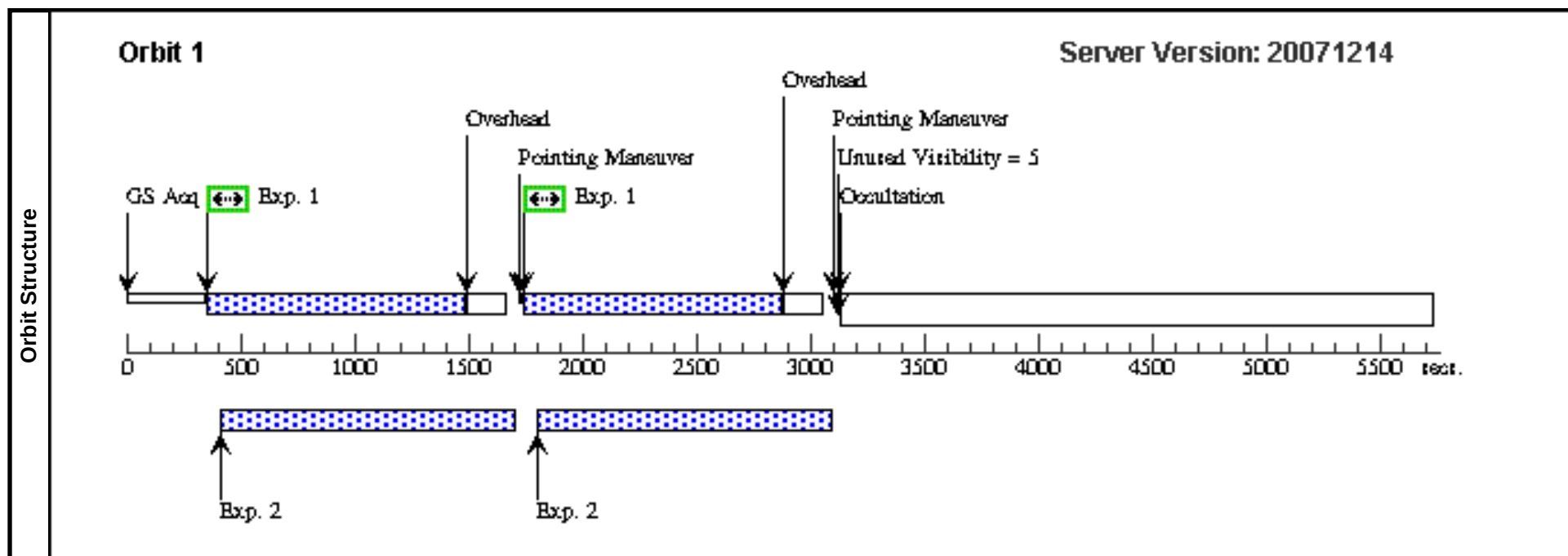
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Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
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Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO		Pattern 1-2 (1)	1000.0 Secs			
									Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1)	[==>(Pattern 1)]		[1]	
									Prime + Parallel Group 1-2	[==>(Pattern 2)]			
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

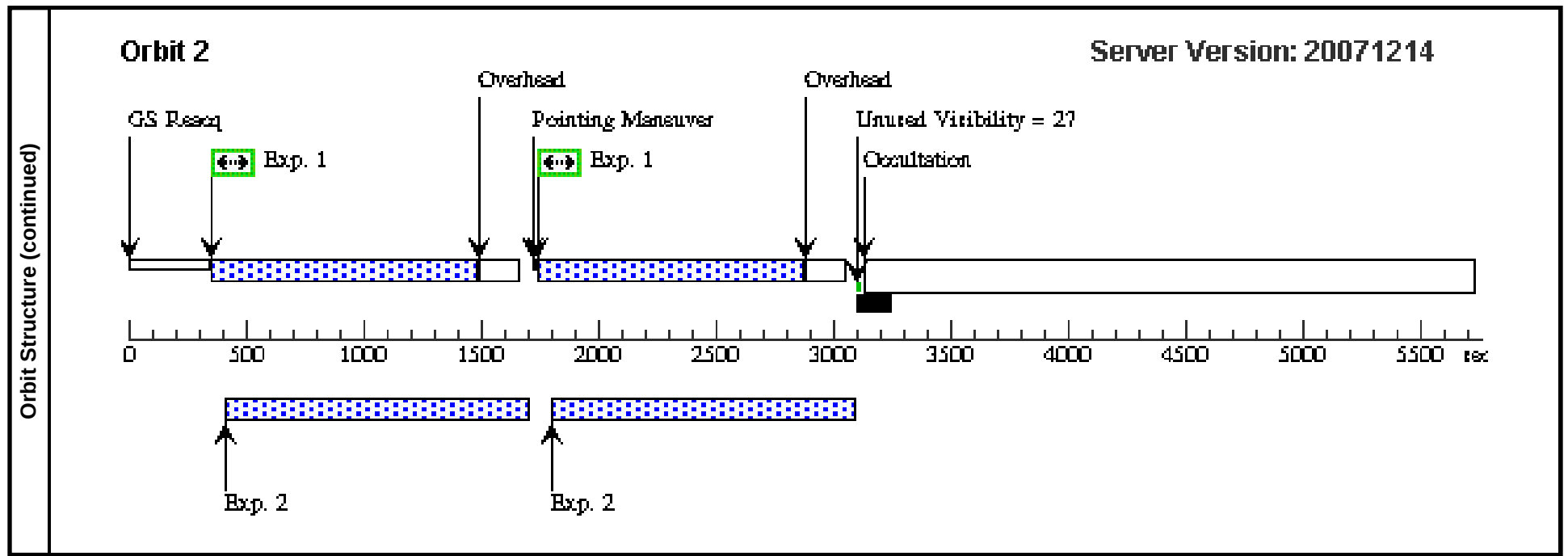




Proposal 11188 - Visit 08 - First Resolved Imaging of Escaping Lyman Continuum

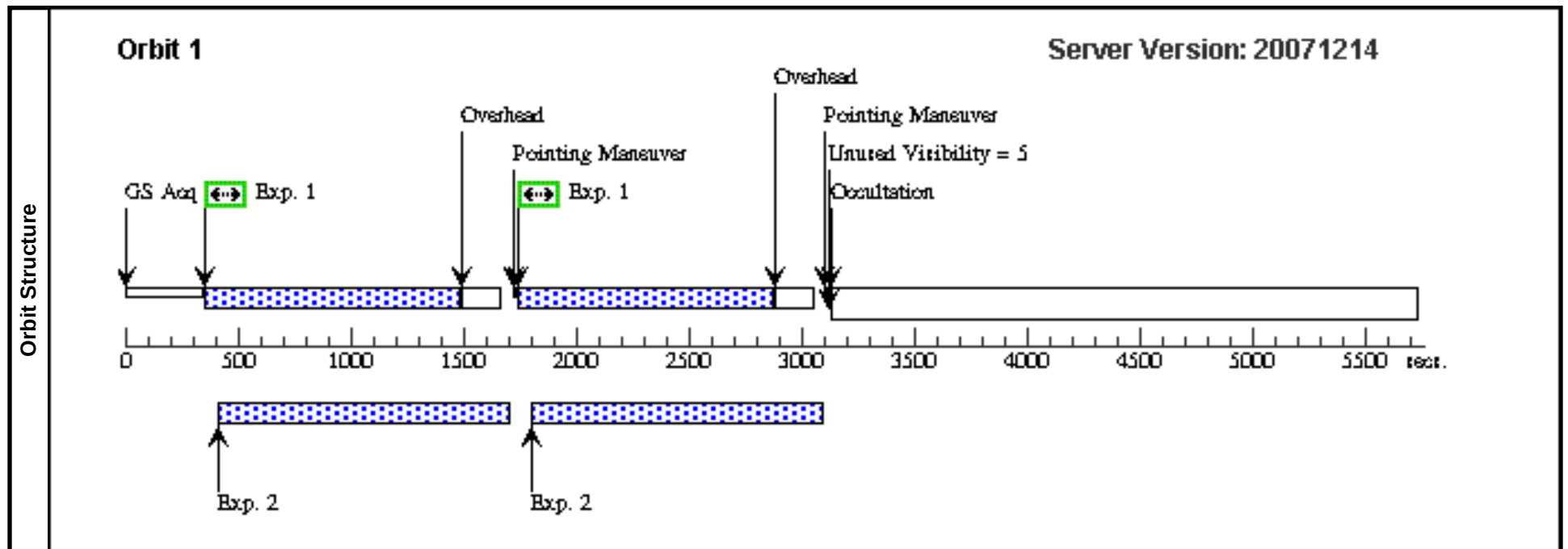
Visit	Proposal 11188, Visit 08, implementation										Fri Jan 18 07:28:00 GMT 2008		
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	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 01												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG 2.0,0.66 67	Pattern 1-2 (1) Prime + Parallel Gro up 1-2	1000.0 Secs			
										[==>(Pattern 1)]	[1]		
										[==>(Pattern 2)]			
										[==>(Pattern 3)]	[2]		
										[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Gro up 1-2	[==>(Pattern 1)]	[1]		
									[==>(Pattern 2)]				
									[==>(Pattern 3)]	[2]			
									[==>(Pattern 4)]				

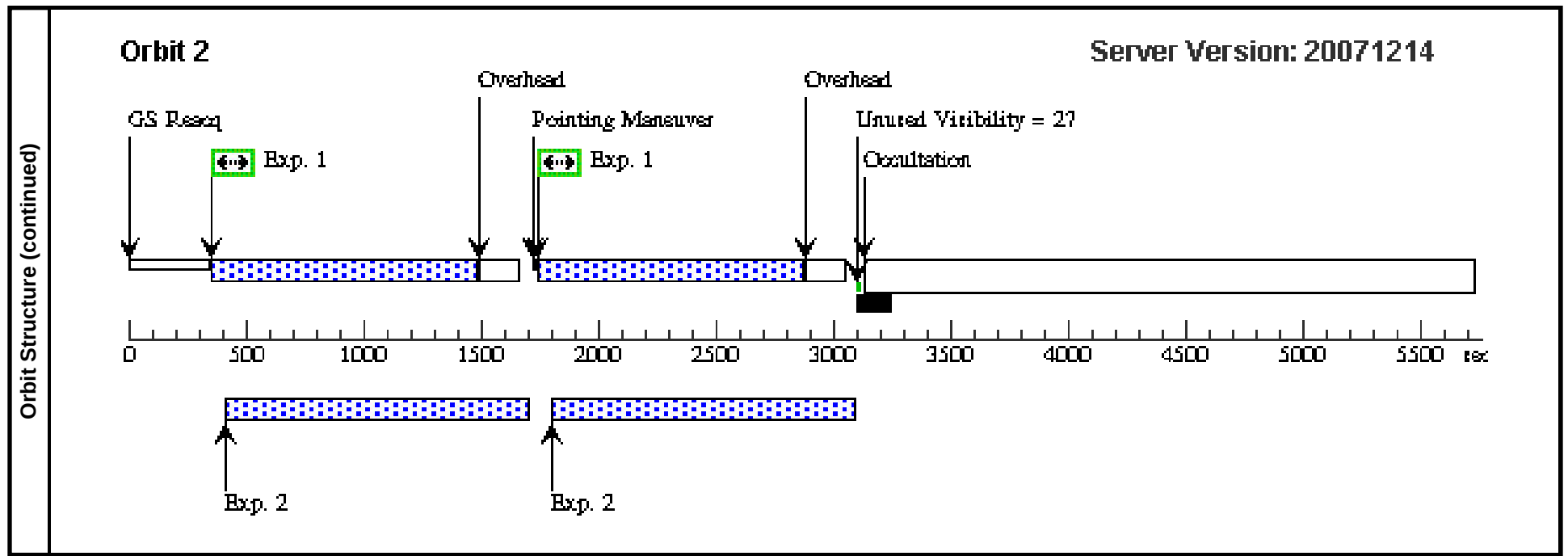




Proposal 11188 - Visit 09 - First Resolved Imaging of Escaping Lyman Continuum

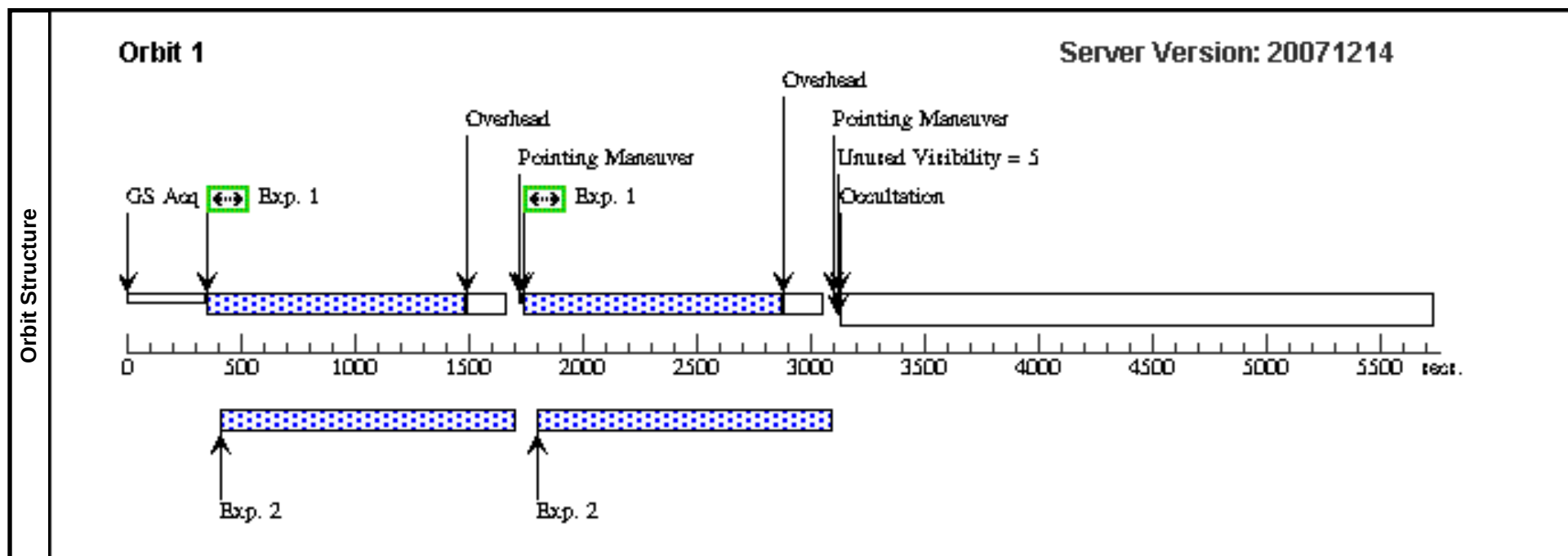
Visit	Proposal 11188, Visit 09, implementation										Fri Jan 18 07:28:01 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 01												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG -1.3333, -2.6667	Pattern 1-2 (1) Prime + Parallel Gro up 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F160W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Gro up 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

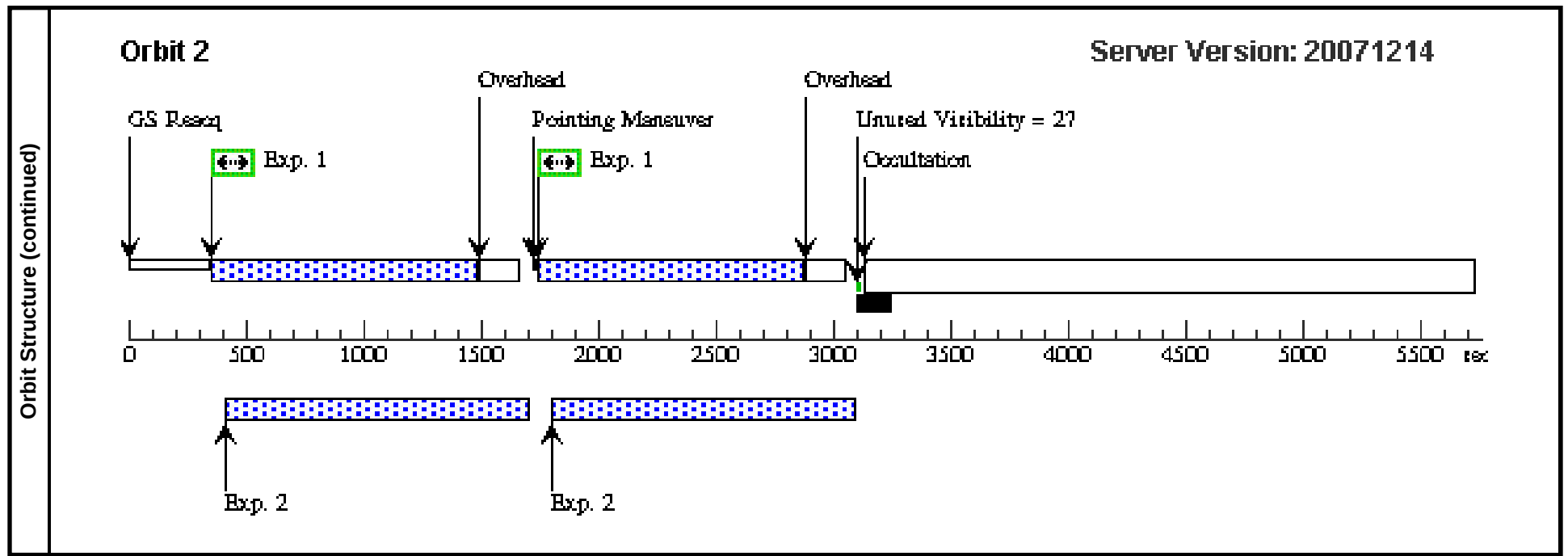




Proposal 11188 - Visit 10 - First Resolved Imaging of Escaping Lyman Continuum

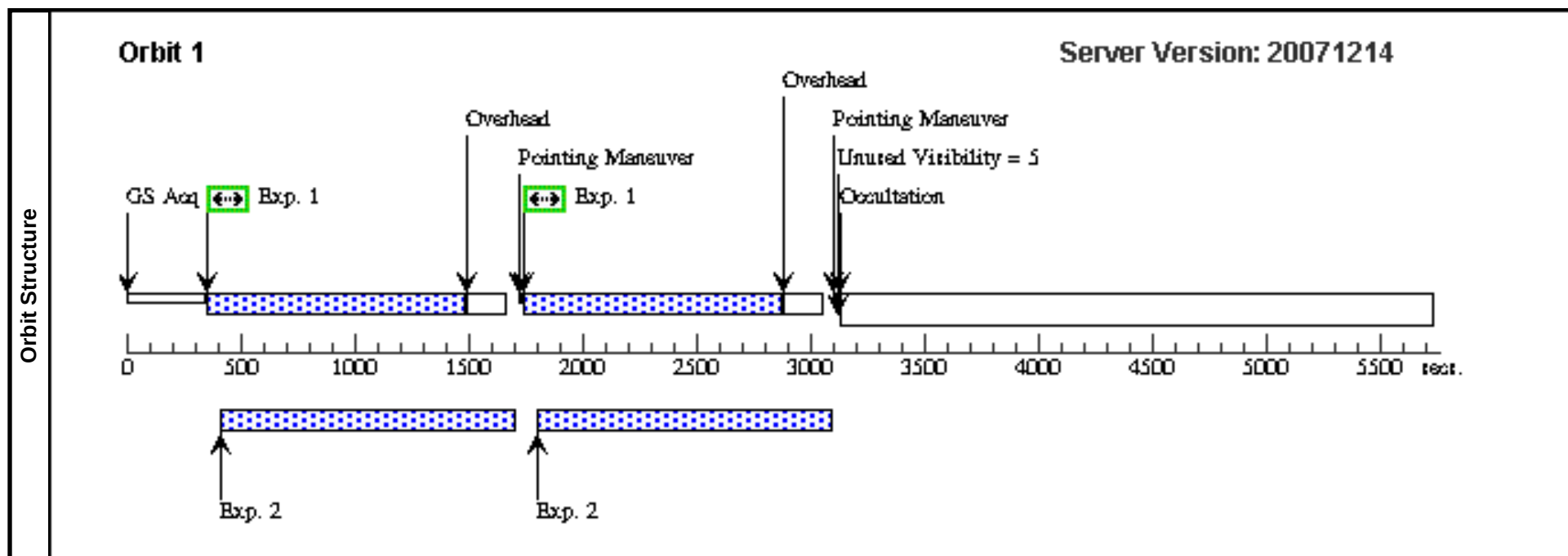
Visit	Proposal 11188, Visit 10, implementation Fri Jan 18 07:28:01 GMT 2008									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2, NIC3 Special Requirements: SAME ORIENT AS 01									
Patterns	#	Primary Pattern				Secondary Pattern				Exposures
	(1)	Pattern Type=WFPC2-BOX Coordinate Frame=POS-TARG Purpose=DITHER Pattern Orientation=26.56505 Number Of Points=4 Angle Between Sides=143.1301 Point Spacing=0.559017 Center Pattern=false Line Spacing=0.559017								(1-2)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SSA22A-N	RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000		V=24.5+/-0.1	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL	F336W	CR-SPLIT=NO	POS TARG 0.6667,-2.0	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs	
									[==>(Pattern 1)]	
									[==>(Pattern 2)]	[1]
									[==>(Pattern 3)]	
									[==>(Pattern 4)]	[2]
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX	F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]	
									[==>(Pattern 2)]	[1]
									[==>(Pattern 3)]	
									[==>(Pattern 4)]	[2]

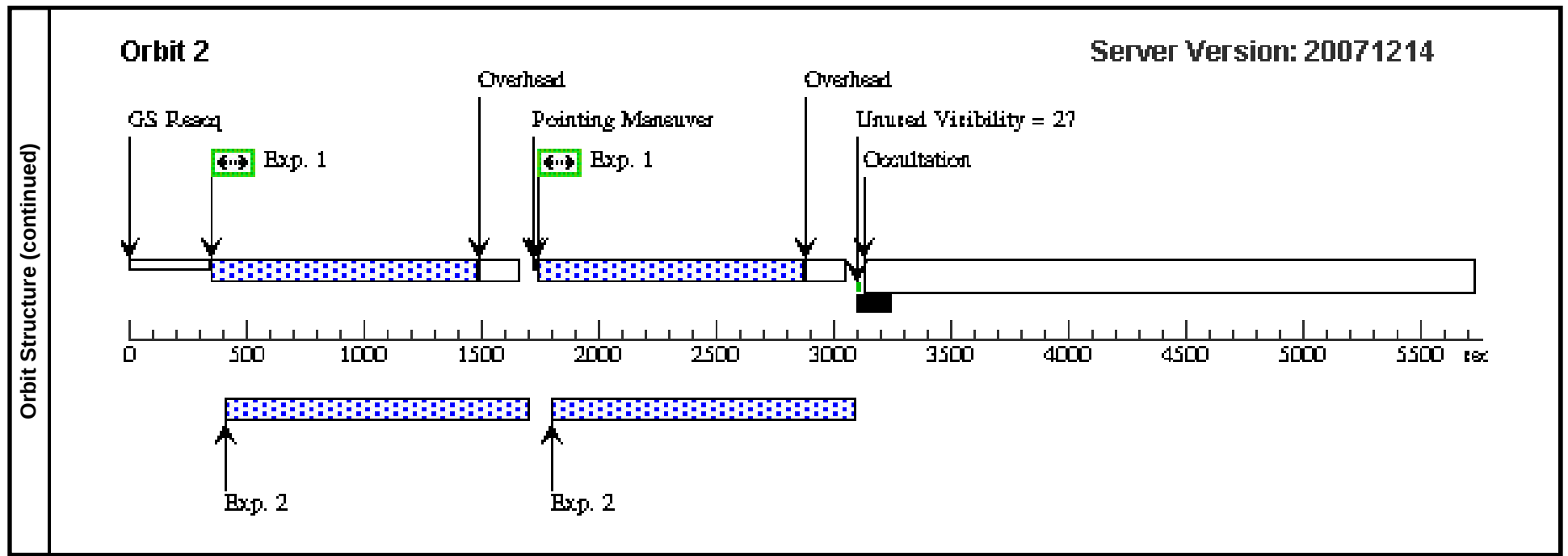




Proposal 11188 - Visit 11 - First Resolved Imaging of Escaping Lyman Continuum

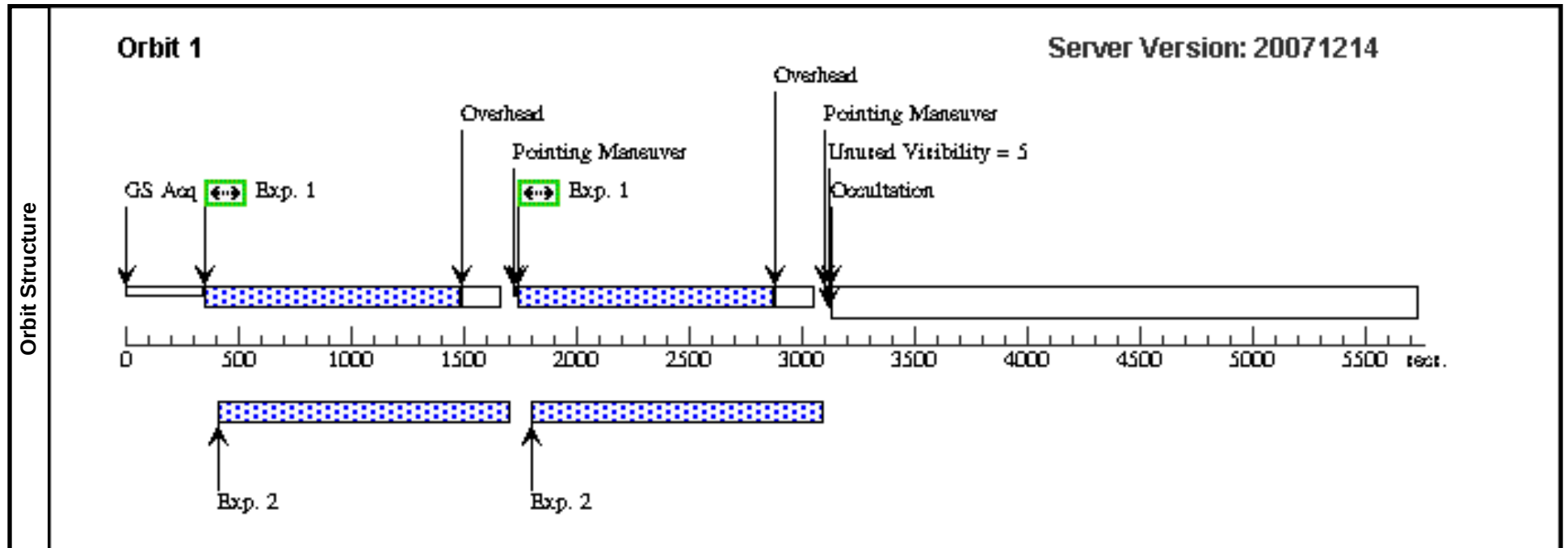
Visit	Proposal 11188, Visit 11, implementation										Fri Jan 18 07:28:02 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 01												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG 2.6667,-1.3333	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F160W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

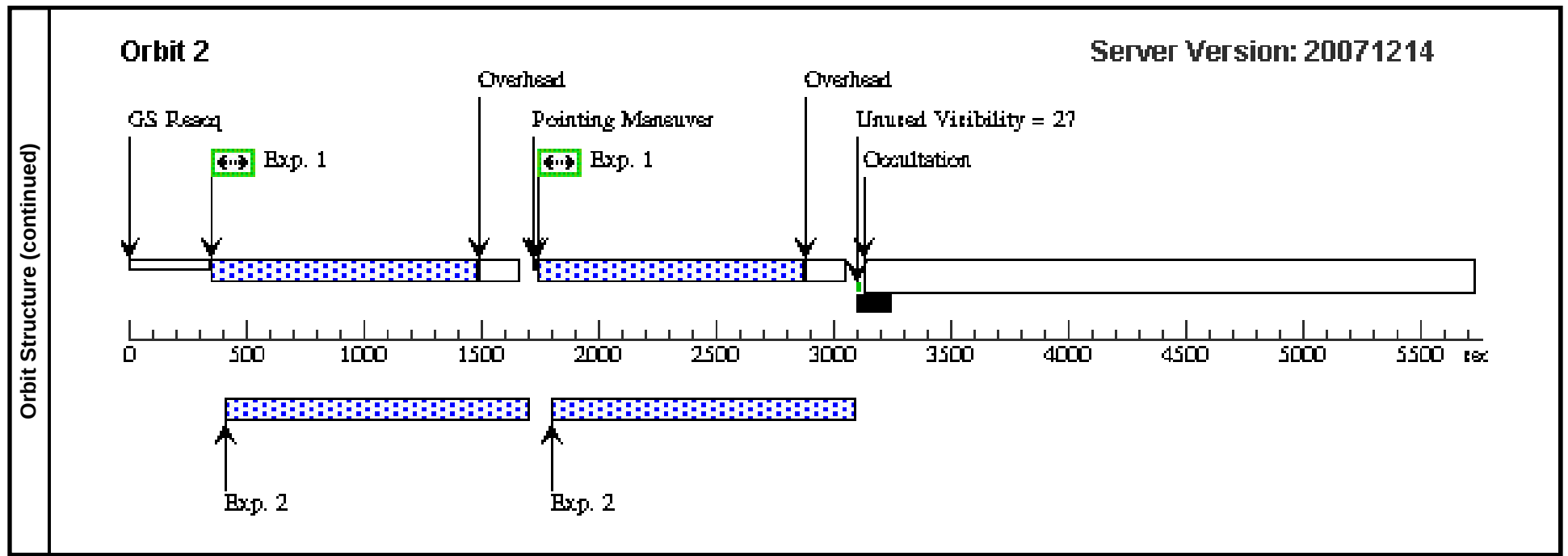




Proposal 11188 - Visit 12 - First Resolved Imaging of Escaping Lyman Continuum

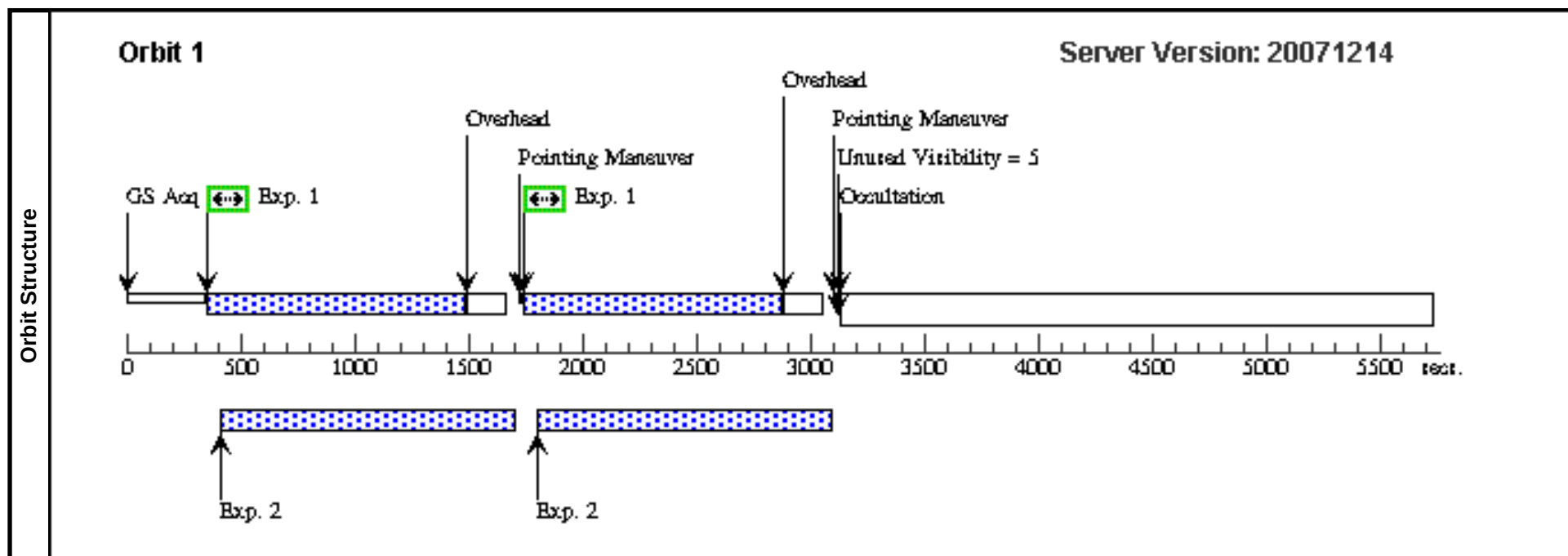
Visit	Proposal 11188, Visit 12, implementation										Fri Jan 18 07:28:02 GMT 2008
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: WFPC2, NIC3										
	Special Requirements: SAME ORIENT AS 01										
Patterns	#	Primary Pattern					Secondary Pattern				Exposures
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false						(1-2)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	SSA22A-N	RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL	F336W	CR-SPLIT=NO	POS TARG 3.3333,-3.3333	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs		
									[==>(Pattern 1)]		[1]
									[==>(Pattern 2)]		
									[==>(Pattern 3)]		[2]
									[==>(Pattern 4)]		
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX	F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)] [==>(Pattern 2)]		[1]
									[==>(Pattern 3)] [==>(Pattern 4)]		[2]

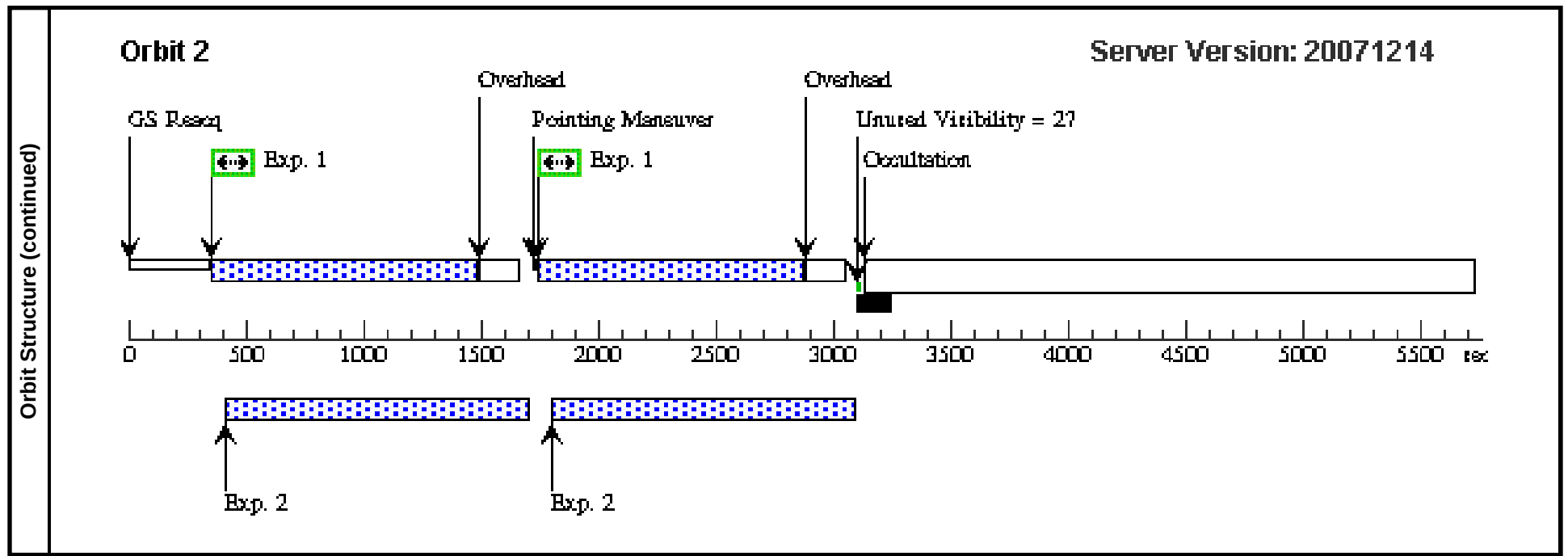




Proposal 11188 - Visit 13 - First Resolved Imaging of Escaping Lyman Continuum

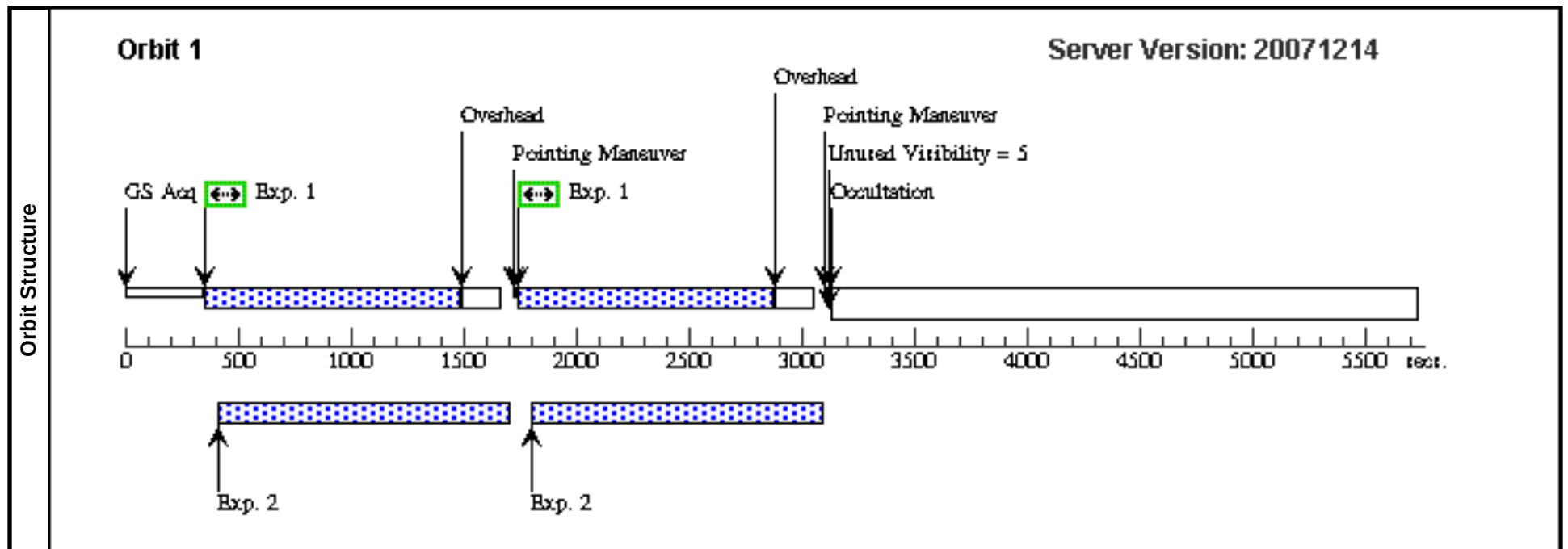
Visit	Proposal 11188, Visit 13, implementation										Fri Jan 18 07:28:02 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 01												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	SSA22A-N		RA: 22 17 23.5422 (334.3480925d) Dec: +00 18 27.10 (.30753d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(1) SSA22A-N	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG -3.3333, 3.3333	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(1) SSA22A-N	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

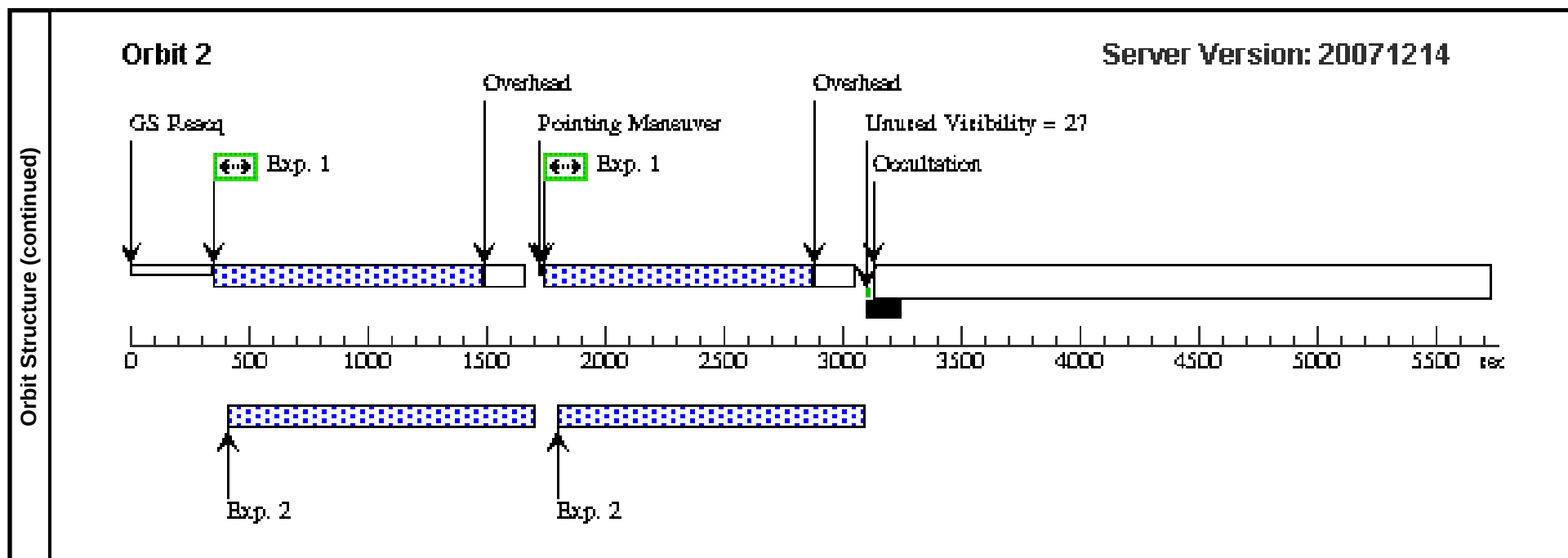




Proposal 11188 - Visit 14 - First Resolved Imaging of Escaping Lyman Continuum

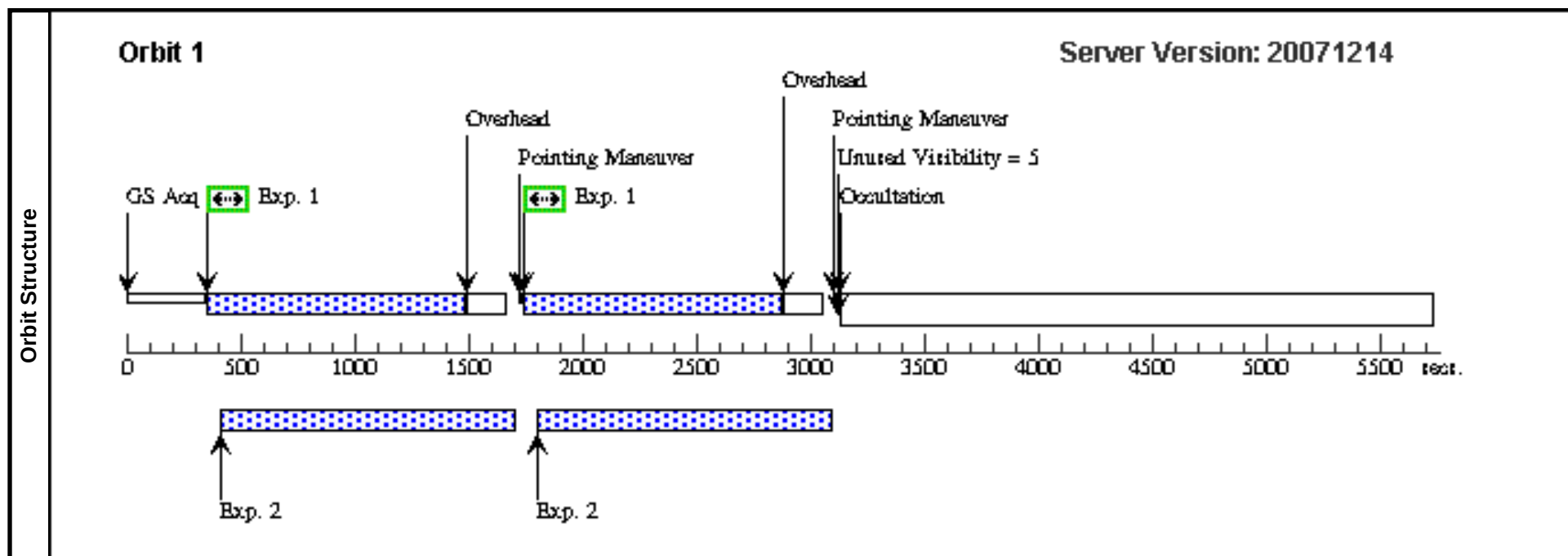
Visit	Proposal 11188, Visit 14, implementation										Fri Jan 18 07:28:03 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 02												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SSA22A-S		RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG -2.6667, 1.3333	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX		F160W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

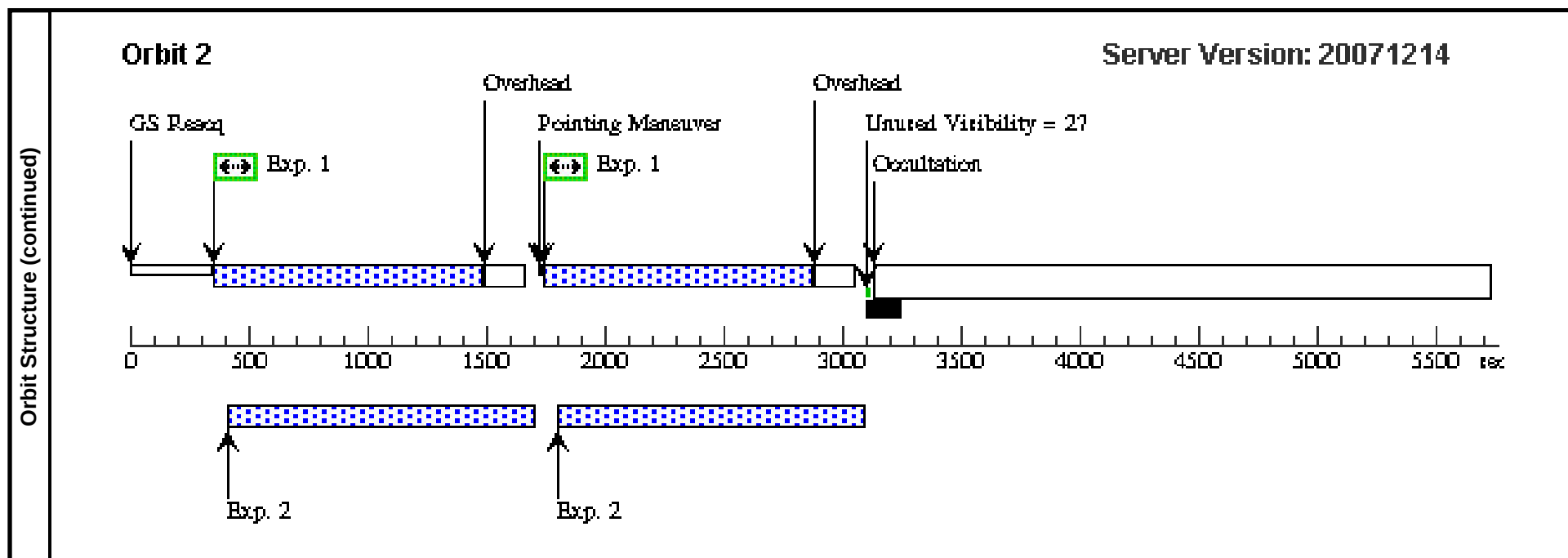




Proposal 11188 - Visit 15 - First Resolved Imaging of Escaping Lyman Continuum

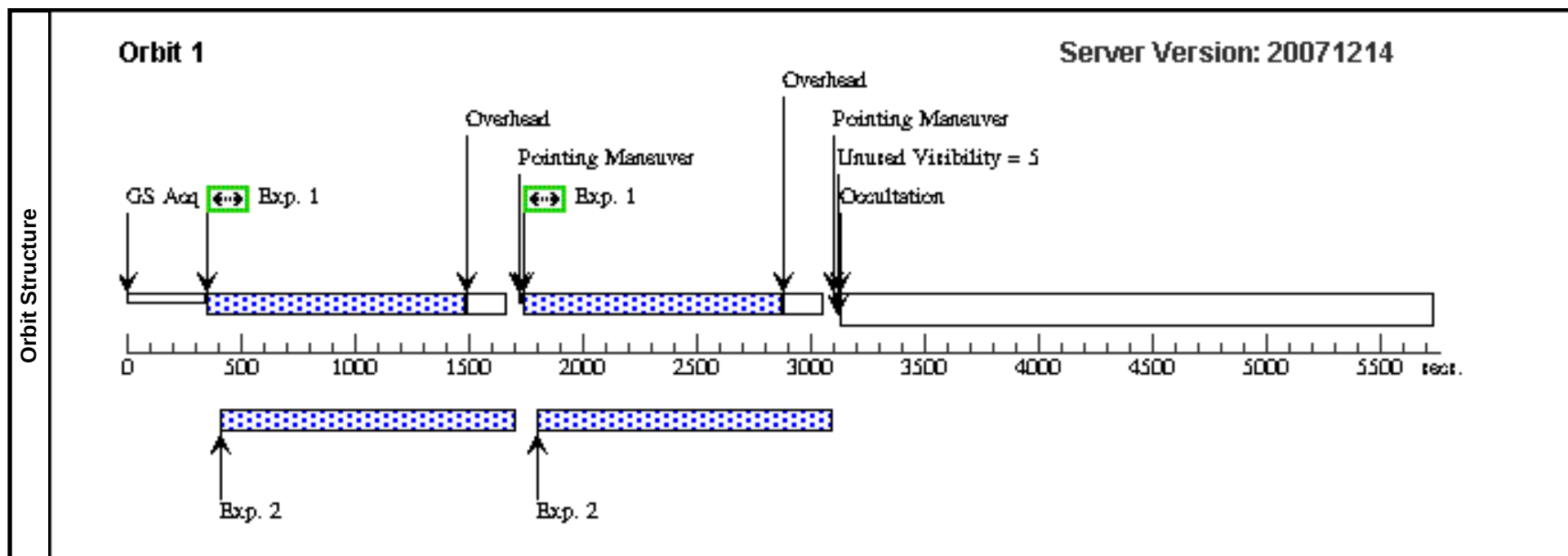
Visit	Proposal 11188, Visit 15, implementation										Fri Jan 18 07:28:04 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 02												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SSA22A-S		RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG -1.333,-2.6667	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

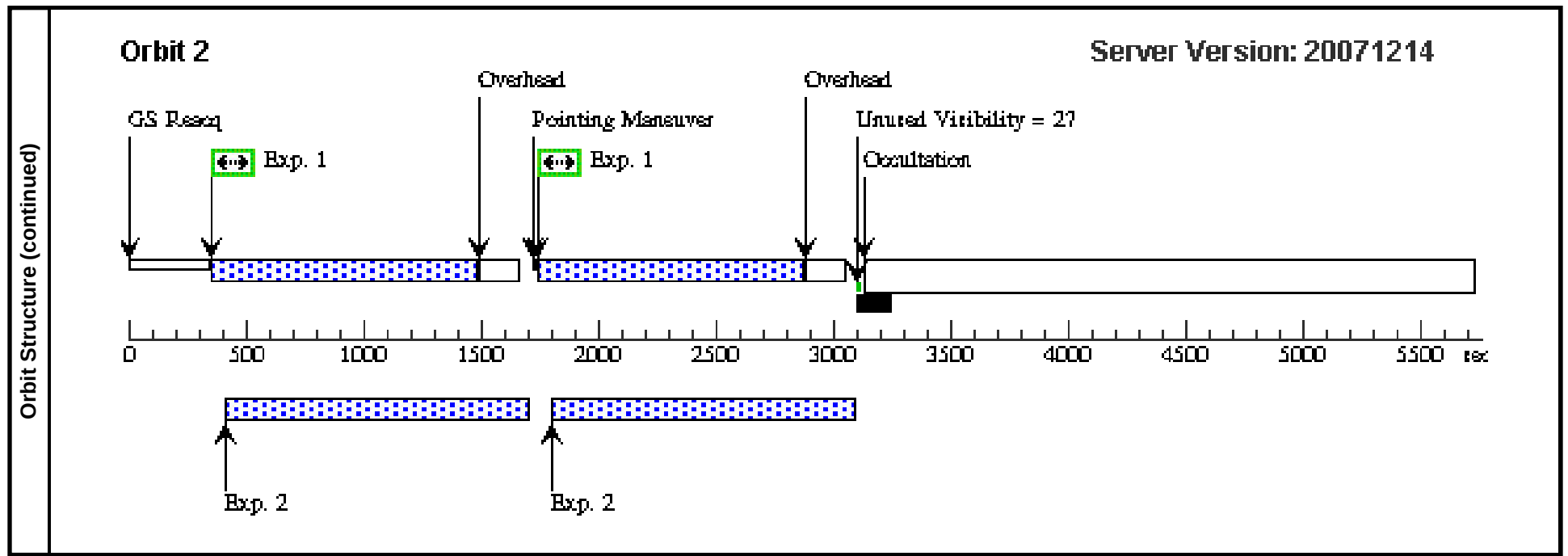




Proposal 11188 - Visit 16 - First Resolved Imaging of Escaping Lyman Continuum

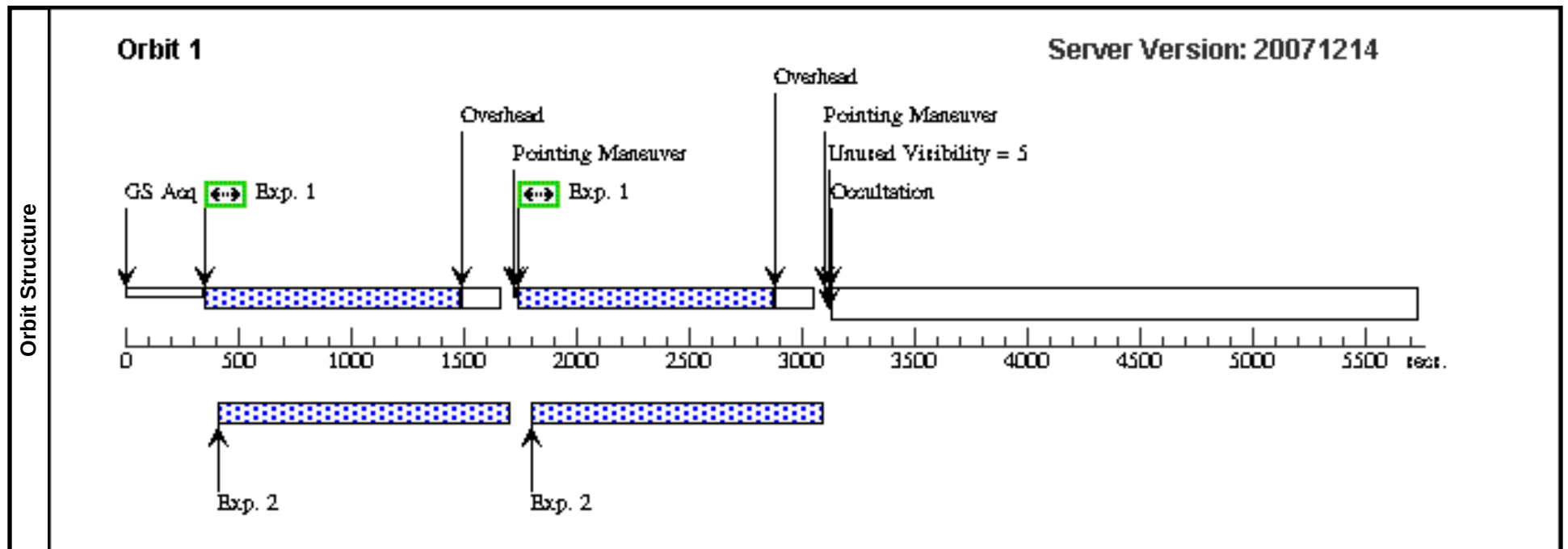
Visit	Proposal 11188, Visit 16, implementation										Fri Jan 18 07:28:05 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 02												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SSA22A-S		RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG 1.3333,2 .6667	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

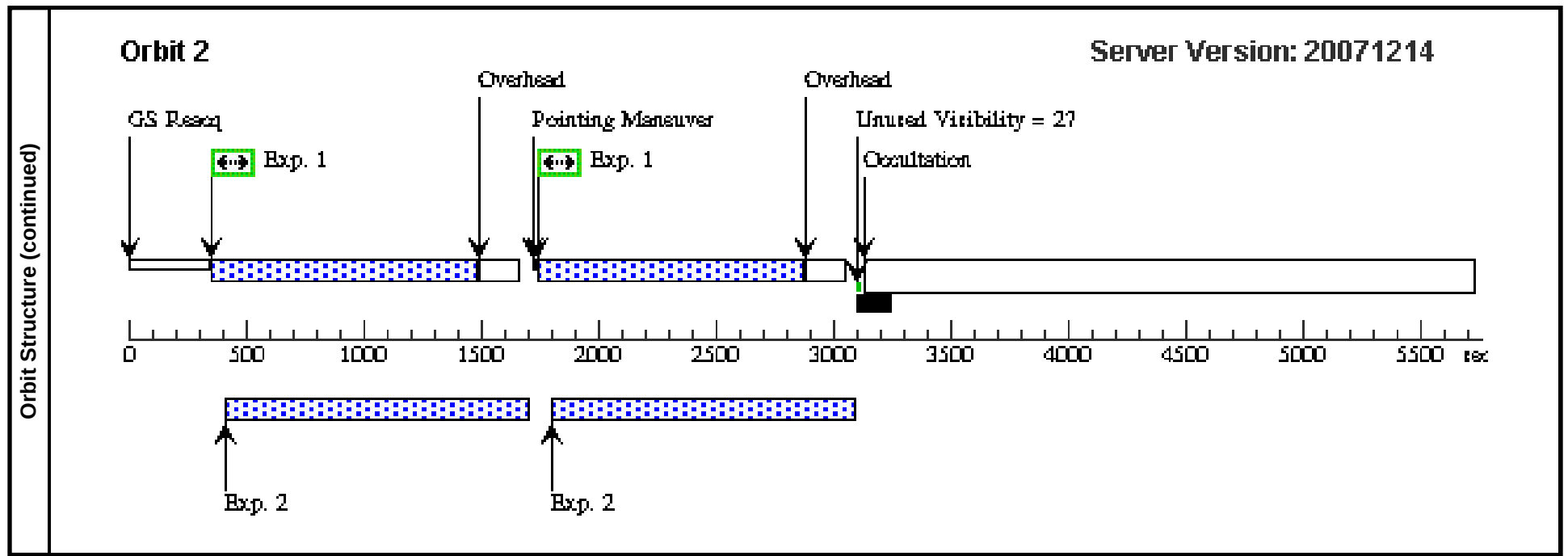




Proposal 11188 - Visit 17 - First Resolved Imaging of Escaping Lyman Continuum

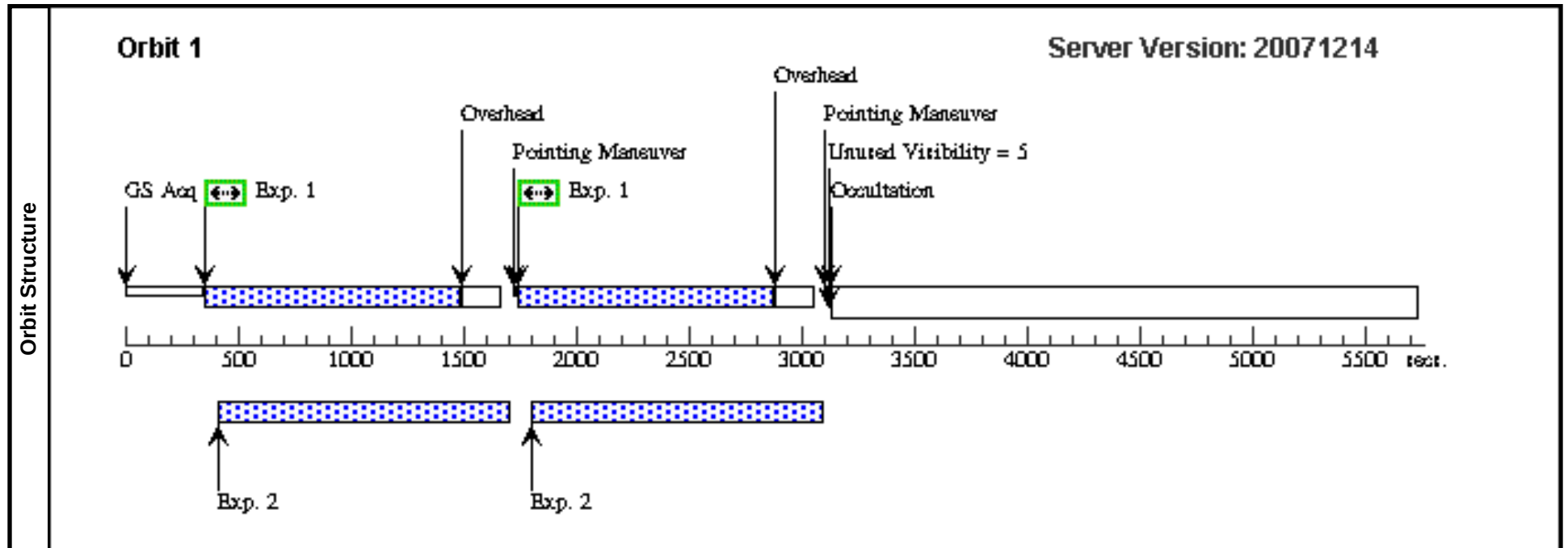
Visit	Proposal 11188, Visit 17, implementation										Fri Jan 18 07:28:05 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 02												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SSA22A-S		RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG 2.6667,-1.3333	Pattern 1-2 (1) Prime + Parallel Group 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX		F160W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

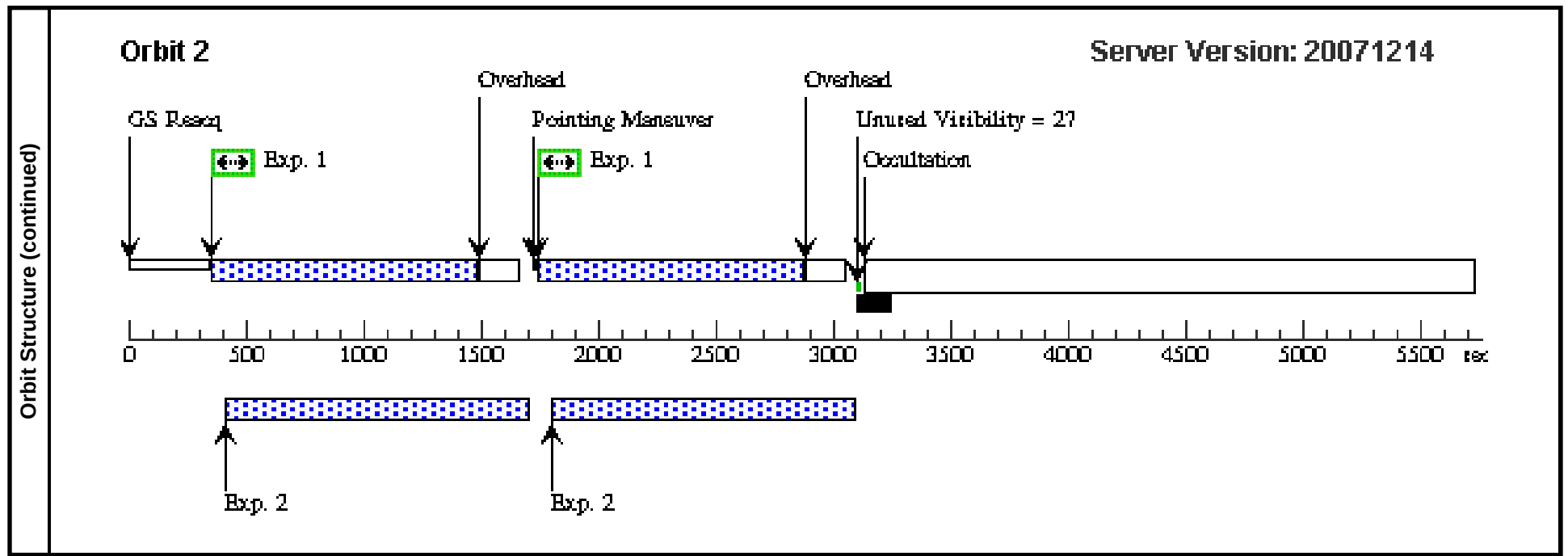




Proposal 11188 - Visit 18 - First Resolved Imaging of Escaping Lyman Continuum

Visit	Proposal 11188, Visit 18, implementation										Fri Jan 18 07:28:05 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 02												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SSA22A-S		RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO		Pattern 1-2 (1)	1000.0 Secs			
									Prime + Parallel Group 1-2	[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1)	[==>(Pattern 1)]		[1]	
								Prime + Parallel Group 1-2	[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				





Proposal 11188 - Visit 19 - First Resolved Imaging of Escaping Lyman Continuum

Visit	Proposal 11188, Visit 19, implementation										Fri Jan 18 07:28:06 GMT 2008		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFPC2, NIC3												
	Special Requirements: SAME ORIENT AS 02												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(1)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559017 Line Spacing=0.559017			Coordinate Frame=POS-TARG Pattern Orientation=26.56505 Angle Between Sides=143.1301 Center Pattern=false							(1-2)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	SSA22A-S		RA: 22 17 22.2760 (334.3428167d) Dec: +00 16 24.80 (.27356d) Equinox: J2000				V=24.5+/-0.1		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) SSA22A-S	WFPC2, IMAGE, WFALL		F336W	CR-SPLIT=NO	POS TARG 2.0,0.66 67	Pattern 1-2 (1) Prime + Parallel Gro up 1-2	1000.0 Secs			
										[==>(Pattern 1)]		[1]	
										[==>(Pattern 2)]			
										[==>(Pattern 3)]		[2]	
										[==>(Pattern 4)]			
	2		(2) SSA22A-S	NIC3, MULTIACCUM, NIC3-FIX		F110W	SAMP-SEQ=SPARS 64; NSAMP=22		Pattern 1-2 (1) Prime + Parallel Gro up 1-2	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]				
									[==>(Pattern 3)]		[2]		
									[==>(Pattern 4)]				

