



10826 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Cycle: 15, 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>
11	(6) RXJ1415.1+3612-POS2	ACS/WFC	2	12-Mar-2007 21:08:59.0	yes
12	(6) RXJ1415.1+3612-POS2	ACS/WFC	2	12-Mar-2007 21:09:05.0	yes
01	(7) MS1610.4+6616-POS1W	WFPC2	3	12-Mar-2007 21:09:11.0	yes
02	(7) MS1610.4+6616-POS1W	WFPC2	3	12-Mar-2007 21:09:22.0	yes
03	(7) MS1610.4+6616-POS1W	WFPC2	3	12-Mar-2007 21:09:29.0	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>
04	(7) MS1610.4+6616-POS1W	WFPC2	3	12-Mar-2007 21:09:36.0	yes
05	(8) MS1610.4+6616-POS2W	WFPC2	3	12-Mar-2007 21:09:43.0	yes
06	(8) MS1610.4+6616-POS2W	WFPC2	3	12-Mar-2007 21:09:49.0	yes
07	(8) MS1610.4+6616-POS2W	WFPC2	3	12-Mar-2007 21:09:55.0	yes
08	(8) MS1610.4+6616-POS2W	WFPC2	3	12-Mar-2007 21:10:05.0	yes

28 Total Orbits Used

ABSTRACT

Detailed studies of nearby galaxies ($z < 0.05$) show that galaxies have very complex histories of formation and evolution involving mergers, bursts of star formation, and morphological changes. Even so, the global properties of the galaxies (radii, luminosities, rotation velocities, velocity dispersions, and absorption line strengths) follow a number of very tight (empirical) scaling relations, e.g. the Tully-Fisher relation and the Fundamental Plane (FP). We use the scaling relations plus quantitative morphological measures for galaxy clusters up to $z=1$ to constrain models for galaxy evolution. Here we request 24 orbits to obtain ACS imaging of the remaining three clusters in our sample at $z \sim 0.7-1.0$. High resolution imaging of the clusters is critical for our study of star formation histories and structural evolution in dense environments since $z < 1$. We have previously obtained deep spectroscopic observations of the clusters with Gemini. The data will provide samples large enough to establish the slope of the FP for each cluster. With multiple clusters at similar redshifts, we can probe evolutionary differences within a single epoch in order to decouple changes due to different environments. Our two other high- z clusters exhibit different chemical enrichment histories, which we argue are due to the different merging histories of these clusters.

OBSERVING DESCRIPTION

This phaseII has been updated to use WFPC2 for a program that originally used ACS/WFC. The original program was for three galaxy clusters, 2 fields in each. The revised WFPC2 are for two fields in one cluster MS1610.4+6616. The fields are placed and oriented such that the overlap with

already obtained ground-based observations are optimized. All observations are obtained in F702W. Other orientations are possible with small changes to the target coordinates. If the current orientations pose scheduling difficulties, please contact the PI for info on other possible orientations (and the adjusted target coordinates for these).

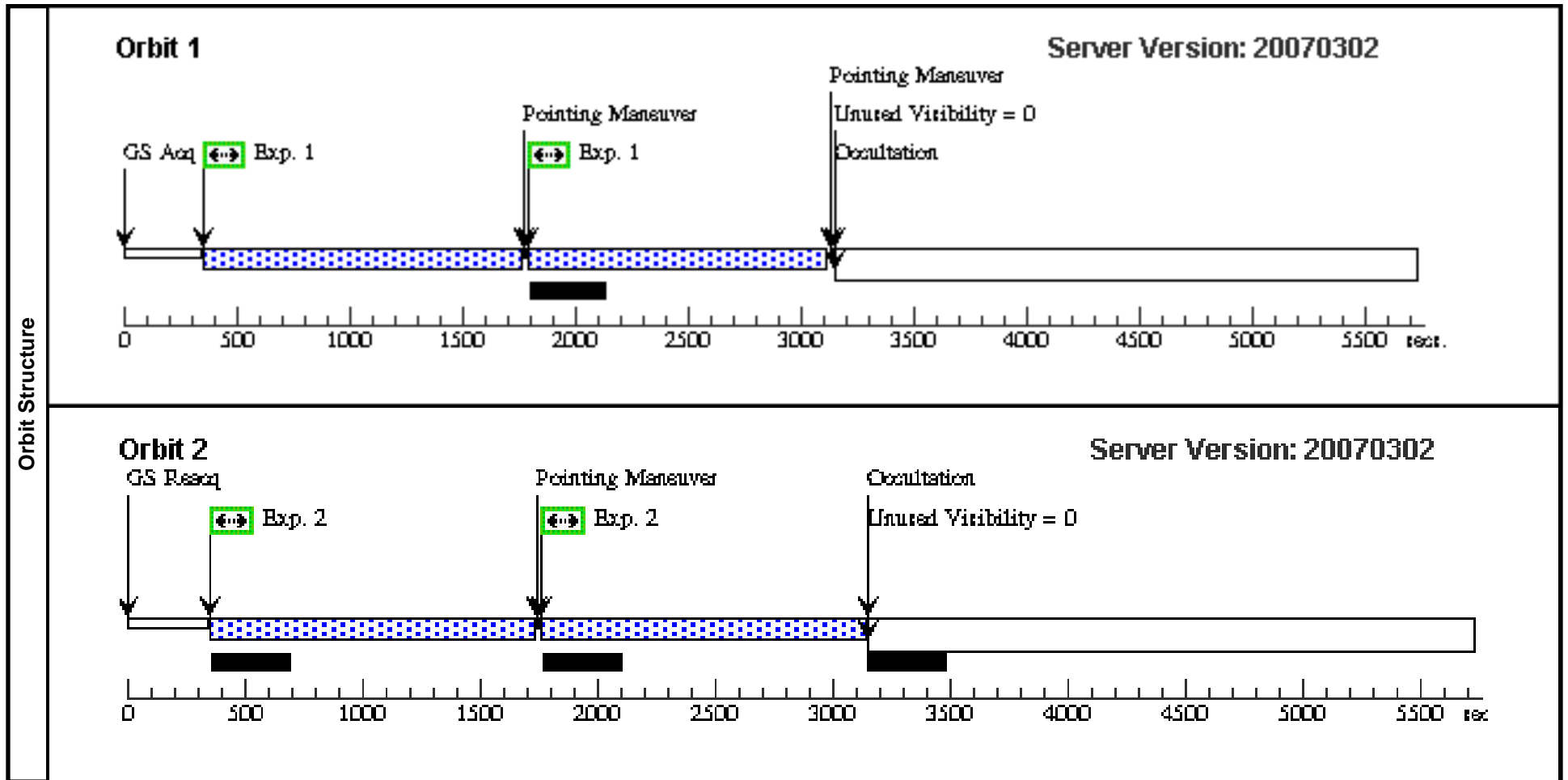
For each field, a total of 6 dither points are used. Visits 1-4 are for field 1 and are all identical, except for the orientation of visits 2-4 being linked to the actual orientation used for visit 1. Multiple visits are only used aid scheduling, but they could in principle be executed one right after the other. Similarly visits 5-8 are identical and cover the other field. Each visit is 3 orbits, for a total of 24 orbits.

The orientation of each has been optimized to the best overlap with our ground based observations. The orientation was determined by interactive use of the VTT using a ground based CCD image of the cluster. The CCD image had a WCS consistent with the ICRS reference frame.

Proposal 10826 - Visit 11 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:08 GMT 2007

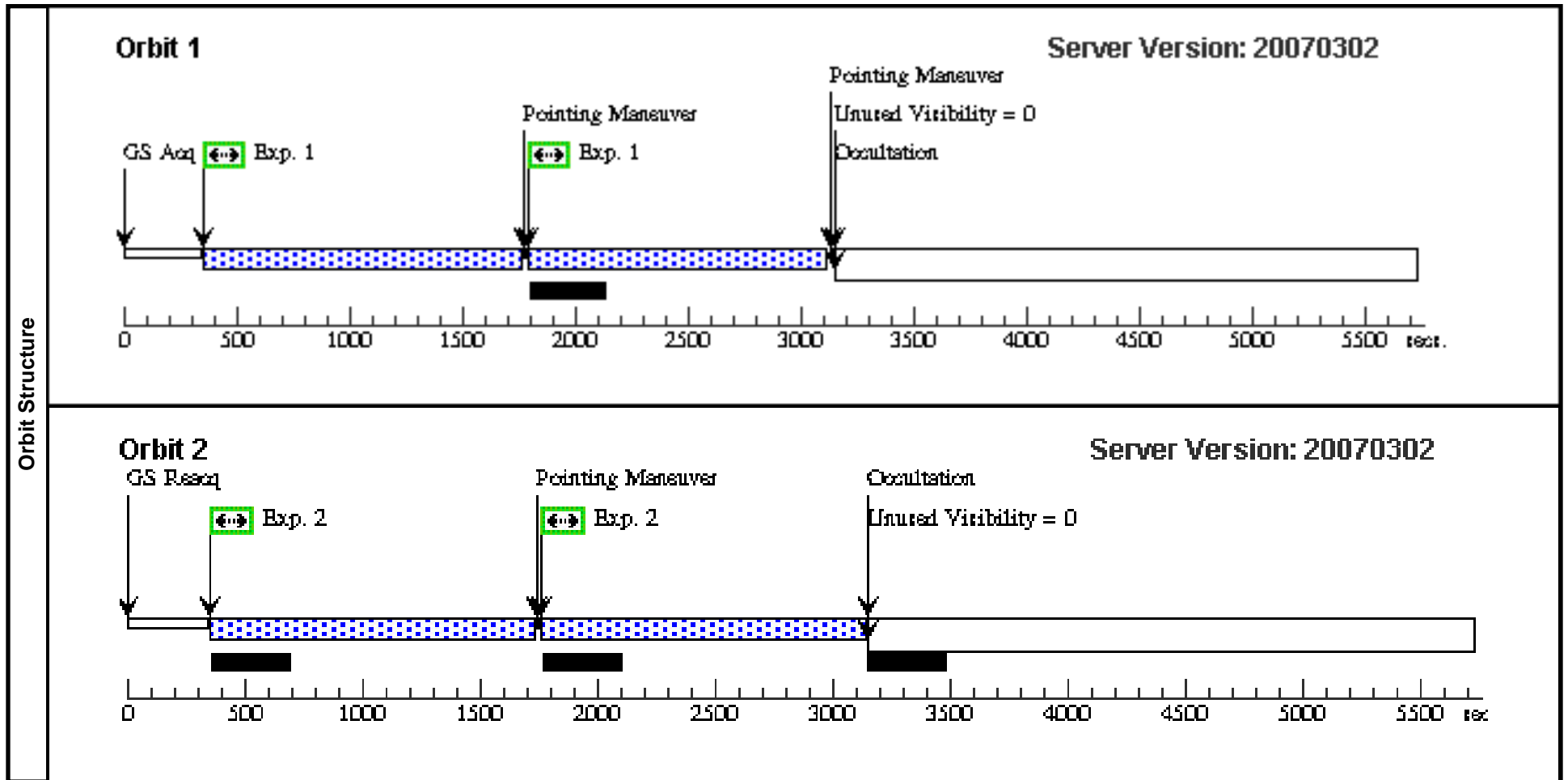
Visit	Proposal 10826, Visit 11, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; ORIENT 32.0D TO 44.0 D; ORIENT 118.0D TO 138.0 D; ORIENT 212.0D TO 227.0 D; ORIENT 296.0D TO 320.0 D <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(1)	Pattern Type=LINE	Coordinate Frame=POS-TARG						(1), (2)	
		Purpose=DITHER	Pattern Orientation=47.2								
		Number Of Points=2	Angle Between Sides=								
		Point Spacing=0.146	Center Pattern=false								
		Line Spacing=									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(6)	RXJ1415.1+3612-POS2	RA: 14 15 13.0000 (213.8041667d)				V=24.0		Reference Frame: ICRS		
			Dec: +36 13 26.00 (36.22389d)				Ic=20-23				
			Equinox: J2000								
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	RXJ1415.1+3612-POS2-VIS1	(6) RXJ1415.1+3612-POS2	ACS/WFC, ACCUM, WFCENTER	F850LP	CR-SPLIT=NO		Pattern 1-1 (1)	1190.0 Secs		
								[=>1203.0 Secs (Pattern 1)]		[1]	
								[=>1203.0 Secs (Pattern 2)]			
	2	RXJ1415.1+3612-POS2-VIS1	(6) RXJ1415.1+3612-POS2	ACS/WFC, ACCUM, WFCENTER	F850LP	CR-SPLIT=NO	POS TARG 0.248,3.001	Pattern 2-2 (1)	1230.0 Secs		
								[=>1256.0 Secs (Pattern 1)]		[2]	
								[=>1256.0 Secs (Pattern 2)]			



Proposal 10826 - Visit 12 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:10 GMT 2007

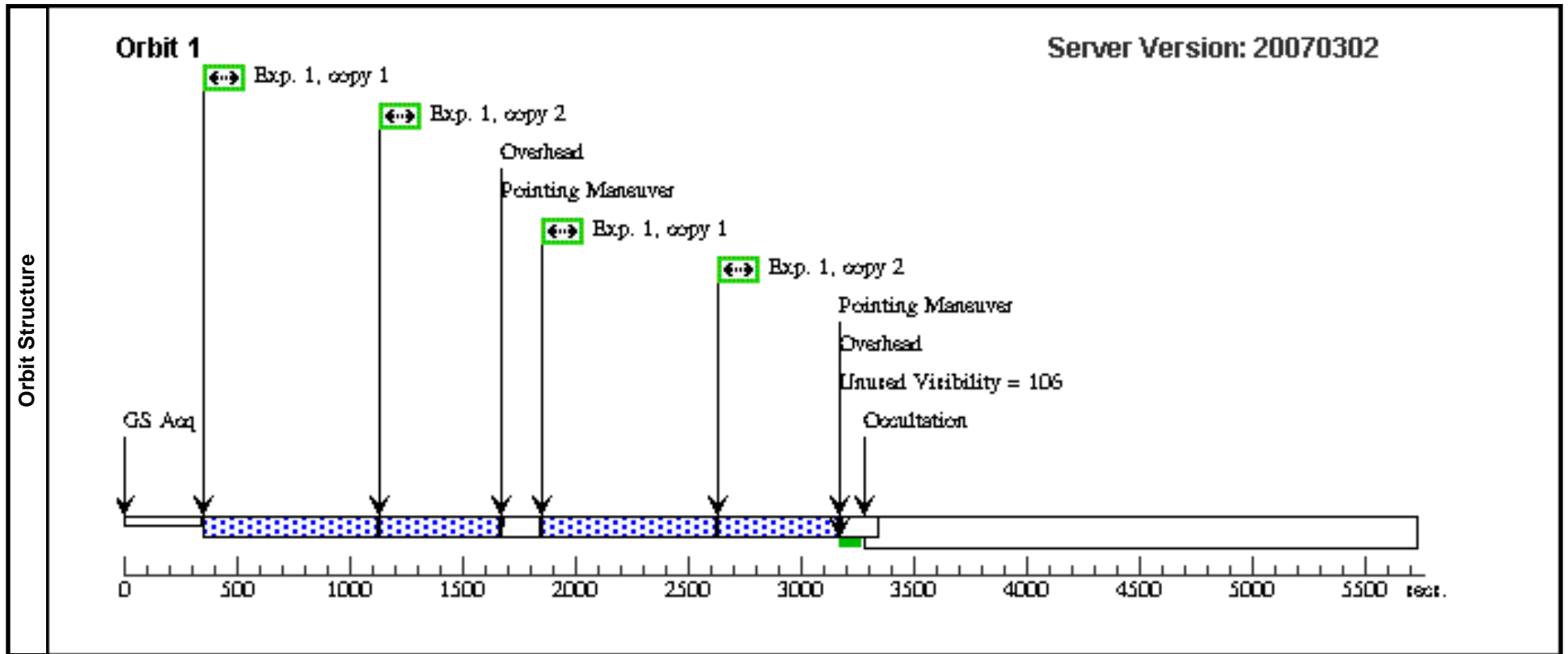
Visit	Proposal 10826, Visit 12, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; ORIENT -5.0D TO 5.0D FROM 11 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i> <i>The target for visit 12 is the same as for visit 11, and we request that visit 12 is taken within +-5deg of the orientation used for visit 11.</i>										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
(1)		Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false						(1), (2)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(6)	RXJ1415.1+3612-POS2	RA: 14 15 13.0000 (213.8041667d) Dec: +36 13 26.00 (36.22389d) Equinox: J2000			V=24.0 Ic=20-23		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	RXJ1415.1+3612-POS2-VIS2	(6) RXJ1415.1+3612-POS2	ACS/WFC, ACCUM, WFCENTER	F850LP	CR-SPLIT=NO	POS TARG 0.273,0.095	Pattern 1-1 (1)	1190.0 Secs		
									[=>1203.0 Secs (Pattern 1)]		[1]
									[=>1203.0 Secs (Pattern 2)]		
2	RXJ1415.1+3612-POS2-VIS2	(6) RXJ1415.1+3612-POS2	ACS/WFC, ACCUM, WFCENTER	F850LP	CR-SPLIT=NO	POS TARG 0.521,3.096	Pattern 2-2 (1)	1230.0 Secs			
								[=>1256.0 Secs (Pattern 1)]		[2]	
								[=>1256.0 Secs (Pattern 2)]			

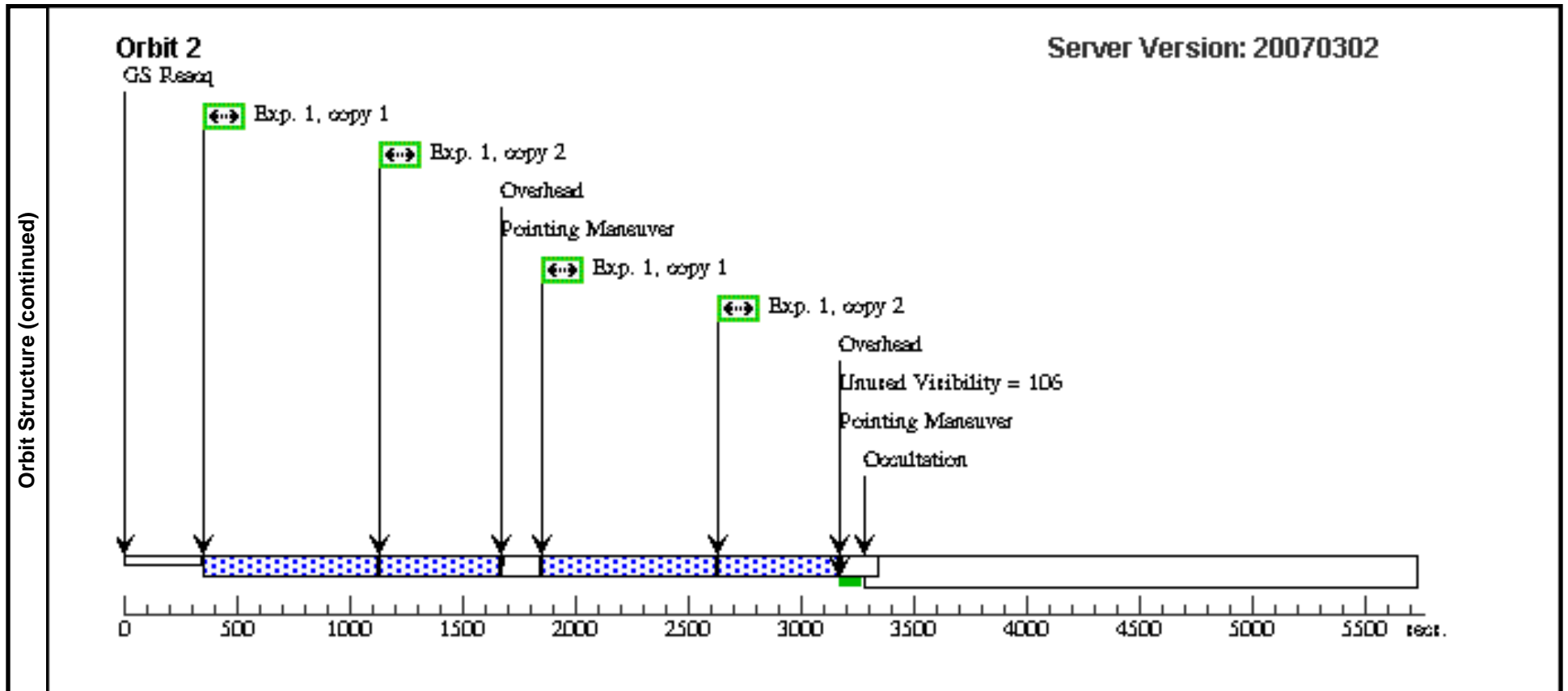


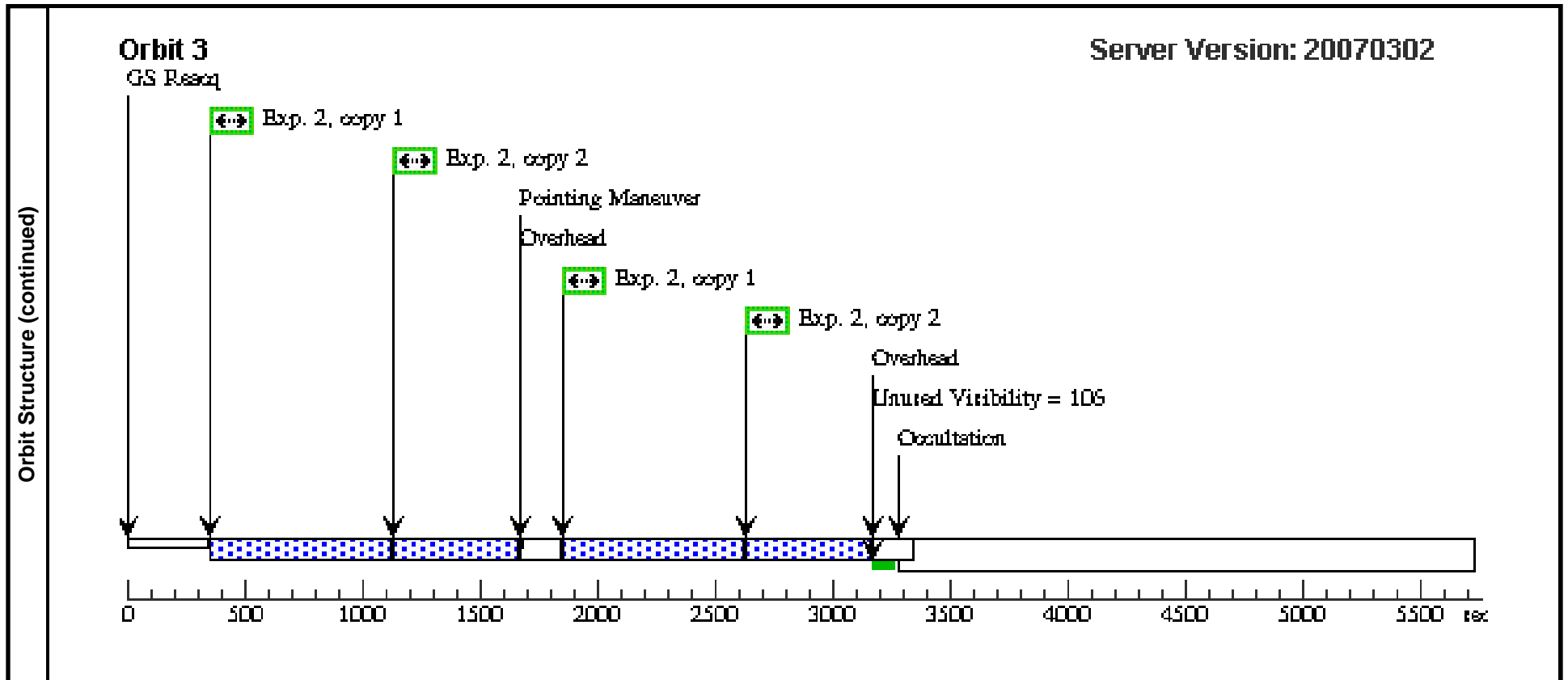
Proposal 10826 - Visit 01 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:10 GMT 2007

Visit	Proposal 10826, Visit 01, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT 185.0D TO 202.0 D <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			
		(2)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559 Line Spacing=0.559	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.1 Center Pattern=false						
	(3)	Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false							(2)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(7)	MS1610.4+6616-POS1W	RA: 16 10 56.0000 (242.7333333d) Dec: +66 07 12.00 (66.12000d) Equinox: J2000			V=24.0 Ic=20-22.5				Reference Frame: ICRS
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]



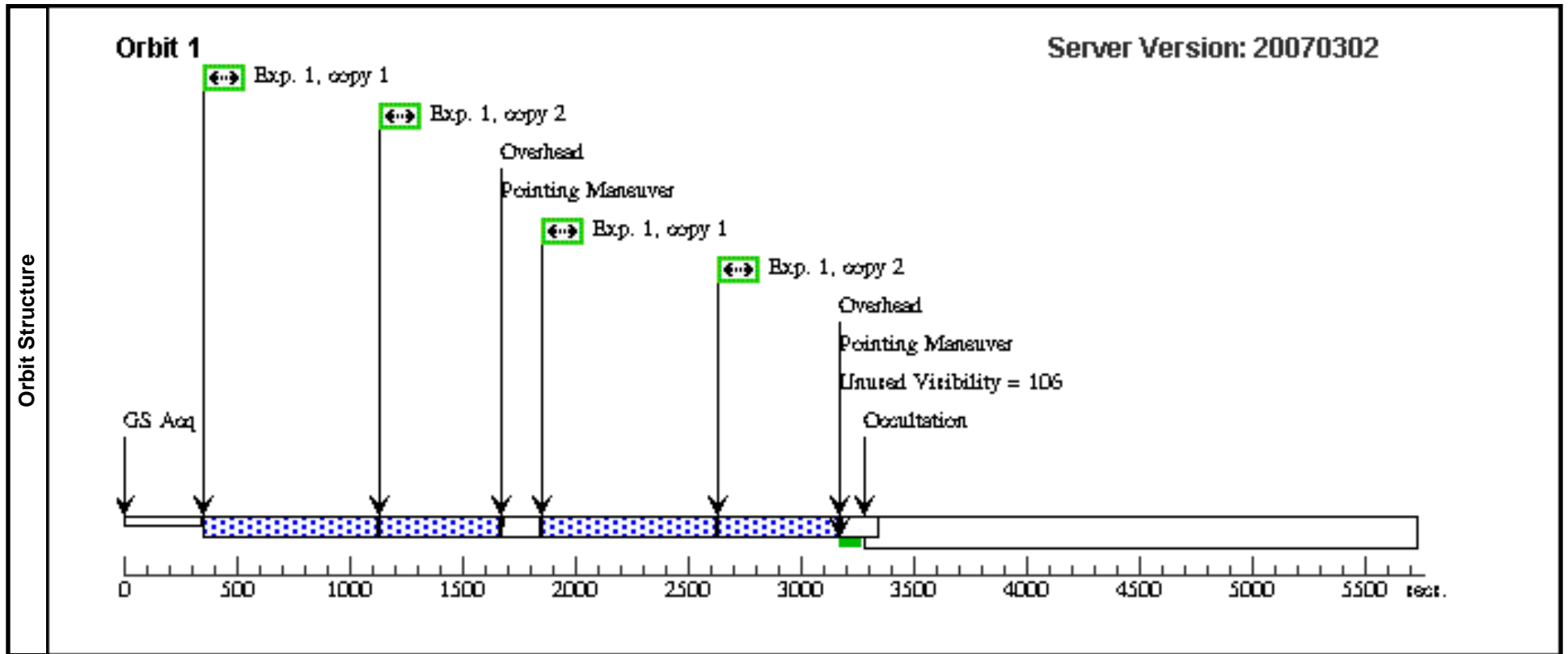


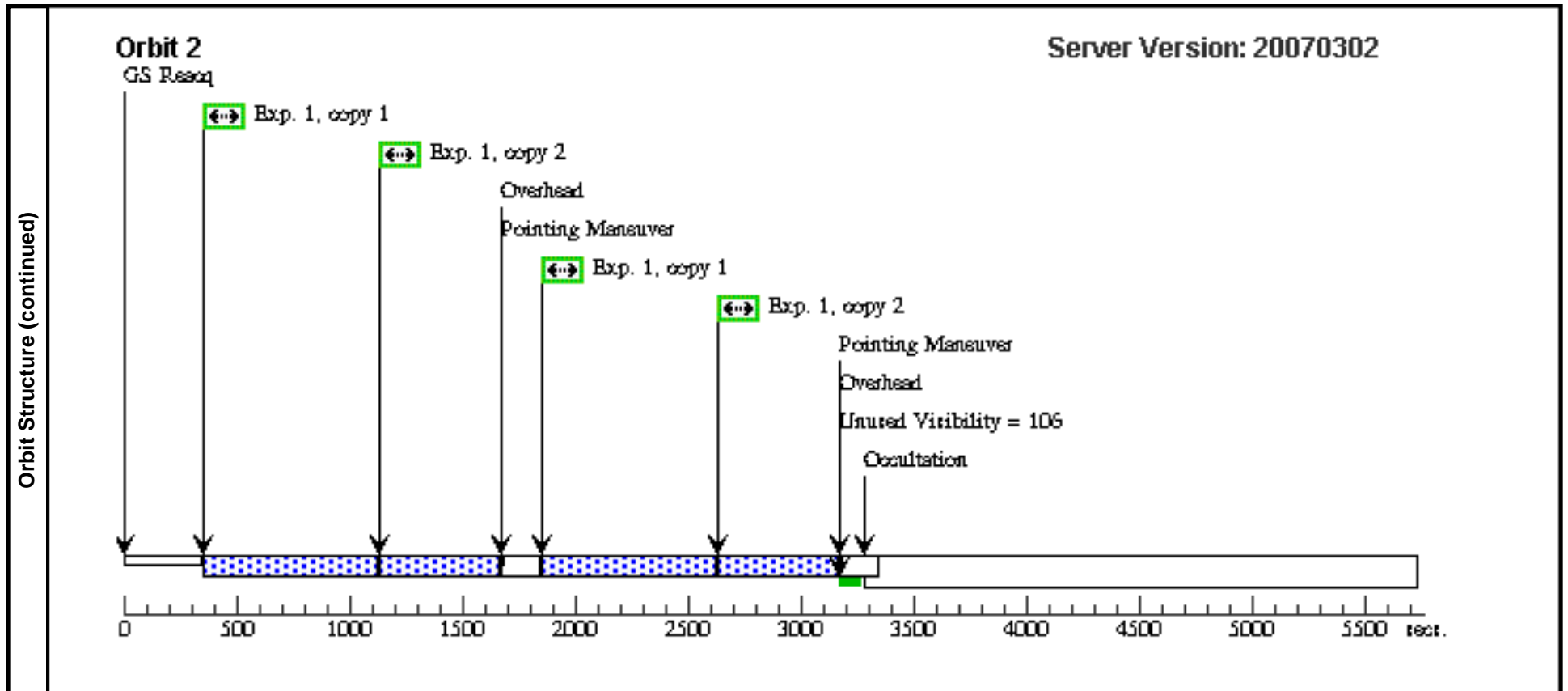


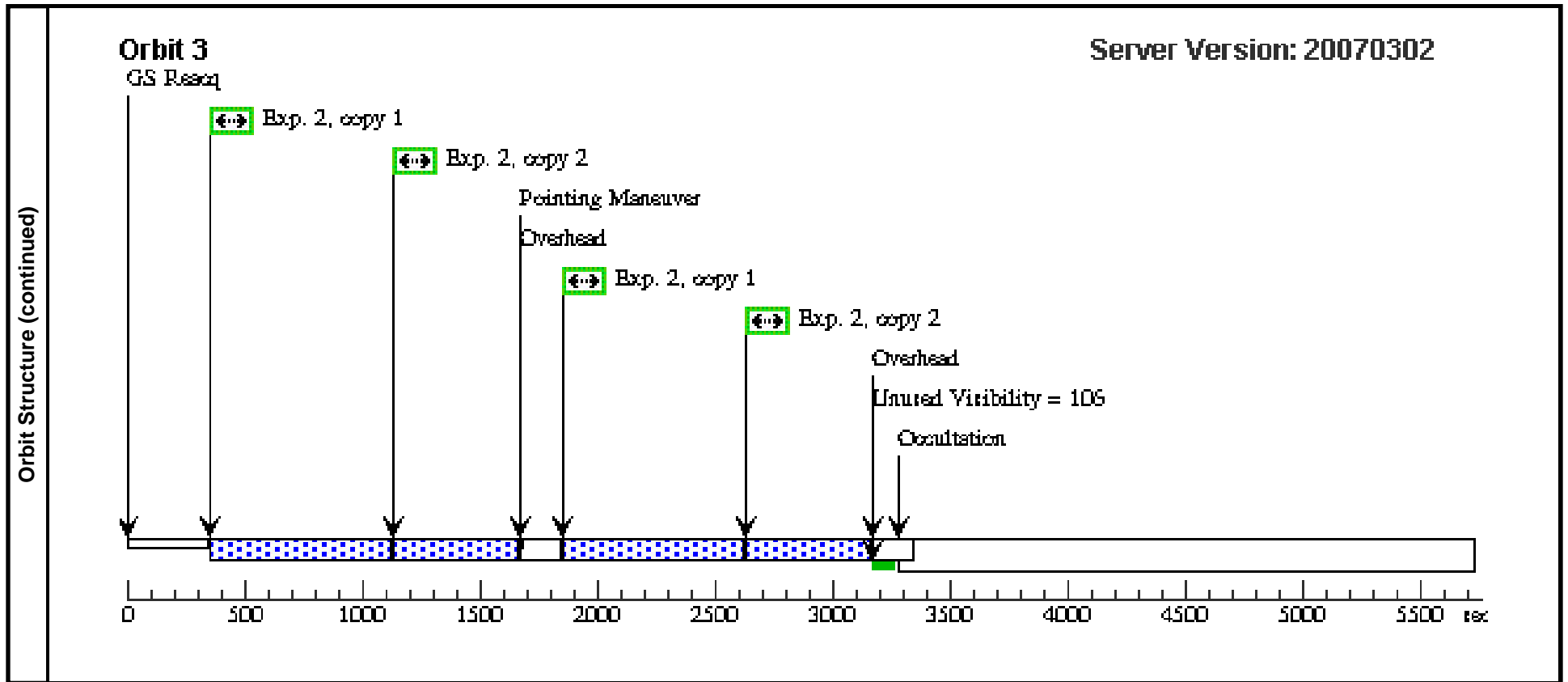
Proposal 10826 - Visit 02 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:11 GMT 2007

Visit	Proposal 10826, Visit 02, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT -2.0D TO 2.0D FROM 01 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
		(2)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559 Line Spacing=0.559	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.1 Center Pattern=false							(1)
	(3)	Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false							(2)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(7)	MS1610.4+6616-POS1W	RA: 16 10 56.0000 (242.7333333d) Dec: +66 07 12.00 (66.12000d) Equinox: J2000			V=24.0 Ic=20-22.5				Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W				Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W				Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]



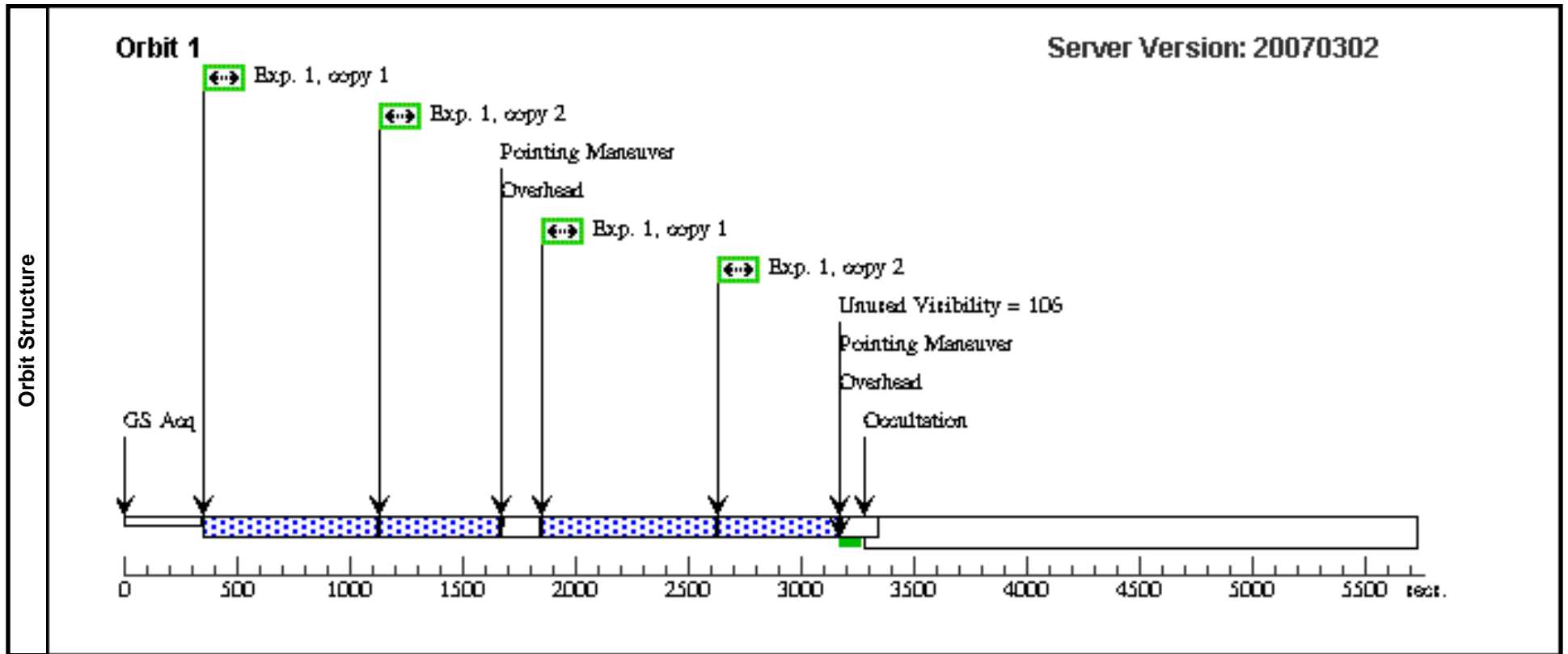


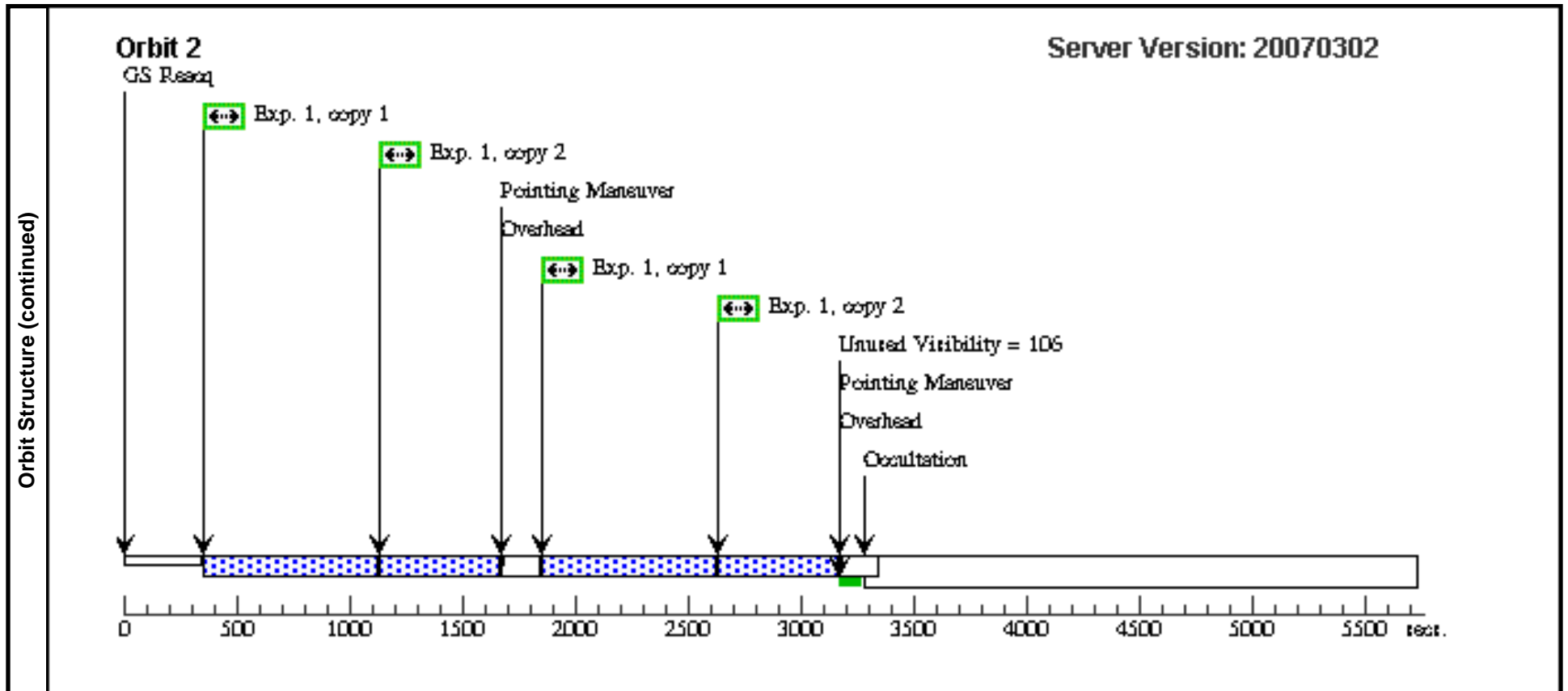


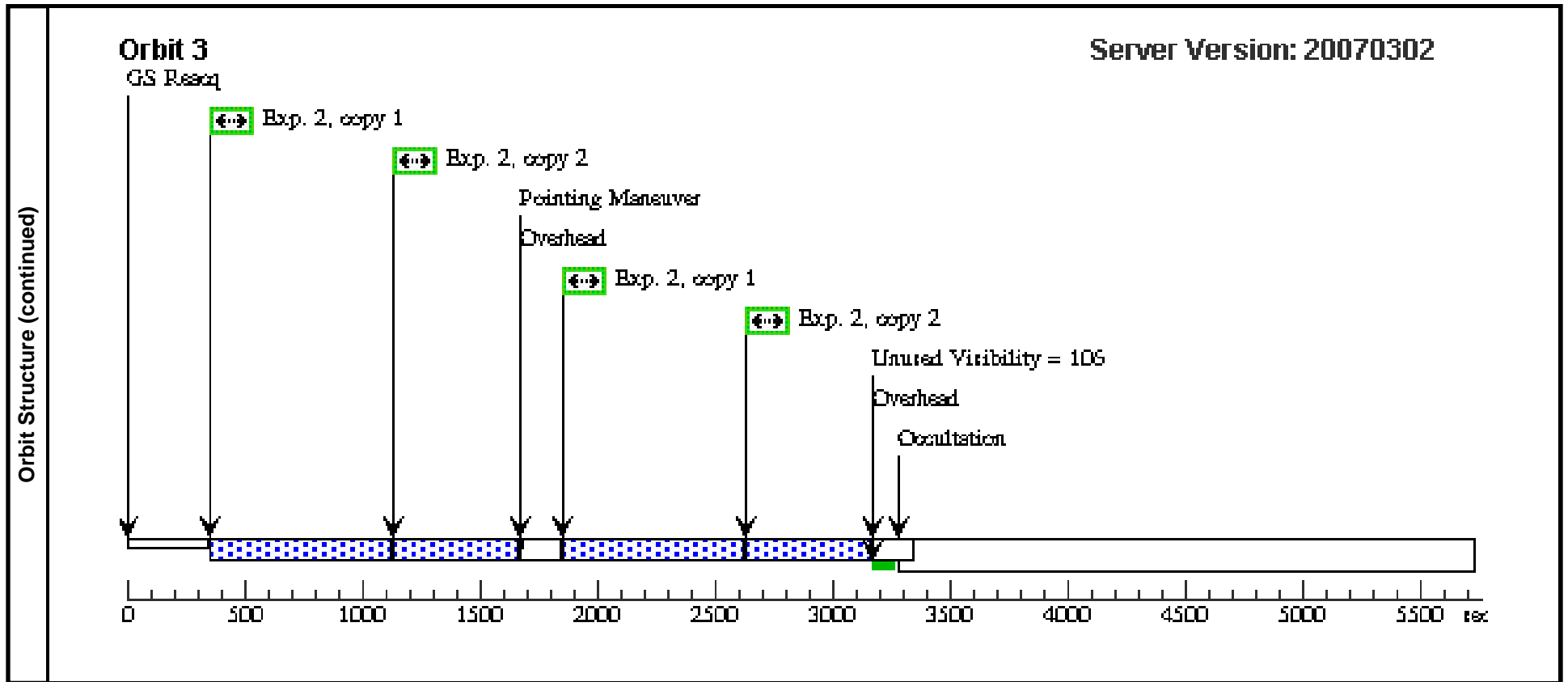
Proposal 10826 - Visit 03 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:13 GMT 2007

Visit	Proposal 10826, Visit 03, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT -2.0D TO 2.0D FROM 01 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
		(2)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559 Line Spacing=0.559	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.1 Center Pattern=false						(1)
	(3)	Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(2)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(7)	MS1610.4+6616-POS1W	RA: 16 10 56.0000 (242.7333333d) Dec: +66 07 12.00 (66.12000d) Equinox: J2000			V=24.0 Ic=20-22.5	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W				Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]
	2	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]



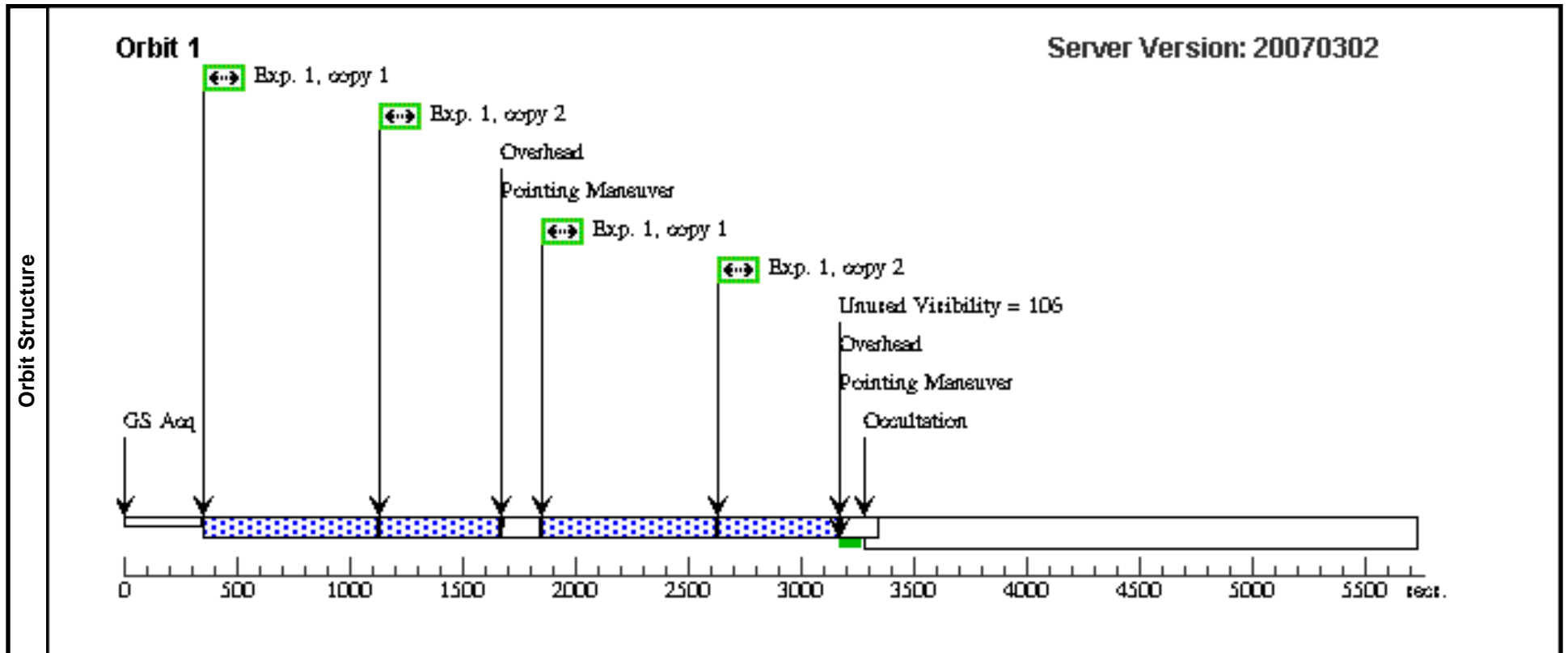


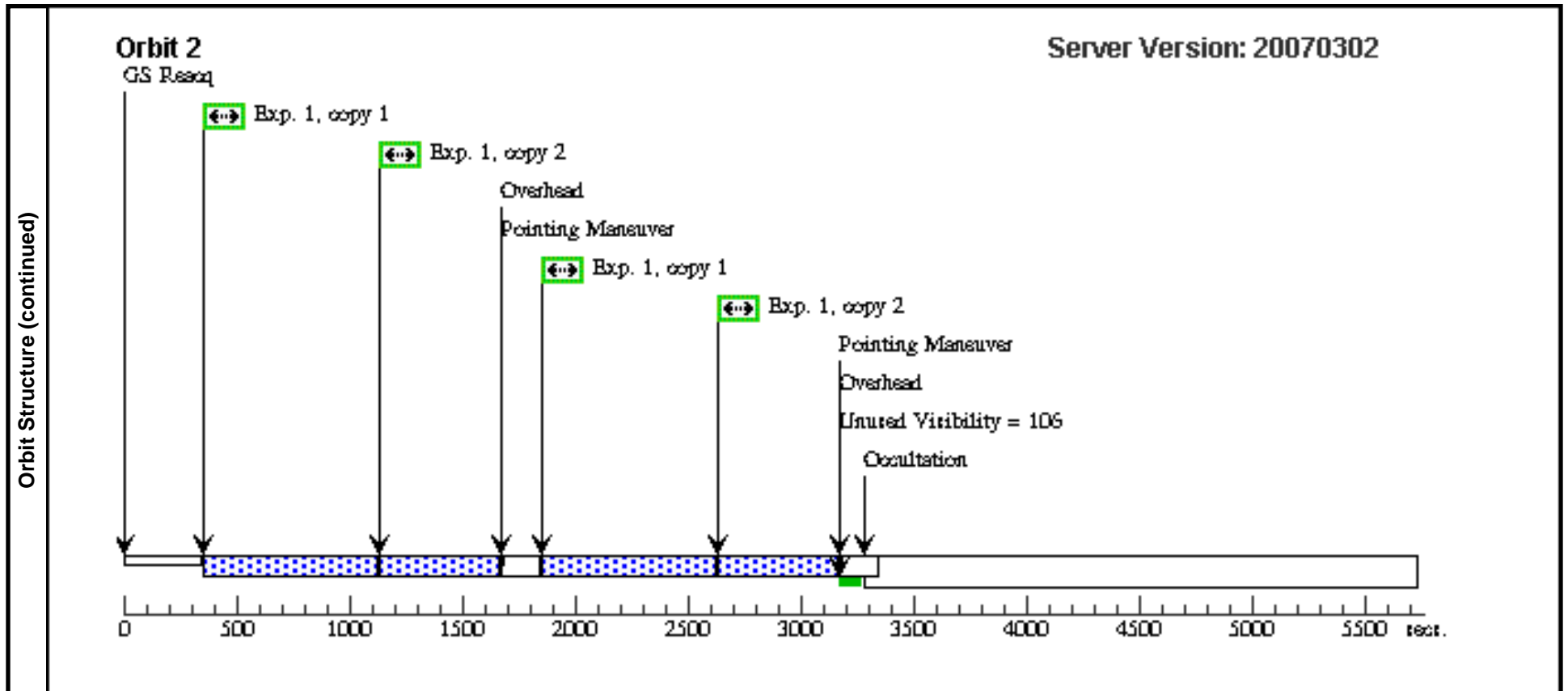


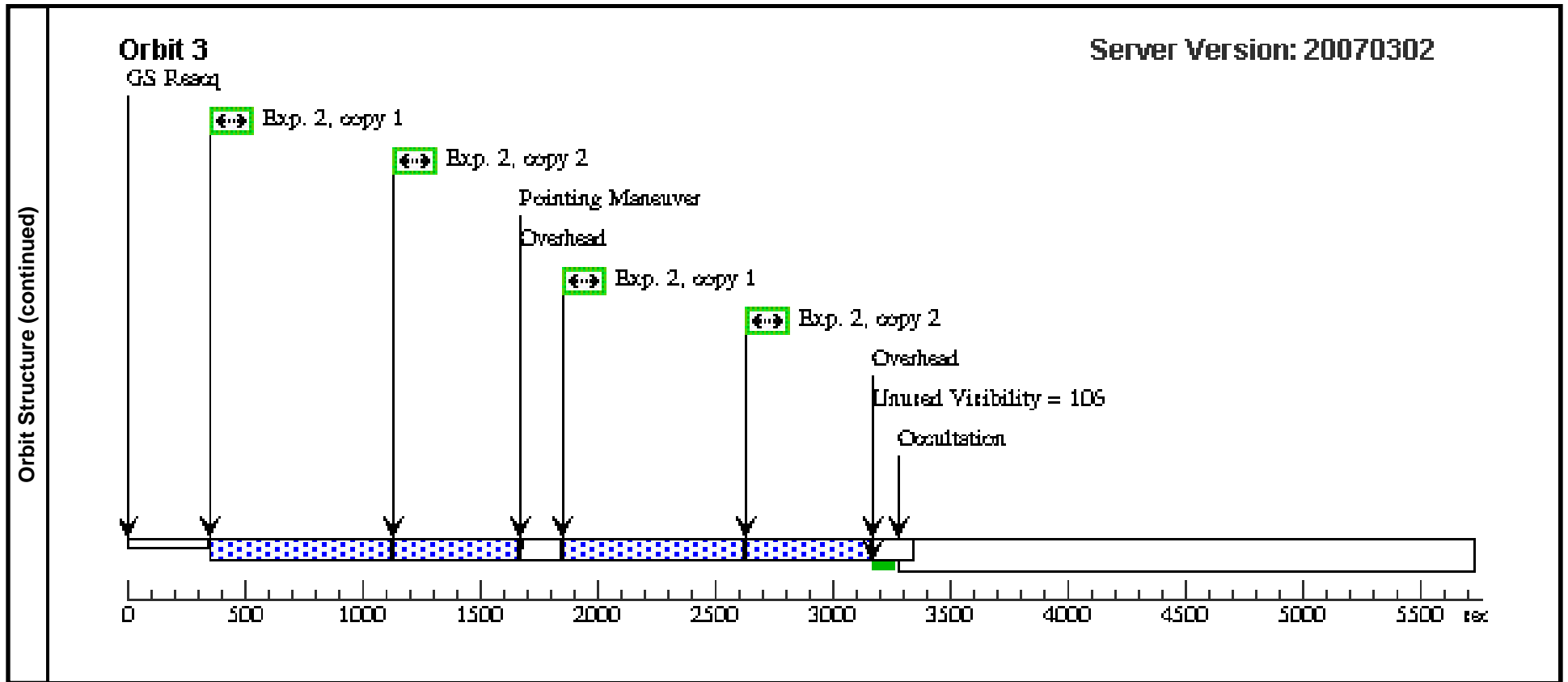
Proposal 10826 - Visit 04 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:13 GMT 2007

Visit	Proposal 10826, Visit 04, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT -2.0D TO 2.0D FROM 01 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
		(2)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559 Line Spacing=0.559	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.1 Center Pattern=false						(1)
	(3)	Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(2)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(7)	MS1610.4+6616-POS1W	RA: 16 10 56.0000 (242.7333333d) Dec: +66 07 12.00 (66.12000d) Equinox: J2000			V=24.0 Ic=20-22.5		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+6616-POS1-VIS1	(7) MS1610.4+6616-POS1W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]



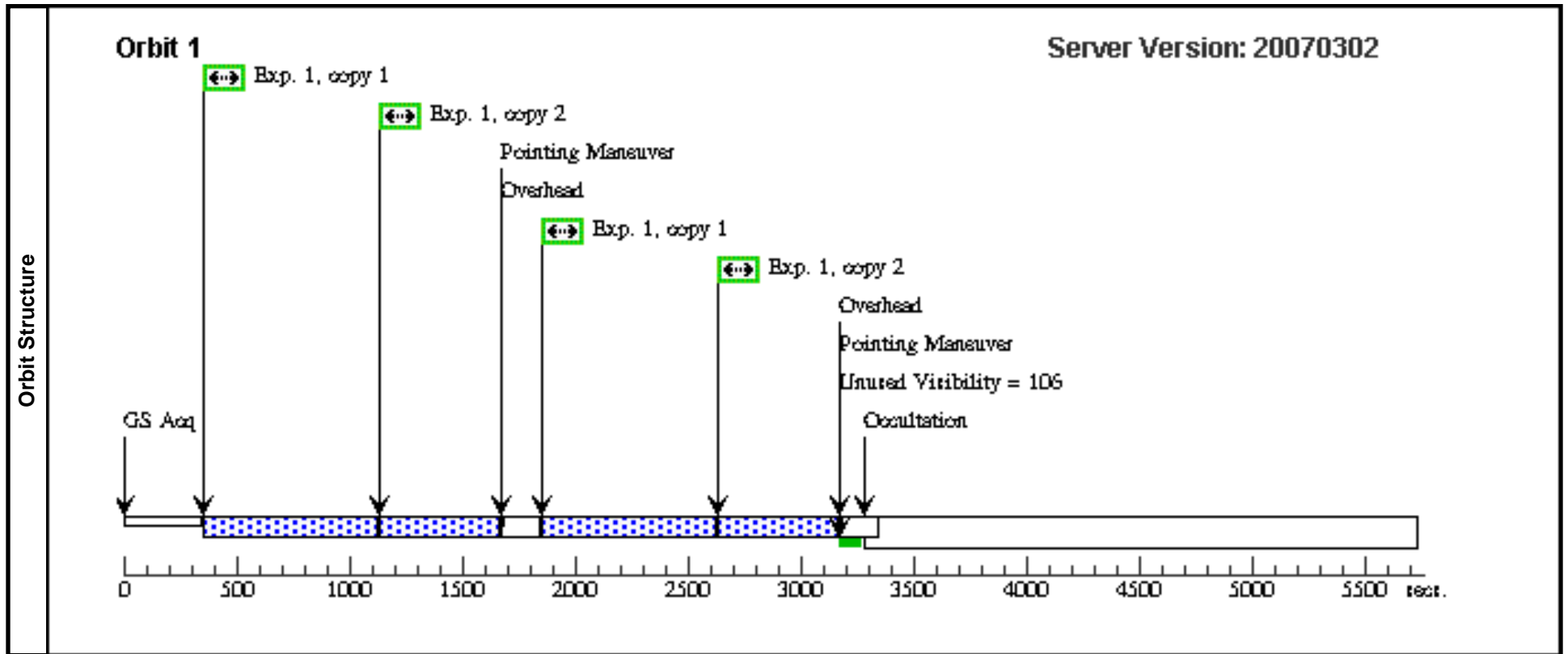


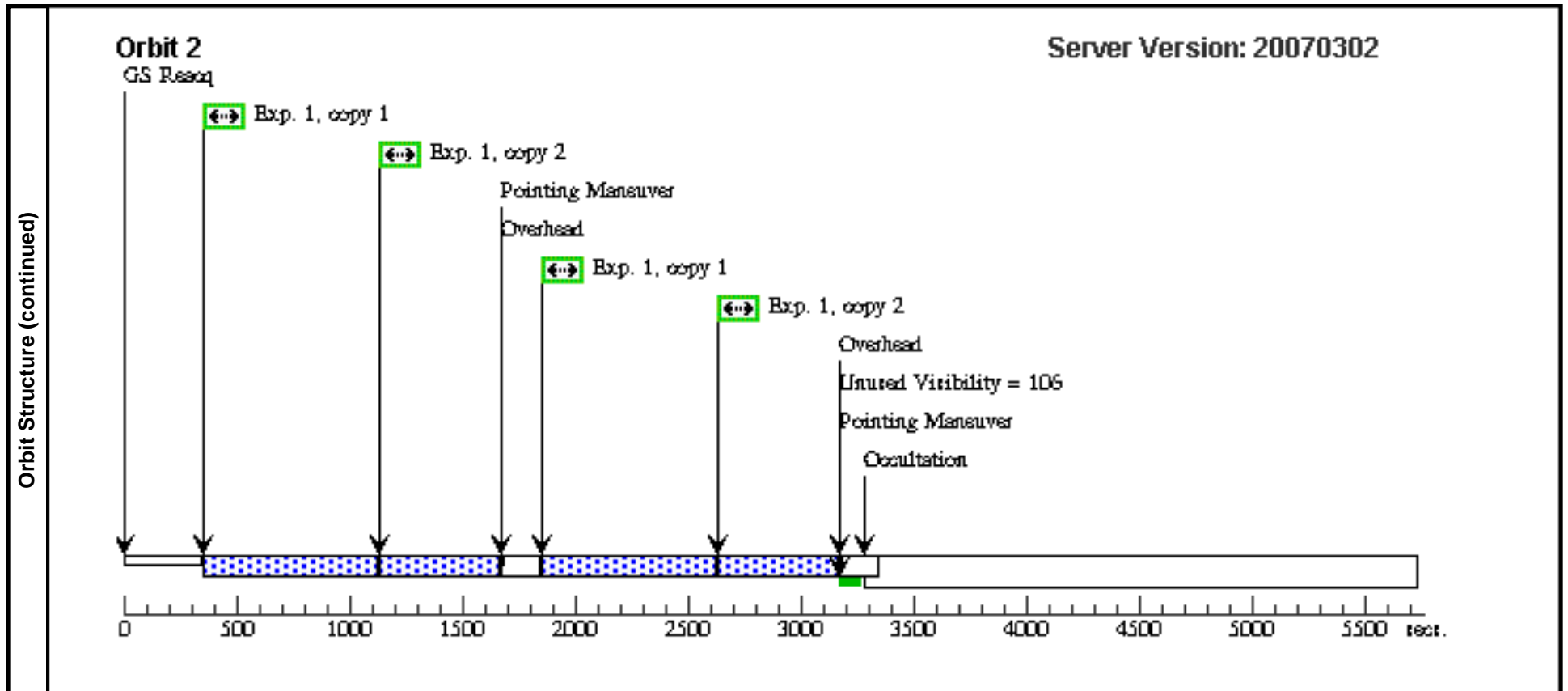


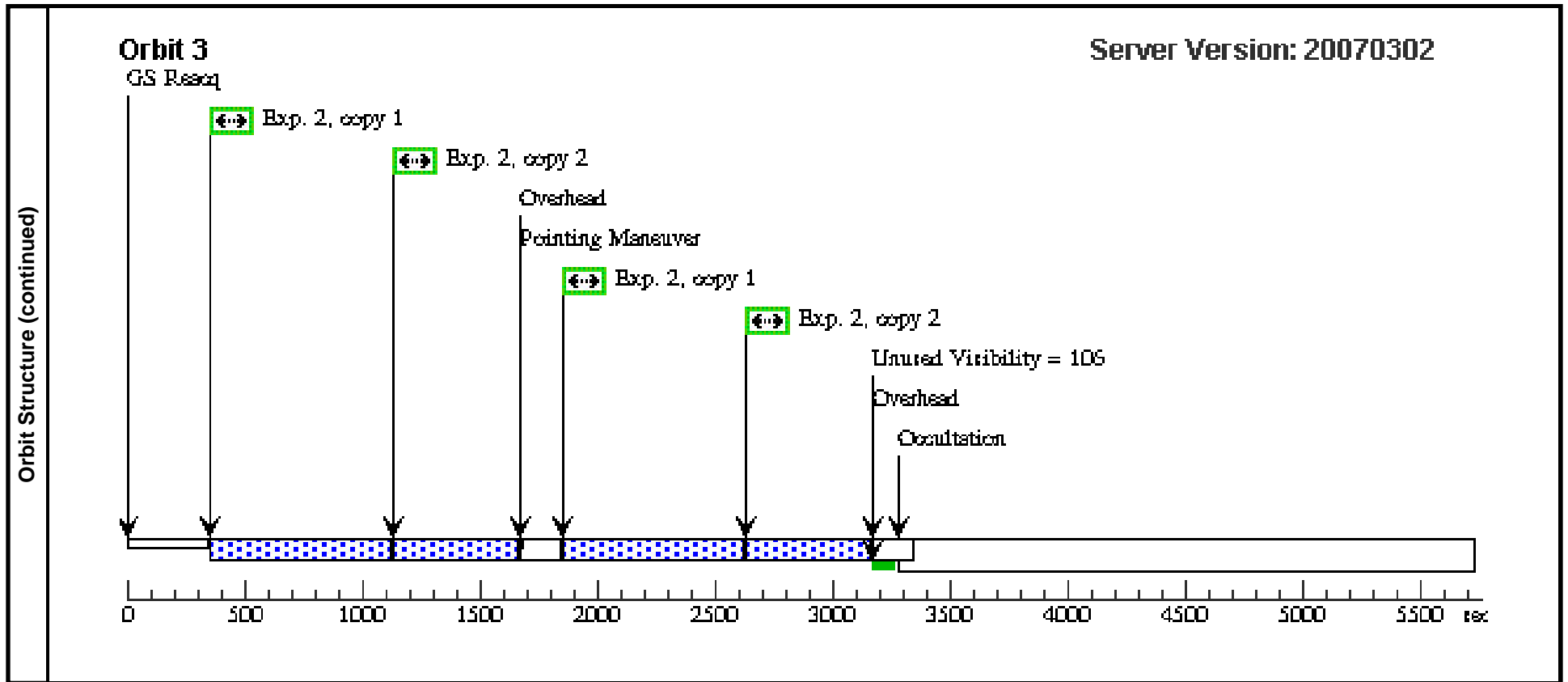
Proposal 10826 - Visit 05 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:14 GMT 2007

Visit	Proposal 10826, Visit 05, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT 170.0D TO 187.0 D <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
		(2)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559 Line Spacing=0.559	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.1 Center Pattern=false						(1)
	(3)	Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(2)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(8)	MS1610.4+6616-POS2W	RA: 16 11 3.3500 (242.7639583d) Dec: +66 08 41.00 (66.14472d) Equinox: J2000			V=24.0 Ic=20-22.5		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+6616-POS1-VIS1	(8) MS1610.4+6616-POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+6616-POS1-VIS1	(8) MS1610.4+6616-POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]



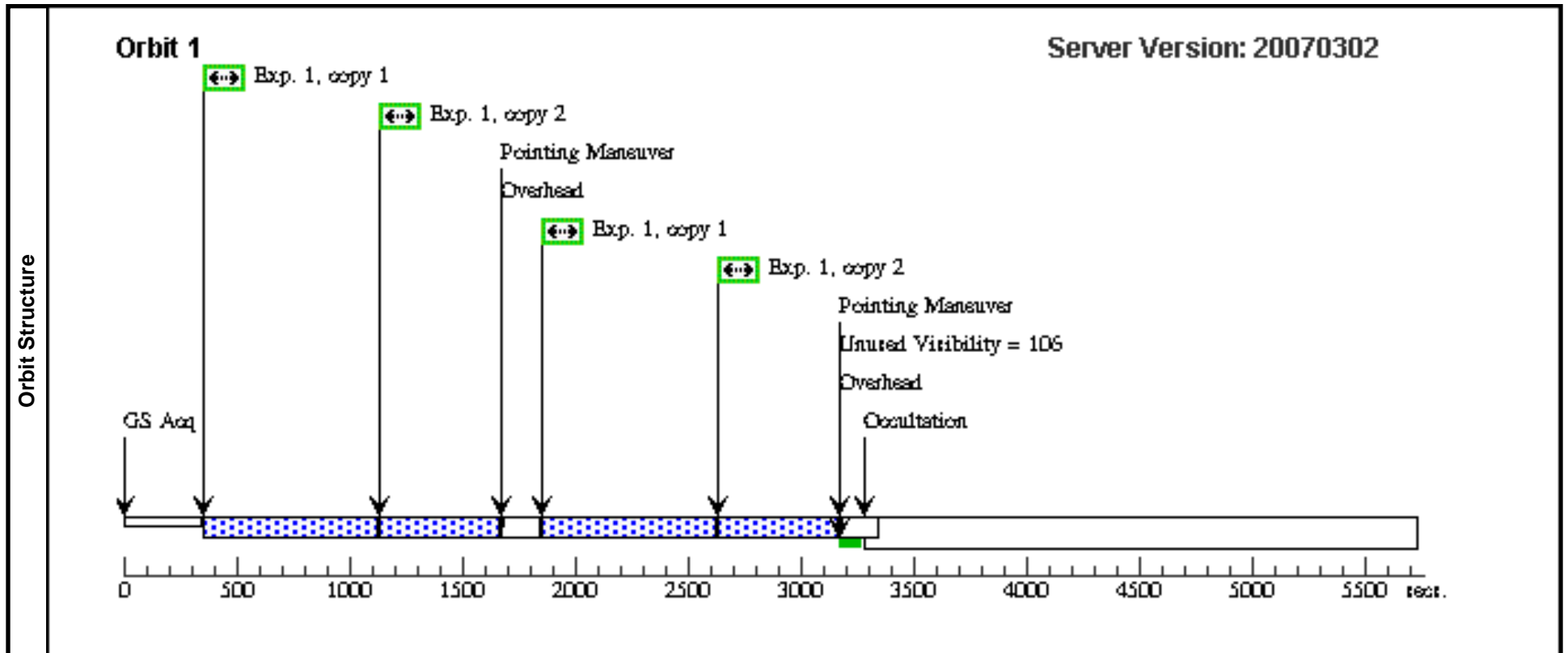


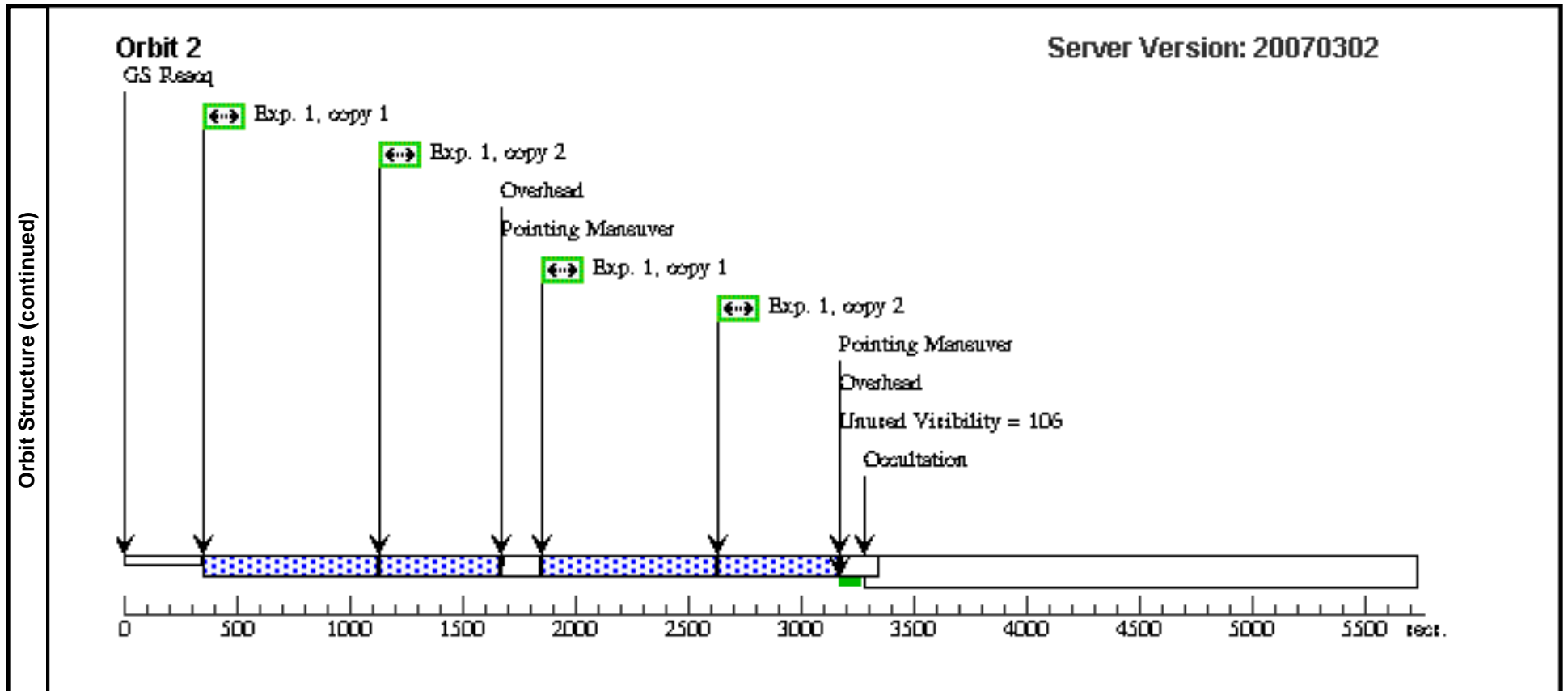


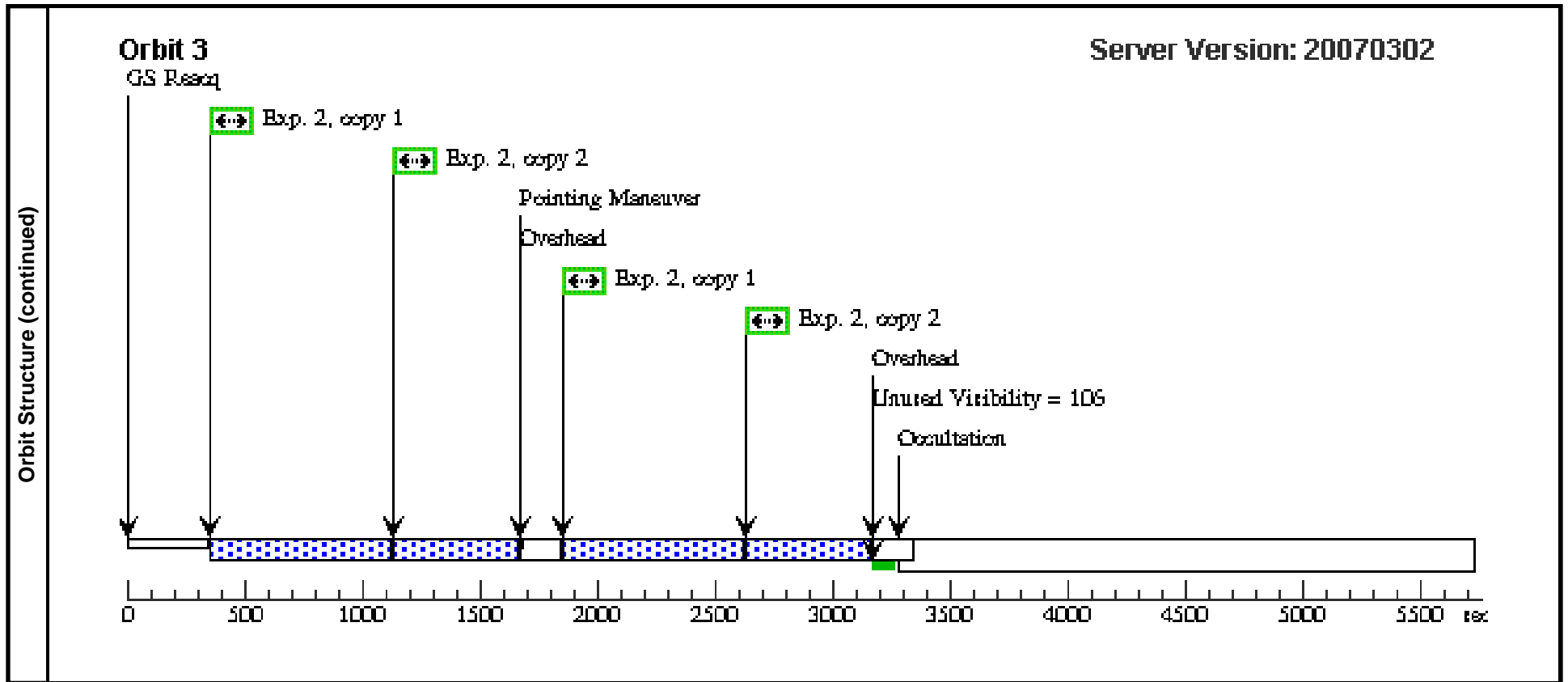
Proposal 10826 - Visit 06 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:15 GMT 2007

Visit	Proposal 10826, Visit 06, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT -2.0D TO 2.0D FROM 05 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
		(2)	Pattern Type=WFPC2-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.559 Line Spacing=0.559	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.1 Center Pattern=false						(1)
	(3)	Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(2)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(8)	MS1610.4+6616-POS2W	RA: 16 11 3.3500 (242.7639583d) Dec: +66 08 41.00 (66.14472d) Equinox: J2000			V=24.0 Ic=20-22.5	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+6616-POS1-VIS1	(8) MS1610.4+6616-POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+6616-POS1-VIS1	(8) MS1610.4+6616-POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]



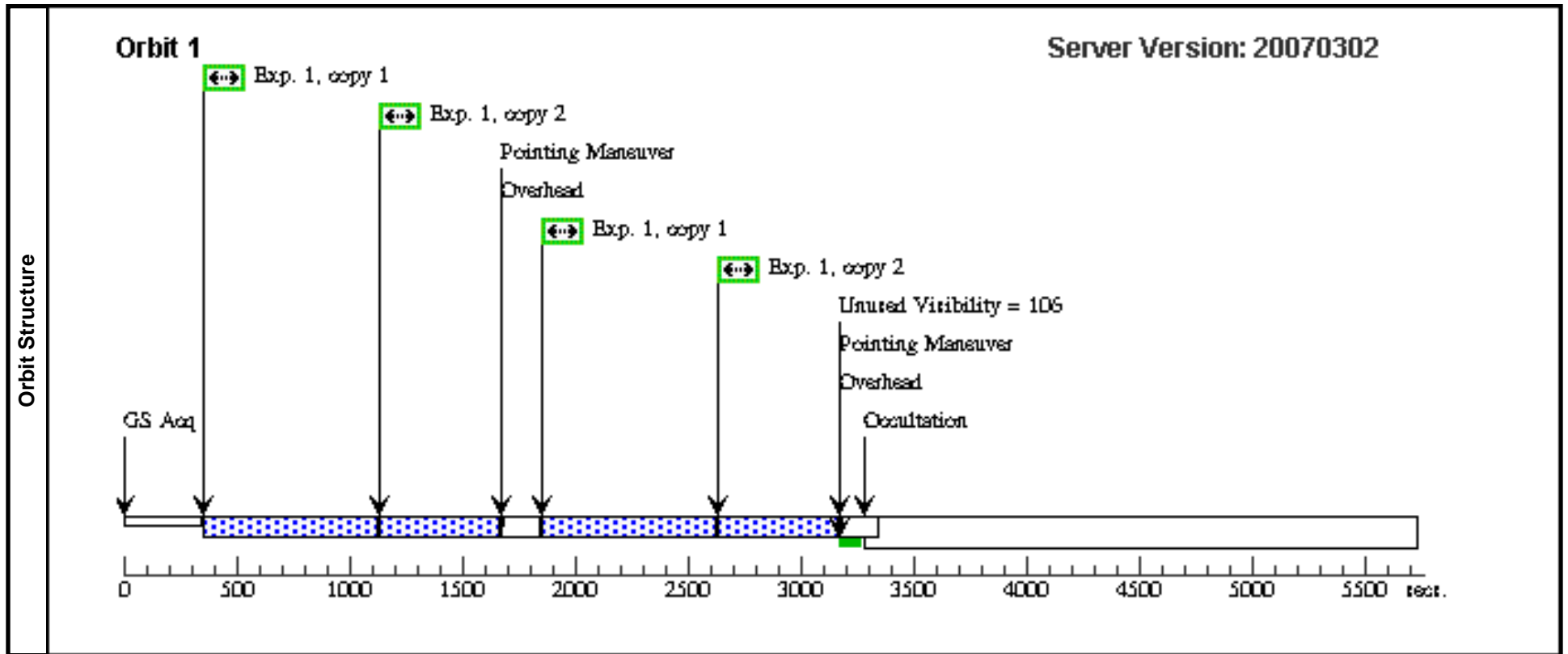


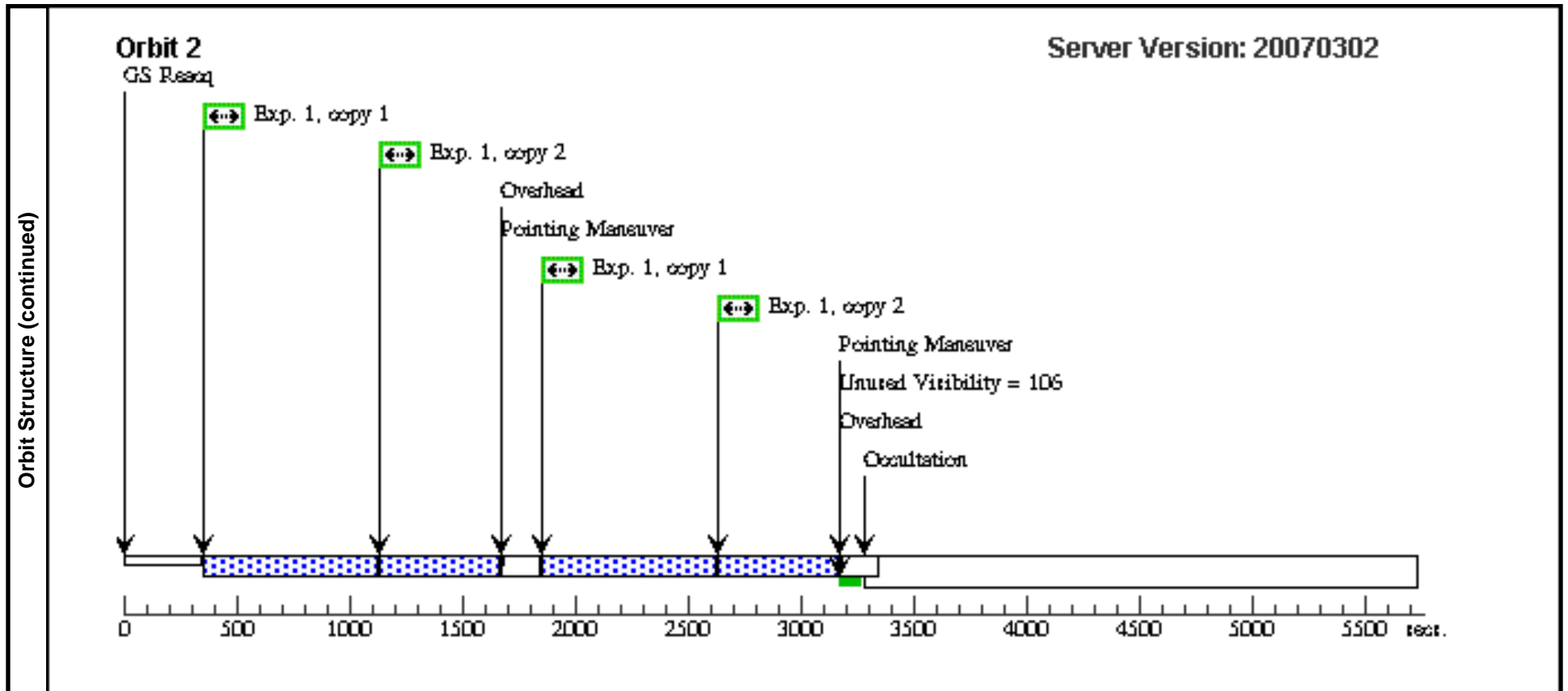


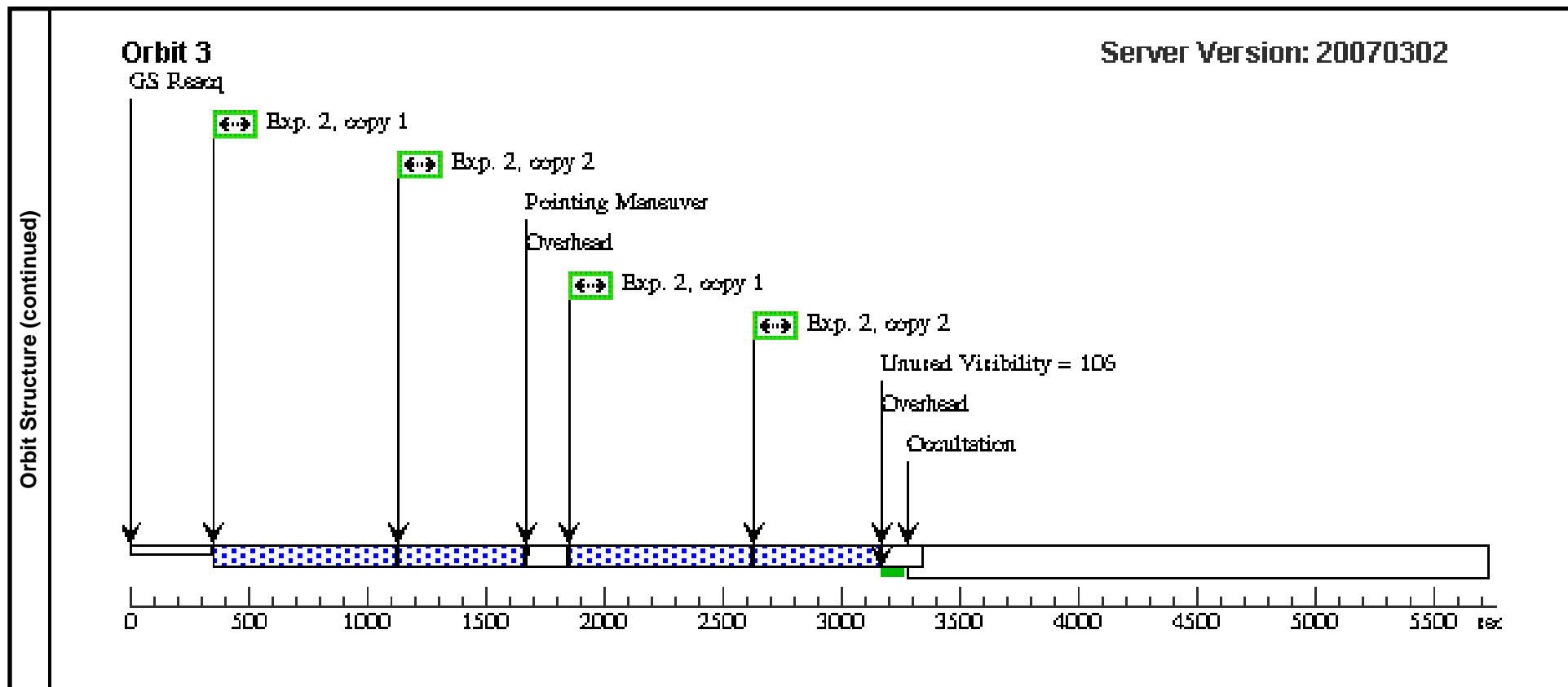
Proposal 10826 - Visit 07 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:16 GMT 2007

Visit	Proposal 10826, Visit 07, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT -2.0D TO 2.0D FROM 05 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			
		(2)	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG						
		Purpose=DITHER	Pattern Orientation=26.6							
		Number Of Points=4	Angle Between Sides=143.1							
		Point Spacing=0.559	Center Pattern=false							
		Line Spacing=0.559								
	(3)	Pattern Type=WFPC2-LINE	Coordinate Frame=POS-TARG							(2)
		Purpose=DITHER	Pattern Orientation=45							
		Number Of Points=2	Angle Between Sides=							
		Point Spacing=0.354	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(8)	MS1610.4+6616-POS2W	RA: 16 11 3.3500 (242.7639583d) Dec: +66 08 41.00 (66.14472d) Equinox: J2000			V=24.0 Ic=20-22.5	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+ 6616-POS1- VIS1	(8) MS1610.4+6616- POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+ 6616-POS1- VIS1	(8) MS1610.4+6616- POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]







Proposal 10826 - Visit 08 - Galaxy Evolution During Half the Age of the Universe: ACS imaging of rich galaxy clusters

Tue Mar 13 01:10:17 GMT 2007

Visit	Proposal 10826, Visit 08, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE; ORIENT -2.0D TO 2.0D FROM 05 <i>Comments: The orientation for the observation is optimized to have the best overlap with our ground based observations. If there are scheduling difficulties, different orientations are possible with small adjustments to the target coordinates. Please contact the PI in this case.</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			
		(2)	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG						
		Purpose=DITHER	Pattern Orientation=26.6							
		Number Of Points=4	Angle Between Sides=143.1							
		Point Spacing=0.559	Center Pattern=false							
		Line Spacing=0.559								
	(3)	Pattern Type=WFPC2-LINE	Coordinate Frame=POS-TARG							(2)
		Purpose=DITHER	Pattern Orientation=45							
		Number Of Points=2	Angle Between Sides=							
		Point Spacing=0.354	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Fluxes	Miscellaneous		
	(8)	MS1610.4+6616-POS2W	RA: 16 11 3.3500 (242.7639583d) Dec: +66 08 41.00 (66.14472d) Equinox: J2000				V=24.0 Ic=20-22.5	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	MS1610.4+6616-POS1-VIS1	(8) MS1610.4+6616-POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 1-1 (2)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)]	[1] [2]
	2	MS1610.4+6616-POS1-VIS1	(8) MS1610.4+6616-POS2W	WFPC2, IMAGE, WFALL-FIX	F702W			Pattern 2-2 (3)	500.0 Secs X 2 [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)]	[3]

