



10635 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Cycle: 14, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets</i>	<i>Configurations</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) GAL-CLUS-041306-654850	ACS/WFC	1	20-Jun-2005 11:53:42.0	yes
02	(2) GAL-CLUS-041306-655218	ACS/WFC	1	20-Jun-2005 11:53:46.0	yes
03	(3) GAL-CLUS-041232-654850	ACS/WFC	1	20-Jun-2005 11:53:49.0	yes
04	(4) GAL-CLUS-041232-655218	ACS/WFC	1	20-Jun-2005 11:53:51.0	yes

Proposal 10635 - Overview

<i>Visit</i>	<i>Targets</i>	<i>Configurations</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
05	(5) MS1008.1-1224-POS1	ACS/WFC	1	20-Jun-2005 11:53:53.0	yes
06	(6) MS1008.1-1224-POS2	ACS/WFC	1	20-Jun-2005 11:53:56.0	yes
07	(7) MS1008.1-1224-POS3	ACS/WFC	1	20-Jun-2005 11:53:58.0	yes
08	(8) MS1008.1-1224-POS4	ACS/WFC	1	20-Jun-2005 11:54:00.0	yes
09	(9) GAL-CLUS-001840+162731	ACS/WFC	1	20-Jun-2005 11:54:03.0	yes
10	(10) GAL-CLUS-001840+162404	ACS/WFC	1	20-Jun-2005 11:54:05.0	yes
11	(11) GAL-CLUS-001828+162731	ACS/WFC	1	20-Jun-2005 11:54:07.0	yes
12	(12) GAL-CLUS-001826+162404	ACS/WFC	1	20-Jun-2005 11:54:09.0	yes
13	(13) MS2137.3-2353-POS1	ACS/WFC	1	20-Jun-2005 11:54:11.0	yes
14	(14) MS2137.3-2353-POS2	ACS/WFC	1	20-Jun-2005 11:54:14.0	yes
15	(15) MS2137.3-2353-POS3	ACS/WFC	1	20-Jun-2005 11:54:16.0	yes
16	(16) MS2137.3-2353-POS4	ACS/WFC	1	20-Jun-2005 11:54:18.0	yes

16 Total Orbits Used

ABSTRACT

We seek to obtain ACS imaging of four distant ($0.3 < z < 0.6$) clusters of galaxies within a 6'x6' field covered by a 2x2 mosaic to determine morphological and structural parameters of late-type galaxies. We specifically concentrate on peculiarities indicative of past or ongoing interaction processes. The ~90 target galaxies have been (P74) or will be (P75) observed with 3D-spectroscopy at ESO-VLT yielding 2D-velocity fields with unprecedented spatial coverage and sampling. The good spatial resolution of the ground-based data will be further enhanced by a deconvolution method based on the proposed ACS images. The velocity field and the morphology in restframe-UV light will reveal possible transformation mechanisms affecting not only the stellar populations but also the mass distribution of the galaxies. Additionally, it will be possible to pin down the nature of the interaction (e.g. tidally or ram-pressure induced). This assessment gets supported by our N-body/SPH simulations (including star formation) of different interaction processes that allow the direct comparison of structural and kinematical characteristics at each time step with the

observations on an individual basis taking into account all observational constraints for a given galaxy. All together, we will be able to explore the relative efficiency of the various proposed transformation phenomena. In the case of non-disturbed spirals, a rotation curve can be extracted from the full 2D velocity field with unprecedented quality, from which the maximum rotation speed can be derived with high confidence. In combination with accurate size and luminosity determinations from the ACS images, we will be able to establish the Tully-Fisher and Fundamental Plane relations of cluster spiral members at cosmological epochs. At these distances cluster assembly is predicted to peak and we can probe the galaxies' luminosity, size and mass evolution with robust methods. Together with our already existing sample of ~ 200 distant ($z \leq 1$) spiral galaxies in the field, we will put strong constraints on current theories of galaxy formation and evolution in different environments.

OBSERVING DESCRIPTION

For each cluster field, we've used one FORS2 pointing, which encompasses 6.5×6.5 arcmins (2.3×2.3 Mpc at $z=0.5$ for the concordance cosmology), to perform our 3D-spectroscopy. About 20 target galaxies are spread out within this field, with $\sim 60\%$ being cluster members due to geometrical constraints in the positioning of individual slitlets. However, the 40% field spirals are also very important as a reference sample and they will dramatically increase the number of distant galaxies with measured velocity fields. Therefore, it is essential to cover the entire FORS field with ACS-WFC, and it is important to have all our four clusters observed by HST. Only then will we eventually have a sample of ~ 45 cluster galaxies with both accurate morphology and 2D-velocity fields, of which ~ 15 spirals may have regular characteristics suitable for a TF analysis, while the other ones may be subject to some kind of interaction judging from our previous (long-slit) spectroscopy.

As for our FDF and WHDF observations during cycle 11 and 12, this can be achieved by a mosaic of 4 pointings with a small overlap area (4 arcsec) between different pointings. The offset from one pointing to another is ~ 3 arcmin, so that 4 different visits are necessary according to the HST manual. The analysis of our previous ACS imaging showed that 1 orbit per visit (pointing) is sufficient to gain the S/N and number of resolution elements needed for a robust determination

of surface brightness, disk scale length, inclination and position angle of the target galaxies as described below. Besides a visual classification of morphologies we will quantitatively assess the galaxies' structure using the publicly available GIM2D (Simard et al. 2002 ApJ 142, 1) and GALFIT (Peng et al. 2002 AJ 124, 266) software packages that analyse the 2D-light distribution of a galaxy. Key morphological parameters are the bulge-to-total luminosity ratio (B/T), the concentration index and the asymmetry index (Abraham et al. 1996).

Proposal 10635 - Overview

We propose to use the high-throughput broad V-filter F606W for all our imaging, since it covers the restframe UV light distribution at $z \sim 0.3-0.6$ tracing the emission by young hot stars. That way, starforming regions and possible structural peculiarities stemming from interactions like tidal tails are readily discernible. At the same time, also the emission lines used for constructing the velocity fields will fall into the broad-V-filter, so that we can use the ACS imaging also for our deconvolution method to enhance the spatial resolution of the spectroscopy. Our measured velocity fields typically cover an area of 7×3 arcsec. With that we reach 3-6 disk scale lengths in V corresponding to 2-4 disk scale lengths of the emitting gas (Ryder & Dopita 1994, ApJ 430, 142). The average surface brightnesses of our spirals at the maximum disk scale length are distributed within $23 < V < 26$; at 1 disk scale length within $21 < V < 24$.

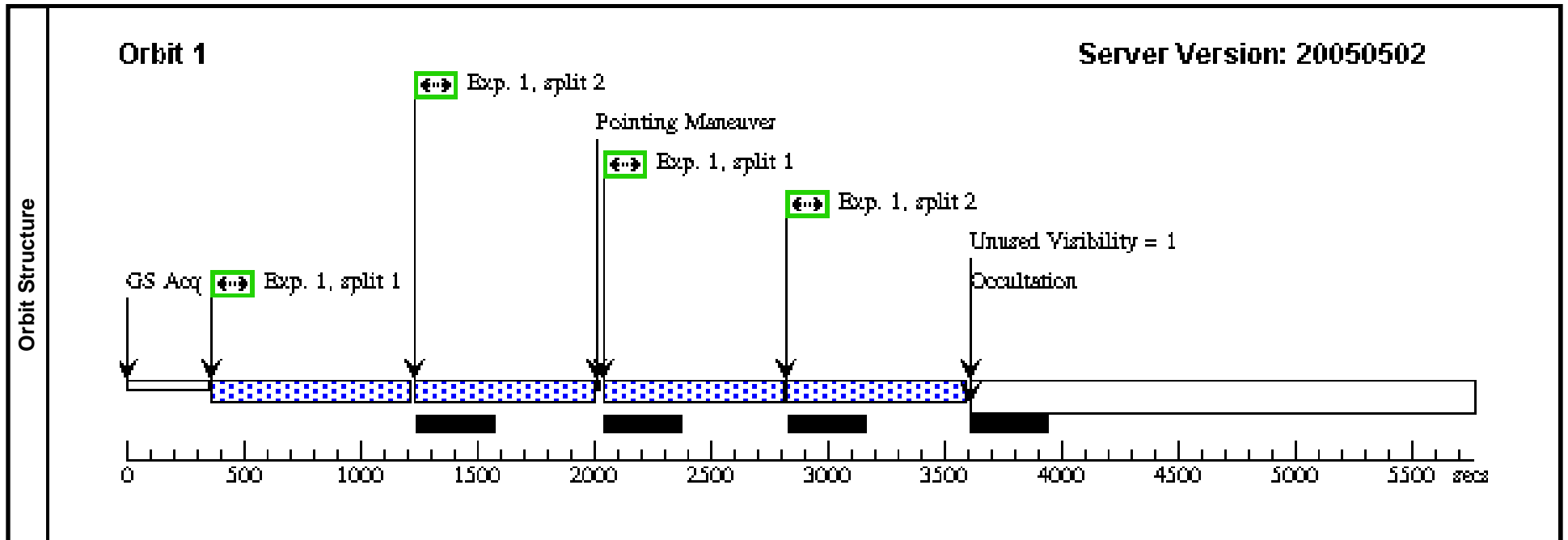
According to the simulations of GIM2D (Simard et al., Fig.6) our faintest and smallest target galaxies will have a systematic error of $\sim 5\%$ and a random error of $\sim 10\%$ in B/T for a signal-to-noise ratio of $S/N=10$ per square arcsec. This is more than adequate for a quantitative morphological classification. We derived values of $S/N > 10$ per square arcsec within an isophote of $I=23$ and $S/N \sim 50$ at $I=20$ for FDF galaxies in our cycle 11 images which were taken with a total integration time of 2400 seconds per pointing.

Typically, an exposure time of ~ 2400 secons can be achieved within a single orbit with an orbit visibility of the cluster fields of 54-60 min, guide star acquisition of 6 min, an ACS overhead of 4 min, and one SAM of 1 min. As for our previous observations, we propose to split each visit into 2 exposures with a small integer pixel offset to be able to remove cosmics and bad pixels and to bridge the intra-chip gap. We do not want to do sub-pixel dithering because the GIM2D & GALFIT software is sensitive to the regridding pattern, and drizzle techniques do not accurately preserve the noise characteristics of the pixels. Another reason is that nothing would be gained by drizzling with respect to the determination of structural parameters (like disk scale length, half-light radius etc.) since the 2 SIGMA isophotes of even the faintest objects we do have spectra of cover > 200 resolution elements on the ACS-WFC chip.

Proposal 10635 - Visit 01 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:20 GMT 2005

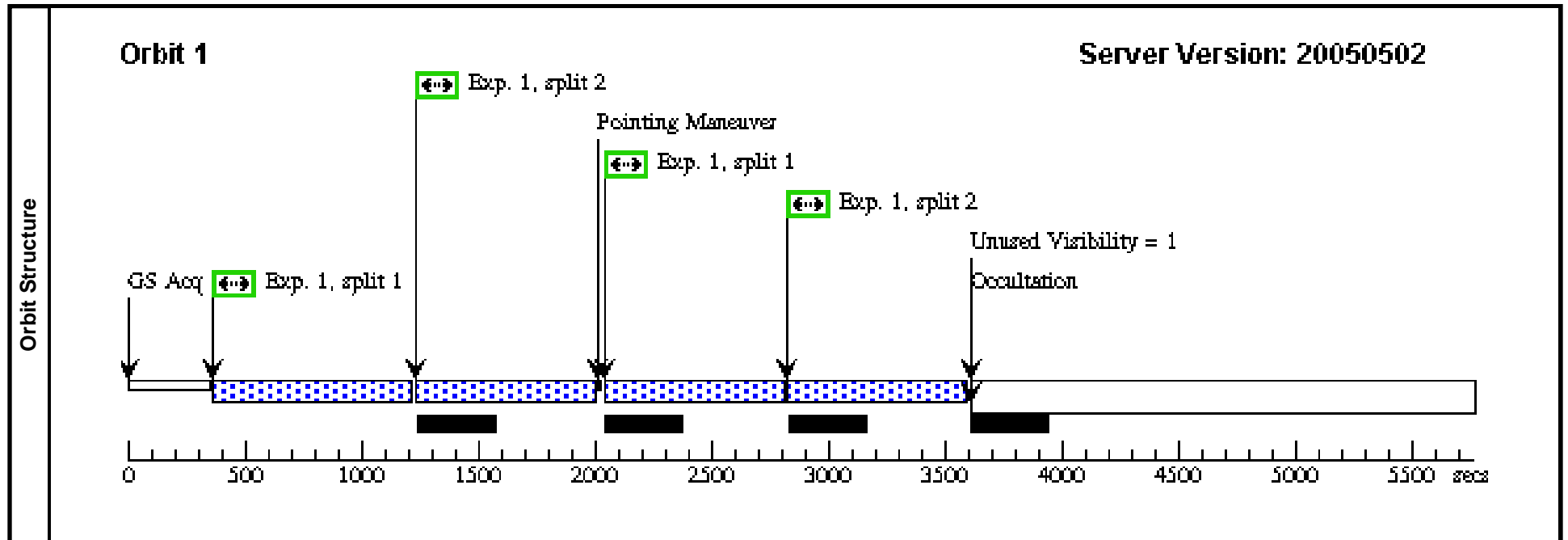
Visit	Proposal 10635, Visit 01 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 355.0D TO 5.0 D										
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	GAL-CLUS-041306-654850	RA: 04 13 9.0000 (63.2875000d) Dec: -65 52 0.00 (-65.86667d) Equinox: J2000 Plate Id: (?)	Redshift: 0.51		V=22.0+/-0.1		Coordinate Source: VLT/FORS image			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(1) GAL-CLUS-041306-654850	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>649.0 Secs (Pattern 1, Split 1)] [==>649.0 Secs (Pattern 1, Split 2)] [==>649.0 Secs (Pattern 2, Split 1)] [==>649.0 Secs (Pattern 2, Split 2)]	[1]	



Proposal 10635 - Visit 02 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:21 GMT 2005

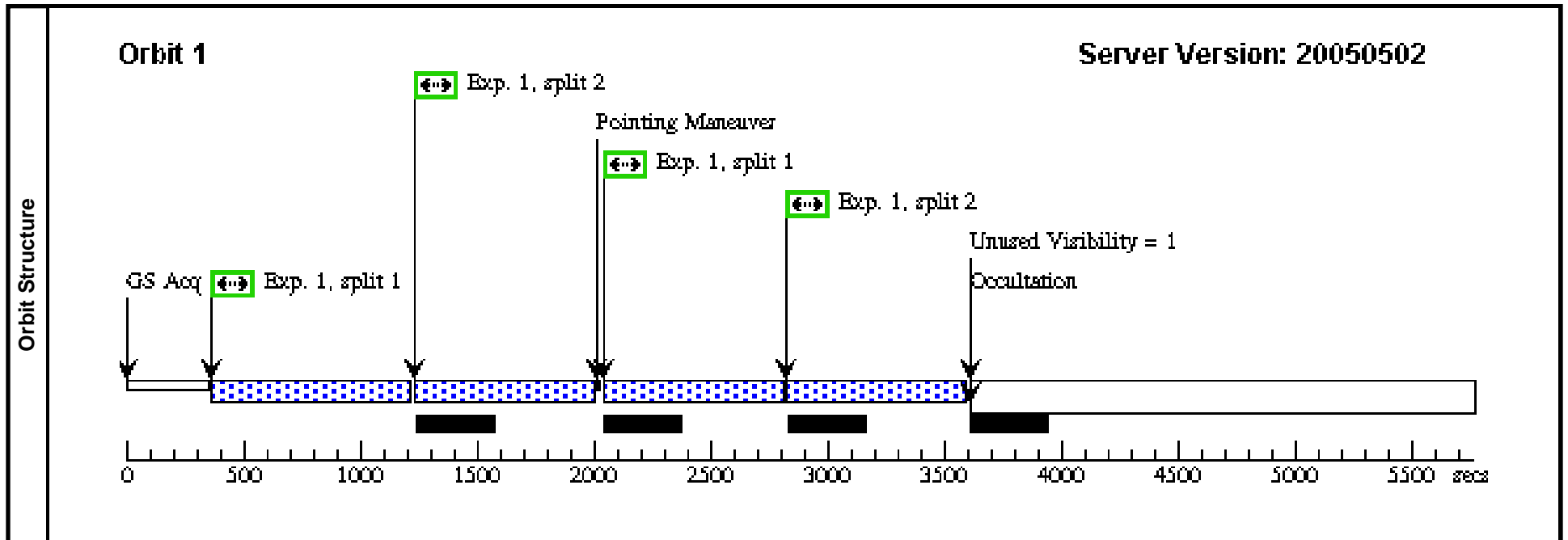
Visit	Proposal 10635, Visit 02 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 355.0D TO 5.0 D									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	GAL-CLUS-041306-655218	RA: 04 12 38.0000 (63.1583333d) Dec: -65 52 0.00 (-65.86667d) Equinox: J2000 Plate Id: (?)	Redshift: 0.51	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) GAL-CLUS-041306-655218	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>649.0 Secs (Pattern 1, Split 1)] [==>649.0 Secs (Pattern 1, Split 2)] [==>649.0 Secs (Pattern 2, Split 1)] [==>649.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 03 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:22 GMT 2005

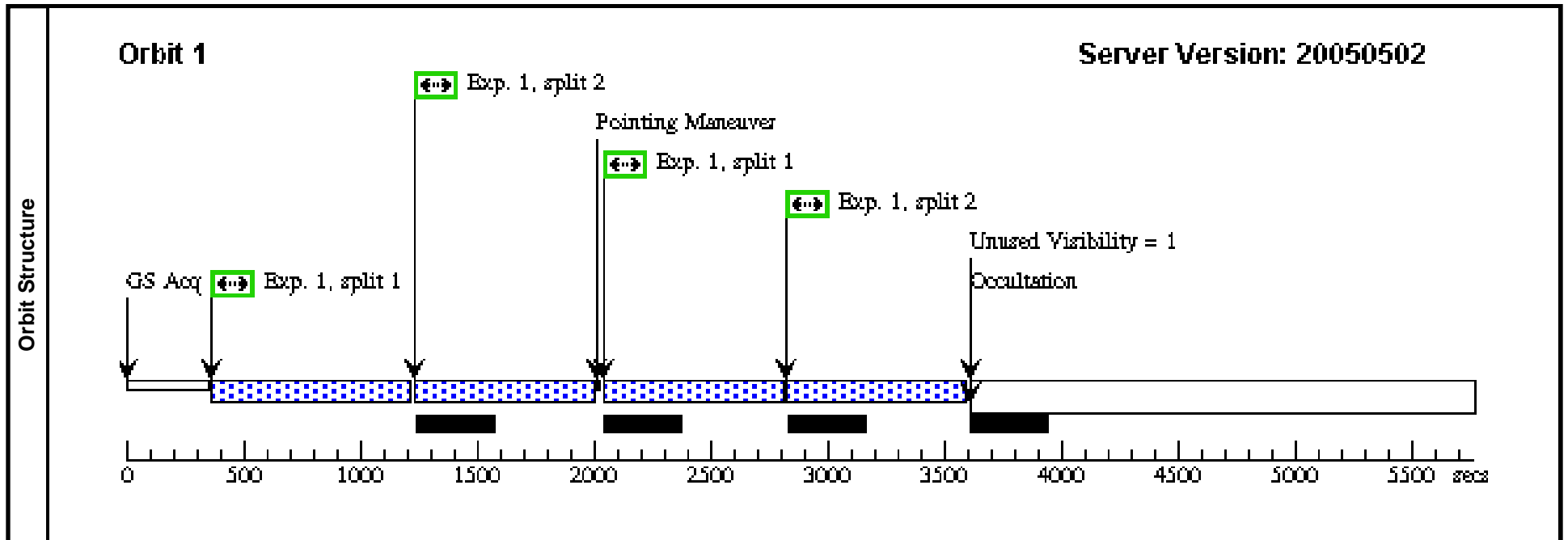
Visit	Proposal 10635, Visit 03 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 355.0D TO 5.0 D									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	GAL-CLUS-041232-654850	RA: 04 13 9.0000 (63.2875000d) Dec: -65 48 43.00 (-65.81194d) Equinox: J2000 Plate Id: (?)	Redshift: 0.51	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) GAL-CLUS-041232-654850	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>649.0 Secs (Pattern 1, Split 1)] [==>649.0 Secs (Pattern 1, Split 2)] [==>649.0 Secs (Pattern 2, Split 1)] [==>649.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 04 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:23 GMT 2005

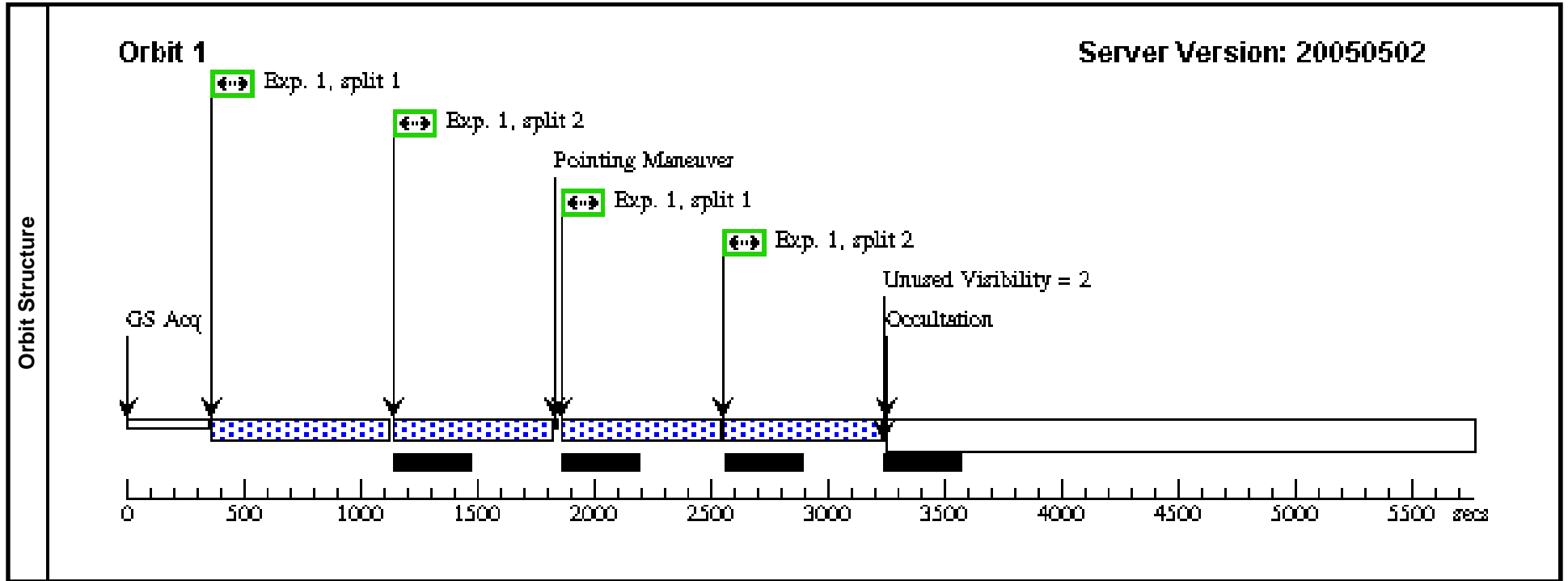
Visit	Proposal 10635, Visit 04 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 355.0D TO 5.0 D									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	GAL-CLUS-041232-655218	RA: 04 12 38.0000 (63.1583333d) Dec: -65 48 43.00 (-65.81194d) Equinox: J2000 Plate Id: (?)	Redshift: 0.51	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) GAL-CLUS-041232-655218	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>649.0 Secs (Pattern 1, Split 1)] [==>649.0 Secs (Pattern 1, Split 2)] [==>649.0 Secs (Pattern 2, Split 1)] [==>649.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 05 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:25 GMT 2005

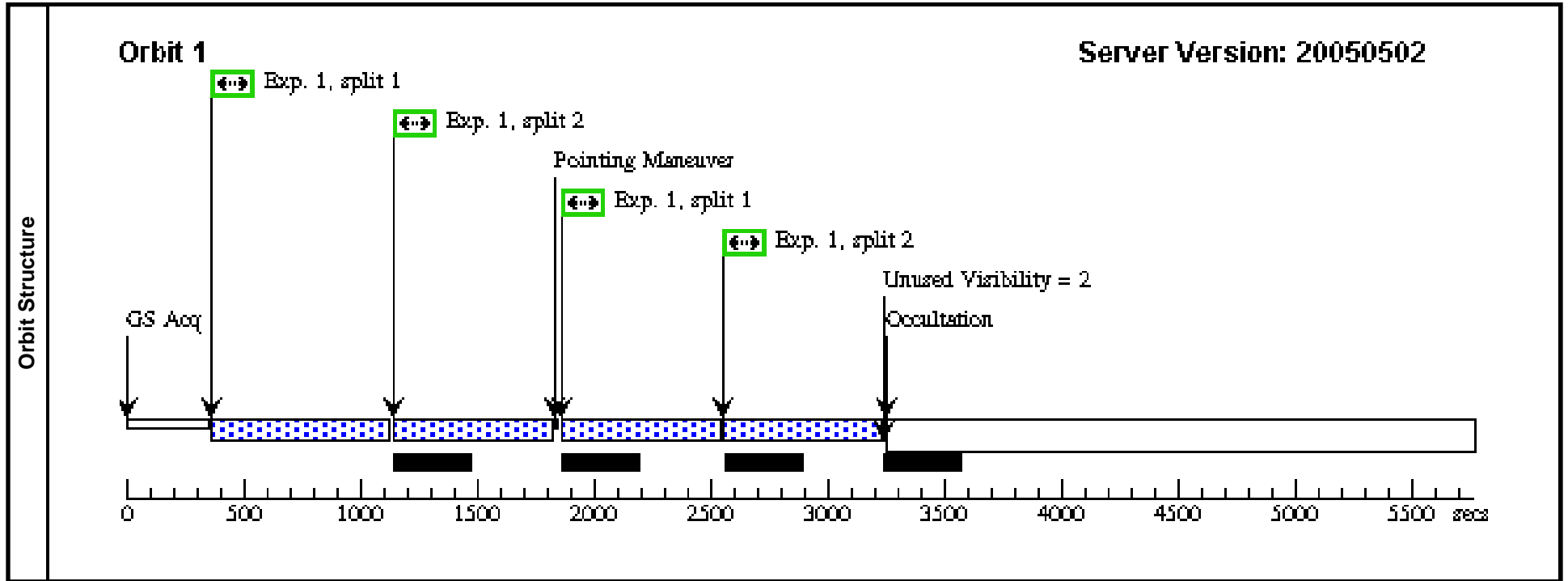
Visit	Proposal 10635, Visit 05 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 270.0D TO 285.0 D										
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Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	MS1008.1-1224-POS1	RA: 10 10 40.0000 (152.6666667d) Dec: -12 37 53.00 (-12.63139d) Equinox: J2000 Plate Id: (?)		Redshift: 0.3		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(5) MS1008.1-1224-POS1	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>558.0 Secs (Pattern 1, Split 1)] [==>558.0 Secs (Pattern 1, Split 2)] [==>558.0 Secs (Pattern 2, Split 1)] [==>558.0 Secs (Pattern 2, Split 2)]	[1]	



Proposal 10635 - Visit 06 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:26 GMT 2005

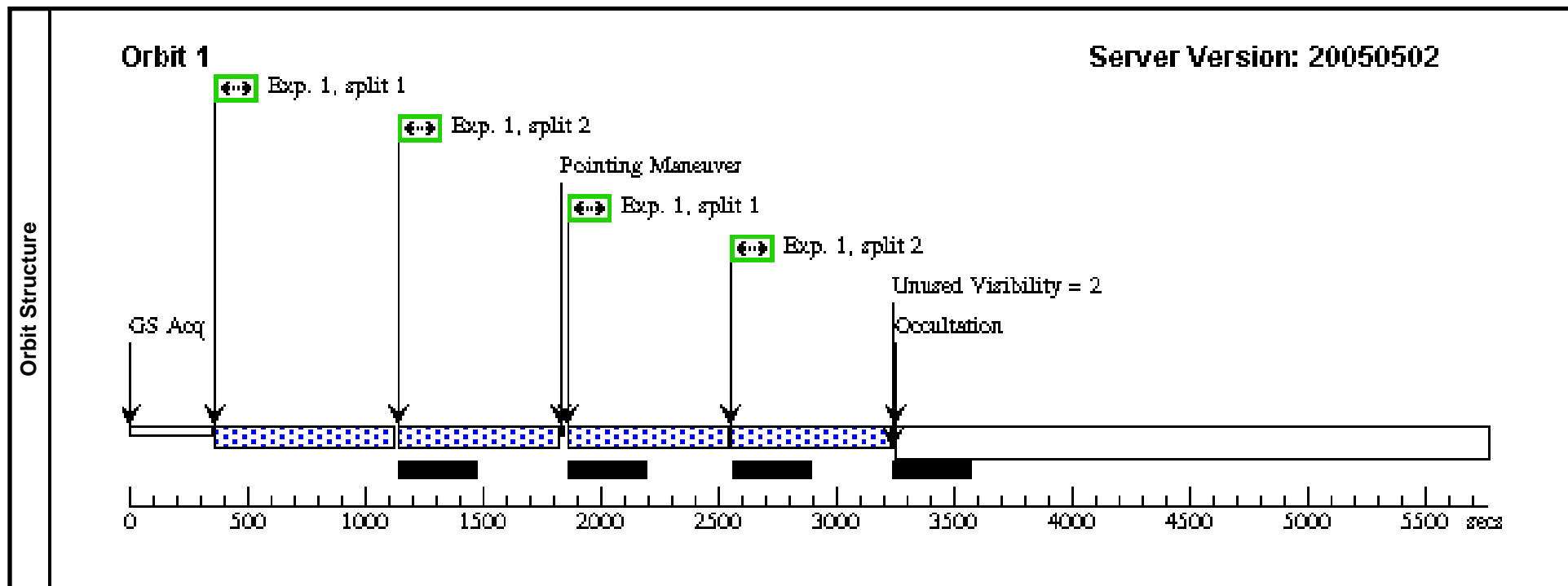
Visit	Proposal 10635, Visit 06 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 270.0D TO 285.0 D										
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Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(6)	MS1008.1-1224-POS2	RA: 10 10 40.0000 (152.6666667d) Dec: -12 40 55.00 (-12.68194d) Equinox: J2000 Plate Id: (?)		Redshift: 0.3		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(6) MS1008.1-1224-POS2	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>558.0 Secs (Pattern 1, Split 1)] [==>558.0 Secs (Pattern 1, Split 2)] [==>558.0 Secs (Pattern 2, Split 1)] [==>558.0 Secs (Pattern 2, Split 2)]	[1]	



Proposal 10635 - Visit 07 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:27 GMT 2005

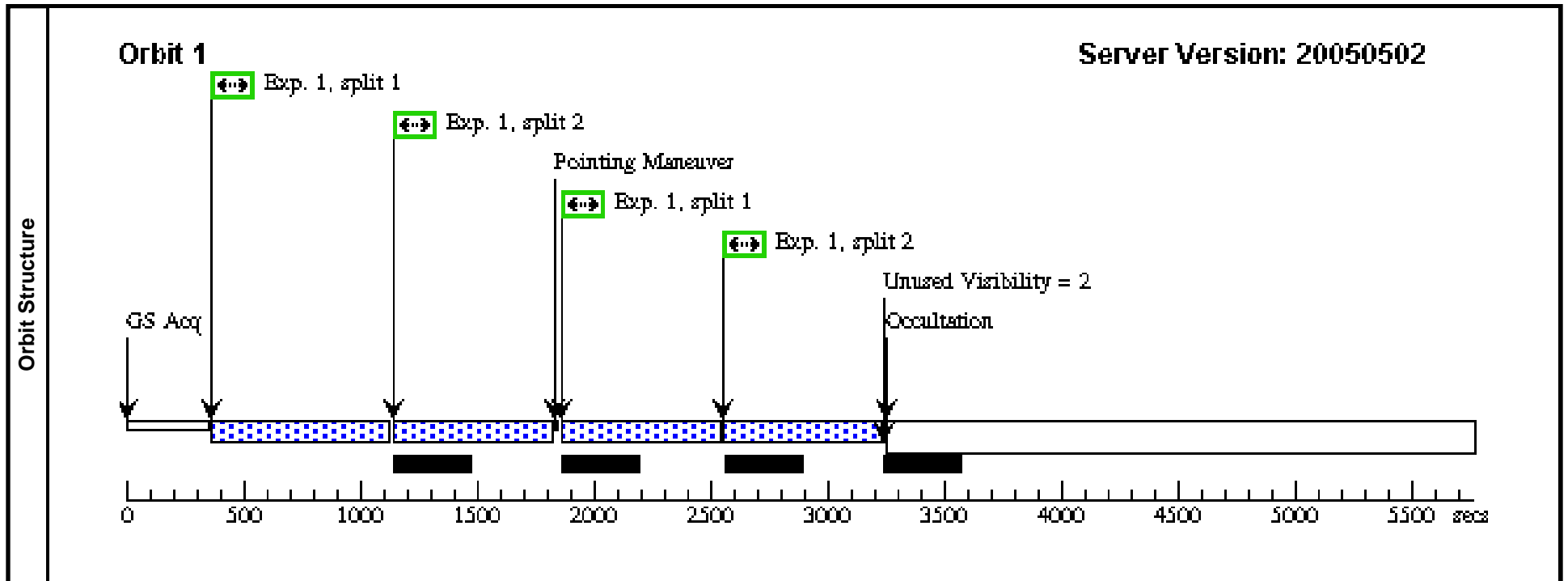
Visit	Proposal 10635, Visit 07 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 270.0D TO 285.0 D									
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Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(7)	MS1008.1-1224-POS3	RA: 10 10 26.0000 (152.6083333d) Dec: -12 37 53.00 (-12.63139d) Equinox: J2000 Plate Id: (?)		Redshift: 0.3		V=22.0+/-0.1		Coordinate Source: VLT/FORS image	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
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Proposal 10635 - Visit 08 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:28 GMT 2005

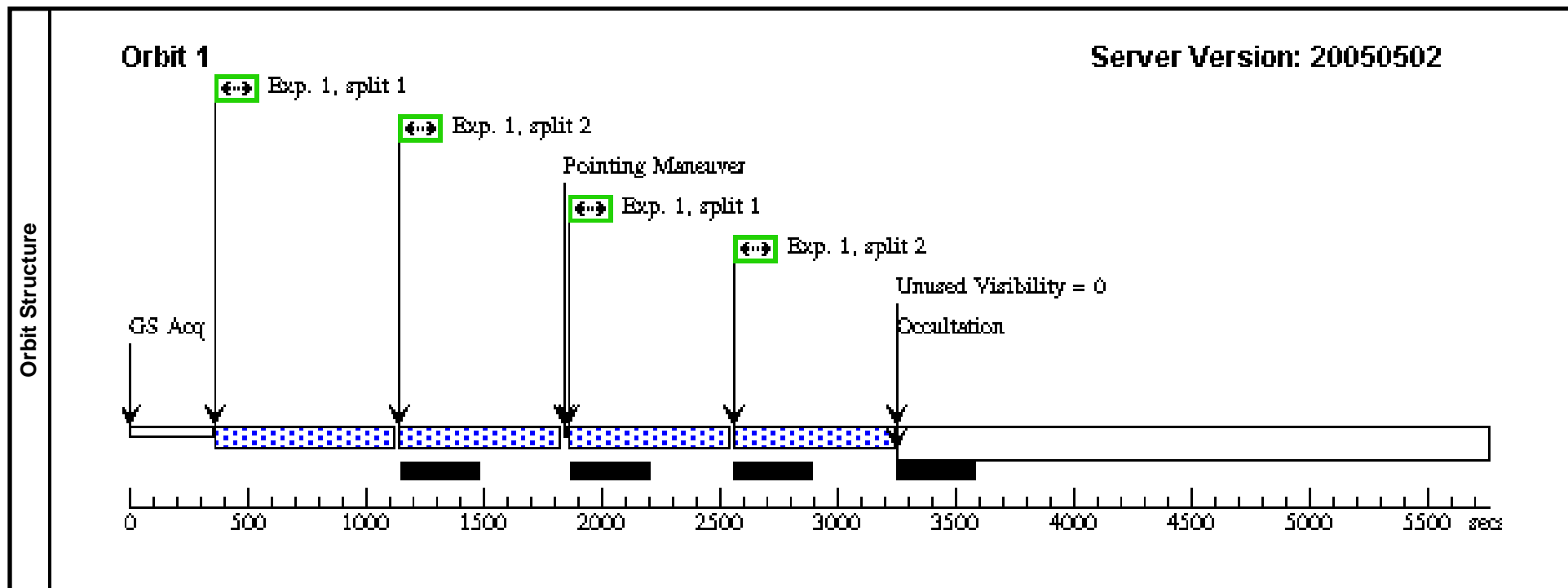
Visit	Proposal 10635, Visit 08 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 270.0D TO 285.0 D									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	MS1008.1-1224-POS4	RA: 10 10 26.0000 (152.6083333d) Dec: -12 40 55.00 (-12.68194d) Equinox: J2000 Plate Id: (?)	Redshift: 0.3	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(8) MS1008.1-1224-POS4	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>558.0 Secs (Pattern 1, Split 1)] [==>558.0 Secs (Pattern 1, Split 2)] [==>558.0 Secs (Pattern 2, Split 1)] [==>558.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 09 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:29 GMT 2005

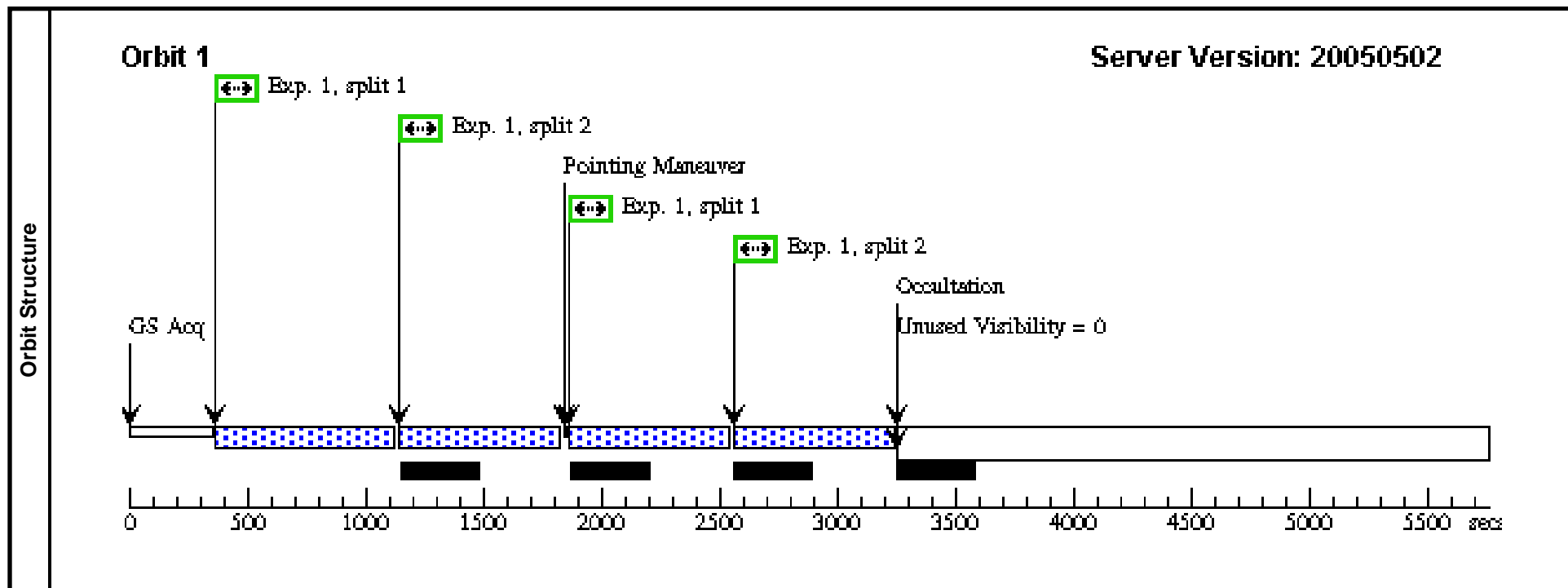
Visit	Proposal 10635, Visit 09 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 241.0D TO 260.0 D									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(9)	GAL-CLUS-001840+162731	RA: 00 18 40.0000 (4.6666667d) Dec: +16 27 31.00 (16.45861d) Equinox: J2000 Plate Id: (?)	Redshift: 0.55		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(9) GAL-CLUS-001840+162731	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 10 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:30 GMT 2005

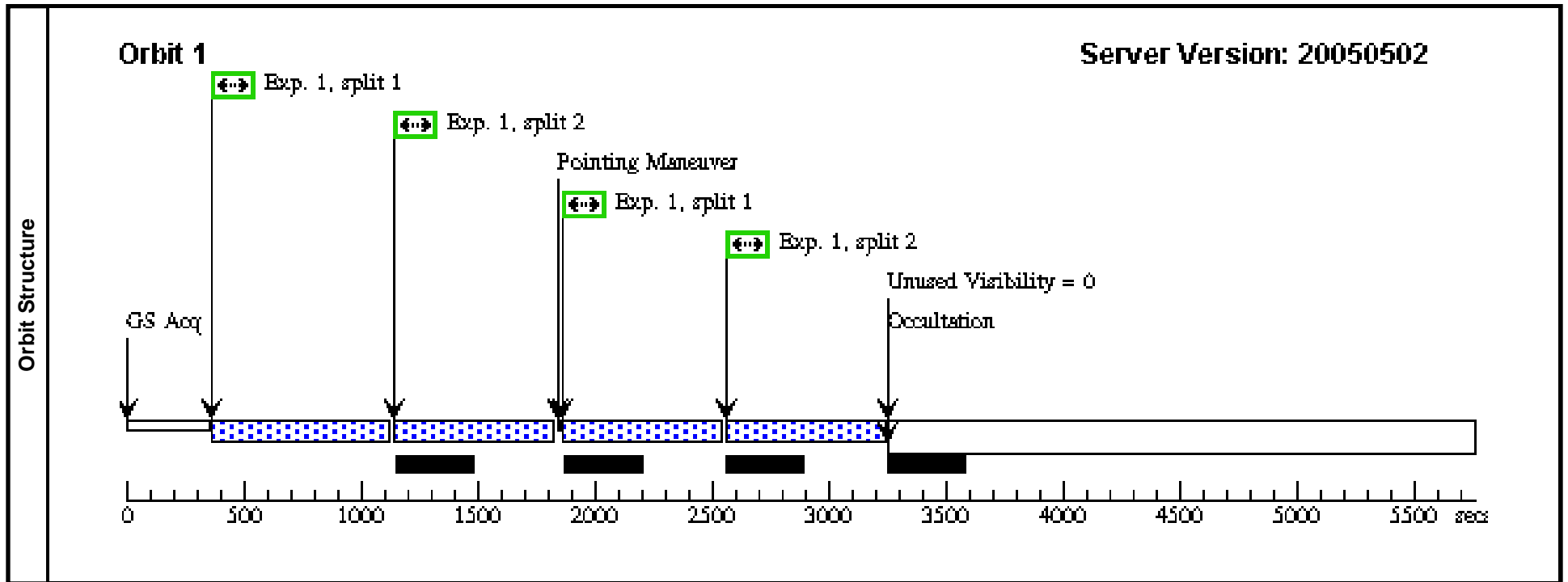
Visit	Proposal 10635, Visit 10 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 241.0D TO 260.0 D									
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		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false					(1)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	GAL-CLUS-001840+162404	RA: 00 18 38.0000 (4.6583333d) Dec: +16 24 52.00 (16.41444d) Equinox: J2000 Plate Id: (?)	Redshift: 0.55	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(10) GAL-CLUS-001840+162404	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 11 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:31 GMT 2005

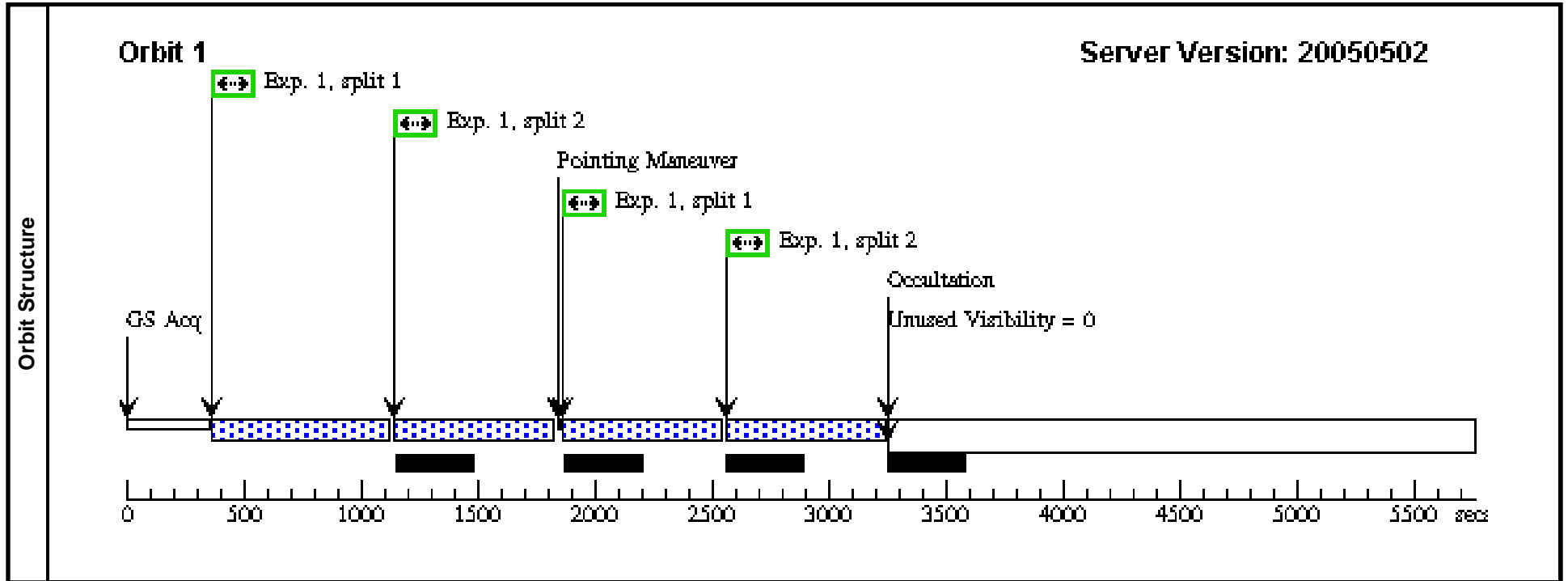
Visit	Proposal 10635, Visit 11 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 241.0D TO 260.0 D									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(11)	GAL-CLUS-001828+162731	RA: 00 18 28.0000 (4.6166667d) Dec: +16 27 31.00 (16.45861d) Equinox: J2000 Plate Id: (?)	Redshift: 0.55	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(11) GAL-CLUS-001828+162731	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 12 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:32 GMT 2005

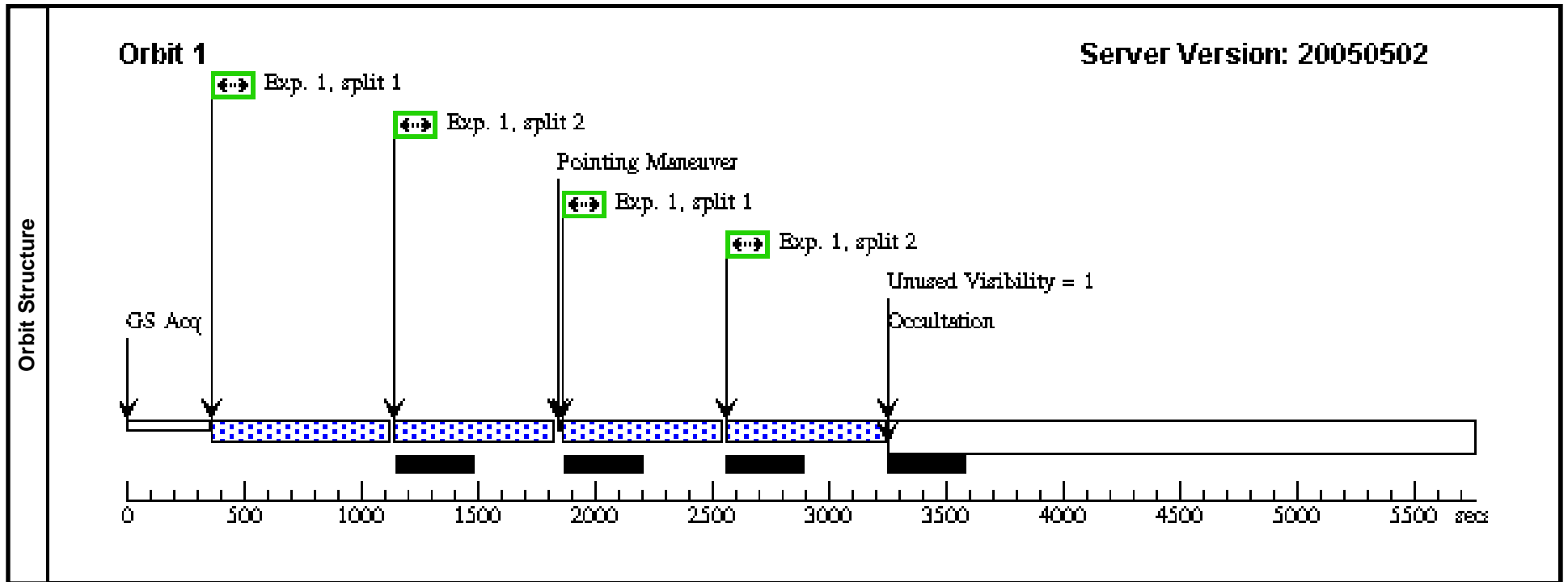
Visit	Proposal 10635, Visit 12 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 241.0D TO 260.0 D									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(12)	GAL-CLUS-001826+162404	RA: 00 18 24.0000 (4.6000000d) Dec: +16 24 52.00 (16.41444d) Equinox: J2000 Plate Id: (?)	Redshift: 0.55	V=22.0+/-0.1	Coordinate Source: VLT/FORS image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(12) GAL-CLUS-001826+162404	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]



Proposal 10635 - Visit 13 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:33 GMT 2005

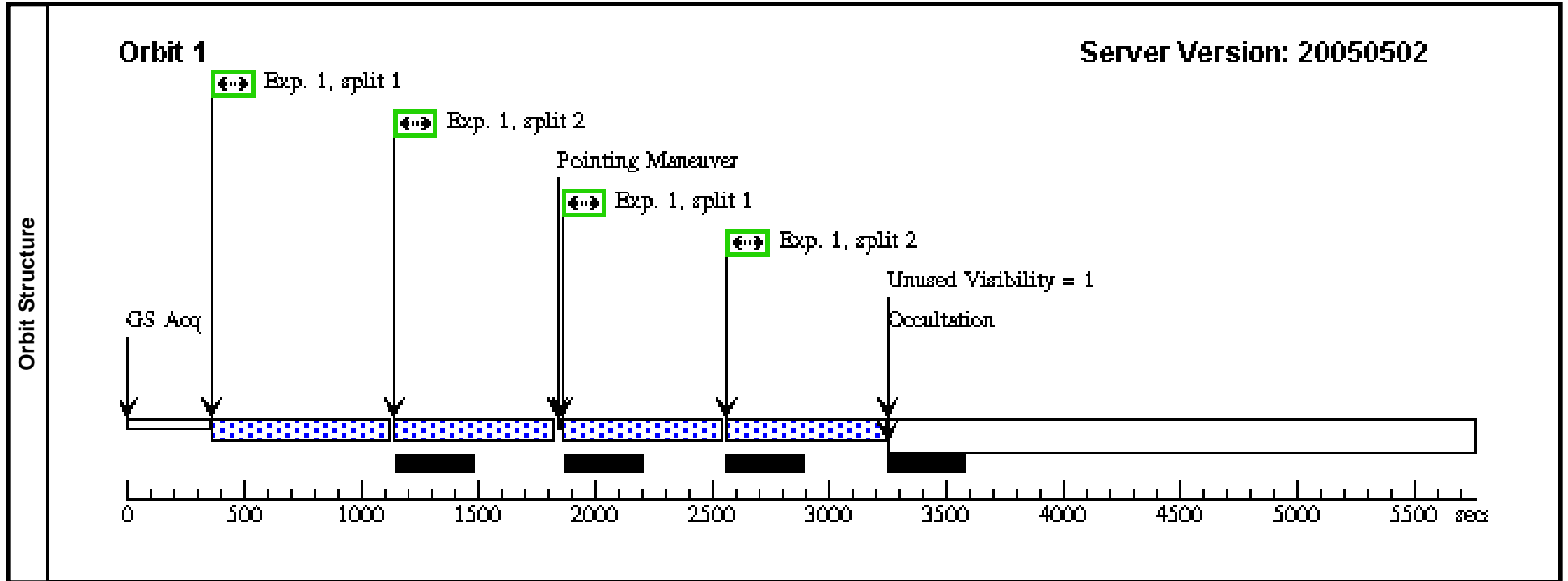
Visit	Proposal 10635, Visit 13 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 265.0D TO 275.0 D										
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(13)	MS2137.3-2353-POS1	RA: 21 40 22.0000 (325.0916667d) Dec: -23 37 57.00 (-23.63250d) Equinox: J2000 Plate Id: (?)		Redshift: 0.31		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(13) MS2137.3-2353-POS1	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]	



Proposal 10635 - Visit 14 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:34 GMT 2005

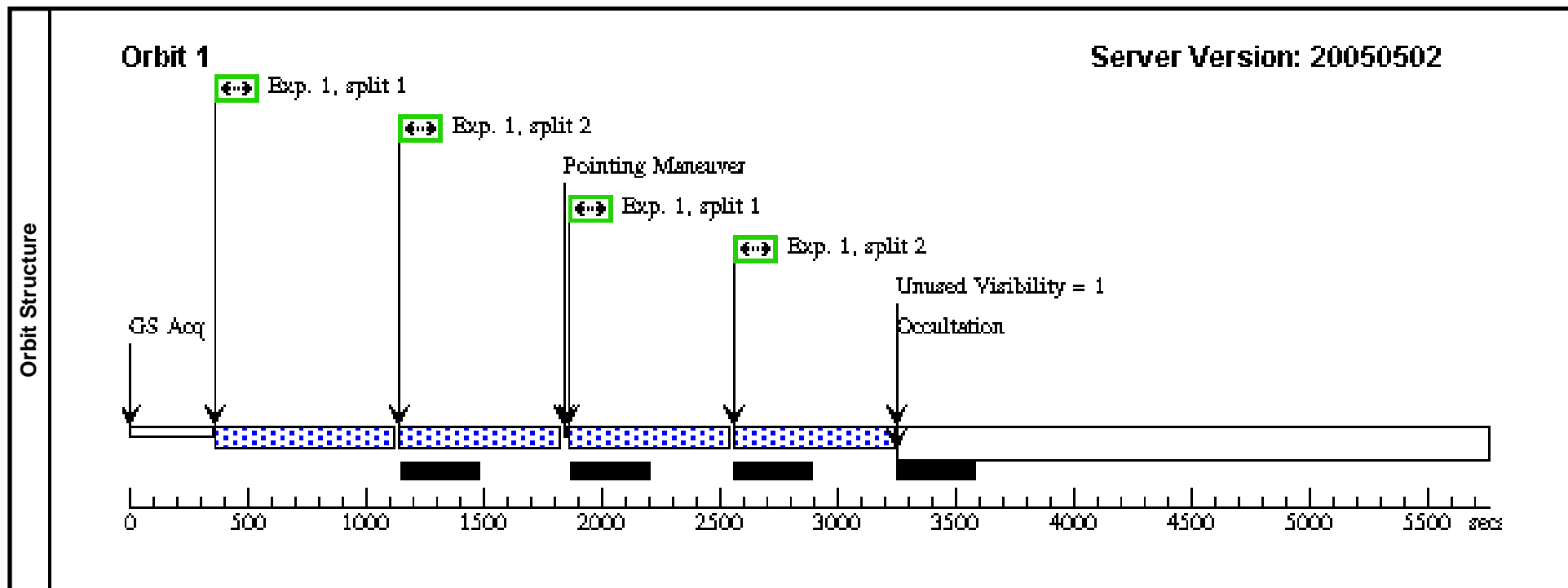
Visit	Proposal 10635, Visit 14 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 265.0D TO 275.0 D										
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(14)	MS2137.3-2353-POS2	RA: 21 40 22.0000 (325.0916667d) Dec: -23 41 2.00 (-23.68389d) Equinox: J2000 Plate Id: (?)		Redshift: 0.31		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(14) MS2137.3-2353-POS2	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]	



Proposal 10635 - Visit 15 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:35 GMT 2005

Visit	Proposal 10635, Visit 15 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 265.0D TO 275.0 D										
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(15)	MS2137.3-2353-POS3	RA: 21 40 7.0000 (325.0291667d) Dec: -23 41 2.00 (-23.68389d) Equinox: J2000 Plate Id: (?)		Redshift: 0.31		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(15) MS2137.3-2353-POS3	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]	



Proposal 10635 - Visit 16 - Galaxy Transformation as probed by Morphology and Velocity Fields of Distant Cluster Galaxies

Mon Jun 20 15:54:36 GMT 2005

Visit	Proposal 10635, Visit 16 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SCHED 30%; ORIENT 265.0D TO 275.0 D										
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(16)	MS2137.3-2353-POS4	RA: 21 40 7.0000 (325.0291667d) Dec: -23 37 51.00 (-23.63083d) Equinox: J2000 Plate Id: (?)		Redshift: 0.31		V=22.0+/-0.1		Coordinate Source: VLT/FORS image		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(16) MS2137.3-2353-POS4	ACS/WFC, ACCUM, WFC	F606W			Pattern 1-1 (1)	2250.0 Secs [==>560.0 Secs (Pattern 1, Split 1)] [==>560.0 Secs (Pattern 1, Split 2)] [==>560.0 Secs (Pattern 2, Split 1)] [==>560.0 Secs (Pattern 2, Split 2)]	[1]	

