



11583 - The Star Formation Rate In Nearby Elliptical Galaxies

Cycle: 17, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
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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) NGC-4697	WFC3/UVIS	3	21-Jul-2008 21:24:58.0	yes
21	(1) NGC-4697	WFC3/UVIS	1	21-Jul-2008 21:25:04.0	yes
02	(2) NGC-4636	WFC3/UVIS	3	21-Jul-2008 21:25:09.0	yes
22	(2) NGC-4636	WFC3/UVIS	1	21-Jul-2008 21:25:17.0	yes
03	(3) MESSIER-084	WFC3/UVIS	3	21-Jul-2008 21:25:22.0	yes
23	(3) MESSIER-084	WFC3/UVIS	1	21-Jul-2008 21:25:26.0	yes
04	(4) MESSIER-105	WFC3/UVIS	3	21-Jul-2008 21:25:31.0	yes
24	(4) MESSIER-105	WFC3/UVIS	1	21-Jul-2008 21:25:35.0	yes

16 Total Orbits Used

ABSTRACT

Small amounts of star formation in normal elliptical galaxies are suggested by several results: some surprisingly young ages from optical line-index dating; cooling X-ray gas; and mid-IR dust emission. Previously, it was difficult to detect low levels of star formation, but UV imaging with WFPC3 will permit us to conclusively identify individual O/B stars in nearby normal ellipticals by their UV colors and magnitudes. This technique is orders of magnitude more sensitive than previous methods, allowing detections of star formation to levels of $1E-4$ Msolar/yr. Proof of concept is provided by a very long UV ACS observation of M87 that revealed many O/B stars. We propose observations of four normal ellipticals where recent star formation is likely. This will yield their star formation rates and the locations of such activity.

OBSERVING DESCRIPTION

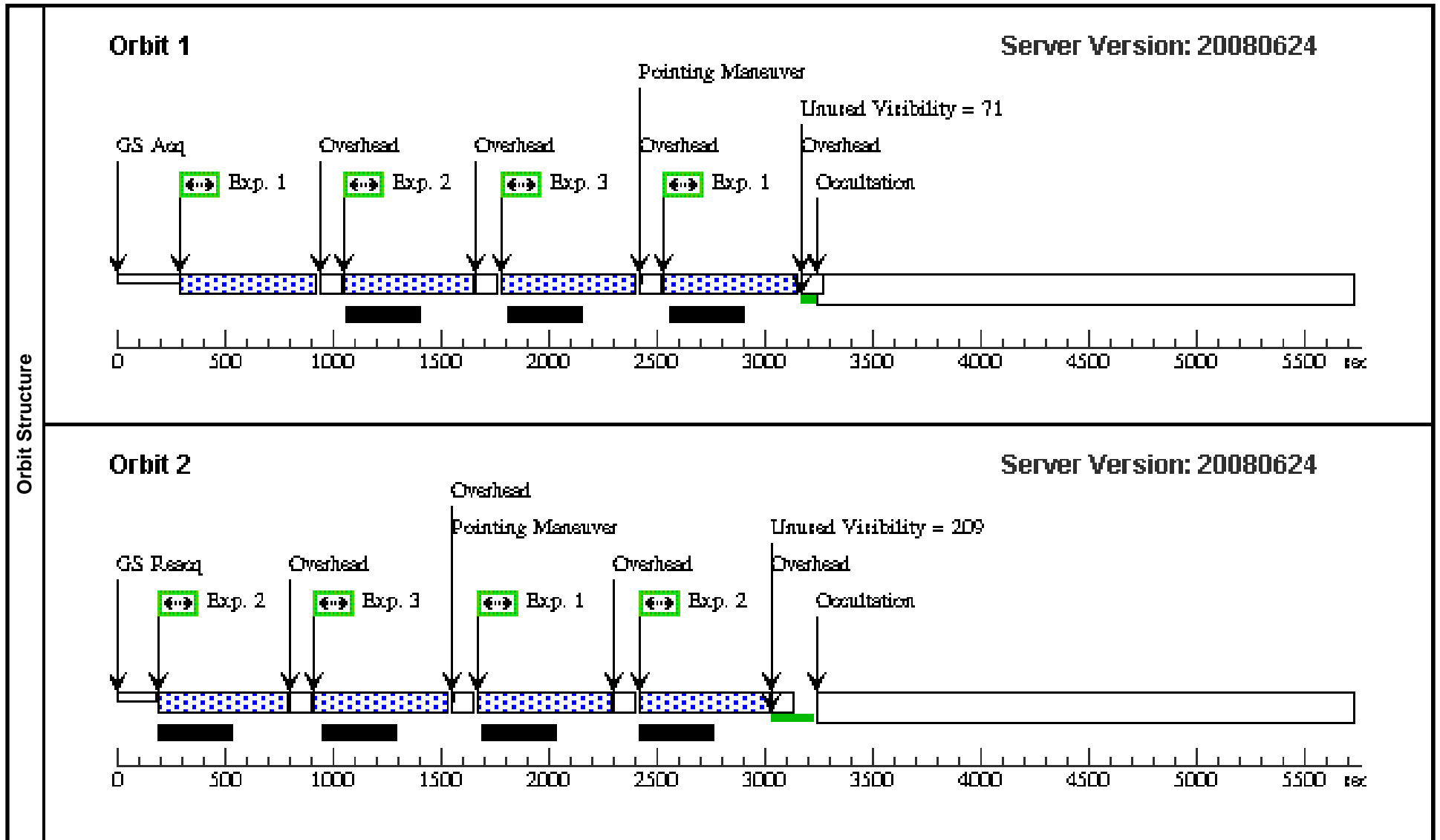
For each galaxy, we will observe two orbits in F225W (4 dithered exposures per orbit) followed by one orbit in F336W (4 dithered exposures). To check for nova, we will observe after a minimum of 30 days one additional orbit in F336W (4 dithered exposures). To maximize ease of scheduling we will not constrain the roll angle for any observation except that the first 3 orbits on each galaxy must be done at the same pointing.

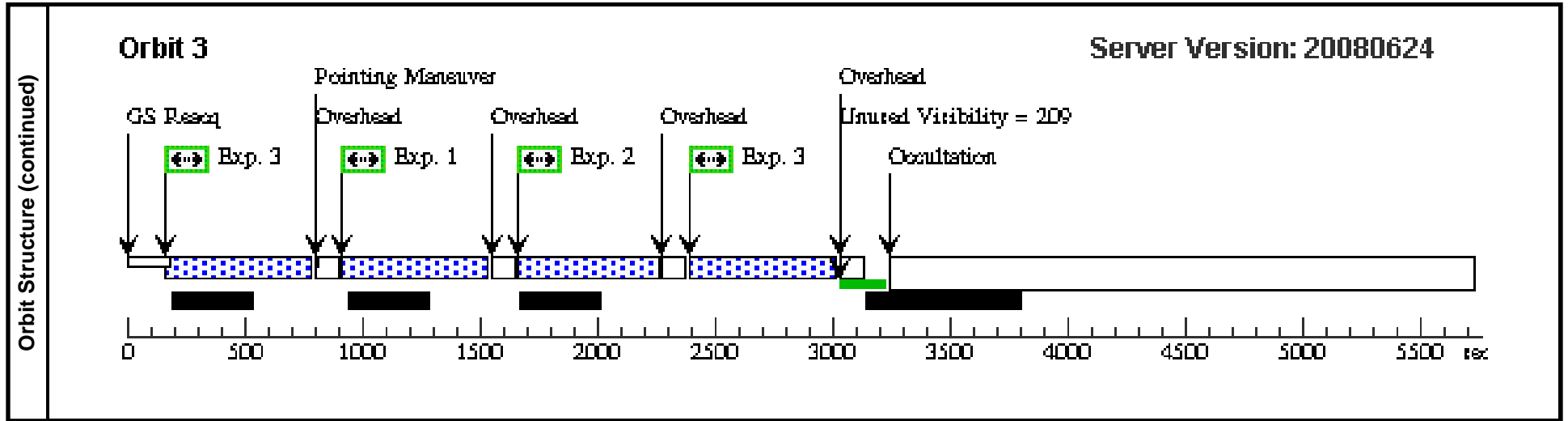
All observations will be in WFPC3/UVIS.

Proposal 11583 - Visit 01 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:38 GMT 2008

Visit	Proposal 11583, Visit 01, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1-3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	NGC-4697	RA: 12 48 35.9000 (192.1495833d) Dec: -05 48 3.00 (-5.80083d) Equinox: J2000 <i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>		V=10.14+/-0.14	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC-4697	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	[2]
									[=>(Pattern 3)]	[3]
									[=>(Pattern 4)]	[3]
	2		(1) NGC-4697	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	[2]
									[=>(Pattern 3)]	[3]
									[=>(Pattern 4)]	[3]
	3		(1) NGC-4697	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
								[=>(Pattern 2)]	[2]	
								[=>(Pattern 3)]	[3]	
								[=>(Pattern 4)]	[3]	

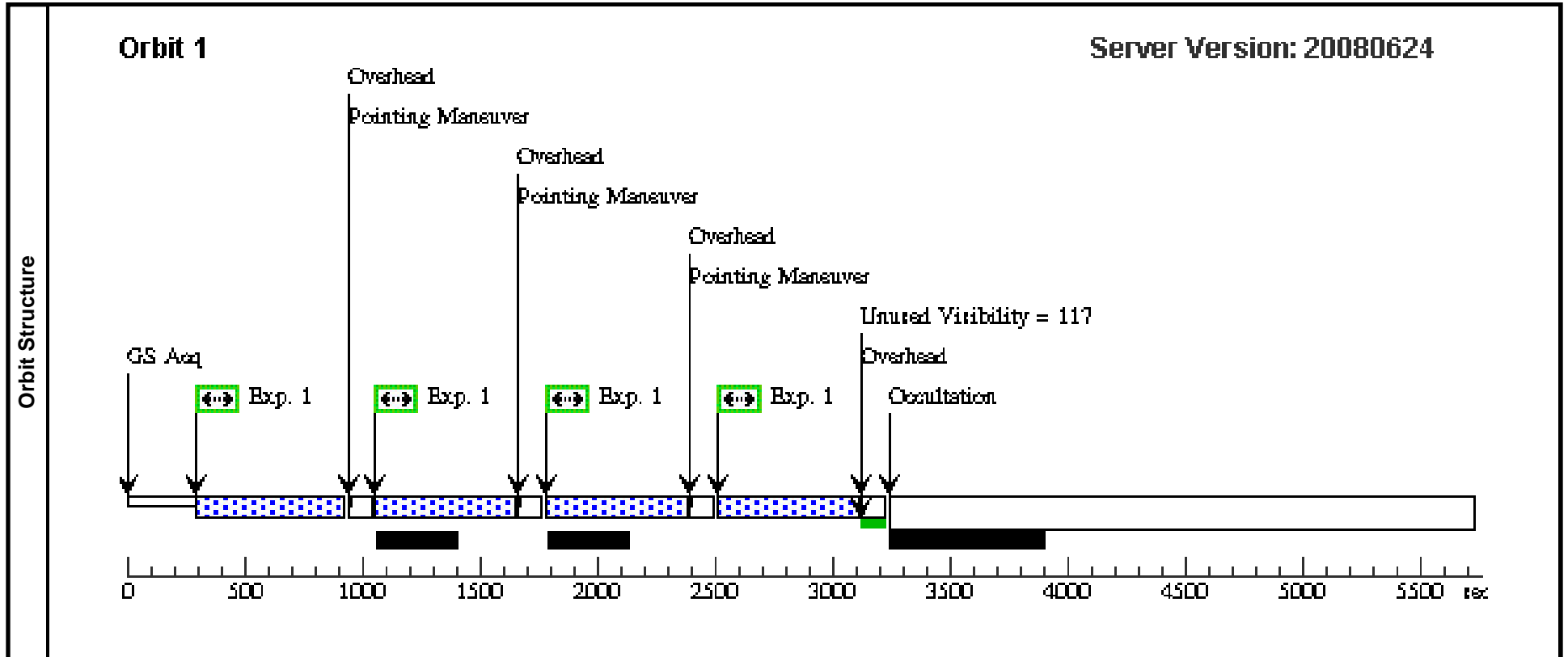




Proposal 11583 - Visit 21 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:39 GMT 2008

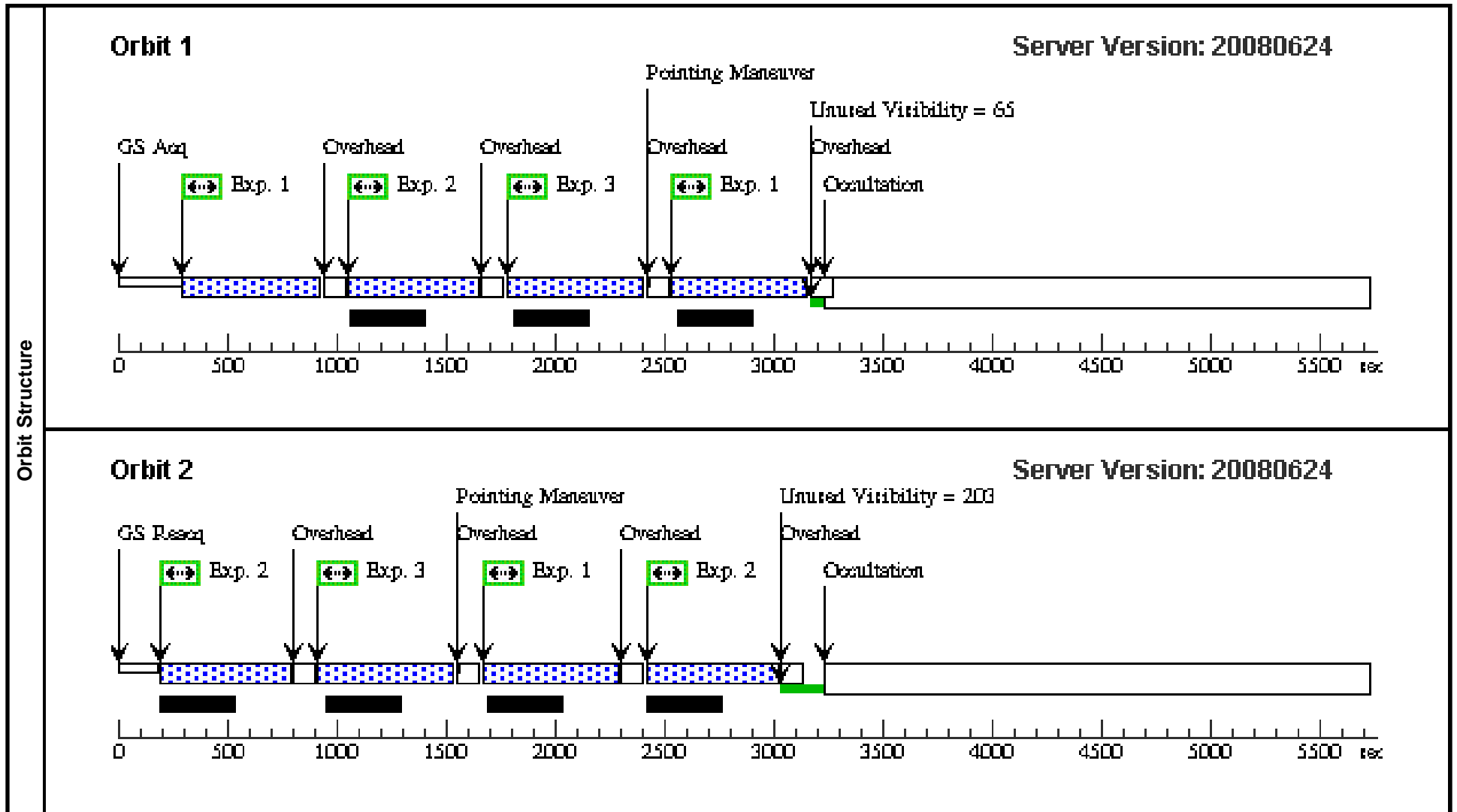
Visit	Proposal 11583, Visit 21, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 01 BY 21 D TO 180 D									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
(1)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	NGC-4697	RA: 12 48 35.9000 (192.1495833d) Dec: -05 48 3.00 (-5.80083d) Equinox: J2000		V=10.14+/-0.14	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) NGC-4697	(1) NGC-4697	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-1 (1)	600 Secs [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]

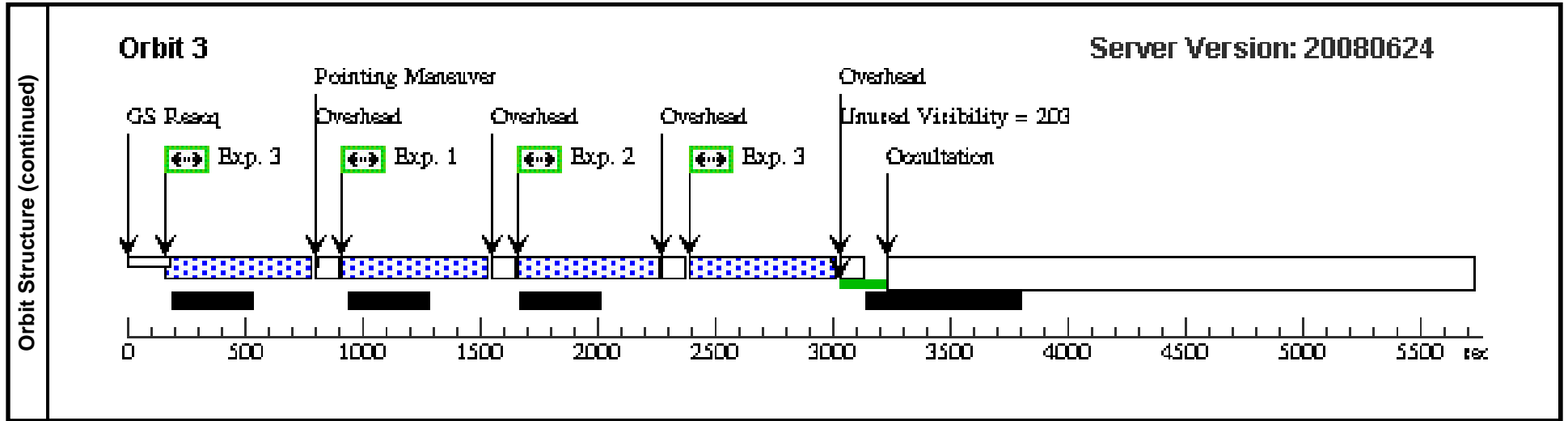


Proposal 11583 - Visit 02 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:39 GMT 2008

Visit	Proposal 11583, Visit 02, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1-3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NGC-4636	RA: 12 42 49.9000 (190.7079167d) Dec: +02 41 16.00 (2.68778d) Equinox: J2000 <i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>		V=10.43+/-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) NGC-4636	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	[2]
									[=>(Pattern 3)]	[3]
									[=>(Pattern 4)]	[3]
	2		(2) NGC-4636	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	[2]
									[=>(Pattern 3)]	[3]
									[=>(Pattern 4)]	[3]
	3		(2) NGC-4636	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
								[=>(Pattern 2)]	[2]	
								[=>(Pattern 3)]	[3]	
								[=>(Pattern 4)]	[3]	

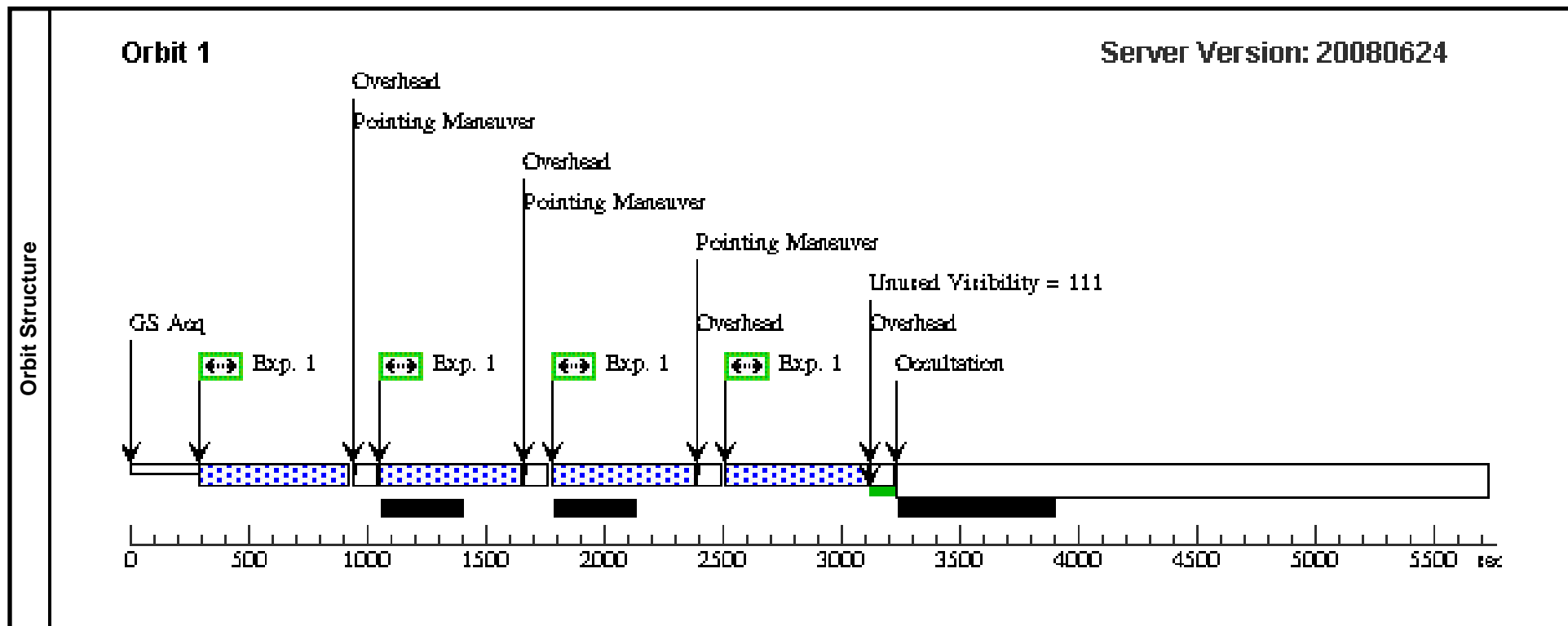




Proposal 11583 - Visit 22 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:40 GMT 2008

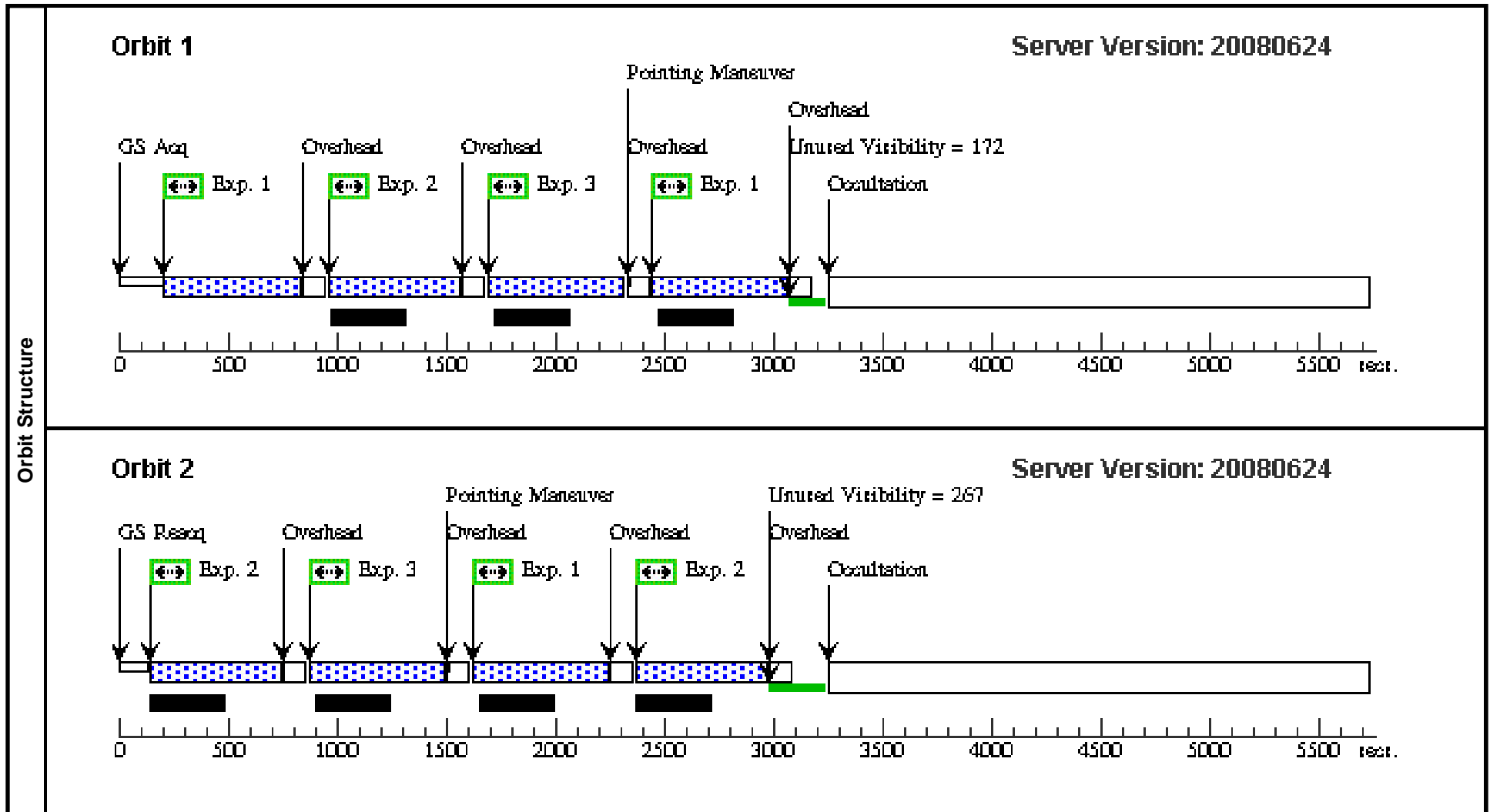
Visit	Proposal 11583, Visit 22, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 02 BY 21 D TO 180 D									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
(1)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NGC-4636	RA: 12 42 49.9000 (190.7079167d) Dec: +02 41 16.00 (2.68778d) Equinox: J2000 Comments: This object was generated by the targetselector and retrieved from the NED database.		V=10.43+/-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) NGC-4636	(2) NGC-4636	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-1 (1)	600 Secs [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]

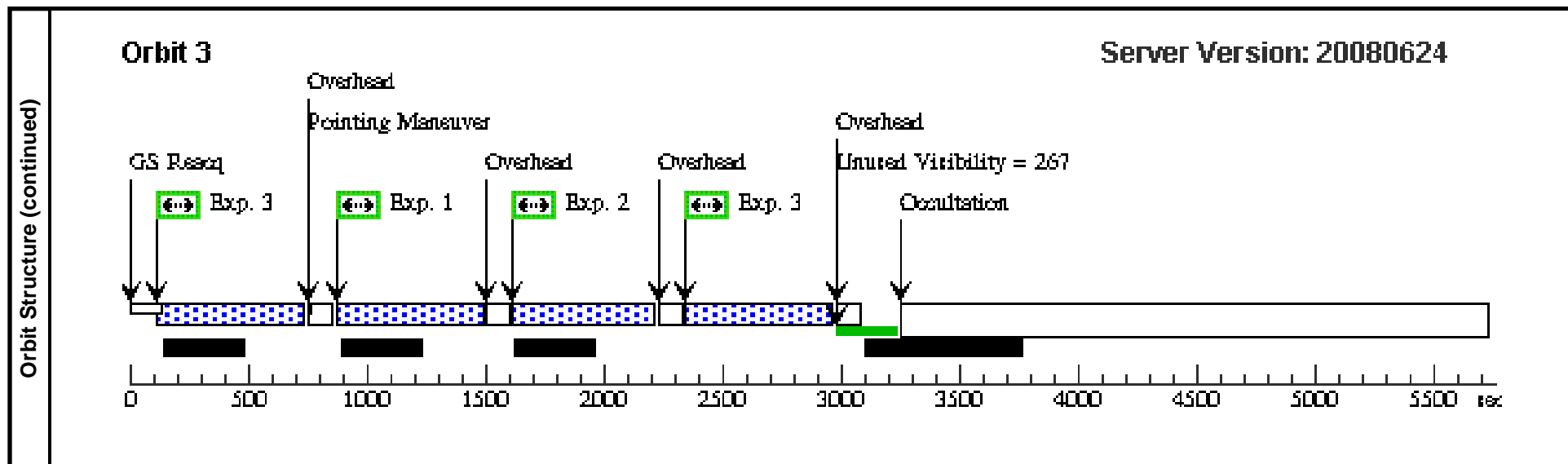


Proposal 11583 - Visit 03 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:40 GMT 2008

Visit	Proposal 11583, Visit 03, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1-3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	MESSIER-084	RA: 12 25 3.7000 (186.2654167d) Dec: +12 53 13.00 (12.88694d) Equinox: J2000 <i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>		V=10.0+/-0.1	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) MESSIER-084	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO	GS ACQ SCENARI O SINGLE	Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	[2]
									[=>(Pattern 3)]	[3]
									[=>(Pattern 4)]	[3]
	2		(3) MESSIER-084	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	[2]
									[=>(Pattern 3)]	[3]
									[=>(Pattern 4)]	[3]
	3		(3) MESSIER-084	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs	
									[=>(Pattern 1)]	[1]
								[=>(Pattern 2)]	[2]	
								[=>(Pattern 3)]	[3]	
								[=>(Pattern 4)]	[3]	

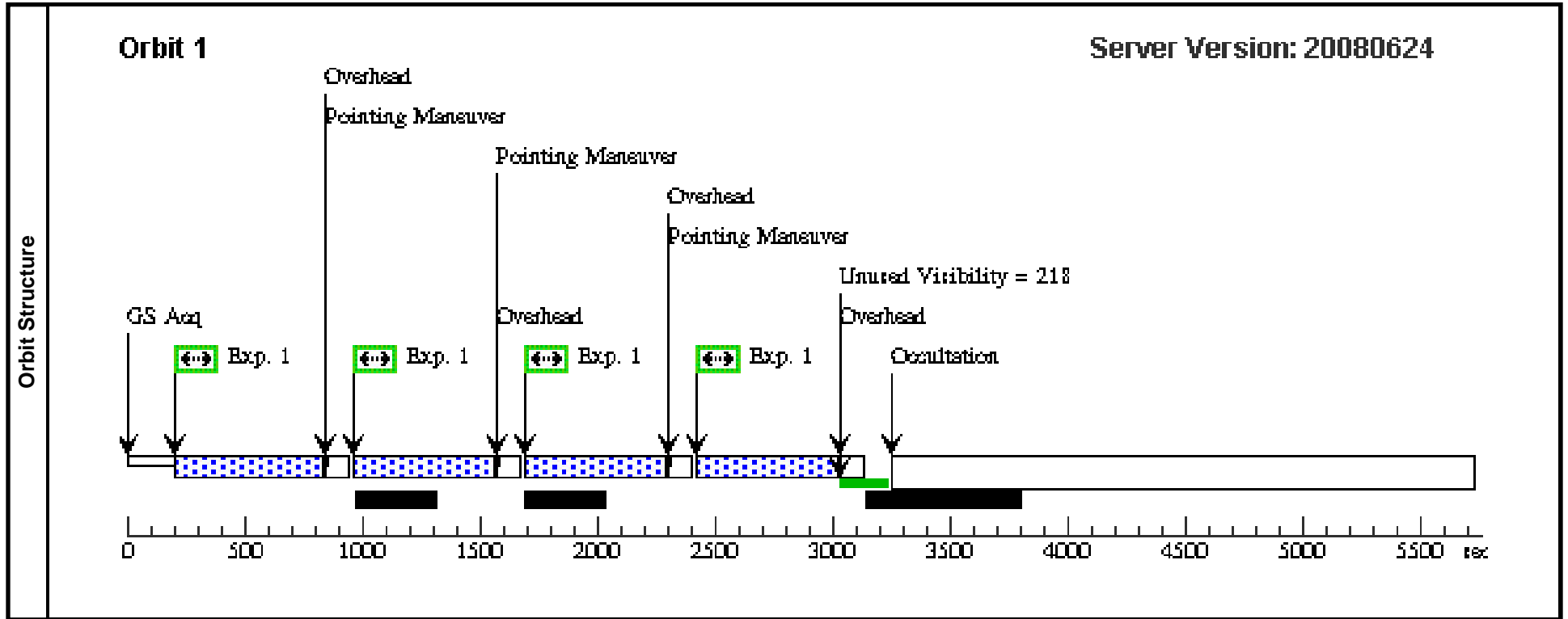




Proposal 11583 - Visit 23 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:41 GMT 2008

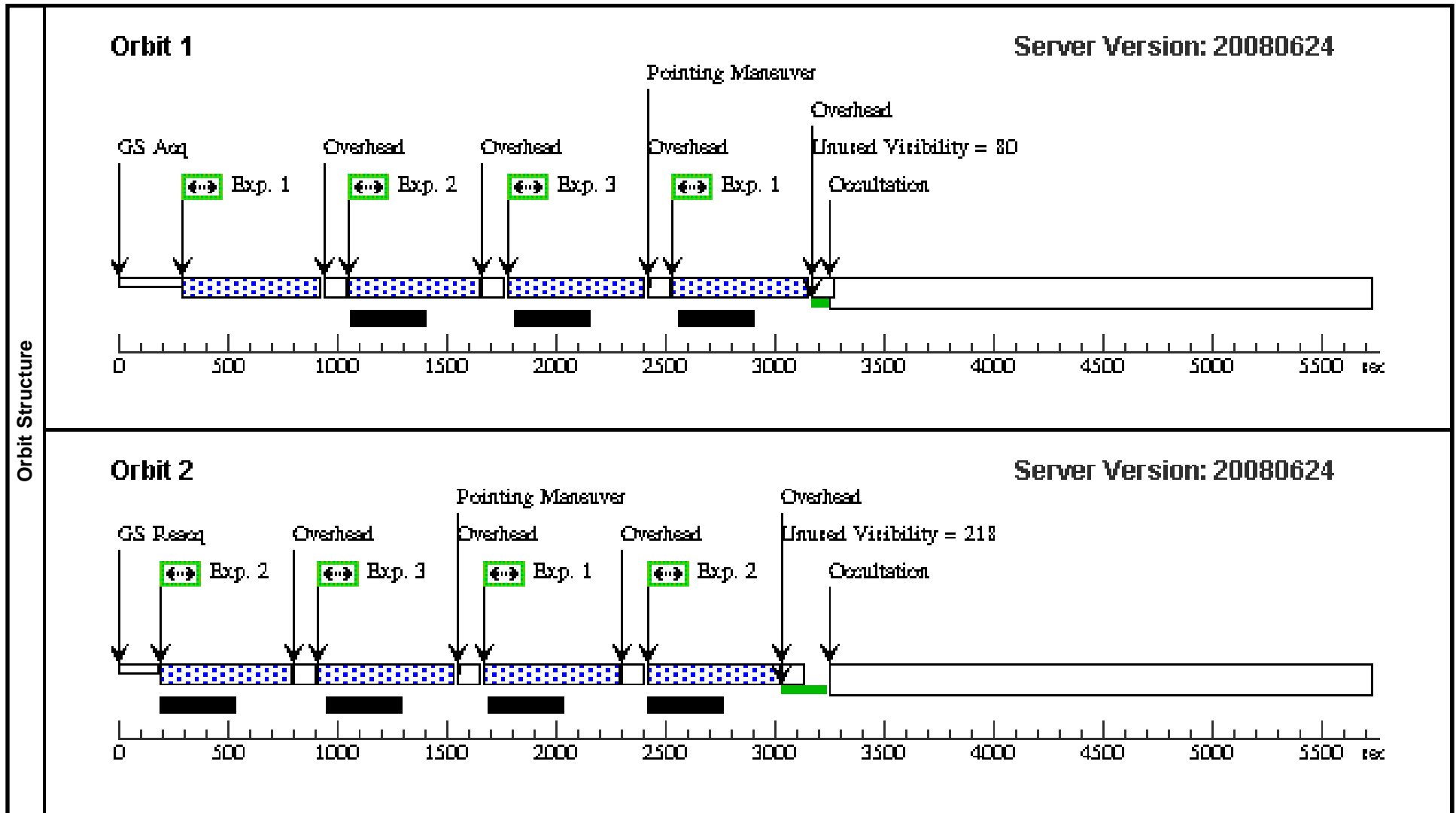
Visit	Proposal 11583, Visit 23, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 03 BY 21 D TO 180 D										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(1)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	MESSIER-084	RA: 12 25 3.7000 (186.2654167d) Dec: +12 53 13.00 (12.88694d) Equinox: J2000				V=10.0+/-0.1		Reference Frame: ICRS		
<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	(3) MESSIER-084	(3) MESSIER-084	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO	GS ACQ SCENARI O SINGLE	Pattern 1-1 (1)	600 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]		[1]

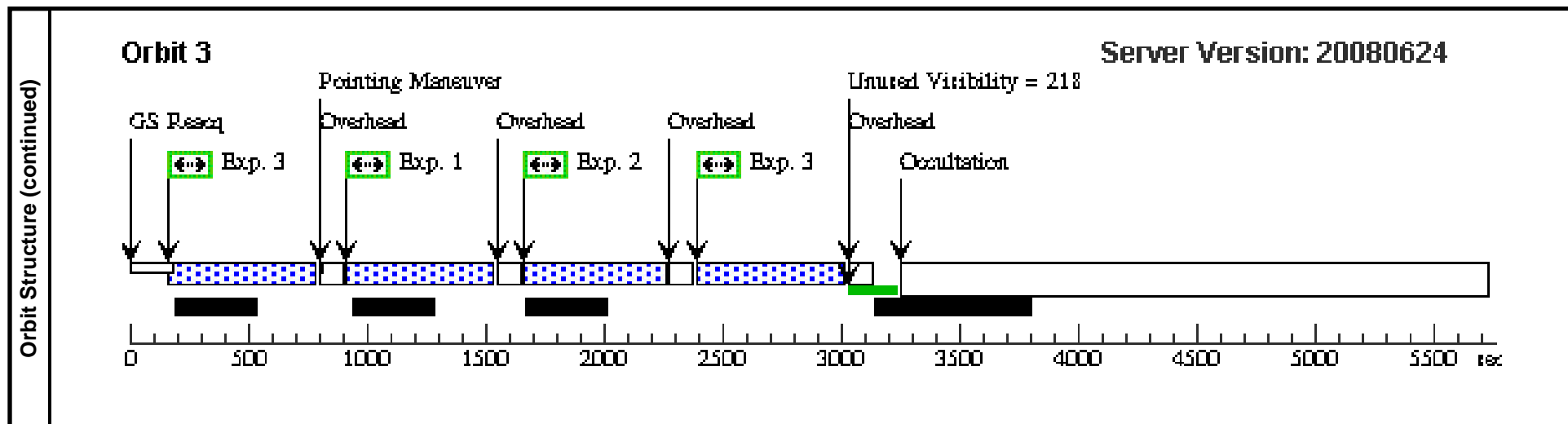


Proposal 11583 - Visit 04 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:41 GMT 2008

Visit		Proposal 11583, Visit 04, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Patterns	#	Primary Pattern			Secondary Pattern			Exposures			
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1-3)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(4)	MESSIER-105	RA: 10 47 49.6000 (161.9566667d) Dec: +12 34 54.00 (12.58167d) Equinox: J2000		V=10.0+/-0.1	Reference Frame: ICRS					
<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(4) MESSIER-105	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs		
									[=>(Pattern 1)]		[1]
									[=>(Pattern 2)]		[2]
									[=>(Pattern 3)]		[3]
									[=>(Pattern 4)]		[3]
	2		(4) MESSIER-105	WFC3/UVIS, ACCUM, UVIS-CENTER	F225W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs		
									[=>(Pattern 1)]		[1]
									[=>(Pattern 2)]		[2]
									[=>(Pattern 3)]		[3]
									[=>(Pattern 4)]		[3]
	3		(4) MESSIER-105	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-3 (1)	600 Secs		
									[=>(Pattern 1)]		[1]
								[=>(Pattern 2)]		[2]	
								[=>(Pattern 3)]		[3]	
								[=>(Pattern 4)]		[3]	





Proposal 11583 - Visit 24 - The Star Formation Rate In Nearby Elliptical Galaxies

Tue Jul 22 01:25:42 GMT 2008

Visit	Proposal 11583, Visit 24, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 04 BY 21 D TO 180 D									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
(1)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false					(1)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	MESSIER-105	RA: 10 47 49.6000 (161.9566667d) Dec: +12 34 54.00 (12.58167d) Equinox: J2000		V=10.0+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) MESSIER-105	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO		Pattern 1-1 (1)	600 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]

