



## 11131 - Star formation at large radii in cooling flow brightest cluster galaxies

Cycle: 16, 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) ABELL-2597	ACS/SBC	3	17-Jan-2008 21:48:41.0	yes
02	(3) ABELL-2597-OFFSET	ACS/SBC	2	17-Jan-2008 21:48:44.0	yes
03	(2) ABELL-2204	ACS/SBC	3	17-Jan-2008 21:48:47.0	yes
04	(4) ABELL-2204-OFFSET	ACS/SBC	2	17-Jan-2008 21:48:50.0	yes

10 Total Orbits Used

### ABSTRACT

We propose to take deep ACS FUV images of the bright central galaxies in two powerful cooling flow clusters for which we have VLT UBR images, with the object of determining whether the UV excesses we observe at large radii (>15kpc) are caused by young stars, ultrahot (WR) stars, or an as yet unknown source. Current models of excess UV light at the AGN-dominated centers of these galaxies cannot easily be extended to large radii.

New understanding of star formation in these clusters will be directly applicable to scenarios of galaxy formation in the early universe.

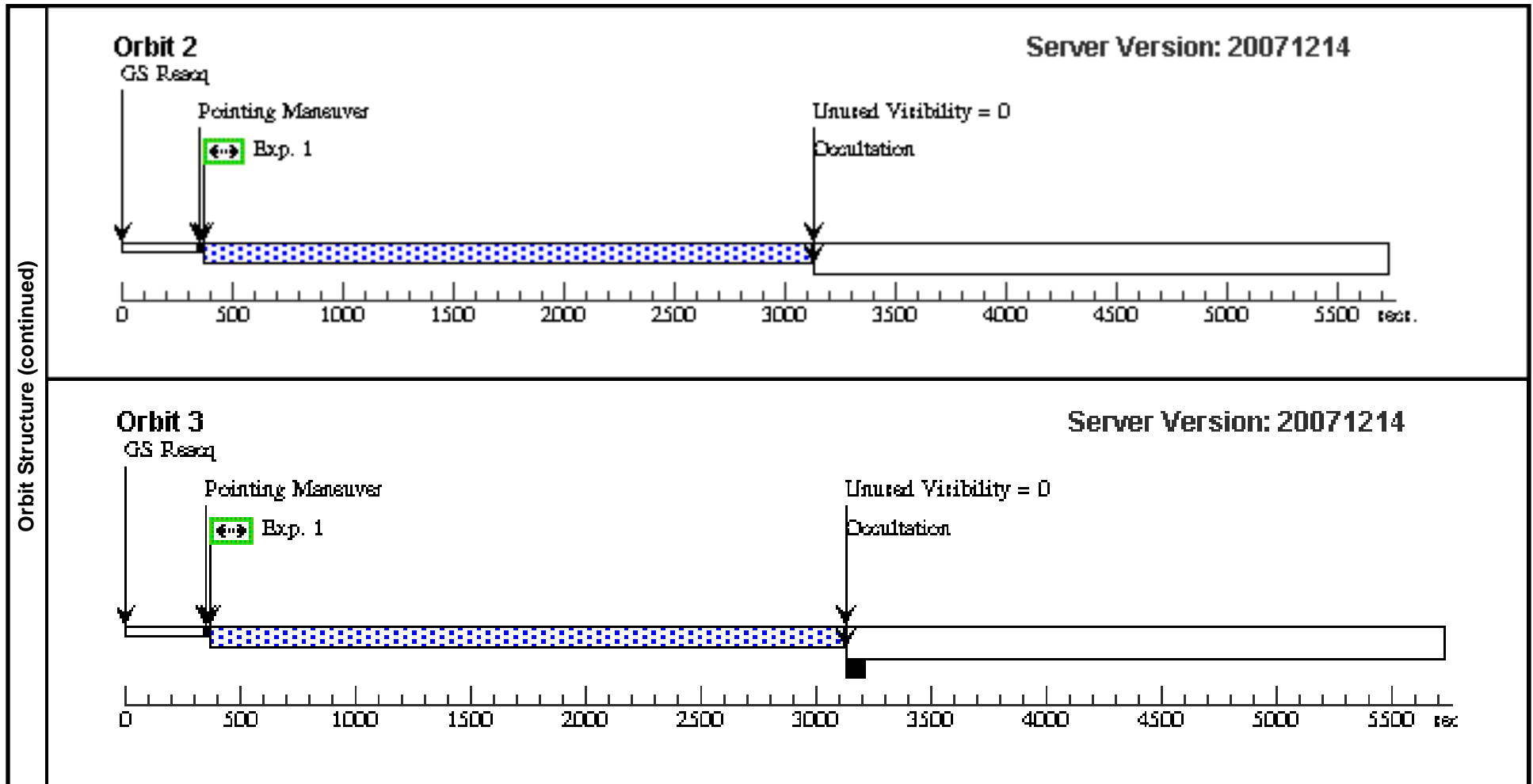
**OBSERVING DESCRIPTION**

We will observe the central galaxies of 2 clusters: ABELL-2597 ( $z=0.085$ ) and ABELL-2204 ( $z=0.152$ ) with ACS SBC in the FUV filter F150LP. We wish to observe the brightest, most extended galaxy in each field. Positional accuracy does not need to be more than 2 arcsec. Each target is observed in 5 orbits, 1 sub-exposure per orbit and each offset by  $\sim 1.5$  arcsec.

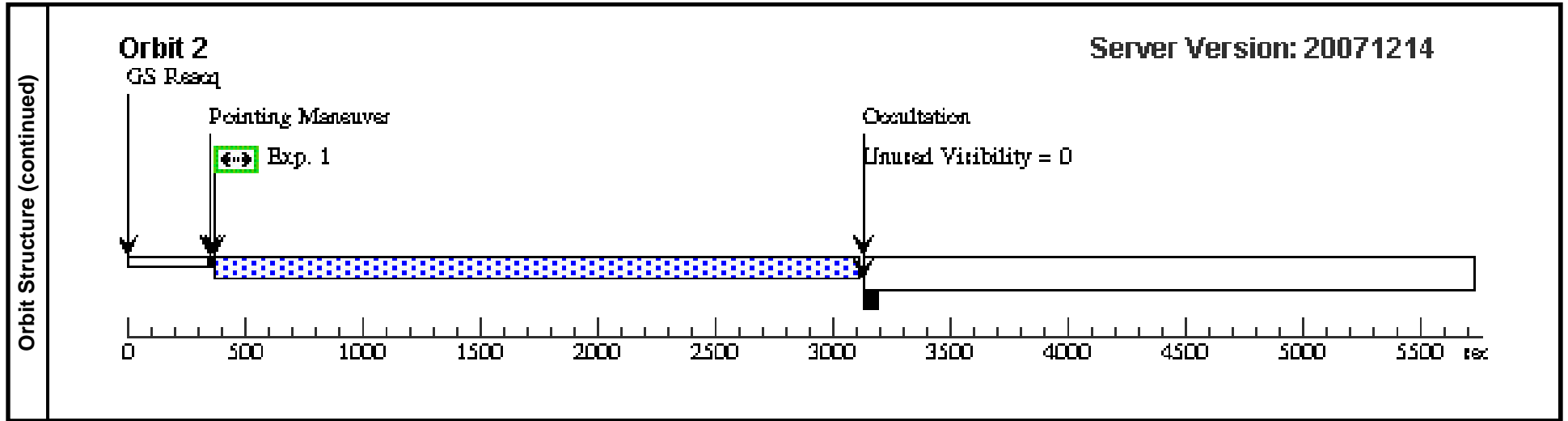
Proposal 11131 - Visit 01 - Star formation at large radii in cooling flow brightest cluster galaxies

Fri Jan 18 02:48:52 GMT 2008

<b>Visit</b>	<b>Proposal 11131, Visit 01</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/SBC Special Requirements: (none)									
	<b>Patterns</b>	#	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>					
(1)		Pattern Type=ACS-SBC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.0 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=44.4 Angle Between Sides= Center Pattern=false		(1)					
<b>Fixed Targets</b>	#	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(1)	ABELL-2597 Alt Name1: PKS2322-12	RA: 23 25 19.9000 (351.3329167d) Dec: -12 07 24.02 (-12.12334d) Equinox: J2000	Proper Motion RA: 0s/yr Proper Motion Dec: 0"/yr Epoch of Position: Redshift: 0.085	V=13+/-1 R-band 11.6mag error~0.5mag	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the NED database. Co-ordinates changed to center on galaxy. The target is extended so positional accuracy needed to be good within 2".</i>										
<b>Exposures</b>	#	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1	(1) ABELL-2597	(1) ABELL-2597	ACS/SBC, ACCUM, SBC	F150LP			Pattern 1-1 (1)	8000.0 Secs	
									[==>2701.0 Secs (Pattern 1)]	[1]
									[==>2720.0 Secs (Pattern 2)]	[2]
									[==>2720.0 Secs (Pattern 3)]	[3]
<b>Orbit Structure</b>	<b>Orbit 1</b> <span style="float: right;"><b>Server Version: 20071214</b></span>									
	<p>GS Acq [ ] Exp. 1</p> <p>Unused Visibility = 0</p> <p>Occultation</p> <p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec.</p>									



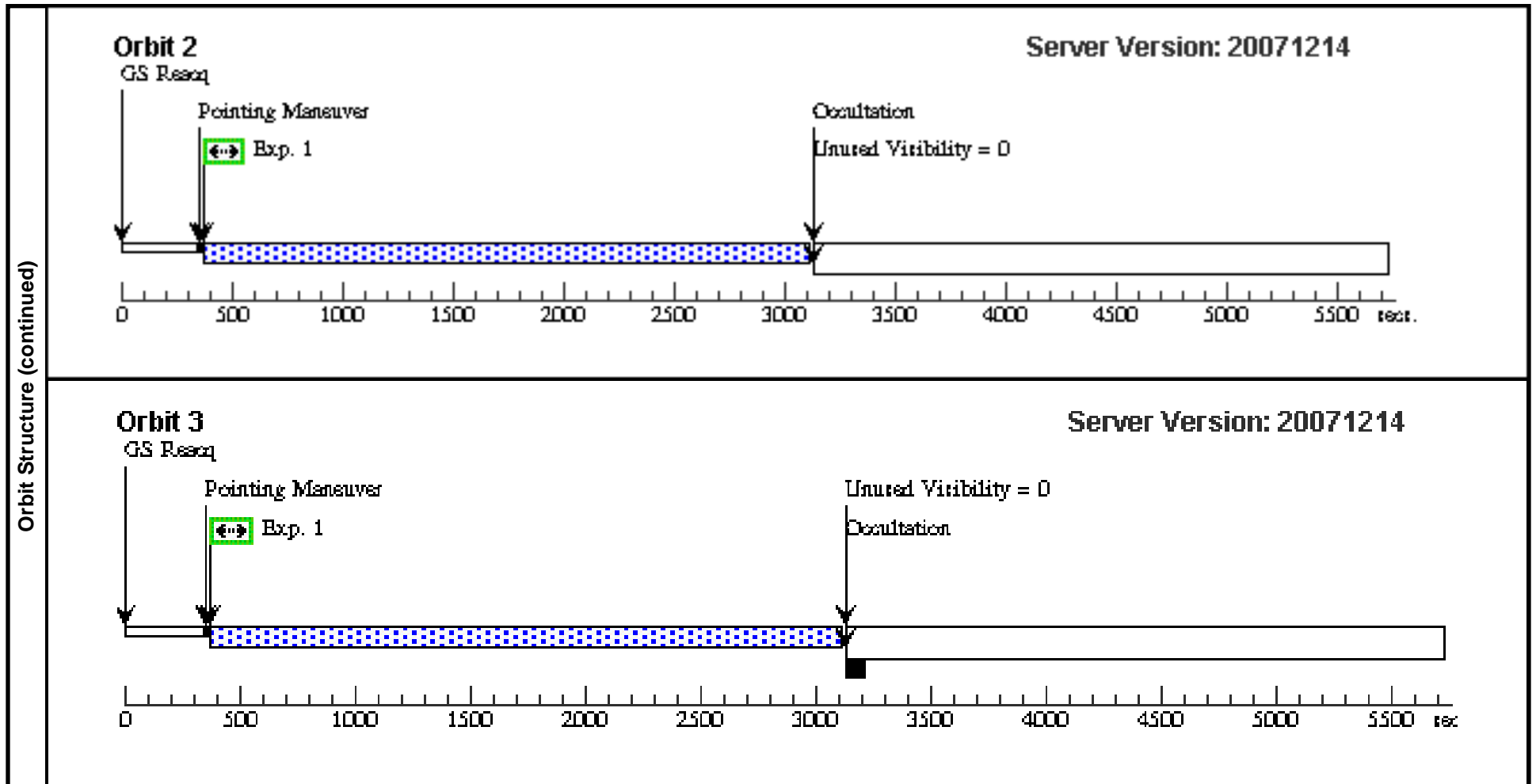
<b>Visit</b>	<b>Proposal 11131, Visit 02</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/SBC Special Requirements: (none)									
	<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>					
(2)		Pattern Type=ACS-SBC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.0 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=134.4 Angle Between Sides= Center Pattern=false		(1)					
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(3)	ABELL-2597-OFFSET Alt Name1: PKS2322-12	RA: 23 25 20.0000 (351.3333333d) Dec: -12 07 22.32 (-12.12287d) Equinox: J2000	Proper Motion RA: 0s/yr Proper Motion Dec: 0"/yr Epoch of Position: Redshift: 0.085	V=13+/-1 R-band 11.6mag error~0.5mag	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the NED database. Co-ordinates changed to center on galaxy. The target is extended so positional accuracy needed to be good within 2".</i>										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1		(3) ABELL-2597-OF FSET	ACS/SBC, ACCUM, SBC	F150LP			Pattern 1-1 (2)	3000.0 Secs	
									[=>2701.0 Secs (Pattern 1)]	[1]
								[=>2718.0 Secs (Pattern 2)]	[2]	
<b>Orbit Structure</b>	<p><b>Orbit 1</b> <span style="float: right;"><b>Server Version: 20071214</b></span></p> <p>Unured Visibility = 0</p> <p>Occultation</p> <p>GS Acq</p> <p>Exp. 1</p> <p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec.</p>									



Proposal 11131 - Visit 03 - Star formation at large radii in cooling flow brightest cluster galaxies

Fri Jan 18 02:48:54 GMT 2008

<b>Visit</b>	<b>Proposal 11131, Visit 03</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/SBC Special Requirements: (none)									
	<b>Patterns</b>	#	<b>Primary Pattern</b>				<b>Secondary Pattern</b>			
(1)		Pattern Type=ACS-SBC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.0 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=44.4 Angle Between Sides= Center Pattern=false						(1)
<b>Fixed Targets</b>	#	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>		<b>Miscellaneous</b>	
	(2)	ABELL-2204	RA: 16 32 46.8820 (248.1953417d) Dec: +05 34 32.31 (5.57564d) Equinox: J2000		Proper Motion RA: 0s/yr Proper Motion Dec: 0"/yr Epoch of Position: Redshift: 0.152		V=14+/-0.4 Rmag=12.2 error=0.4		Reference Frame: ICRS	
<i>Comments: This object was generated by the targetselector and retrieved from the NED database. Co-ordinates changed to center on galaxy. The target is extended so positional accuracy needed to be good within 2".</i>										
<b>Exposures</b>	#	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1	(2) ABELL-2204		ACS/SBC, ACCUM, SBC	F150LP			Pattern 1-1 (1)	8000.0 Secs	
									[=>2696.0 Secs (Pattern 1)]	[1]
									[=>2715.0 Secs (Pattern 2)]	[2]
								[=>2715.0 Secs (Pattern 3)]	[3]	
<b>Orbit Structure</b>	<b>Orbit 1</b> <span style="float: right;"><b>Server Version: 20071214</b></span>									
	<p>GS Acq <span style="border: 1px solid green; padding: 2px;">←→</span> Exp. 1</p> <p>Unused Visibility = 0</p> <p>Occultation</p> <p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec.</p>									



<b>Visit</b>	<b>Proposal 11131, Visit 04</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/SBC Special Requirements: (none)									
	<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>					
(2)		Pattern Type=ACS-SBC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.0 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=134.4 Angle Between Sides= Center Pattern=false		(1)					
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(4)	ABELL-2204-OFFSET	RA: 16 32 47.0020 (248.1958417d) Dec: +05 34 33.81 (5.57606d) Equinox: J2000	Proper Motion RA: 0s/yr Proper Motion Dec: 0"/yr Epoch of Position: Redshift: 0.152	V=14+/-0.4 Rmag=12.2 error=0.4	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the NED database. Co-ordinates changed to center on galaxy. The target is extended so positional accuracy needed to be good within 2".</i>										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1		(4) ABELL-2204-OFFSET	ACS/SBC, ACCUM, SBC	F150LP			Pattern 1-1 (2)	4000.0 Secs	
									[=>2696.0 Secs (Pattern 1)]	[1]
								[=>2713.0 Secs (Pattern 2)]	[2]	
<b>Orbit Structure</b>	<p><b>Orbit 1</b> <span style="float: right;"><b>Server Version: 20071214</b></span></p> <p>GS Acq [←→] Exp. 1</p> <p>Occultation Unred Visibility = 0</p> <p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec.</p>									

