



## 13687 - Unveiling the mass-to-light distribution of high-redshift clusters

Cycle: 22, 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) RCS234526-3632.6	WFC3/IR	2	23-Jul-2014 21:14:30.0	yes
02	(2) XMMXCSJ2215.9-1738	WFC3/IR	2	23-Jul-2014 21:14:32.0	yes

4 Total Orbits Used

### **ABSTRACT**

We propose to investigate the formation of massive cluster galaxies in the redshift range ( $1 < z < 2$ ). This is a critical epoch when galaxies in clusters are transitioning from actively star-forming to quiescent systems. We plan to perform deep near-infrared observations of two of the most distant galaxy clusters using HST WFC3, which will provide us with the highest resolution imaging possible of their stellar populations. These data will allow us to derive reliable, high resolution stellar mass maps and extract structural parameters such as size and morphology. By combining these measurements with our exceptionally deep VLT/KMOS data in the same cluster fields we can construct the fundamental plane of the most massive galaxies in the universe immediately after their initial assembly.

### **OBSERVING DESCRIPTION**

We plan to perform deep near-infrared observations of two of the most distant galaxy clusters using HST WFC3, which will provide us with the highest resolution imaging possible of their stellar populations.

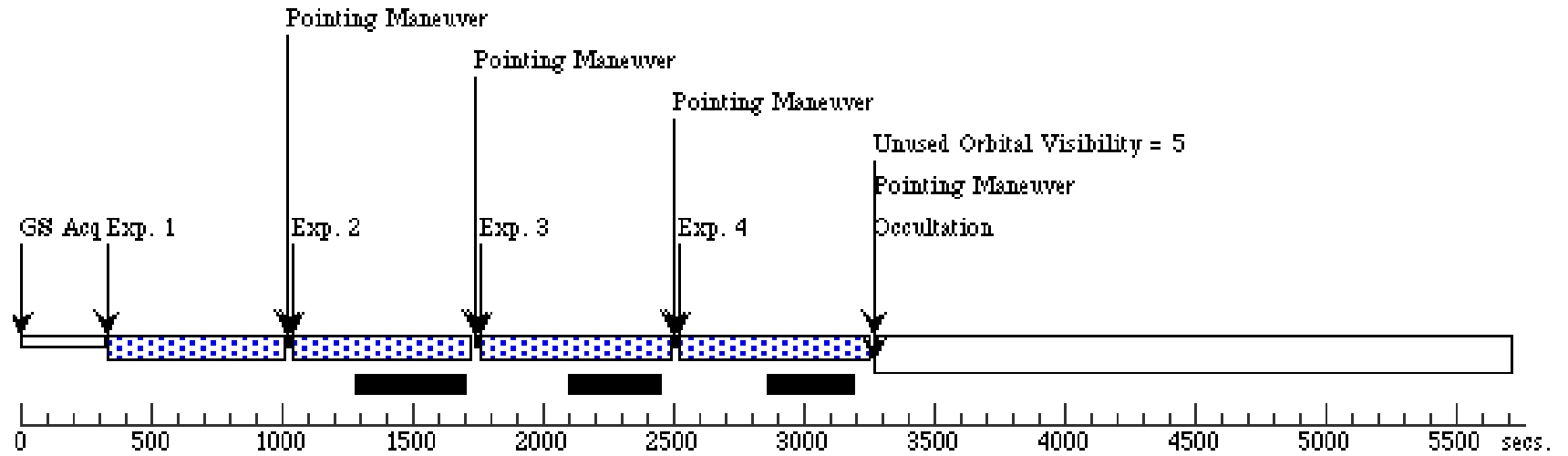
Proposal 13687 - Visit 01 - Unveiling the mass-to-light distribution of high-redshift clusters

Thu Jul 24 01:14:34 GMT 2014

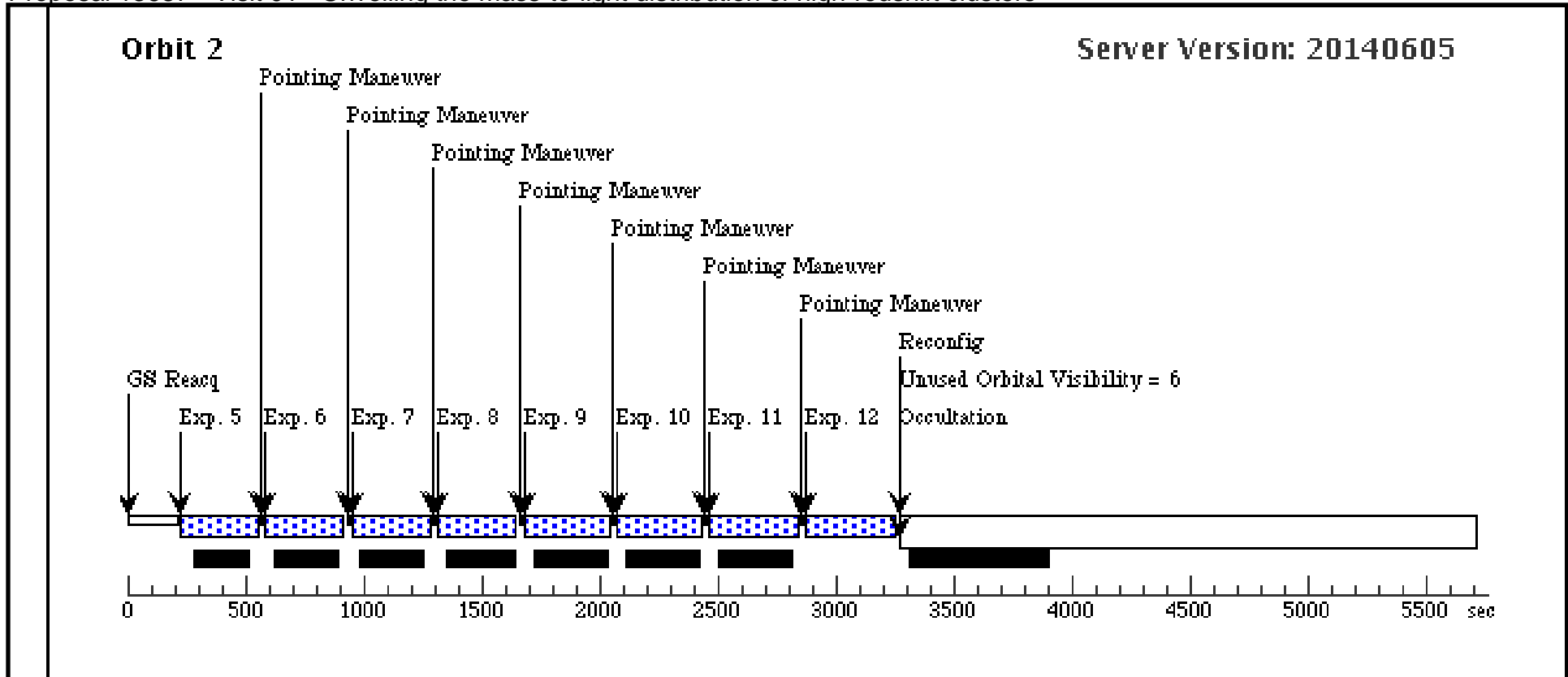
Fixed Targets	Visit									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	RCS234526-3632.6	RA: 23 45 27.6950 (356.3653958d) Dec: -36 33 16.39 (-36.55455d) Equinox: J2000	Redshift: 1.04	V=23.1 H=20.0	Reference Frame: ICRS				
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F105W - Ex p1 - Dither1 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=14; SAMP-SEQ=SPAR S50	POS TARG 0.000,0.00; GS ACQ SCENARI O BASE1B3		652.938154 Secs (652.938 Secs) [==>]	[1]
	2	F105W - Ex p1 - Dither2 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=14; SAMP-SEQ=SPAR S50	POS TARG 0.542,0.182		652.938154 Secs (652.938 Secs) [==>]	[1]
	3	F105W - Ex p1 - Dither3 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=15; SAMP-SEQ=SPAR S50	POS TARG 0.339,0.485		702.938605 Secs (702.939 Secs) [==>]	[1]
	4	F105W - Ex p1 - Dither4 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=15; SAMP-SEQ=SPAR S50	POS TARG -0.203,0.303		702.938605 Secs (702.939 Secs) [==>]	[1]
	5	F105W - Ex p2 - Dither1 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=13; SAMP-SEQ=SPAR S25	POS TARG 0.000,0.000		302.938471 Secs (302.938 Secs) [==>]	[2]
	6	F105W - Ex p2 - Dither2 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=13; SAMP-SEQ=SPAR S25	POS TARG 0.542,0.182		302.938471 Secs (302.938 Secs) [==>]	[2]
	7	F105W - Ex p2 - Dither3 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=13; SAMP-SEQ=SPAR S25	POS TARG 0.339,0.485		302.938471 Secs (302.938 Secs) [==>]	[2]
	8	F105W - Ex p2 - Dither4 (618878)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=13; SAMP-SEQ=SPAR S25	POS TARG -0.203,0.303		302.938471 Secs (302.938 Secs) [==>]	[2]
	9	F160W - Ex p3 - Dither1 (620699)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPAR S25	POS TARG 0.000,0.000		327.938986 Secs (327.939 Secs) [==>]	[2]
	10	F160W - Ex p3 - Dither2 (620699)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPAR S25	POS TARG 0.542,0.182		327.938986 Secs (327.939 Secs) [==>]	[2]
	11	F160W - Ex p3 - Dither3 (620699)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25	POS TARG 0.339,0.485		352.939501 Secs (352.94 Secs) [==>]	[2]
12	F160W - Ex p3 - Dither4 (620699)	(1) RCS234526-363 2.6	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPAR S25	POS TARG -0.203,0.303		352.939501 Secs (352.94 Secs) [==>]	[2]	

**Orbit 1**

Server Version: 20140605



Orbit Structure



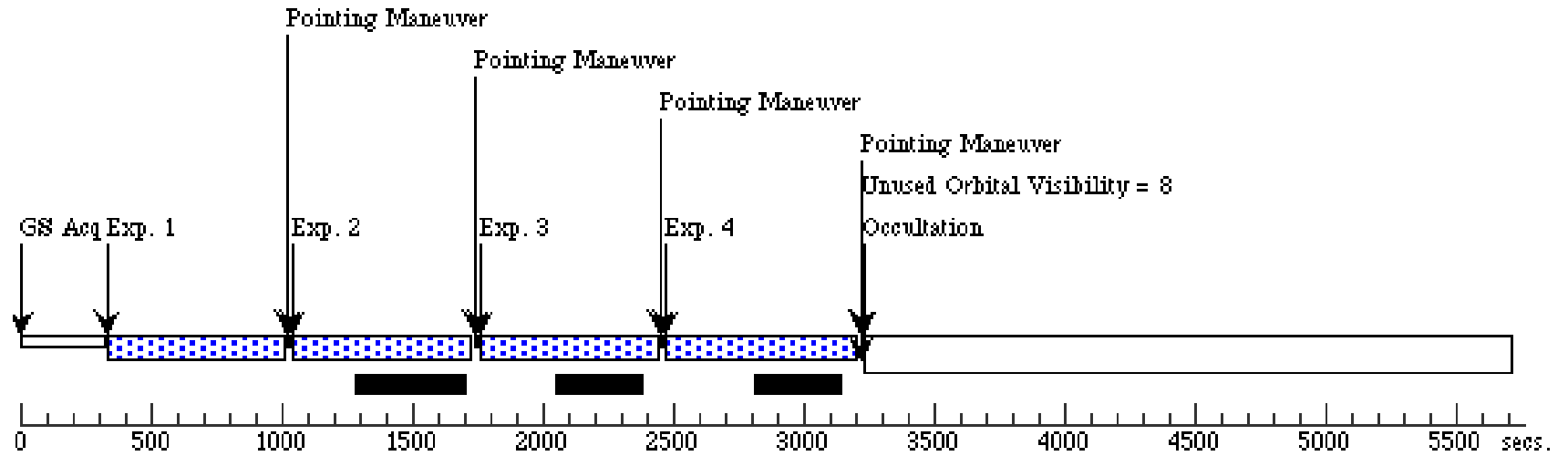
Proposal 13687 - Visit 02 - Unveiling the mass-to-light distribution of high-redshift clusters

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Visit	<b>Proposal 13687, Visit 02, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(5), (6)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	XMMXCSJ2215.9-1738	RA: 22 15 58.5760 (333.9940667d) Dec: -17 38 4.60 (-17.63461d) Equinox: J2000	Redshift: 1.46	V=25.5 H=21.0	Reference Frame: ICRS				
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W - Exp p1 - Dither1 (WFC3IR.i m.620701)	(2) XMMXCSJ2215.9-1738	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50	POS TARG 0.000,0.000		652.938154 Secs (652.938 Secs)	[1]
	2	F125W - Exp p1 - Dither2 (WFC3IR.i m.620701)	(2) XMMXCSJ2215.9-1738	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50	POS TARG 0.542,0.182		652.938154 Secs (652.938 Secs)	[1]
	3	F125W - Exp p1 - Dither3 (WFC3IR.i m.620701)	(2) XMMXCSJ2215.9-1738	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50	POS TARG 0.339,0.485		652.938154 Secs (652.938 Secs)	[1]
	4	F125W - Exp p1 - Dither4 (WFC3IR.i m.620701)	(2) XMMXCSJ2215.9-1738	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S50	POS TARG -0.203,0.303		702.938605 Secs (702.939 Secs)	[1]
	5	F140W - Exp 2 (WFC3IR.i m.620702)	(2) XMMXCSJ2215.9-1738	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=13; SAMP-SEQ=SPAR S25		Pattern 1, Exps 5-5 in Visit 02 (1)	302.938471 Secs (1211.754 Secs)	[2]
	6	F160W - Exp p3 (WFC3IR.i m.620700)	(2) XMMXCSJ2215.9-1738	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPAR S25		Pattern 1, Exps 6-6 in Visit 02 (1)	327.938986 Secs (1311.756 Secs)	[2]

**Orbit 1**

Server Version: 20140605



Orbit Structure

