



14361 - Tales of tails: the Coma episodes

Cycle: 23, 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) IC-4040	ACS/WFC WFC3/UVIS	1	21-Oct-2015 21:30:00.0	yes
02	(2) D100	ACS/WFC WFC3/UVIS	1	21-Oct-2015 21:30:02.0	yes
03	(2) D100	ACS/WFC WFC3/UVIS	1	21-Oct-2015 21:30:03.0	yes

3 Total Orbits Used

ABSTRACT

The ICM has long been proposed to play a vital role in galaxy evolution in clusters, through stripping of the cold gas. Studies of tails behind cluster late-type galaxies have shed light on the energy transfer in the multi-phase gas, demonstrated by the discoveries of tails in X-rays and other bands, and the associated star formation. Many questions remain unanswered, e.g., the nature of double tails, the energy transfer of multi-phase gas and the key factors of intracluster star formation. We propose ACIS-S observations on a sample of Coma galaxies with known tails in X-rays or H α . Joint HST and JVLA data for some galaxies are also requested. This project is developed on our previous successful programs and the combined data will allow us to better address some outstanding questions.

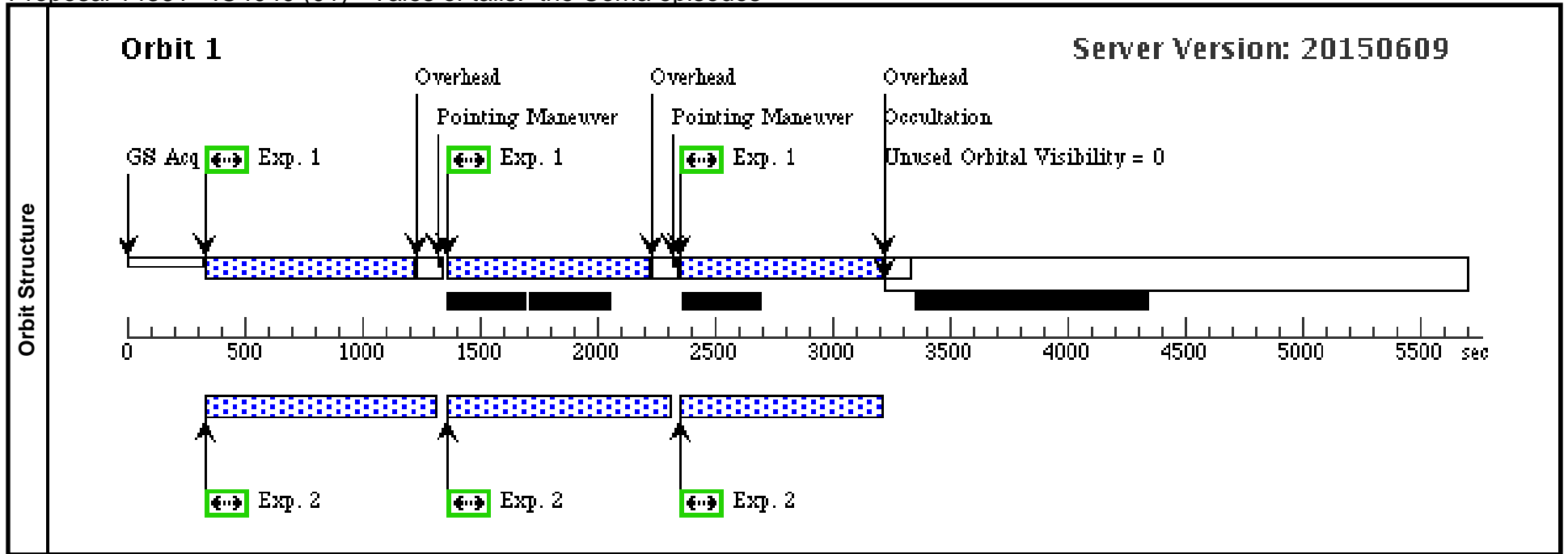
OBSERVING DESCRIPTION

We will use WFC3 and ACS to study the transforming galaxies IC4040 and D100 in the Coma cluster. The WFC3 F275W data in one orbit will be used to search for young star clusters in galaxies and the gaseous tails. We will also obtain the F475W and F814W data for D100. The ACS data in two high-throughput filters allow detections of faint features (e.g., faint star clusters in the tail) and a detailed color map of the galaxy. The F275W data will add important information on the starburst in the last several 10 Myr. As F475W/F814W combination is also used by the ACS Coma cluster survey, we will use the parallel ACS time to take F475W and F814W data during the primary WFC3 observations. The HST data in three bands allow us to constrain the SF history in the galaxy and the tail, and to examine the spatial relationship of the color structure with the ICM pressure.

Proposal 14361 - IC4040 (01) - Tales of tails: the Coma episodes

Thu Oct 22 01:30:04 GMT 2015

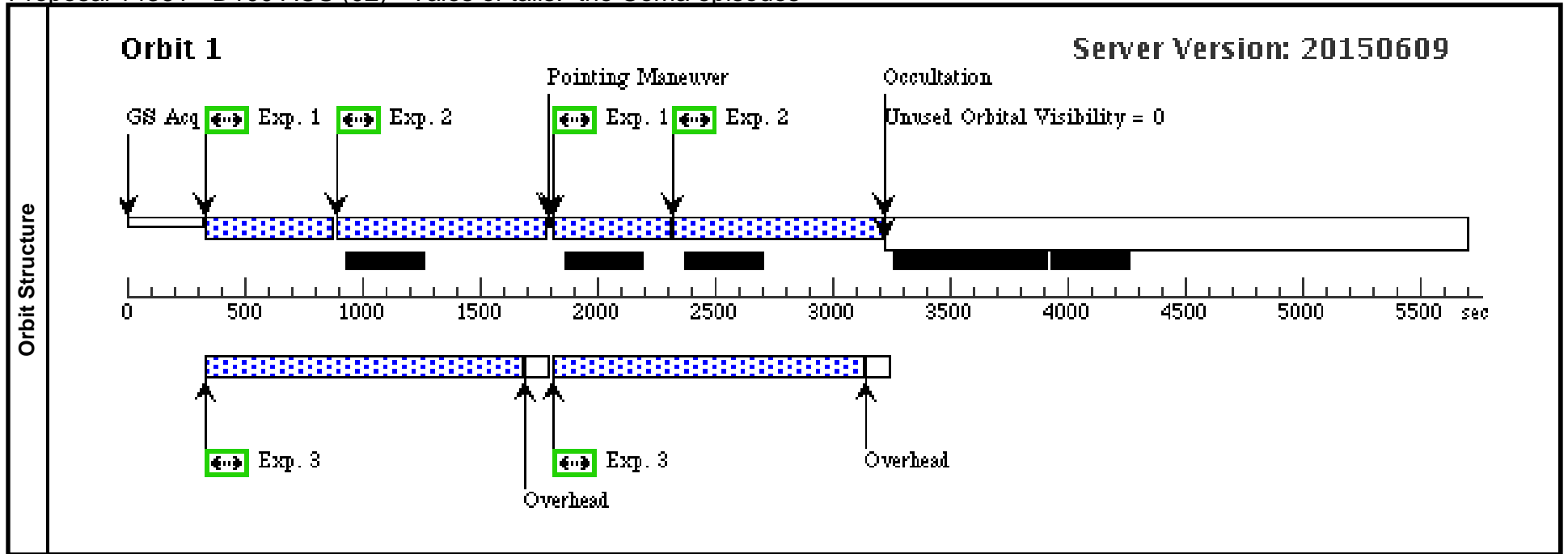
Visit	Proposal 14361, IC4040 (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 80D TO 270 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(4)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=2.4 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		(1-2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	IC-4040	RA: 13 00 36.6600 (195.1527500d) Dec: +28 02 38.19 (28.04394d) Equinox: J2000		V=14.76	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Extended=YES									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) IC-4040	WFC3/UVIS, ACCUM, UVIS	F275W	FLASH=10.0		Pattern 4, Exps 1-2 in IC4040 (01) (4) Prime + Parallel Group 1-2 in Pattern 4, Exps 1-2 in IC4040 (01)	861 Secs (2583 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
2		(1) IC-4040	ACS/WFC, ACCUM, WFC	F475W				Pattern 4, Exps 1-2 in IC4040 (01) (4) Prime + Parallel Group 1-2 in Pattern 4, Exps 1-2 in IC4040 (01)	736 Secs (2338 Secs) [==>776.0 Secs (Pattern 1)] [==>826.0 Secs (Pattern 2)] [==>(Pattern 3)]	[1]



Proposal 14361 - D100 ACS (02) - Tales of tails: the Coma episodes

Thu Oct 22 01:30:05 GMT 2015

Visit	Proposal 14361, D100 ACS (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 70D TO 110 D; ORIENT 160D TO 330 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=85.28 Angle Between Sides= Center Pattern=false		(1-3)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	D100	RA: 13 00 12.9350 (195.0538958d) Dec: +27 52 30.63 (27.87518d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=15.8	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) D100	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-3 in D100 ACS (02) (1) Prime + Parallel Group 1-3 in Pattern 1, Exps 1-3 in D100 ACS (02)	337 Secs (674 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2		(2) D100	ACS/WFC, ACCUM, WFC	F475W			Pattern 1, Exps 1-3 in D100 ACS (02) (1) Prime + Parallel Group 1-3 in Pattern 1, Exps 1-3 in D100 ACS (02)	722 Secs (1444 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3		(2) D100	WFC3/UVIS, ACCUM, UVIS	F475W			Pattern 1, Exps 1-3 in D100 ACS (02) (1) Prime + Parallel Group 1-3 in Pattern 1, Exps 1-3 in D100 ACS (02)	1322 Secs (2644 Secs) [==>1322.0 Secs (Pattern 1)] [==>1322.0 Secs (Pattern 2)]	[1]



Proposal 14361 - D100 UV (03) - Tales of tails: the Coma episodes

Thu Oct 22 01:30:05 GMT 2015

Visit	Proposal 14361, D100 UV (03) Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 70D TO 100 D; ORIENT 130D TO 250 D; ORIENT 290D TO 330 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(4)	Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=2.4 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true		(1-2)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	D100	RA: 13 00 12.9350 (195.0538958d) Dec: +27 52 30.63 (27.87518d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=15.8	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) D100	WFC3/UVIS, ACCUM, UVIS	F275W	FLASH=10		Pattern 4, Exps 1-2 in D100 UV (03) (4) Prime + Parallel Group 1-2 in Pattern 4, Exps 1-2 in D100 UV (03)	861 Secs (2583 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
2		(2) D100	ACS/WFC, ACCUM, WFC	F475W				Pattern 4, Exps 1-2 in D100 UV (03) (4) Prime + Parallel Group 1-2 in Pattern 4, Exps 1-2 in D100 UV (03)	736 Secs (2338 Secs) [==>776.0 Secs (Pattern 1)] [==>826.0 Secs (Pattern 2)] [==>(Pattern 3)]	[1]

