



15844 - Monsters in the making: extreme cluster mergers at $z > 0.5$

Cycle: 27, 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) EMACSJ0324.0+2421	ACS/WFC	3	18-Sep-2020 14:00:17.0	yes
02	(1) EMACSJ0324.0+2421	WFC3/IR	2	18-Sep-2020 14:00:19.0	yes
52	(1) EMACSJ0324.0+2421	WFC3/IR	1	18-Sep-2020 14:00:21.0	yes
03	(2) EMACSJ1353.7+4329	ACS/WFC	3	18-Sep-2020 14:00:22.0	yes
04	(2) EMACSJ1353.7+4329	WFC3/IR	2	18-Sep-2020 14:00:24.0	yes
05	(3) EMACSJ1527.6+2044	ACS/WFC	3	18-Sep-2020 14:00:26.0	yes
06	(10) EMACSJ1527.6+2044-COPY	WFC3/IR	1	18-Sep-2020 14:00:27.0	yes
07	(10) EMACSJ1527.6+2044-COPY	WFC3/IR	1	18-Sep-2020 14:00:28.0	yes
08	(4) EMACSJ1756.8+4008	ACS/WFC	3	18-Sep-2020 14:00:30.0	yes

<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>
09	(6) EMACSJ1756.8+4008-E	WFC3/IR	2	18-Sep-2020 14:00:31.0	yes
10	(7) EMACSJ1756.8+4008-W	WFC3/IR	2	18-Sep-2020 14:00:33.0	yes
11	(5) EMACSJ1823.1+7822	ACS/WFC	3	18-Sep-2020 14:00:35.0	yes
12	(8) EMACSJ1823.1+7822-E	WFC3/IR	2	18-Sep-2020 14:00:37.0	yes
13	(9) EMACSJ1823.1+7822-W	WFC3/IR	2	18-Sep-2020 14:00:39.0	yes

30 Total Orbits Used

ABSTRACT

We propose multi-passband observations of five exceptional galaxy clusters at $z > 0.5$ discovered by the eMACS project, in order to map their gravitational-lensing strength and determine the merger phase and geometry, thereby assessing their potential for future, extremely deep lensing and structure evolution studies in the era of 30m telescopes and JWST.

In recognition of the fact that the vast majority of powerful cluster lenses are active mergers, we selected our targets to be dynamically highly disturbed systems with X-ray luminosities and velocity dispersions rivaling those of MACSJ0717.5+3745, the most powerful cluster lens known. Although some HST data exist for our targets, deeper and wider observations are indispensable for the identification of multi-image systems over the full extent of the strong-lensing regime of these potential monster lenses.

In conjunction with supporting Chandra observations also requested here, the proposed HST imaging project will (1) provide robust estimates of our targets' lensing strength, (2) establish the temporal phase of the collision, and (3) yield tentative constraints on the collisional properties of dark matter from the offsets between the X-ray and dark-matter peaks. By evaluating the power and potential of these newly discovered, extreme systems, the proposed project stands to add HFF-caliber cluster targets in a critical, yet hitherto poorly sampled and explored mass and redshift regime.

OBSERVING DESCRIPTION

We model our observational approach after the strategy successfully employed by the RELICS Legacy Program, which, pursuing similar science goals in their observations of clusters at comparable redshifts, invested 5 orbits per cluster, employing the ACS filters F435W, F606W, and F814W (1 orbit each), as well as the WFC3/IR filters F105W, F125W, F140W, and F160W (1/2 orbit each). This combination seamlessly covers the range

Proposal 15844 (STScI Edit Number: 6, Created: Friday, September 18, 2020 at 1:00:40 PM Eastern Standard Time) - Overview

from 4000Å to 1.7micron, thus probing the spectral-energy distribution of cluster members from the near-UV to the z-band (rest frame), while offering excellent color discrimination for lensed background galaxies at $z = 1-6$, the redshift range expected to dominate the population of strongly lensed galaxies. Although not as deep as the CLASH observations (partly as a result of the reduced number of passbands), this approach still vastly improves upon the SNAPhot images that exist for some of our targets, yielding 5sigma detections at the peak of the magnitude distribution of lensed galaxies at AB magnitudes of approximately 26 (Postman et al., 2012), thus ensuring the detectability of over half a dozen multiple-image systems per cluster.

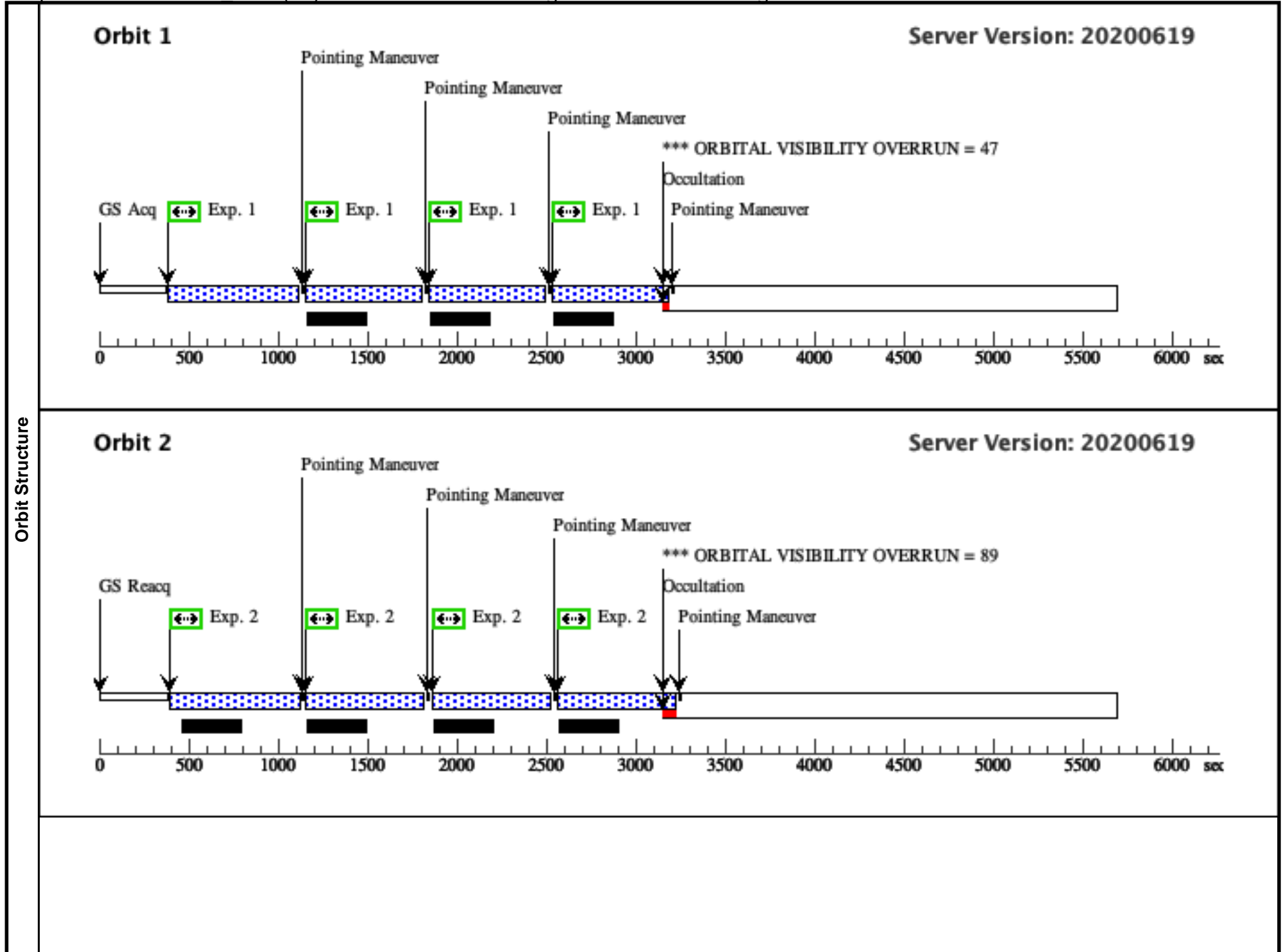
Although photometric redshifts obtained from only seven passbands will be less robust than those based on photometry in CLASH's 16 filters, the predicted statistical uncertainties of less than 10% for the chosen filter combination (Jouvel et al., 2014) will be sufficient to yield tight constraints on our lens models. We further emphasize that we will make full use of groundbased facilities to secure spectroscopic redshifts of strong-lensing features, using both optical and NIR spectrographs.

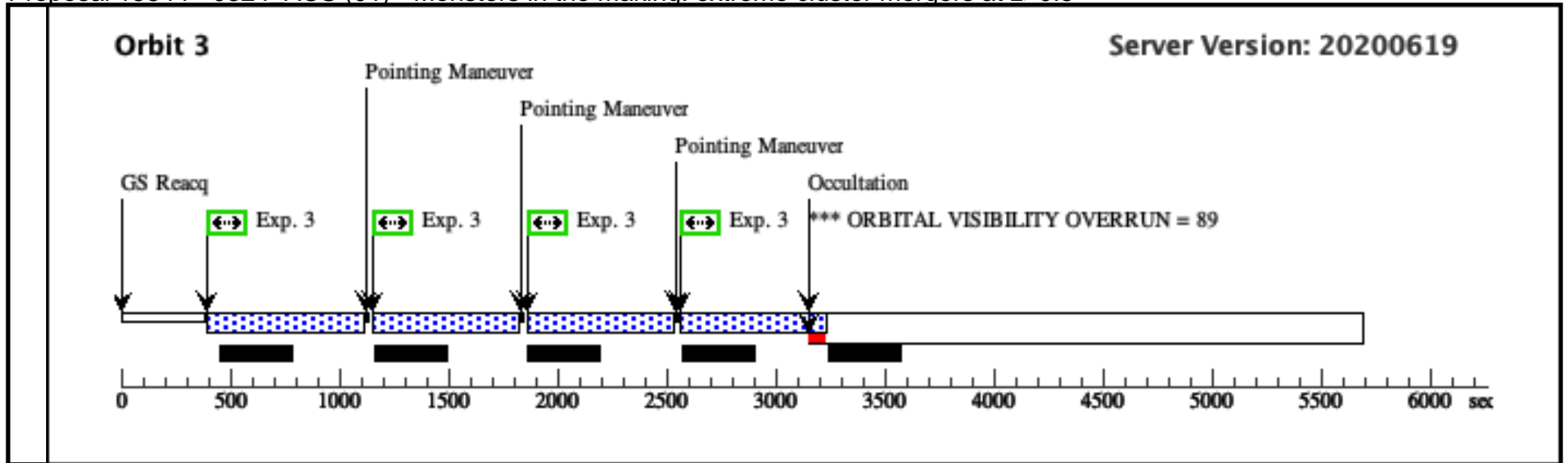
The ACS apertures used in our observations must be carefully positioned for several of our targets (specifically eMACSJ1756 and eMACSJ1823) to ensure coverage of the entire merger. In recognition of the much smaller field of view of WFC3/IR, two separate WFC3/IR pointings are needed for these two targets at the indicated depth in all listed passbands. Although the orientation of the WFC3/IR tiles is not critical, ORIENT angles as requested will greatly help maximize the contiguous coverage of the cluster cores in all passbands.

Proposal 15844 - 0324 ACS (01) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:40 GMT 2020

Visit	Proposal 15844, 0324_ACS (01), completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Diagnosics										
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	(1)	EMACSJ0324.0+2421	RA: 03 24 1.9000 (51.0079167d) Dec: +24 21 22.00 (24.35611d) Equinox: J2000		V=21	Reference Frame: ICRS				
	<i>Comments:</i> Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	0324_435	(1) EMACSJ0324.0+2421	ACS/WFC, ACCUM, WFC	F435W			Pattern 2, Exps 1-1 in 0324_ACS (01) (2)	530 Secs (2112 Secs) [==>528.0 Secs (Pattern 1)] [==>528.0 Secs (Pattern 2)] [==>528.0 Secs (Pattern 3)] [==>528.0 Secs (Pattern 4)]	[1]
	2	0324_606	(1) EMACSJ0324.0+2421	ACS/WFC, ACCUM, WFC	F606W			Pattern 2, Exps 2-2 in 0324_ACS (01) (2)	530 Secs (2164 Secs) [==>541.0 Secs (Pattern 1)] [==>541.0 Secs (Pattern 2)] [==>541.0 Secs (Pattern 3)] [==>541.0 Secs (Pattern 4)]	[2]
	3	0324_814	(1) EMACSJ0324.0+2421	ACS/WFC, ACCUM, WFC	F814W			Pattern 2, Exps 3-3 in 0324_ACS (01) (2)	530 Secs (2172 Secs) [==>543.0 Secs (Pattern 1)] [==>543.0 Secs (Pattern 2)] [==>543.0 Secs (Pattern 3)] [==>543.0 Secs (Pattern 4)]	[3]



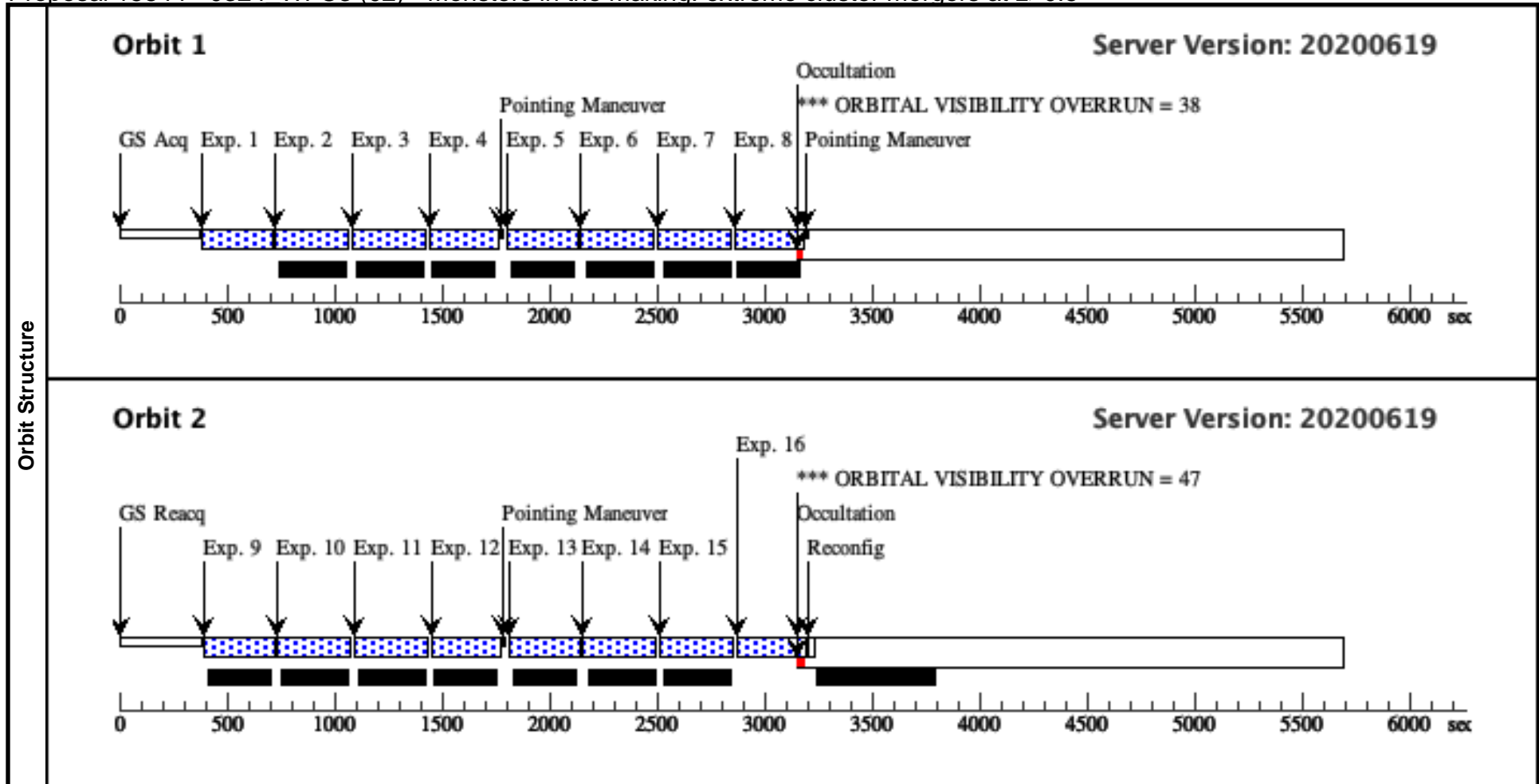


Proposal 15844 - 0324_WFC3 (02) - Monsters in the making: extreme cluster mergers at $z > 0.5$

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Fixed Targets		<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>EMACSJ0324.0+2421</td> <td>RA: 03 24 1.9000 (51.0079167d) Dec: +24 21 22.00 (24.35611d) Equinox: J2000</td> <td></td> <td>V=21</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	EMACSJ0324.0+2421	RA: 03 24 1.9000 (51.0079167d) Dec: +24 21 22.00 (24.35611d) Equinox: J2000		V=21
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(1)	EMACSJ0324.0+2421	RA: 03 24 1.9000 (51.0079167d) Dec: +24 21 22.00 (24.35611d) Equinox: J2000		V=21	Reference Frame: ICRS												
Comments: Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]																	

Proposal 15844 - 0324 WFC3 (02) - Monsters in the making: extreme cluster mergers at z>0.5

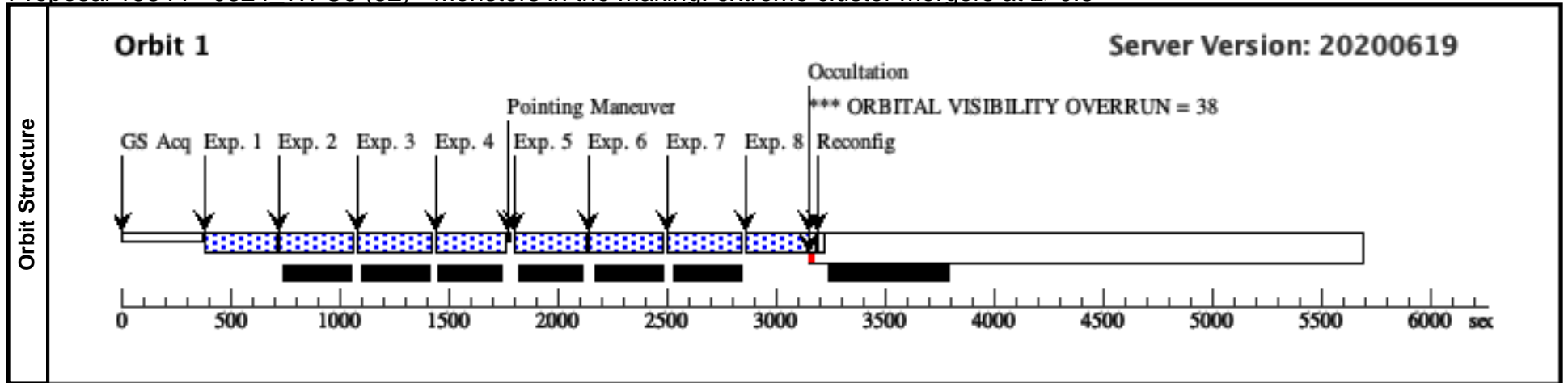
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
Exposures	1	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG 0,0		302.938471 Secs	(302.938 Secs)	[1]
	2	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs	(327.939 Secs)	[1]
	3	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs	(327.939 Secs)	[1]
	4	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 1		302.938471 Secs	(302.938 Secs)	[1]
	5	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -1.8970, 4.17795		302.938471 Secs	(302.938 Secs)	[1]
	6	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs	(327.939 Secs)	[1]
	7	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs	(327.939 Secs)	[1]
	8	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 5		302.938471 Secs	(302.938 Secs)	[1]
	9	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -5.8942 5.2.36145		302.938471 Secs	(302.938 Secs)	[2]
	10	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs	(327.939 Secs)	[2]
	11	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs	(327.939 Secs)	[2]
	12	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 9		302.938471 Secs	(302.938 Secs)	[2]
	13	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -4.1327 5,-1.69540		302.938471 Secs	(302.938 Secs)	[2]
	14	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs	(327.939 Secs)	[2]
	15	(1) EMACSJ0324.0+ 2421	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs	(327.939 Secs)	[2]
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Proposal 15844 - 0324_WFC3 (52) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:40 GMT 2020

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Comments: Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG 0,0		302.938471 Secs (302.938 Secs) [==>]	[1]
	2		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	3		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	4		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 1		302.938471 Secs (302.938 Secs) [==>]	[1]
	5		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -1.8970, 4.17795		302.938471 Secs (302.938 Secs) [==>]	[1]
	6		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	7		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	8		(1) EMACSJ0324.0+2421	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 5		302.938471 Secs (302.938 Secs) [==>]	[1]

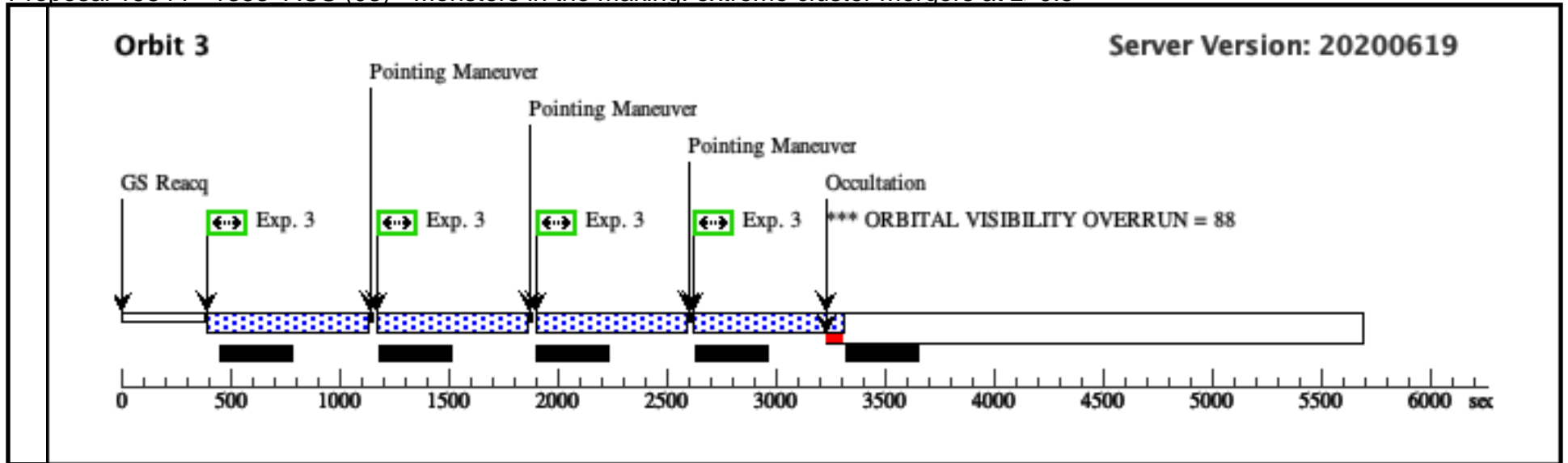


Proposal 15844 - 1353 ACS (03) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:40 GMT 2020

Visit	Proposal 15844, 1353_ACS (03), completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: ORIENT 130D TO 140 D									
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Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	EMACSJ1353.7+4329	RA: 13 53 44.1000 (208.4337500d) Dec: +43 29 2.00 (43.48389d) Equinox: J2000		V=21	Reference Frame: ICRS				
<i>Comments:</i> Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	1353_435	(2) EMACSJ1353.7+4329	ACS/WFC, ACCUM, WFC	F435W		POS TARG -2,-33; GS ACQ SCENARI O BASE1B3	Pattern 2, Exps 1-1 in 1353_ACS (03) (2)	530 Secs (2196 Secs) [=>549.0 Secs (Pattern 1)] [=>549.0 Secs (Pattern 2)] [=>549.0 Secs (Pattern 3)] [=>549.0 Secs (Pattern 4)]	[1]
	2	1353_606	(2) EMACSJ1353.7+4329	ACS/WFC, ACCUM, WFC	F606W		POS TARG -2,-33	Pattern 2, Exps 2-2 in 1353_ACS (03) (2)	530 Secs (2244 Secs) [=>561.0 Secs (Pattern 1)] [=>561.0 Secs (Pattern 2)] [=>561.0 Secs (Pattern 3)] [=>561.0 Secs (Pattern 4)]	[2]
	3	1353_814	(2) EMACSJ1353.7+4329	ACS/WFC, ACCUM, WFC	F814W		POS TARG -2,-33	Pattern 2, Exps 3-3 in 1353_ACS (03) (2)	530 Secs (2252 Secs) [=>563.0 Secs (Pattern 1)] [=>563.0 Secs (Pattern 2)] [=>563.0 Secs (Pattern 3)] [=>563.0 Secs (Pattern 4)]	[3]



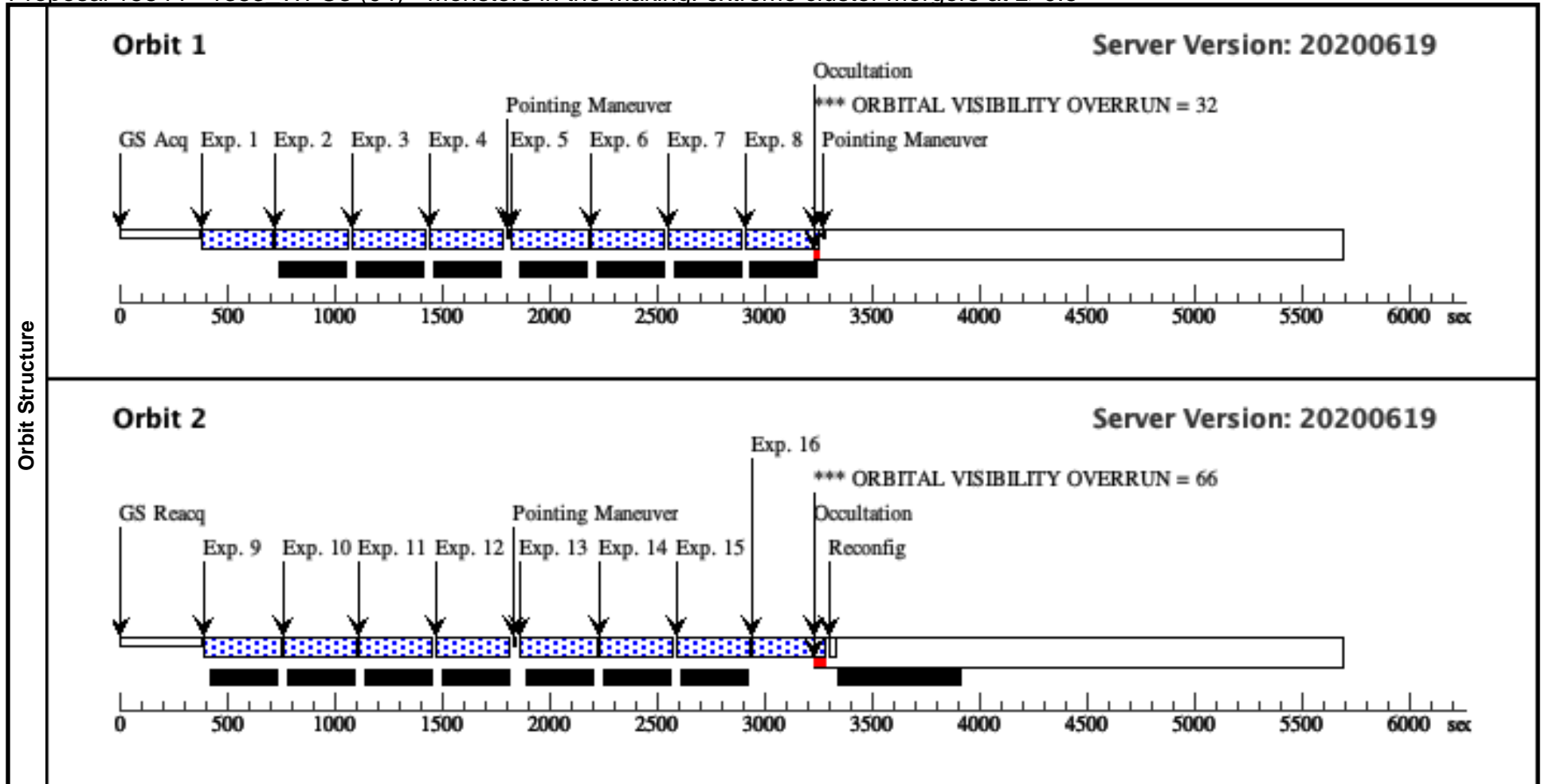


Proposal 15844 - 1353_WFC3 (04) - Monsters in the making: extreme cluster mergers at $z > 0.5$

Visit	<p>Proposal 15844, 1353_WFC3 (04), completed Fri Sep 18 18:00:40 GMT 2020 Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: ORIENT 130D TO 140 D</p>																
	<p>(1353_WFC3 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1353_WFC3 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN</p>																
Fixed Targets	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 30%;">Target Coordinates</th> <th style="width: 25%;">Targ. Coord. Corrections</th> <th style="width: 10%;">Fluxes</th> <th style="width: 10%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td data-bbox="142 423 247 591">(2)</td> <td data-bbox="247 423 478 591">EMACSJ1353.7+4329</td> <td data-bbox="478 423 919 591"> RA: 13 53 44.1000 (208.4337500d) Dec: +43 29 2.00 (43.48389d) Equinox: J2000 </td> <td data-bbox="919 423 1318 591"></td> <td data-bbox="1318 423 1612 591">V=21</td> <td data-bbox="1612 423 2007 591">Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	EMACSJ1353.7+4329	RA: 13 53 44.1000 (208.4337500d) Dec: +43 29 2.00 (43.48389d) Equinox: J2000		V=21	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	EMACSJ1353.7+4329	RA: 13 53 44.1000 (208.4337500d) Dec: +43 29 2.00 (43.48389d) Equinox: J2000		V=21	Reference Frame: ICRS												
<p><i>Comments:</i> Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]</p>																	

Proposal 15844 - 1353 WFC3 (04) - Monsters in the making: extreme cluster mergers at z>0.5

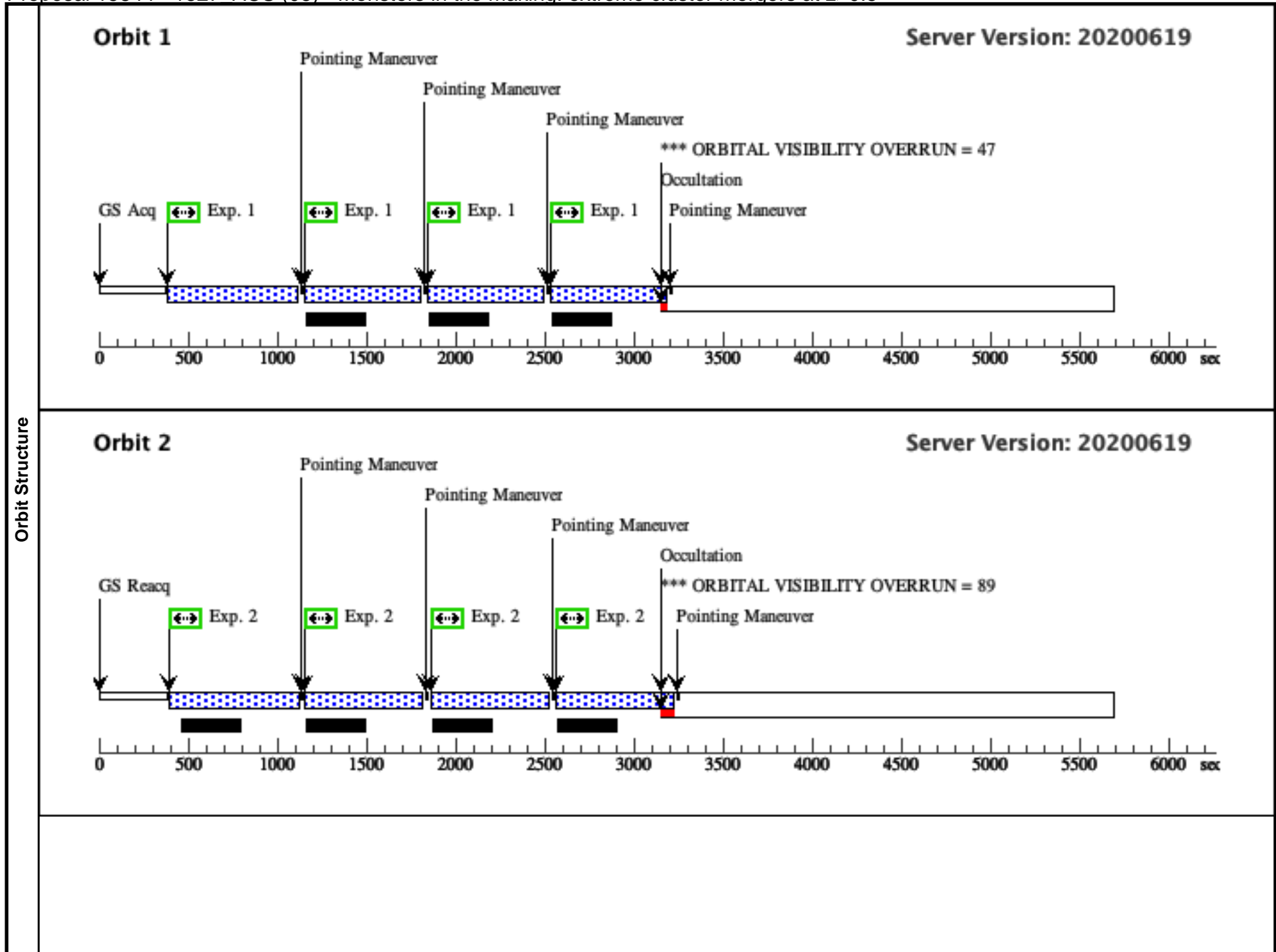
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
Exposures	1	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG 0,0		302.938471 Secs	(302.938 Secs)	[1]
	2	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs	(327.939 Secs)	[1]
	3	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs	(327.939 Secs)	[1]
	4	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs	(327.939 Secs)	[1]
	5	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -1.8970, 4.17795		327.938986 Secs	(327.939 Secs)	[1]
	6	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs	(327.939 Secs)	[1]
	7	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs	(327.939 Secs)	[1]
	8	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs	(327.939 Secs)	[1]
	9	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -5.8942 5.2.36145		327.938986 Secs	(327.939 Secs)	[2]
	10	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs	(327.939 Secs)	[2]
	11	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs	(327.939 Secs)	[2]
	12	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs	(327.939 Secs)	[2]
	13	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -4.1327 5,-1.69540		327.938986 Secs	(327.939 Secs)	[2]
	14	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs	(327.939 Secs)	[2]
	15	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs	(327.939 Secs)	[2]
	16	(2) EMACSJ1353.7+ 4329	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs	(327.939 Secs)	[2]



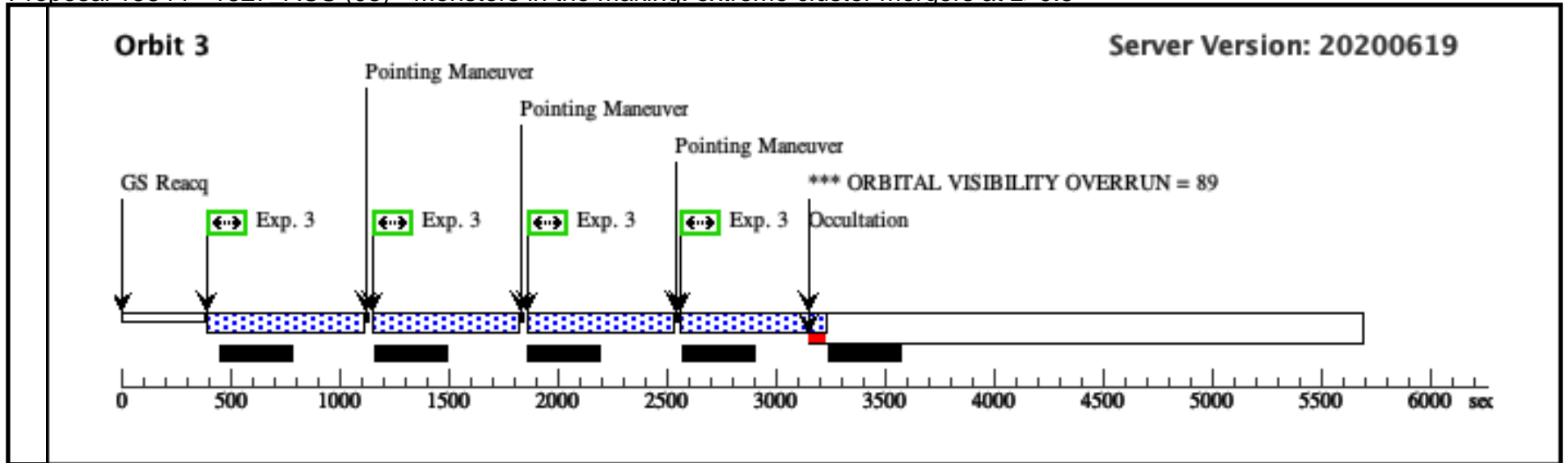
Proposal 15844 - 1527_ACS (05) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:41 GMT 2020

Visit	Proposal 15844, 1527_ACS (05), completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: ORIENT 150D TO 160 D									
	(1527_ACS (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1527_ACS (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1527_ACS (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern		Secondary Pattern		Exposures				
	(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=3.058944 Line Spacing=6.039452	Coordinate Frame=POS-TARG Pattern Orientation=85.329042 Angle Between Sides=179.702031 Center Pattern=false			(1), (2), (3)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	EMACSJ1527.6+2044	RA: 15 27 41.6000 (231.9233333d) Dec: +20 44 45.00 (20.74583d) Equinox: J2000		V=21	Reference Frame: ICRS				
Comments: Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	1527_435	(3) EMACSJ1527.6+2044	ACS/WFC, ACCUM, WFC-FIX	F435W		POS TARG -13,-22	Pattern 2, Exps 1-1 in 1527_ACS (05) (2)	530 Secs (2112 Secs)	
	[=>528.0 Secs (Pattern 1)] [=>528.0 Secs (Pattern 2)] [=>528.0 Secs (Pattern 3)] [=>528.0 Secs (Pattern 4)]									
										[1]
2	1527_606	(3) EMACSJ1527.6+2044	ACS/WFC, ACCUM, WFC-FIX	F606W		POS TARG -13,-22	Pattern 2, Exps 2-2 in 1527_ACS (05) (2)	530 Secs (2164 Secs)		
[=>541.0 Secs (Pattern 1)] [=>541.0 Secs (Pattern 2)] [=>541.0 Secs (Pattern 3)] [=>541.0 Secs (Pattern 4)]										
									[2]	
3	1527_814	(3) EMACSJ1527.6+2044	ACS/WFC, ACCUM, WFC-FIX	F814W		POS TARG -13,-22	Pattern 2, Exps 3-3 in 1527_ACS (05) (2)	530 Secs (2172 Secs)		
[=>543.0 Secs (Pattern 1)] [=>543.0 Secs (Pattern 2)] [=>543.0 Secs (Pattern 3)] [=>543.0 Secs (Pattern 4)]										
									[3]	



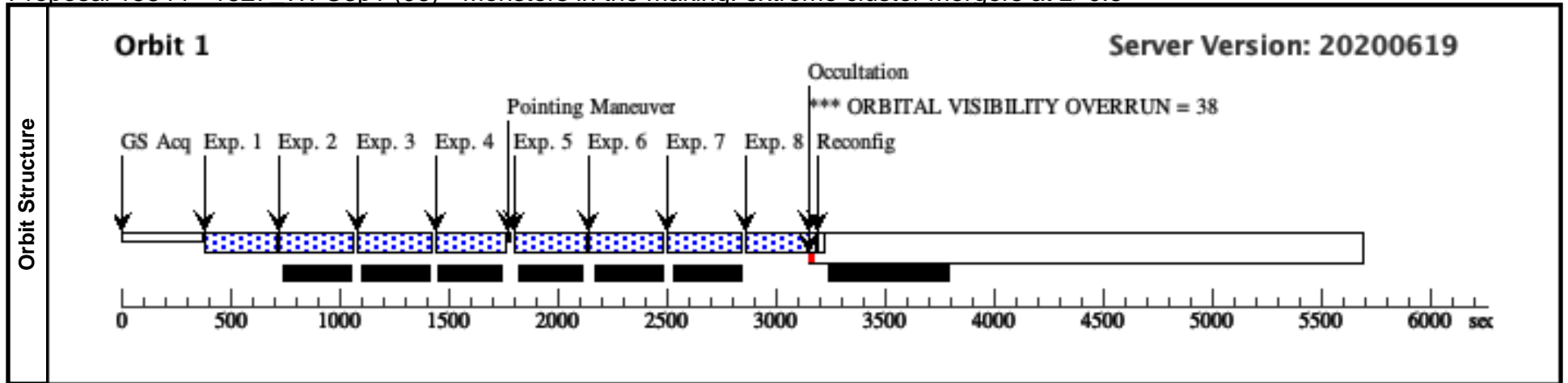
Orbit Structure



Proposal 15844 - 1527_WFC3p1 (06) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:41 GMT 2020

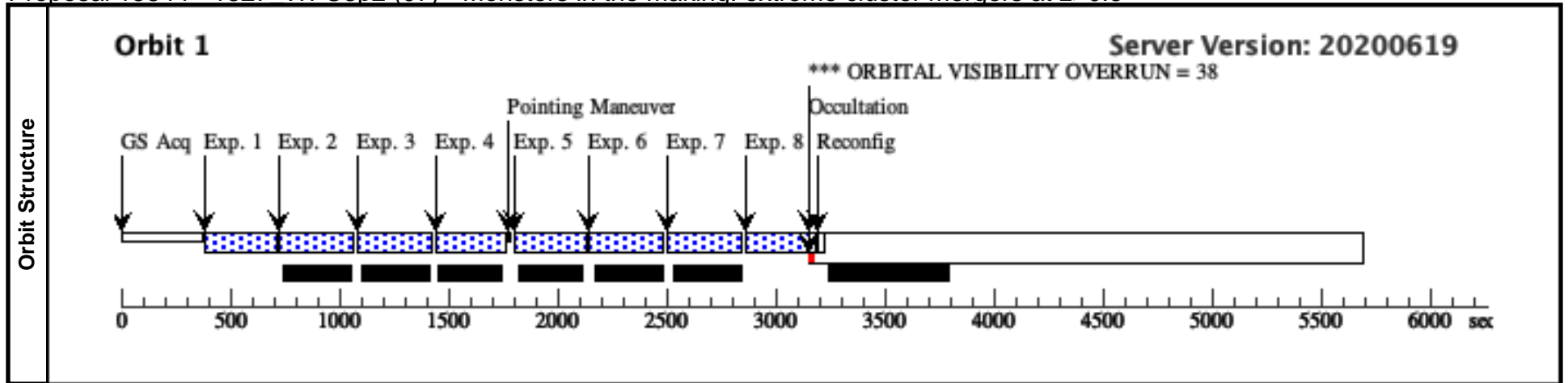
Visit	Proposal 15844, 1527_WFC3p1 (06), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: ORIENT 130D TO 140 D									
	(1527_WFC3p1 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	EMACSJ1527.6+2044-COPY	RA: 15 27 41.3000 (231.9220833d) Dec: +20 44 34.00 (20.74278d) Equinox: J2000		V=21	Reference Frame: ICRS				
Comments: Copy of target 3. This target is used with vists 6 & 7. RA and Dec needed to be shifted to find guide star pairs. Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG 0,0; GS ACQ SCENARI O BASE1B3		302.938471 Secs (302.938 Secs) [==>]	[1]
	2		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	3		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	4		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 1		302.938471 Secs (302.938 Secs) [==>]	[1]
	5		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -1.8970, 4.17795		302.938471 Secs (302.938 Secs) [==>]	[1]
	6		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	7		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	8		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 5		302.938471 Secs (302.938 Secs) [==>]	[1]



Proposal 15844 - 1527_WFC3p2 (07) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:41 GMT 2020

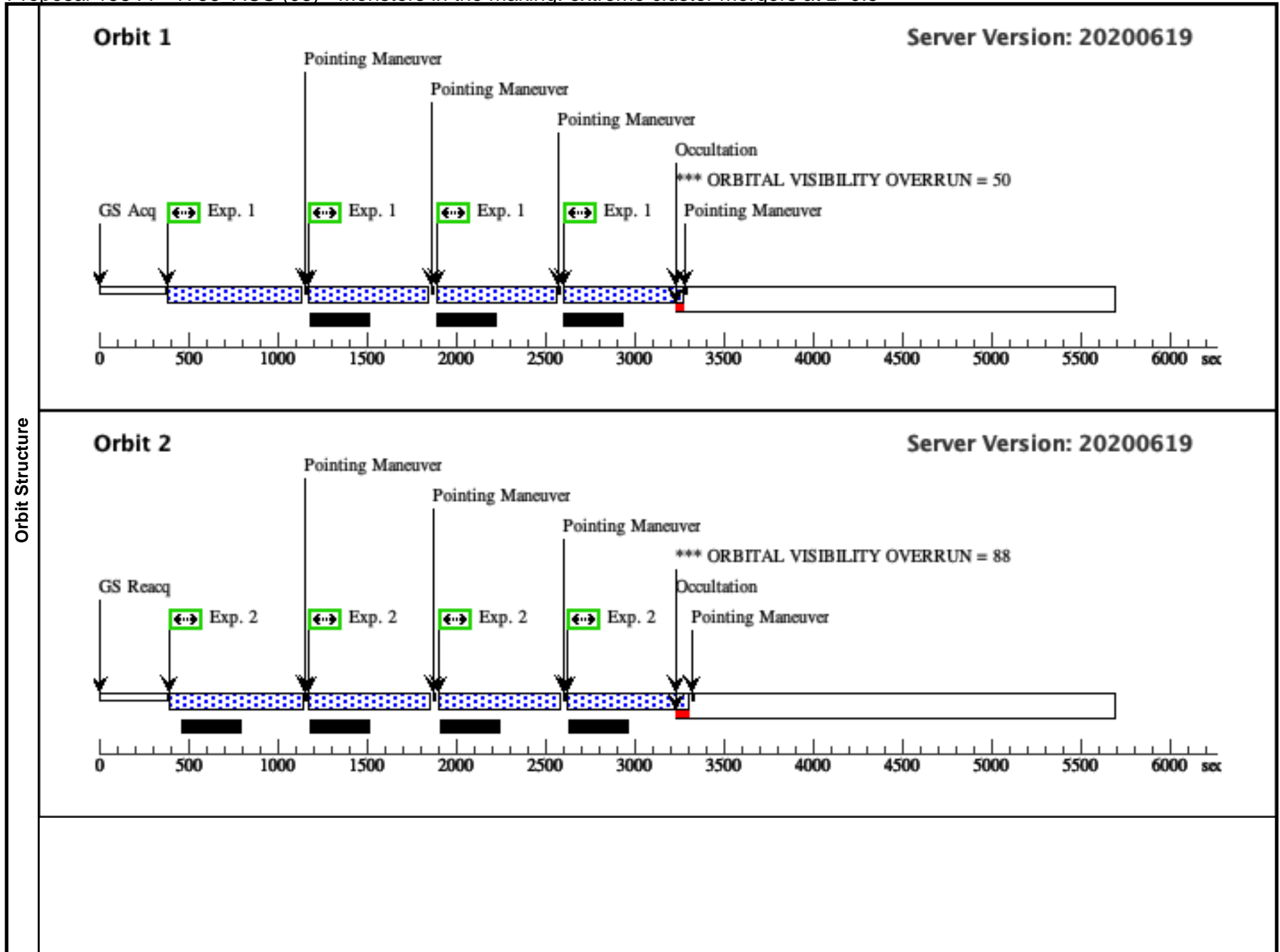
Visit	Proposal 15844, 1527_WFC3p2 (07), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: ORIENT 130D TO 140 D									
	(1527_WFC3p2 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	EMACSJ1527.6+2044-COPY	RA: 15 27 41.3000 (231.9220833d) Dec: +20 44 34.00 (20.74278d) Equinox: J2000		V=21	Reference Frame: ICRS				
Comments: Copy of target 3. This target is used with vists 6 & 7. RA and Dec needed to be shifted to find guide star pairs. Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -5.8942 5,2.36145 ; GS ACQ SCENARI O BASE1B3		302.938471 Secs (302.938 Secs) [==>]	[1]
	2		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	3		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	4		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 1		302.938471 Secs (302.938 Secs) [==>]	[1]
	5		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG -4.1327 5,-1.69540		302.938471 Secs (302.938 Secs) [==>]	[1]
	6		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	7		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	8		(10) EMACSJ1527.6+2044-COPY	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	SAME POS AS 5		302.938471 Secs (302.938 Secs) [==>]	[1]

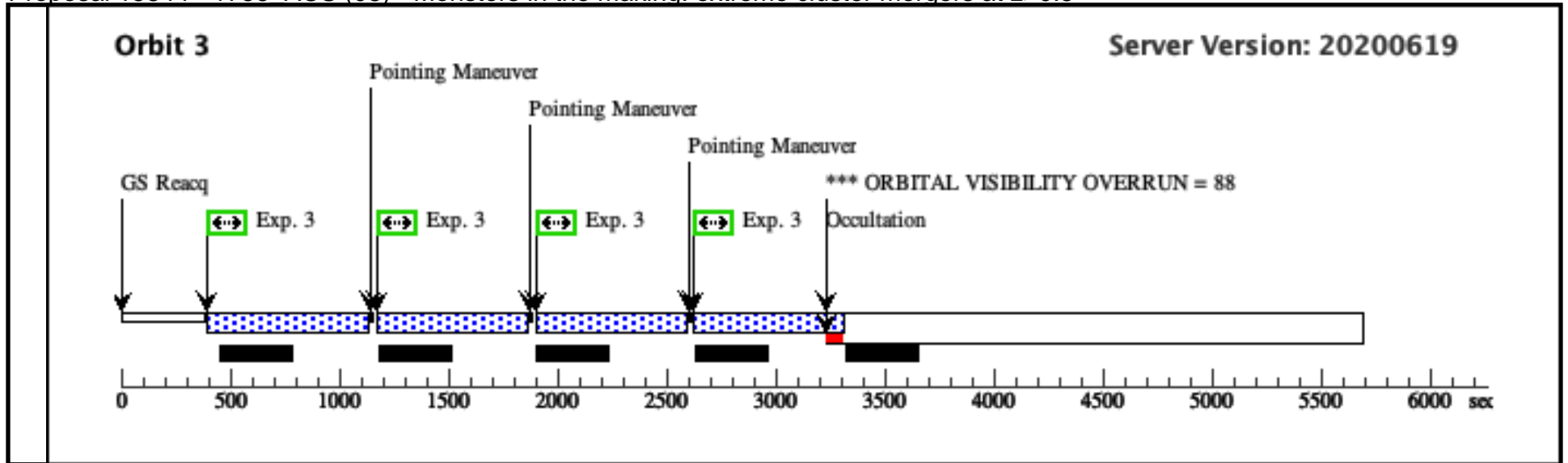


Proposal 15844 - 1756 ACS (08) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:41 GMT 2020

Visit	Proposal 15844, 1756_ACS (08), completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: ORIENT 125D TO 135 D									
	(1756_ACS (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1756_ACS (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1756_ACS (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern		Secondary Pattern		Exposures				
	(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=3.058944 Line Spacing=6.039452	Coordinate Frame=POS-TARG Pattern Orientation=85.329042 Angle Between Sides=179.702031 Center Pattern=false			(1), (2), (3)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	EMACSJ1756.8+4008	RA: 17 56 47.0000 (269.1958333d) Dec: +40 07 55.00 (40.13194d) Equinox: J2000		V=21	Reference Frame: ICRS				
Comments: Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	1756_435	(4) EMACSJ1756.8+4008	ACS/WFC, ACCUM, WFC-FIX	F435W		POS TARG -13,-22	Pattern 2, Exps 1-1 in 1756_ACS (08) (2)	530 Secs (2196 Secs)	
	[=>549.0 Secs (Pattern 1)] [=>549.0 Secs (Pattern 2)] [=>549.0 Secs (Pattern 3)] [=>549.0 Secs (Pattern 4)]									[1]
	2	1756_606	(4) EMACSJ1756.8+4008	ACS/WFC, ACCUM, WFC-FIX	F606W		POS TARG -13,-22	Pattern 2, Exps 2-2 in 1756_ACS (08) (2)	530 Secs (2244 Secs)	
[=>561.0 Secs (Pattern 1)] [=>561.0 Secs (Pattern 2)] [=>561.0 Secs (Pattern 3)] [=>561.0 Secs (Pattern 4)]									[2]	
3	1756_814	(4) EMACSJ1756.8+4008	ACS/WFC, ACCUM, WFC-FIX	F814W		POS TARG -13,-22	Pattern 2, Exps 3-3 in 1756_ACS (08) (2)	530 Secs (2252 Secs)		
[=>563.0 Secs (Pattern 1)] [=>563.0 Secs (Pattern 2)] [=>563.0 Secs (Pattern 3)] [=>563.0 Secs (Pattern 4)]									[3]	



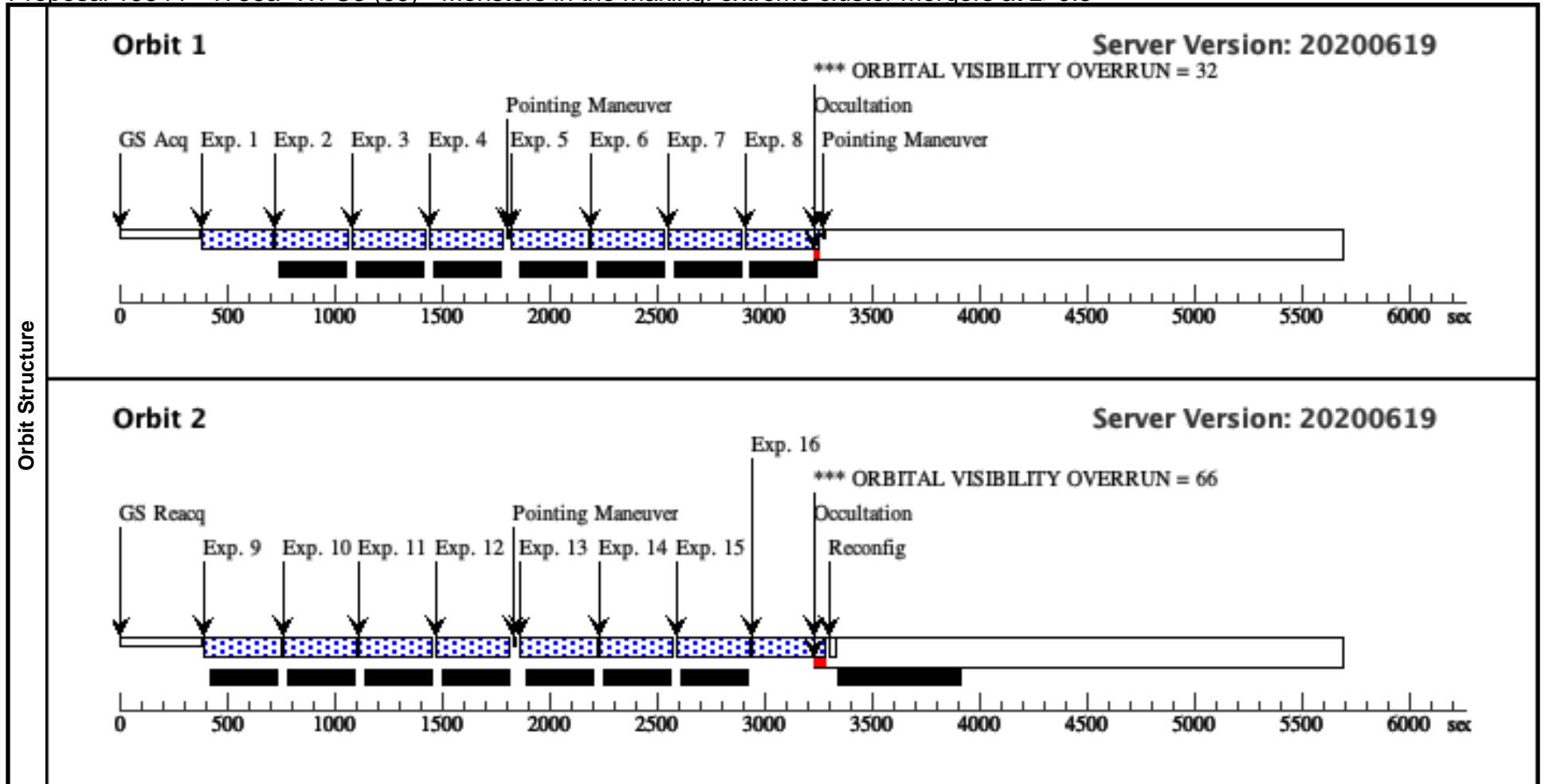


Proposal 15844 - 1756a WFC3 (09) - Monsters in the making: extreme cluster mergers at $z > 0.5$

Visit	Proposal 15844, 1756a_WFC3 (09), completed Fri Sep 18 18:00:41 GMT 2020 Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: ORIENT 213D TO 223 D																
	Diagnostics	(1756a_WFC3 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1756a_WFC3 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN															
Fixed Targets		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 25%;">Target Coordinates</th> <th style="width: 20%;">Targ. Coord. Corrections</th> <th style="width: 10%;">Fluxes</th> <th style="width: 20%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(6)</td> <td>EMACSJ1756.8+4008-E</td> <td>RA: 17 56 52.5000 (269.2187500d) Dec: +40 08 0.00 (40.13333d) Equinox: J2000</td> <td></td> <td>V=21</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(6)	EMACSJ1756.8+4008-E	RA: 17 56 52.5000 (269.2187500d) Dec: +40 08 0.00 (40.13333d) Equinox: J2000		V=21
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(6)	EMACSJ1756.8+4008-E	RA: 17 56 52.5000 (269.2187500d) Dec: +40 08 0.00 (40.13333d) Equinox: J2000		V=21	Reference Frame: ICRS												
Comments: Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]																	

Proposal 15844 - 1756a WFC3 (09) - Monsters in the making: extreme cluster mergers at z>0.5

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG 0,0; GS ACQ SCENARI O BASE1B3			302.938471 Secs (302.938 Secs) [==>]	[1]
	2	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1			327.938986 Secs (327.939 Secs) [==>]	[1]
	3	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1			327.938986 Secs (327.939 Secs) [==>]	[1]
	4	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1			327.938986 Secs (327.939 Secs) [==>]	[1]
	5	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -1.8970, 4.17795			327.938986 Secs (327.939 Secs) [==>]	[1]
	6	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5			327.938986 Secs (327.939 Secs) [==>]	[1]
	7	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5			327.938986 Secs (327.939 Secs) [==>]	[1]
	8	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5			327.938986 Secs (327.939 Secs) [==>]	[1]
	9	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -5.8942 5.2.36145			327.938986 Secs (327.939 Secs) [==>]	[2]
	10	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9			327.938986 Secs (327.939 Secs) [==>]	[2]
	11	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9			327.938986 Secs (327.939 Secs) [==>]	[2]
	12	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9			327.938986 Secs (327.939 Secs) [==>]	[2]
	13	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -4.1327 5,-1.69540			327.938986 Secs (327.939 Secs) [==>]	[2]
	14	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13			327.938986 Secs (327.939 Secs) [==>]	[2]
	15	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13			327.938986 Secs (327.939 Secs) [==>]	[2]
16	(6) EMACSJ1756.8+ 4008-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13			327.938986 Secs (327.939 Secs) [==>]	[2]	

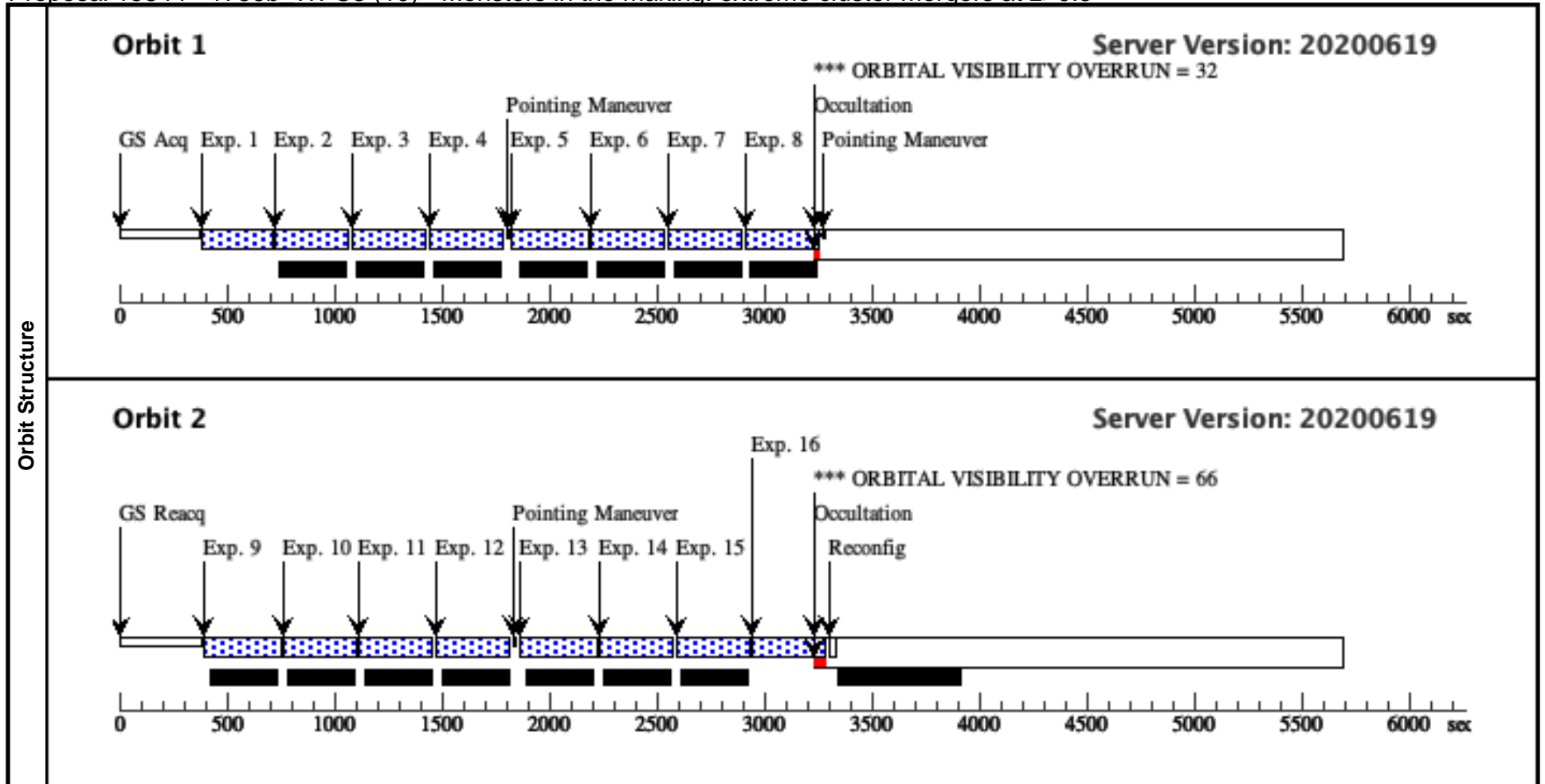


Proposal 15844 - 1756b WFC3 (10) - Monsters in the making: extreme cluster mergers at $z > 0.5$

Visit	Proposal 15844, 1756b_WFC3 (10), completed Fri Sep 18 18:00:41 GMT 2020 Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: ORIENT -4D TO 4D FROM 09																
	Diagnostics	(1756b_WFC3 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1756b_WFC3 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN															
Fixed Targets		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 25%;">Target Coordinates</th> <th style="width: 20%;">Targ. Coord. Corrections</th> <th style="width: 10%;">Fluxes</th> <th style="width: 20%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(7)</td> <td>EMACSJ1756.8+4008-W</td> <td>RA: 17 56 42.5000 (269.1770833d) Dec: +40 07 45.00 (40.12917d) Equinox: J2000</td> <td></td> <td>V=21</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments:</i> Category=<i>CLUSTER OF GALAXIES</i> Description=<i>[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(7)	EMACSJ1756.8+4008-W	RA: 17 56 42.5000 (269.1770833d) Dec: +40 07 45.00 (40.12917d) Equinox: J2000		V=21
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(7)	EMACSJ1756.8+4008-W	RA: 17 56 42.5000 (269.1770833d) Dec: +40 07 45.00 (40.12917d) Equinox: J2000		V=21	Reference Frame: ICRS												

Proposal 15844 - 1756b WFC3 (10) - Monsters in the making: extreme cluster mergers at z>0.5

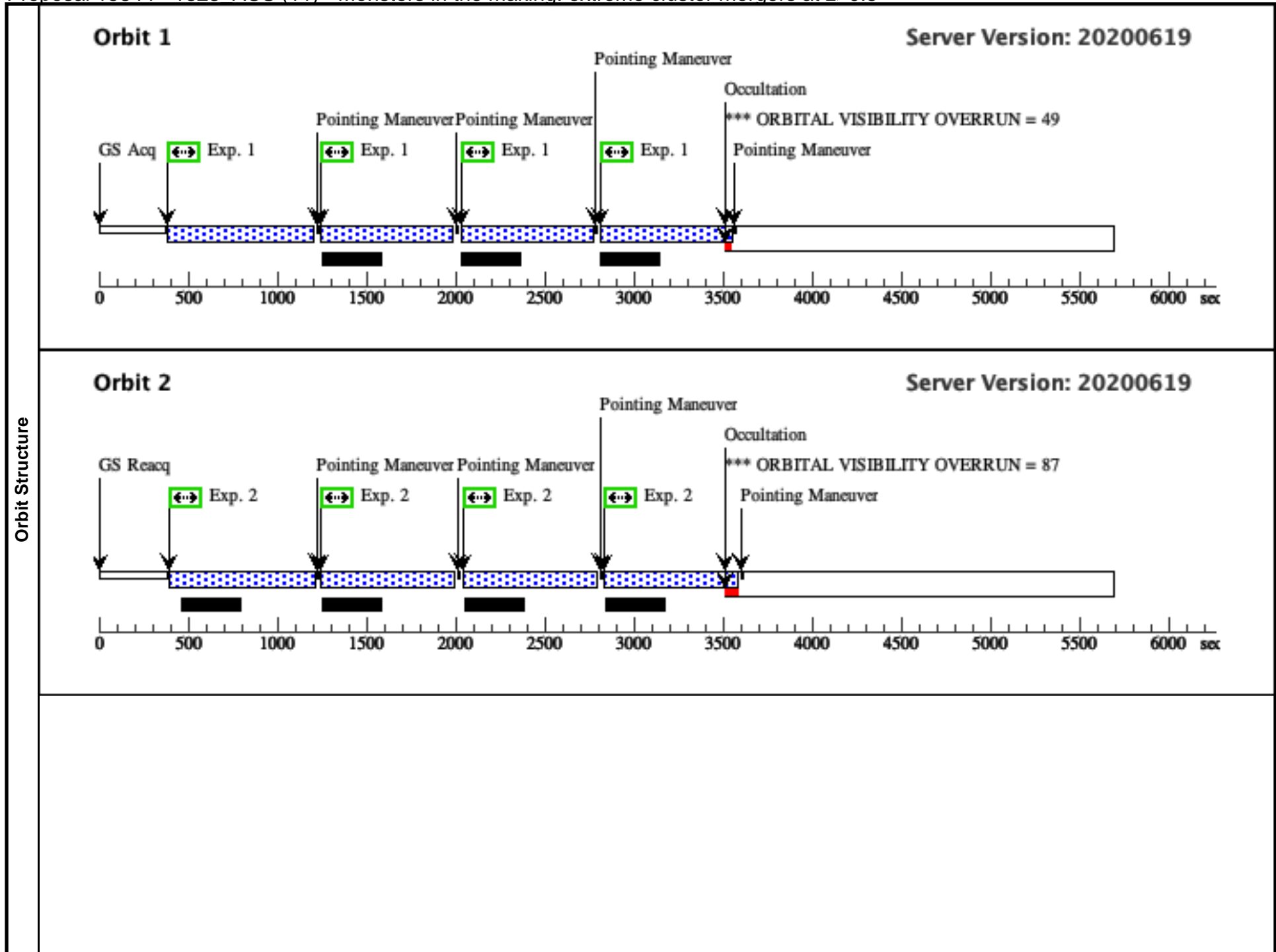
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=13	POS TARG 0,0; GS ACQ SCENARI O BASE1B3		302.938471 Secs (302.938 Secs) [==>]	[1]
	2		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	3		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	4		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 1		327.938986 Secs (327.939 Secs) [==>]	[1]
	5		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -1.8970, 4.17795		327.938986 Secs (327.939 Secs) [==>]	[1]
	6		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	7		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	8		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 5		327.938986 Secs (327.939 Secs) [==>]	[1]
	9		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -5.8942 5.2.36145		327.938986 Secs (327.939 Secs) [==>]	[2]
	10		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs (327.939 Secs) [==>]	[2]
	11		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs (327.939 Secs) [==>]	[2]
	12		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 9		327.938986 Secs (327.939 Secs) [==>]	[2]
	13		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=14	POS TARG -4.1327 5,-1.69540		327.938986 Secs (327.939 Secs) [==>]	[2]
	14		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs (327.939 Secs) [==>]	[2]
	15		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs (327.939 Secs) [==>]	[2]
16		(7) EMACSJ1756.8+ 4008-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=14	SAME POS AS 13		327.938986 Secs (327.939 Secs) [==>]	[2]	

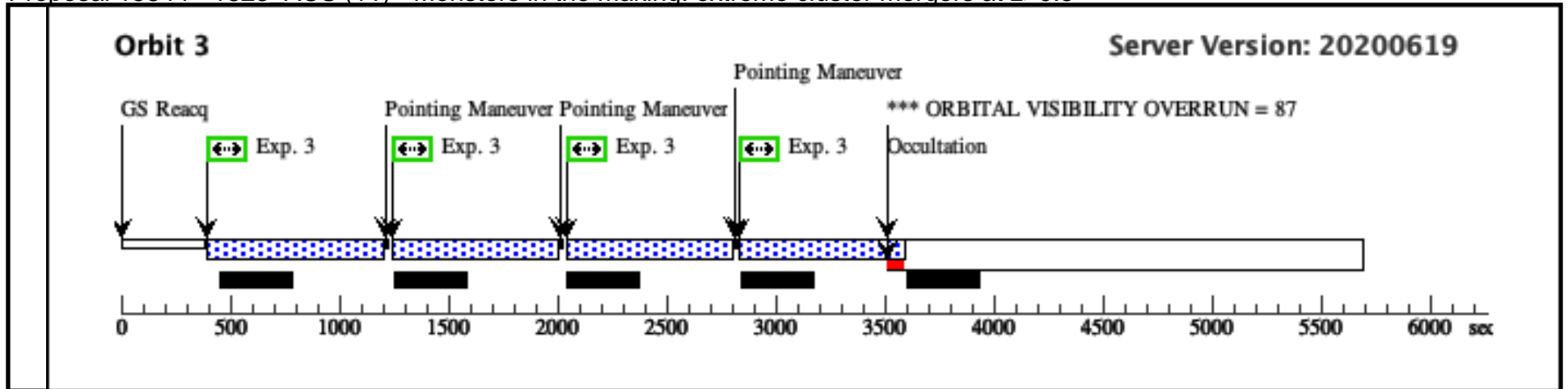


Proposal 15844 - 1823 ACS (11) - Monsters in the making: extreme cluster mergers at z>0.5

Fri Sep 18 18:00:41 GMT 2020

Visit	Proposal 15844, 1823_ACS (11), completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: ORIENT 100D TO 110 D									
	(1823_ACS (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1823_ACS (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (1823_ACS (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=3.058944 Line Spacing=6.039452	Coordinate Frame=POS-TARG Pattern Orientation=85.329042 Angle Between Sides=179.702031 Center Pattern=false	(1), (2), (3)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(5)	EMACSJ1823.1+7822	RA: 18 23 1.0000 (275.7541667d) Dec: +78 22 30.00 (78.37500d) Equinox: J2000		V=21	Reference Frame: ICRS				
<i>Comments:</i> Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	1823_435	(5) EMACSJ1823.1+7822	ACS/WFC, ACCUM, WFC-FIX	F435W		POS TARG -13,-22	Pattern 2, Exps 1-1 i n 1823_ACS (11) (2)	530 Secs (2476 Secs) [==>619.0 Secs (Pattern 1)] [==>619.0 Secs (Pattern 2)] [==>619.0 Secs (Pattern 3)] [==>619.0 Secs (Pattern 4)]	[1]
	2	1823_606	(5) EMACSJ1823.1+7822	ACS/WFC, ACCUM, WFC-FIX	F606W		POS TARG -13,-22	Pattern 2, Exps 2-2 i n 1823_ACS (11) (2)	530 Secs (2524 Secs) [==>631.0 Secs (Pattern 1)] [==>631.0 Secs (Pattern 2)] [==>631.0 Secs (Pattern 3)] [==>631.0 Secs (Pattern 4)]	[2]
	3	1823_814	(5) EMACSJ1823.1+7822	ACS/WFC, ACCUM, WFC-FIX	F814W		POS TARG -13,-22	Pattern 2, Exps 3-3 i n 1823_ACS (11) (2)	530 Secs (2532 Secs) [==>633.0 Secs (Pattern 1)] [==>633.0 Secs (Pattern 2)] [==>633.0 Secs (Pattern 3)] [==>633.0 Secs (Pattern 4)]	[3]



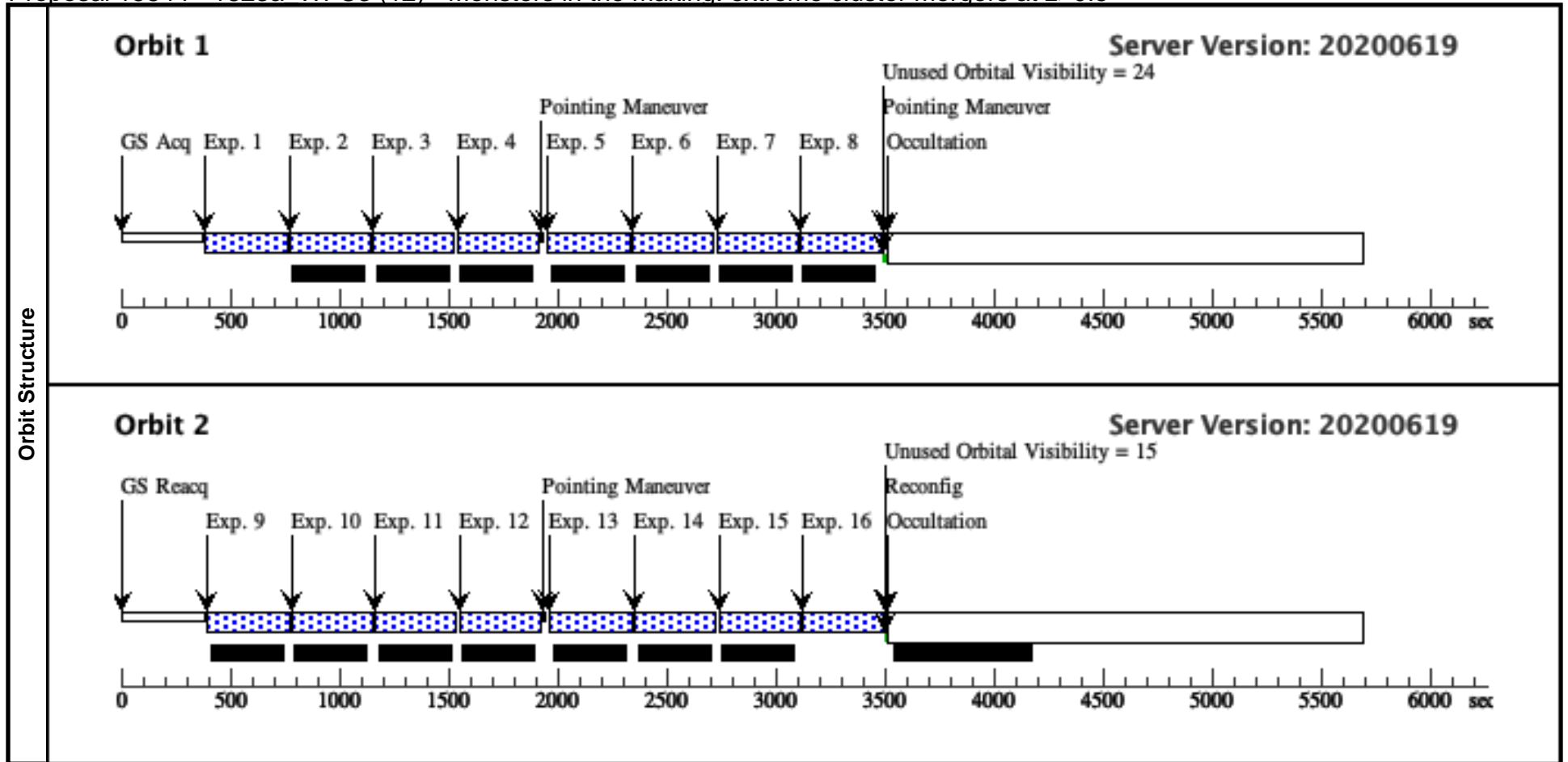


Proposal 15844 - 1823a WFC3 (12) - Monsters in the making: extreme cluster mergers at $z > 0.5$

Visit	Proposal 15844, 1823a_WFC3 (12), scheduling Fri Sep 18 18:00:41 GMT 2020					
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 15D TO 25 D					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(8)	EMACSJ1823.1+7822-E	RA: 18 23 18.0000 (275.8250000d) Dec: +78 23 10.00 (78.38611d) Equinox: J2000		V=21	Reference Frame: ICRS
<i>Comments:</i> Category= <i>CLUSTER OF GALAXIES</i> Description= <i>[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]</i>						

Proposal 15844 - 1823a WFC3 (12) - Monsters in the making: extreme cluster mergers at z>0.5

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0		352.939501 Secs (352.94 Secs) [==>]	[1]
	2		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 1		352.939501 Secs (352.94 Secs) [==>]	[1]
	3		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 1		352.939501 Secs (352.94 Secs) [==>]	[1]
	4		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 1		352.939501 Secs (352.94 Secs) [==>]	[1]
	5		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG -1.8970, 4.17795		352.939501 Secs (352.94 Secs) [==>]	[1]
	6		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		352.939501 Secs (352.94 Secs) [==>]	[1]
	7		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		352.939501 Secs (352.94 Secs) [==>]	[1]
	8		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		352.939501 Secs (352.94 Secs) [==>]	[1]
	9		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG -5.8942 5.2.36145		352.939501 Secs (352.94 Secs) [==>]	[2]
	10		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 9		352.939501 Secs (352.94 Secs) [==>]	[2]
	11		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 9		352.939501 Secs (352.94 Secs) [==>]	[2]
	12		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 9		352.939501 Secs (352.94 Secs) [==>]	[2]
	13		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG -4.1327 5,-1.69540		352.939501 Secs (352.94 Secs) [==>]	[2]
	14		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 13		352.939501 Secs (352.94 Secs) [==>]	[2]
	15		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 13		352.939501 Secs (352.94 Secs) [==>]	[2]
	16		(8) EMACSJ1823.1+ 7822-E	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 13		352.939501 Secs (352.94 Secs) [==>]	[2]



Proposal 15844 - 1823b WFC3 (13) - Monsters in the making: extreme cluster mergers at $z > 0.5$

Visit	Proposal 15844, 1823b_WFC3 (13), scheduling Fri Sep 18 18:00:41 GMT 2020 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SAME ORIENT AS 12					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(9)		EMACSJ1823.1+7822-W	RA: 18 22 44.0000 (275.6833333d) Dec: +78 22 20.00 (78.37222d) Equinox: J2000		V=21	Reference Frame: ICRS
Comments: Category=CLUSTER OF GALAXIES Description=[GRAVITATIONAL LENS, HIGH REDSHIFT CLUSTER]						

Proposal 15844 - 1823b WFC3 (13) - Monsters in the making: extreme cluster mergers at $z>0.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
Exposures	1	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0		352.939501 Secs (352.94 Secs)	[1]	
	2	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 1		352.939501 Secs (352.94 Secs)	[1]	
	3	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 1		352.939501 Secs (352.94 Secs)	[1]	
	4	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 1		352.939501 Secs (352.94 Secs)	[1]	
	5	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG -1.8970, 4.17795		352.939501 Secs (352.94 Secs)	[1]	
	6	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		352.939501 Secs (352.94 Secs)	[1]	
	7	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		352.939501 Secs (352.94 Secs)	[1]	
	8	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		352.939501 Secs (352.94 Secs)	[1]	
	9	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG -5.8942 5.2.36145		352.939501 Secs (352.94 Secs)	[2]	
	10	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 9		352.939501 Secs (352.94 Secs)	[2]	
	11	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 9		352.939501 Secs (352.94 Secs)	[2]	
	12	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 9		352.939501 Secs (352.94 Secs)	[2]	
	13	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG -4.1327 5,-1.69540		352.939501 Secs (352.94 Secs)	[2]	
	14	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F105W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 13		352.939501 Secs (352.94 Secs)	[2]	
	15	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 13		352.939501 Secs (352.94 Secs)	[2]	
	16	(9) EMACSJ1823.1+ 7822-W	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 13		352.939501 Secs (352.94 Secs)	[2]	

