



## 10874 - Search for Extremely Faint $z>7$ Galaxy Population with Cosmic Lenses

Cycle: 15, 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>
10	(1) CL0024+16-POS1 ANY	NIC3 WFPC2	4	21-May-2007 20:08:42.0	yes
11	(1) CL0024+16-POS1 ANY	NIC3 WFPC2	3	21-May-2007 20:08:52.0	yes
20	(2) CL0024+16-POS2 ANY	NIC3 WFPC2	4	21-May-2007 20:09:05.0	yes
21	(2) CL0024+16-POS2 ANY	NIC3 WFPC2	3	21-May-2007 20:09:13.0	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>
30	(3) CL1056-03-POS1 ANY	NIC3 WFPC2	3	21-May-2007 20:09:20.0	yes
31	(3) CL1056-03-POS1 ANY	ACS/WFC NIC3	3	21-May-2007 20:09:33.0	yes
40	(4) CL1056-03-POS2 ANY	ACS/WFC NIC3	3	21-May-2007 20:09:41.0	yes
41	(4) CL1056-03-POS2 ANY	ACS/WFC NIC3	2	21-May-2007 20:09:47.0	yes
50	(5) CL1056-03-POS3 ANY	NIC3 WFPC2	3	21-May-2007 20:09:53.0	yes
51	(5) CL1056-03-POS3 ANY	NIC3 WFPC2	2	21-May-2007 20:09:59.0	yes
60	(6) CL1056-03-WFC ANY	ACS/WFC NIC3	3	21-May-2007 20:10:05.0	yes

33 Total Orbits Used

## ABSTRACT

Deep UDF/NICMOS observations find a significant decrease in the number of galaxy candidates between redshift  $z=6$  and  $7$ , but the sample at  $z>7$  is too small to draw conclusions. From our observations of 15 clusters we have found a number of bright  $z$ -dropouts, aided by the lensing amplification. We propose deep NICMOS observations of the best cases of cluster centers where a rare combination of a significant lensing effect and the richness in  $z$ -band dropouts in background may dramatically increase the discovery rate. The NICMOS images will reach an unprecedented depth of  $AB\sim 27.8$ , or  $AB\sim 30$  in nonlensed intrinsic magnitude, and may find many faint ( $\sim 0.05L^*$ ) galaxies at  $z=7-10$ , at a level that the UDF reaches for  $z\sim 6$  objects. We produce precision mass distribution maps from weak-lensing models, which enable us to derive the candidates' intrinsic magnitudes and their luminosity function. The knowledge of such faint galaxy population at  $z>7$  will facilitate the models of the IGM reionization and future JWST

planning.

### **OBSERVING DESCRIPTION**

We will observe CL0024 with 2 NIC3 pointings, each with 3.5 orbits of F110W (J band) and F160W (H band). We will observe CL1056 with 3 NIC3 pointings: two of the pointings will each have 2.5 orbits of F110W and F160W, while the third pointing will have 3 orbits of F110W and F160W. For CL1056, we also require 3 additional orbits of ACS F850LP (z band) to be added to our previous archival observations.

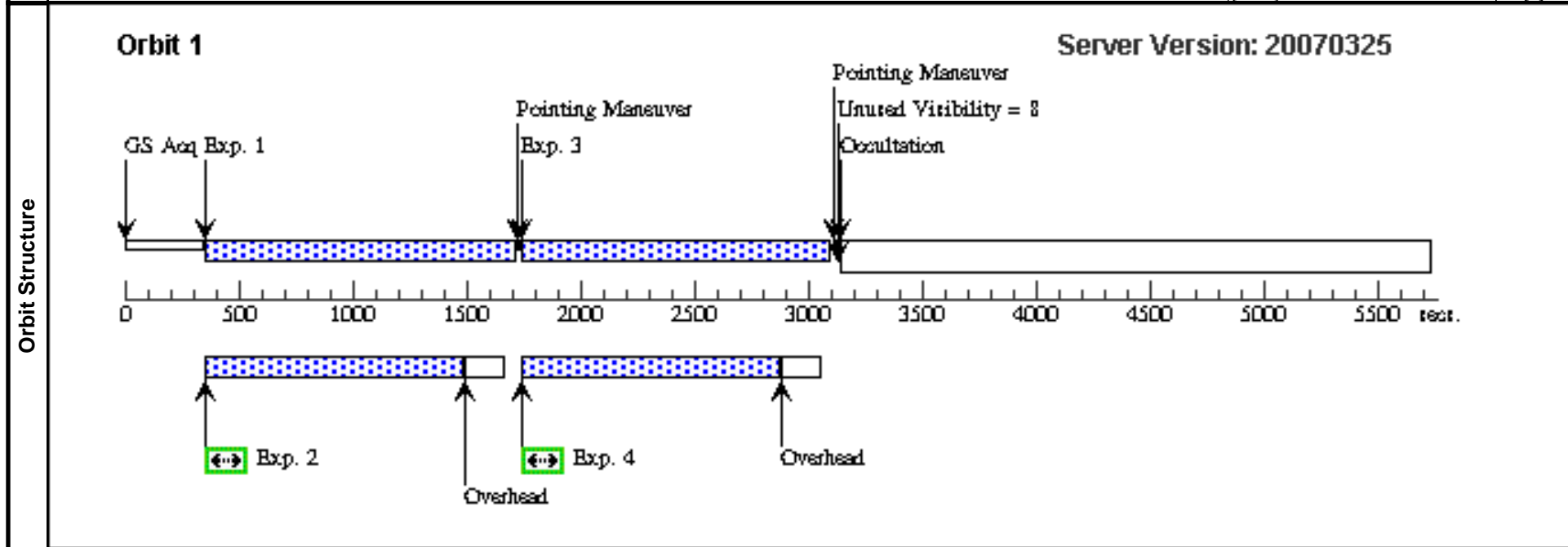
Proposal 10874 - Visit 10 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

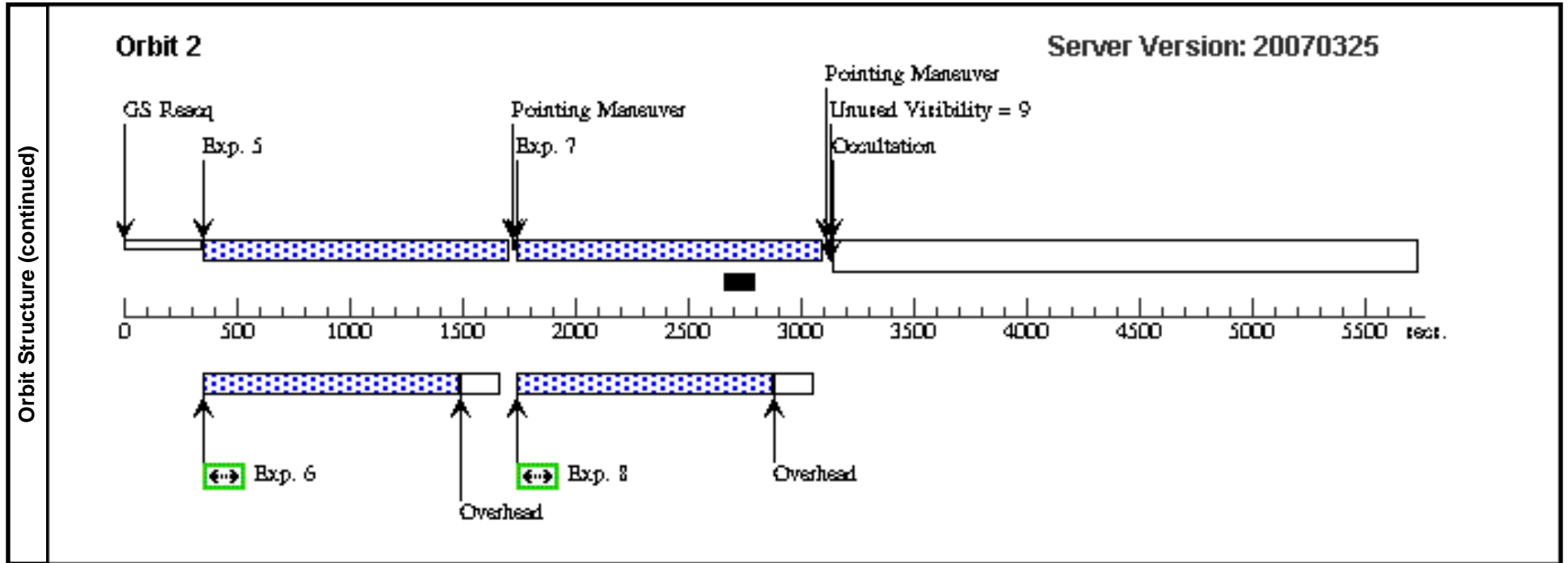
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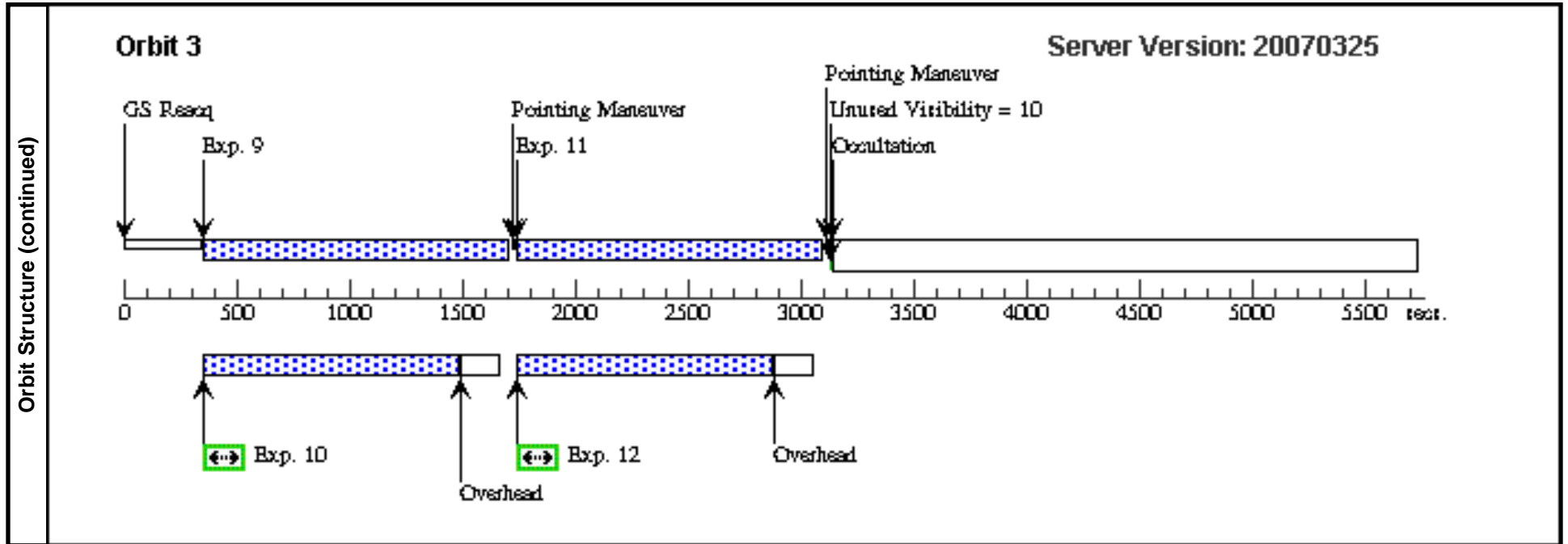
Visit	<b>Proposal 10874, Visit 10, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 75.0D TO 85.0 D; ORIENT 165.0D TO 175.0 D; ORIENT 255.0D TO 265.0 D; ORIENT 345.0D TO 355.0 D Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.  CL0024: 1st NIC3 pointing, 2 orbits of F110W (J band) and F160W (H band).  This pointing does not overlap the NIC3 pointings of GO10504.									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	CL0024+16-POS1	RA: 00 26 38.3683 (6.6598679d) Dec: +17 10 32.11 (17.17559d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) CL0024+16-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]	
	2	ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1000.0 Secs [==>]	[1]	
	3	(1) CL0024+16-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Group 3-4	[==>]	[1]	
	4	ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1000.0 Secs [==>]	[1]	
	5	(1) CL0024+16-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 5-6	[==>]	[2]	
	6	ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1000.0 Secs [==>]	[2]	
	7	(1) CL0024+16-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585	Prime + Parallel Group 7-8	[==>]	[2]	
	8	ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1000.0 Secs [==>]	[2]	
	9	(1) CL0024+16-POS1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23		Prime + Parallel Group 9-10	[==>]	[3]	
10	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1000.0 Secs [==>]	[3]		

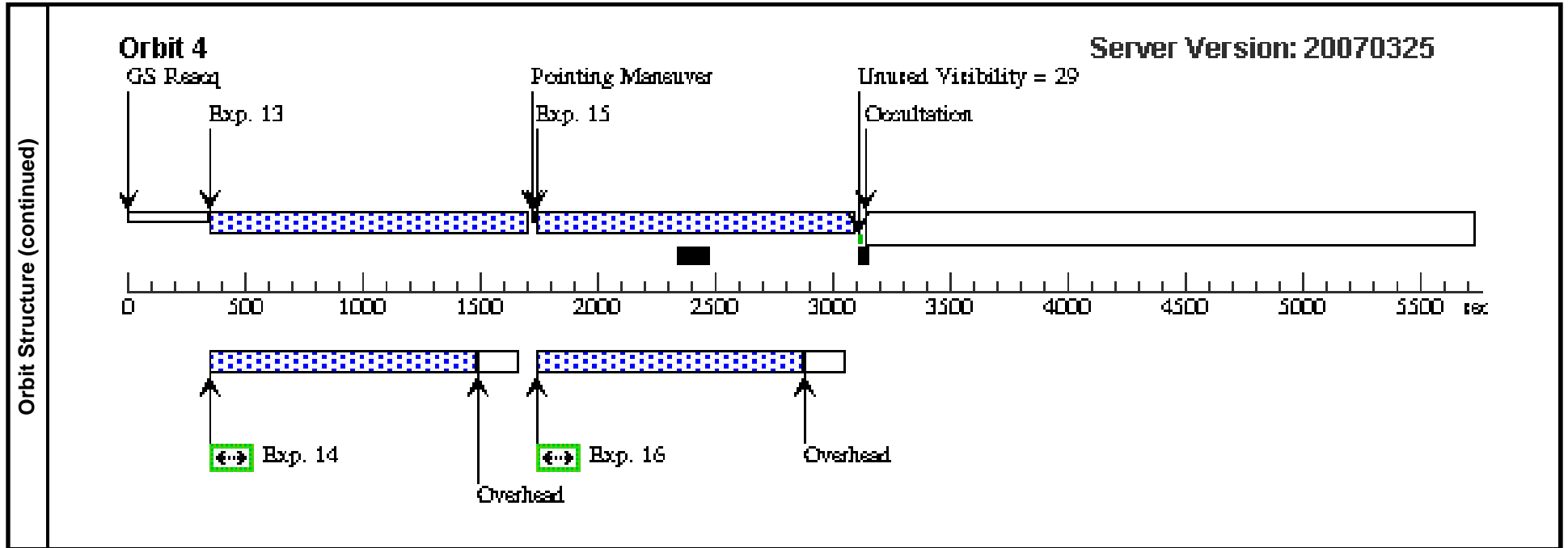
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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures (continued)	11	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Gro up 11-12	[==>]	[3]
	12	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 11-12	1000.0 Secs [==>]	[3]
	13	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Gro up 13-14	[==>]	[4]
	14	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 13-14	1000.0 Secs [==>]	[4]
	15	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585	Prime + Parallel Gro up 15-16	[==>]	[4]
	16	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 15-16	1000.0 Secs [==>]	[4]









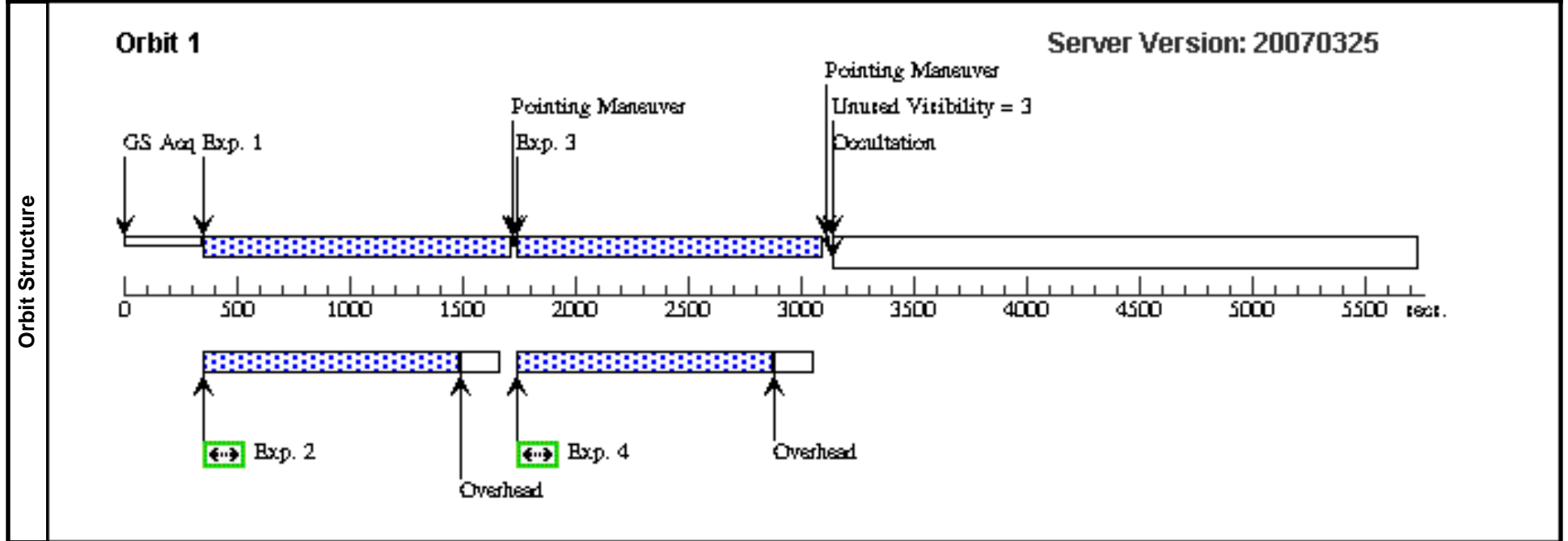
Proposal 10874 - Visit 11 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

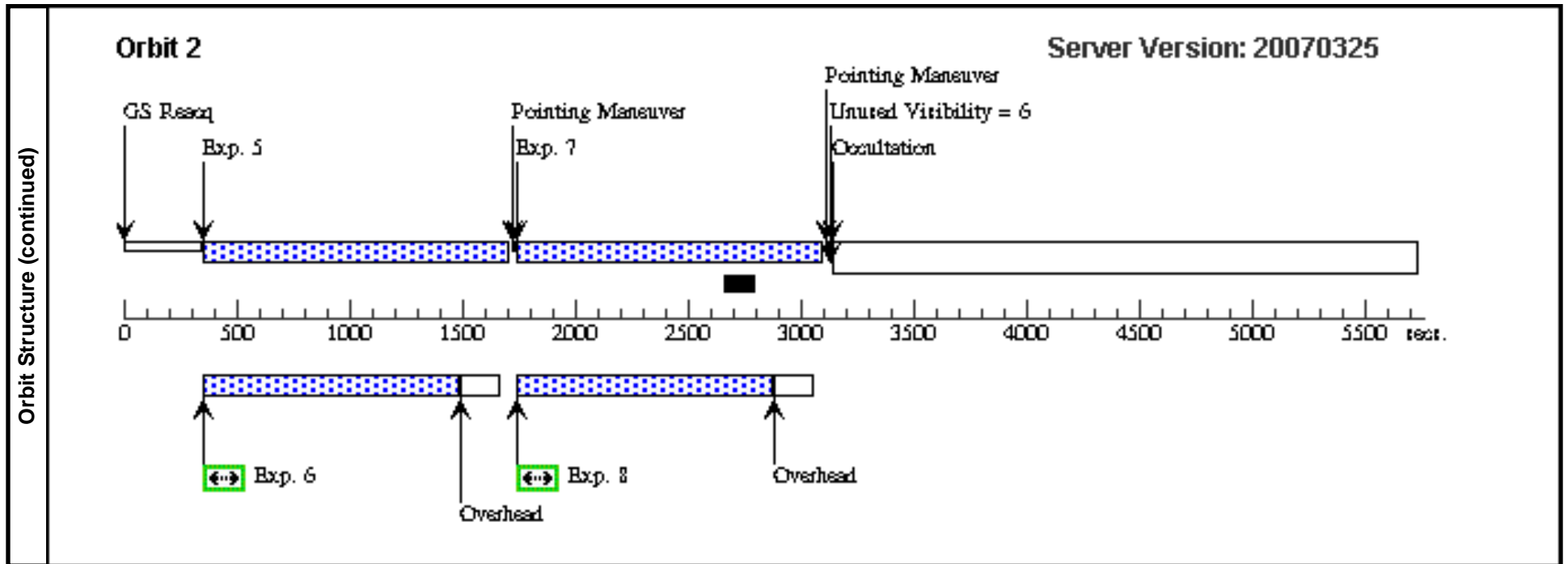
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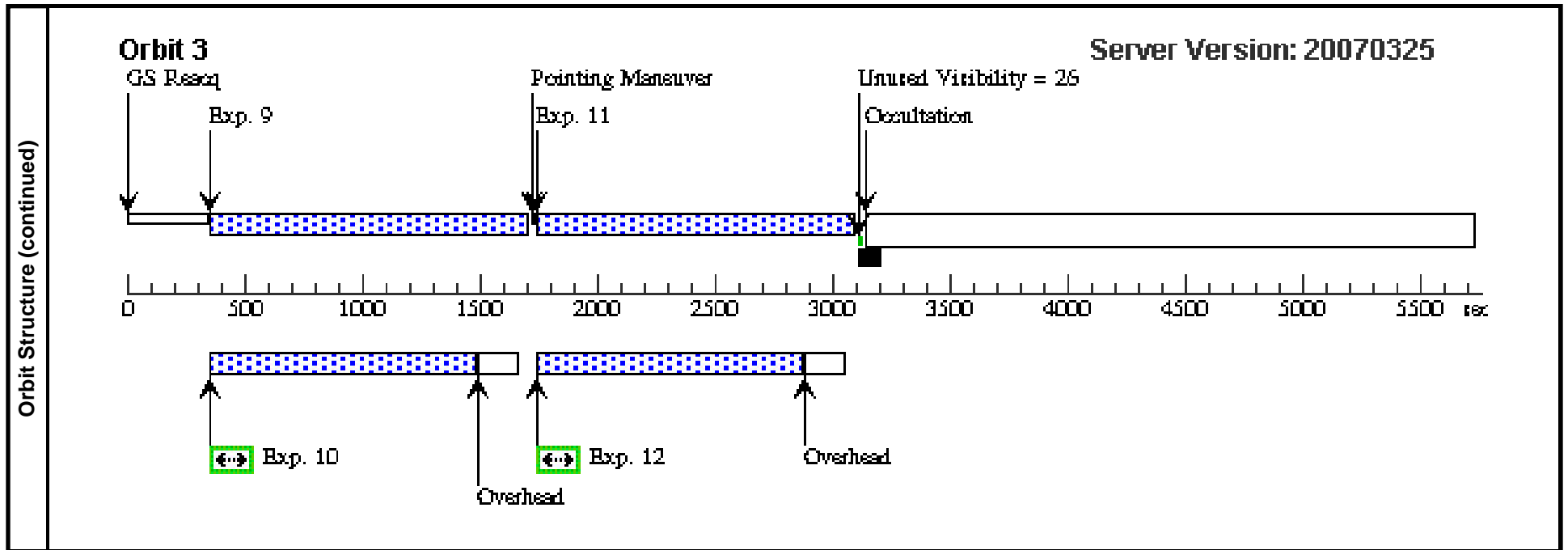
Visit	<b>Proposal 10874, Visit 11, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFPC2, NIC3 Special Requirements: SAME ORIENT AS 10 <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i>  CL0024: 1st NIC3 pointing, 1.5 orbits of F110W (J band) and F160W (H band).  This pointing does not overlap the NIC3 pointings of GO10504.									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	CL0024+16-POS1	RA: 00 26 38.3683 (6.6598679d) Dec: +17 10 32.11 (17.17559d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]	
	2	ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1000.0 Secs [==>]	[1]	
	3	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 1.1172,1 .1143	Prime + Parallel Group 3-4	[==>]	[1]	
	4	ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1000.0 Secs [==>]	[1]	
	5	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585	Prime + Parallel Group 5-6	[==>]	[2]	
	6	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1000.0 Secs [==>]	[2]	
	7	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -1.1143, -1.5172	Prime + Parallel Group 7-8	[==>]	[2]	
	8	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1000.0 Secs [==>]	[2]	
9	(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 1.1172,1 .1143	Prime + Parallel Group 9-10	[==>]	[3]		

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Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	10		ANY		WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1000.0 Secs [==>]
11		(1) CL0024+16-POS 1	NIC3, MULTIACCUM, NIC3		F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -1.1143, -1.5172	Prime + Parallel Group 11-12	[==>]	[3]
12		ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 11-12	1000.0 Secs [==>]	[3]







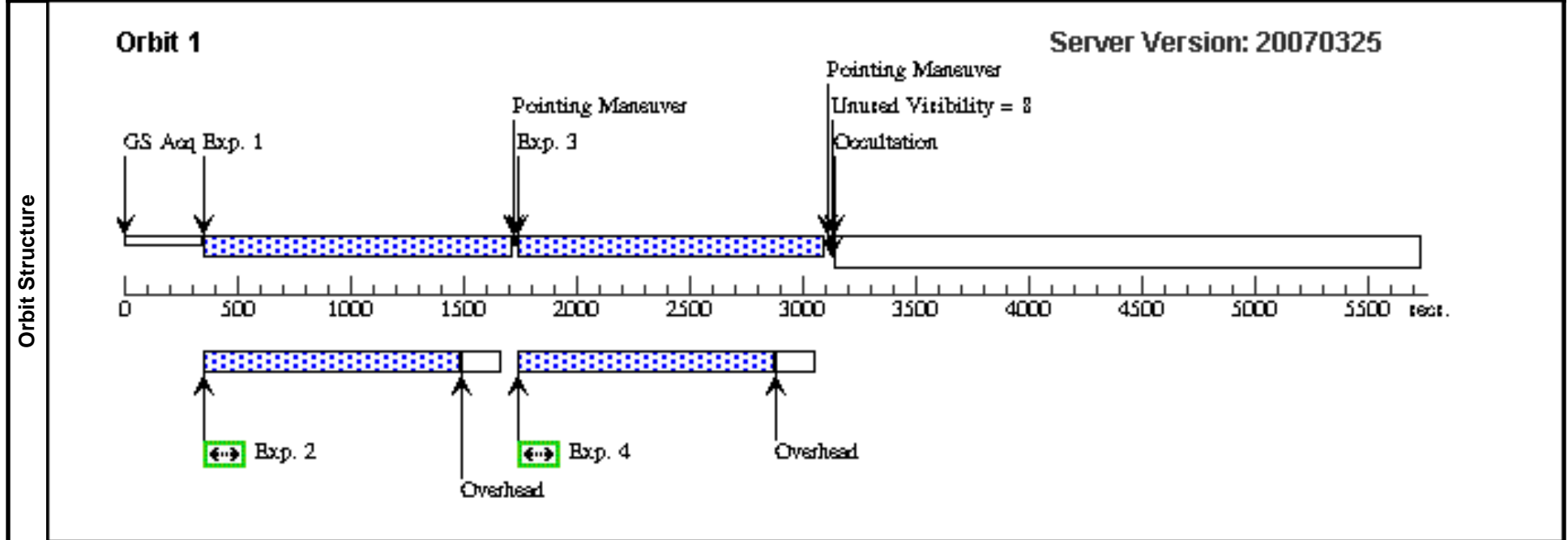
Proposal 10874 - Visit 20 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

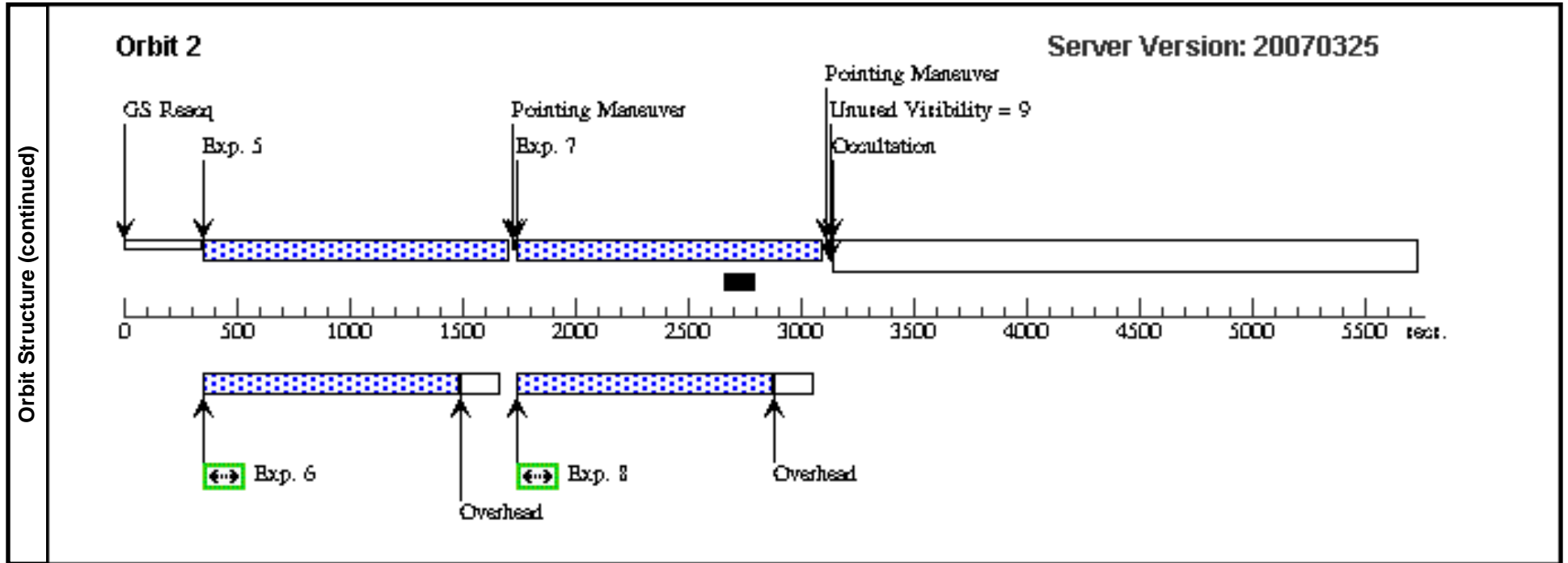
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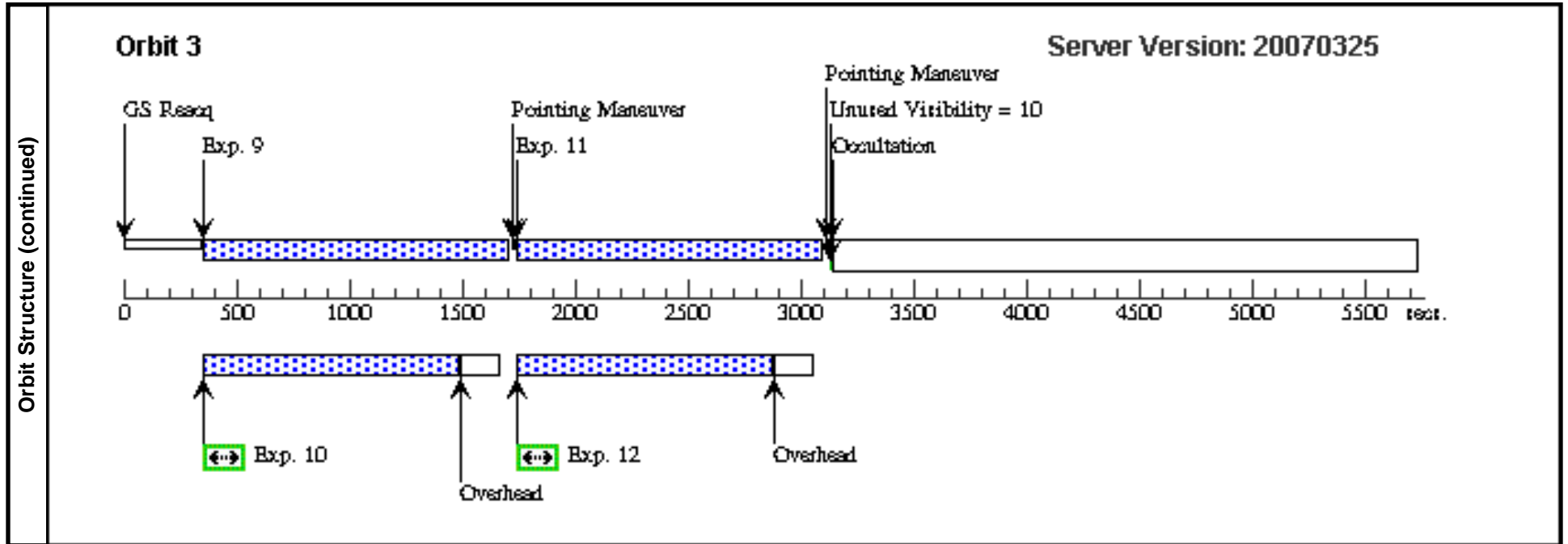
Visit	<b>Proposal 10874, Visit 20, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 75.0D TO 85.0 D; ORIENT 165.0D TO 175.0 D; ORIENT 255.0D TO 265.0 D; ORIENT 345.0D TO 355.0 D <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i>  CL0024: 2nd NIC3 pointing, 2 orbits of F110W (J band) and F160W (H band).  This pointing does not overlap the NIC3 pointings of GO10504.									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	CL0024+16-POS2	RA: 00 26 33.1918 (6.6382992d) Dec: +17 08 52.58 (17.14794d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	GS ACQ SCENARI O BASE1TNS	Prime + Parallel Gro up 1-2	[==>]	[1]
	2	ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Gro up 1-2	1000.0 Secs [==>]	[1]
	3	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Gro up 3-4	[==>]	[1]
	4	ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Gro up 3-4	1000.0 Secs [==>]	[1]
	5	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Gro up 5-6	[==>]	[2]
	6	ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Gro up 5-6	1000.0 Secs [==>]	[2]
	7	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585	Prime + Parallel Gro up 7-8	[==>]	[2]
	8	ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Gro up 7-8	1000.0 Secs [==>]	[2]
	9	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23		Prime + Parallel Gro up 9-10	[==>]	[3]
10	ANY		WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 9-10	1000.0 Secs [==>]	[3]	

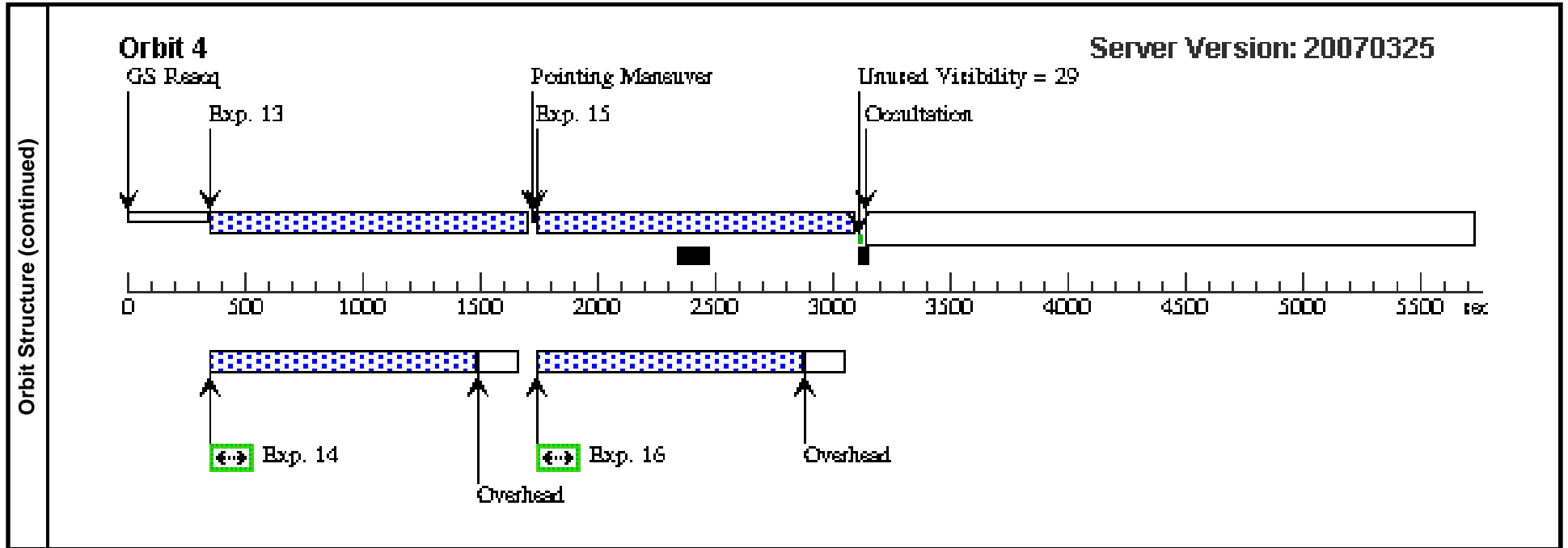
Proposal 10874 - Visit 20 - Search for Extremely Faint  $z>7$  Galaxy Population with Cosmic Lenses

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures (continued)	11	(2) CL0024+16-POS 2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Gro up 11-12	[==>]	[3]
	12	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 11-12	1000.0 Secs [==>]	[3]
	13	(2) CL0024+16-POS 2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Gro up 13-14	[==>]	[4]
	14	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 13-14	1000.0 Secs [==>]	[4]
	15	(2) CL0024+16-POS 2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585	Prime + Parallel Gro up 15-16	[==>]	[4]
	16	ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 15-16	1000.0 Secs [==>]	[4]









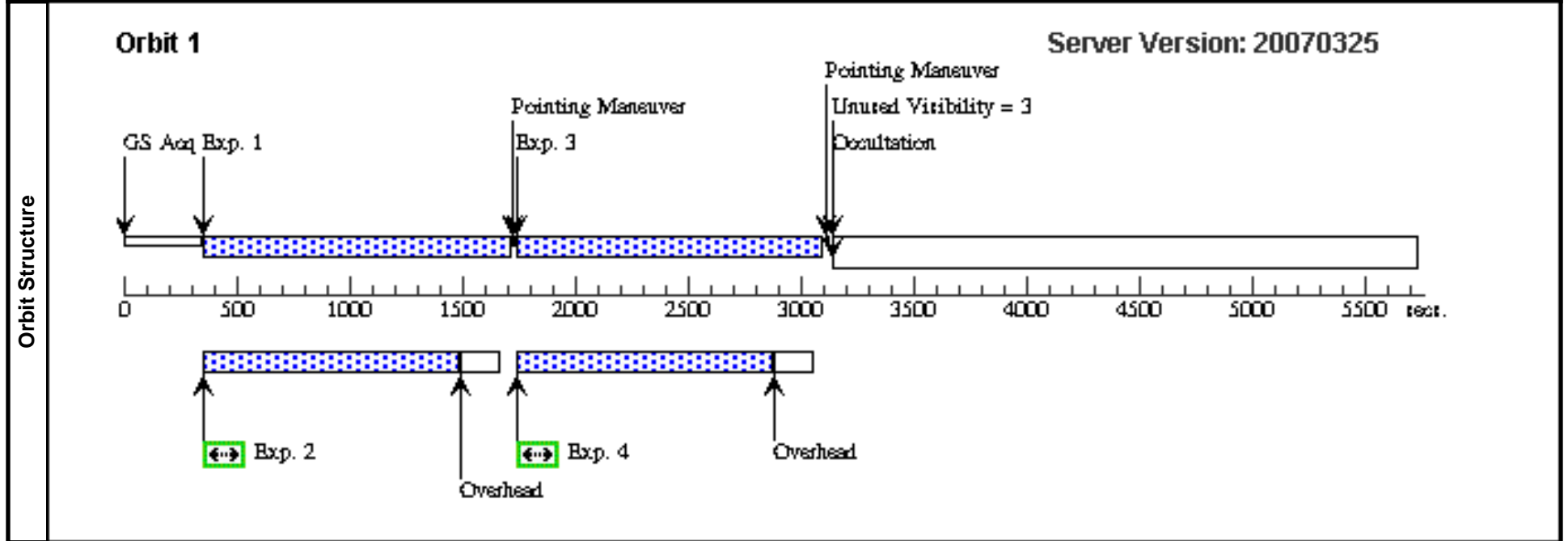
Proposal 10874 - Visit 21 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

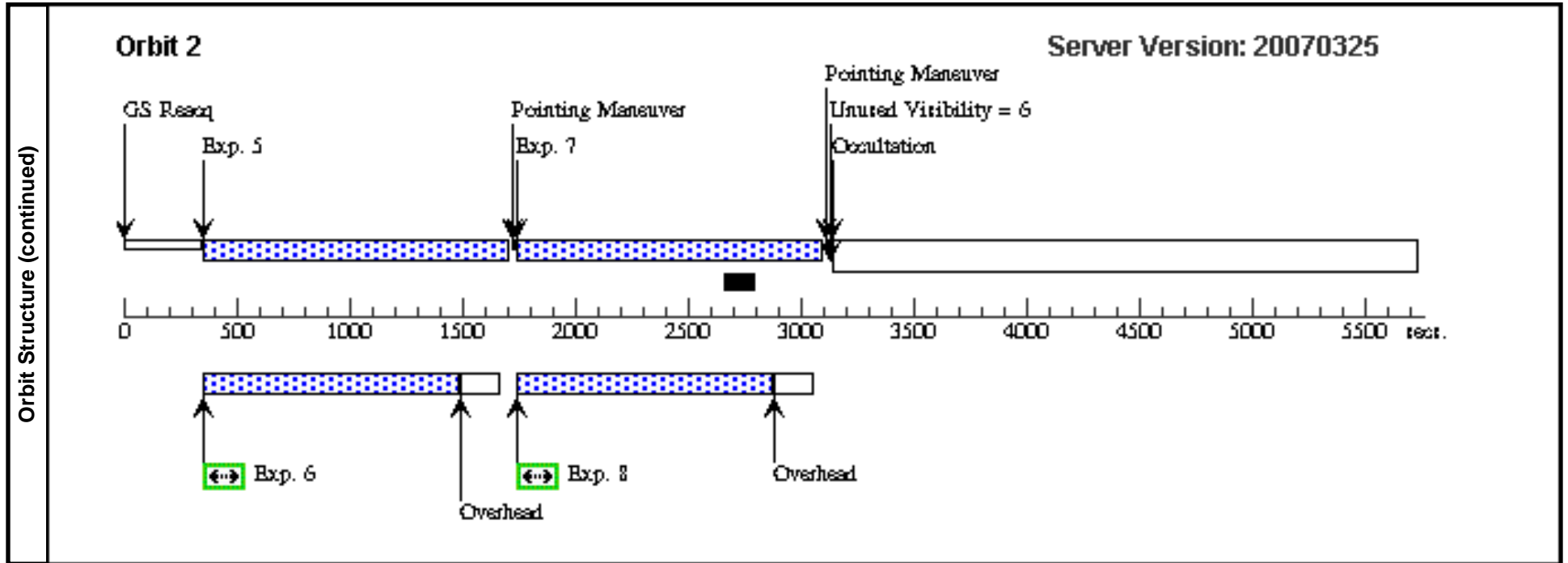
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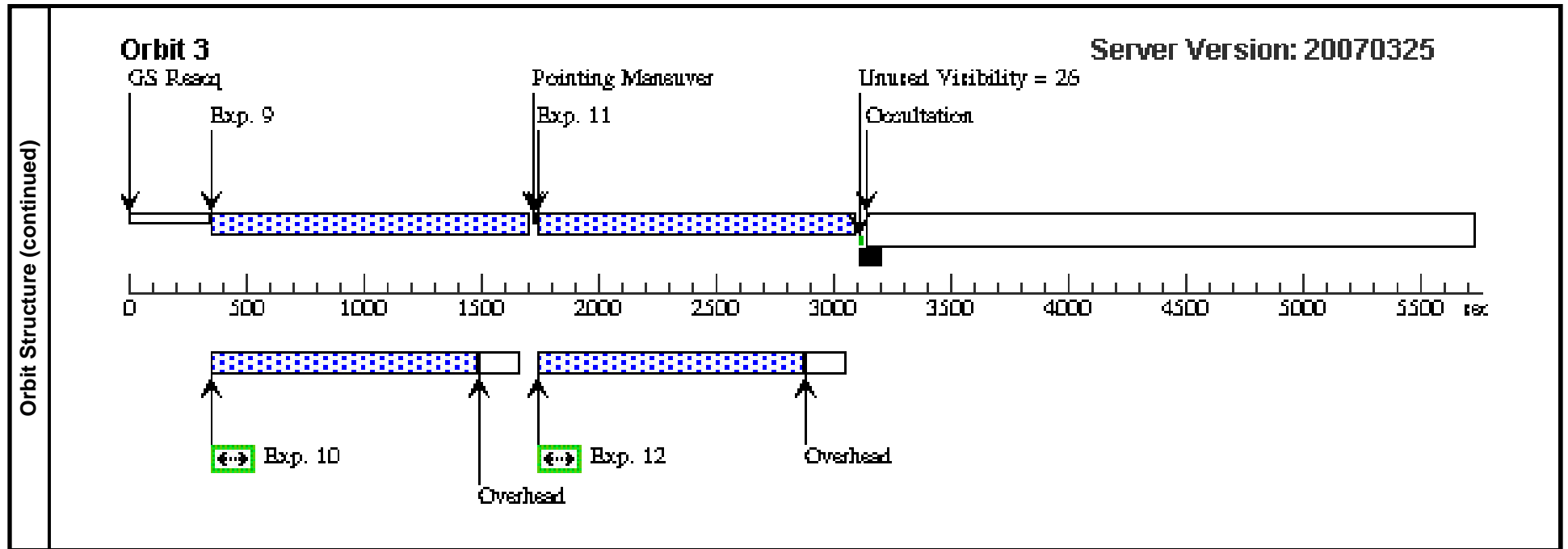
Visit	<b>Proposal 10874, Visit 21, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFPC2, NIC3 Special Requirements: SAME ORIENT AS 20 <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i>  CL0024: 2nd NIC3 pointing, 1.5 orbits of F110W (J band) and F160W (H band).  This pointing does not overlap the NIC3 pointings of GO10504.									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	CL0024+16-POS2	RA: 00 26 33.1918 (6.6382992d) Dec: +17 08 52.58 (17.14794d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Gro up 1-2	[==>]	[1]
	2	ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Gro up 1-2	1000.0 Secs [==>]	[1]
	3	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 1.1172,1 .1143	Prime + Parallel Gro up 3-4	[==>]	[1]
	4	ANY		WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Gro up 3-4	1000.0 Secs [==>]	[1]
	5	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585	Prime + Parallel Gro up 5-6	[==>]	[2]
	6	ANY		WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 5-6	1000.0 Secs [==>]	[2]
	7	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -1.1143, -1.5172	Prime + Parallel Gro up 7-8	[==>]	[2]
	8	ANY		WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 7-8	1000.0 Secs [==>]	[2]
9	(2) 2	CL0024+16-POS	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 1.1172,1 .1143	Prime + Parallel Gro up 9-10	[==>]	[3]	

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Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
		10		ANY	WFPC2, IMAGE, WFALL	F606W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1000.0 Secs [==>]
	11	(2)	CL0024+16-POS 2	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -1.1143, -1.5172	Prime + Parallel Group 11-12	[==>]	[3]
	12		ANY	WFPC2, IMAGE, WFALL	F450W	CR-SPLIT=NO		Prime + Parallel Group 11-12	1000.0 Secs [==>]	[3]







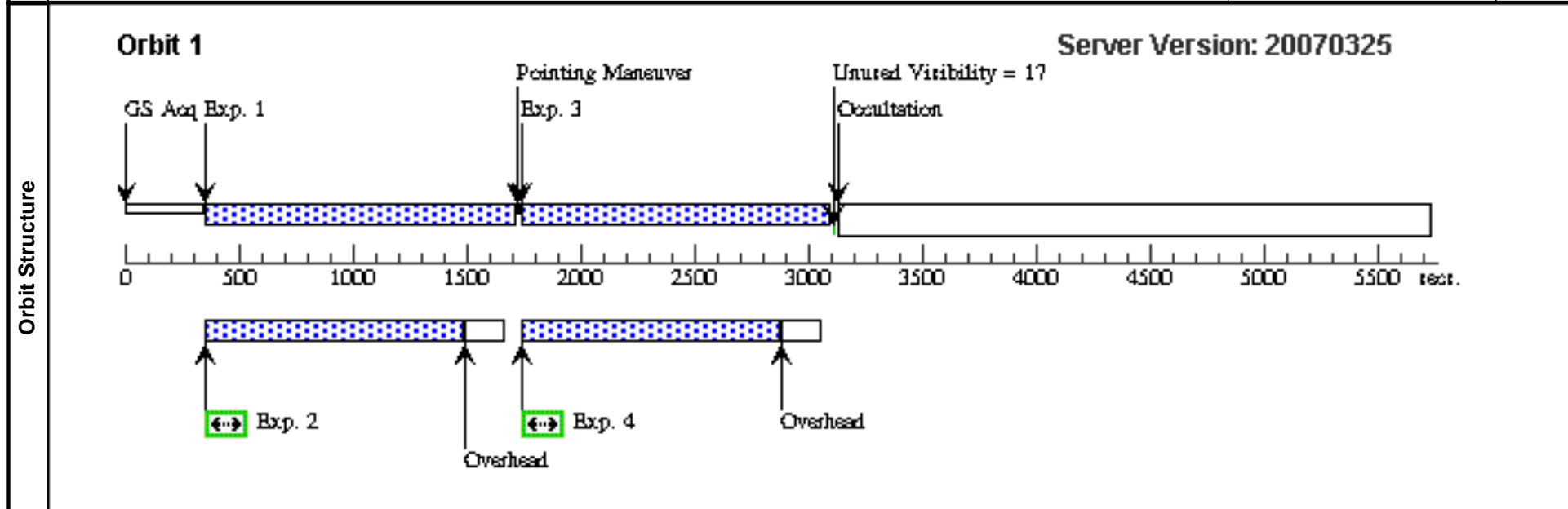
Proposal 10874 - Visit 30 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

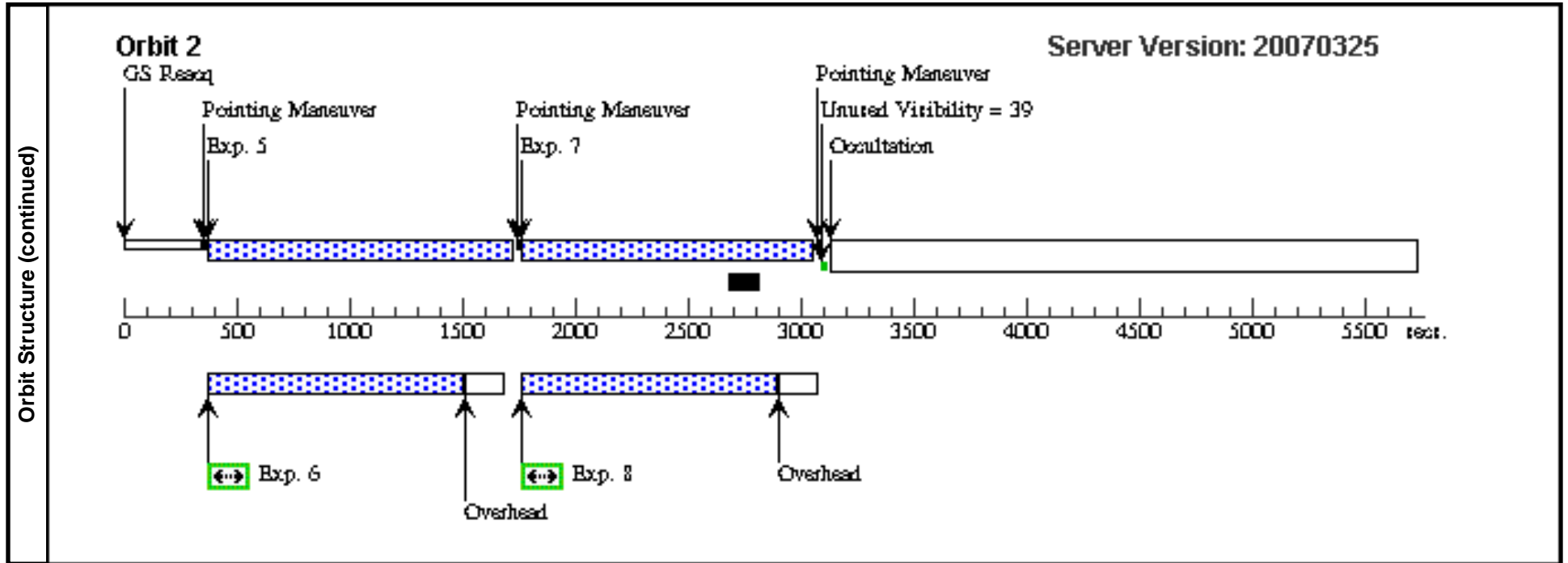
Mon May 21 19:10:13 GMT 2007

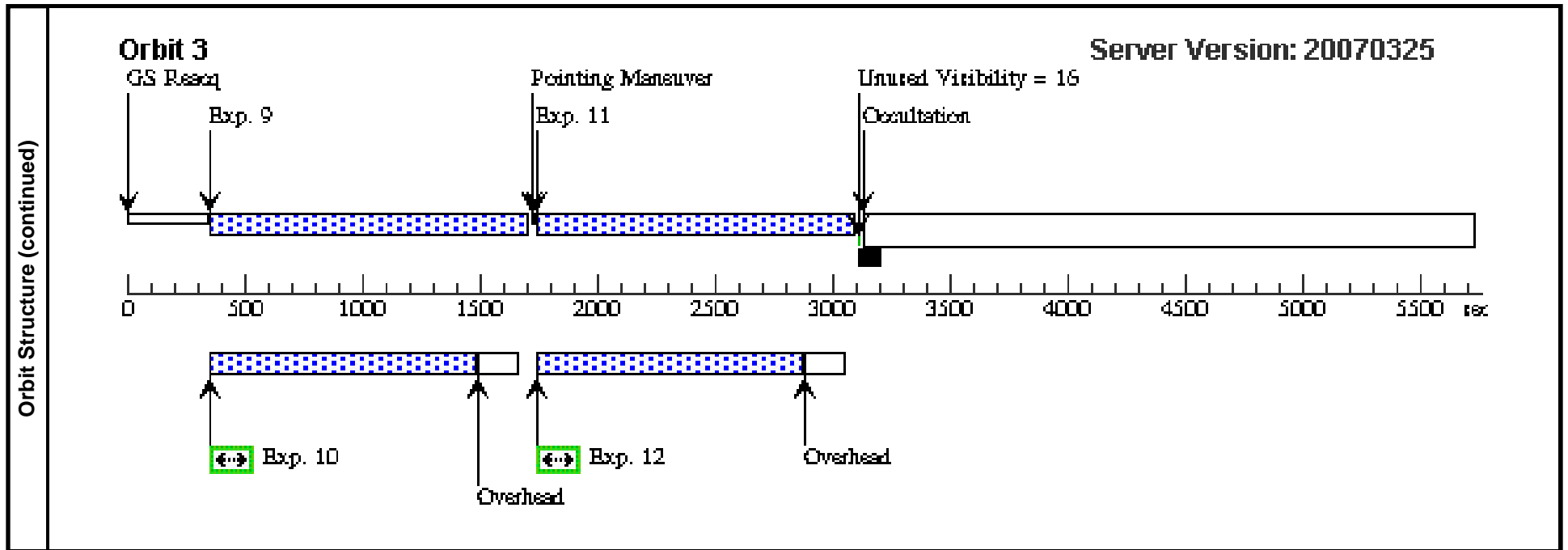
Visit	<b>Proposal 10874, Visit 30, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 25.0D TO 35.0 D; ORIENT 115.0D TO 125.0 D; ORIENT 205.0D TO 215.0 D; ORIENT 295.0D TO 305.0 D <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i> CL1056: 1st NIC3 pointing, 3 orbits of F110W (J band).									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(3)	CL1056-03-POS1	RA: 10 56 57.7233 (164.2405138d) Dec: -03 38 33.09 (-3.64252d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0,0; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]
	2		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1000.0 Secs [==>]	[1]
	3		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Group 3-4	[==>]	[1]
	4		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1000.0 Secs [==>]	[1]
	5		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 5-6	[==>]	[2]
	6		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1000.0 Secs [==>]	[2]
	7		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=22	POS TARG -0.457,0 .6585	Prime + Parallel Group 7-8	[==>]	[2]
	8		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1000.0 Secs [==>]	[2]
	9		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585	Prime + Parallel Group 9-10	[==>]	[3]
10		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1000.0 Secs [==>]	[3]	

Proposal 10874 - Visit 30 - Search for Extremely Faint  $z>7$  Galaxy Population with Cosmic Lenses

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
		11		(3) CL1056-03-POS 1	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 1.1172,1 .1143	Prime + Parallel Gro up 11-12	[==>]
	12		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Gro up 11-12	1000.0 Secs [==>]	[3]







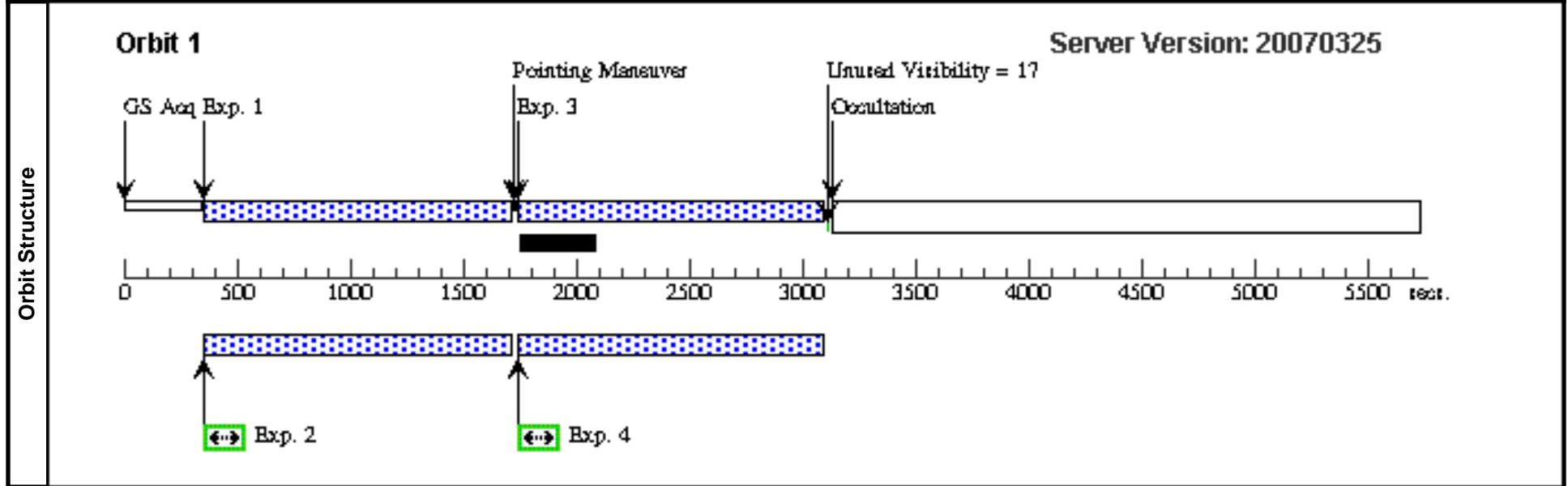
Proposal 10874 - Visit 31 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

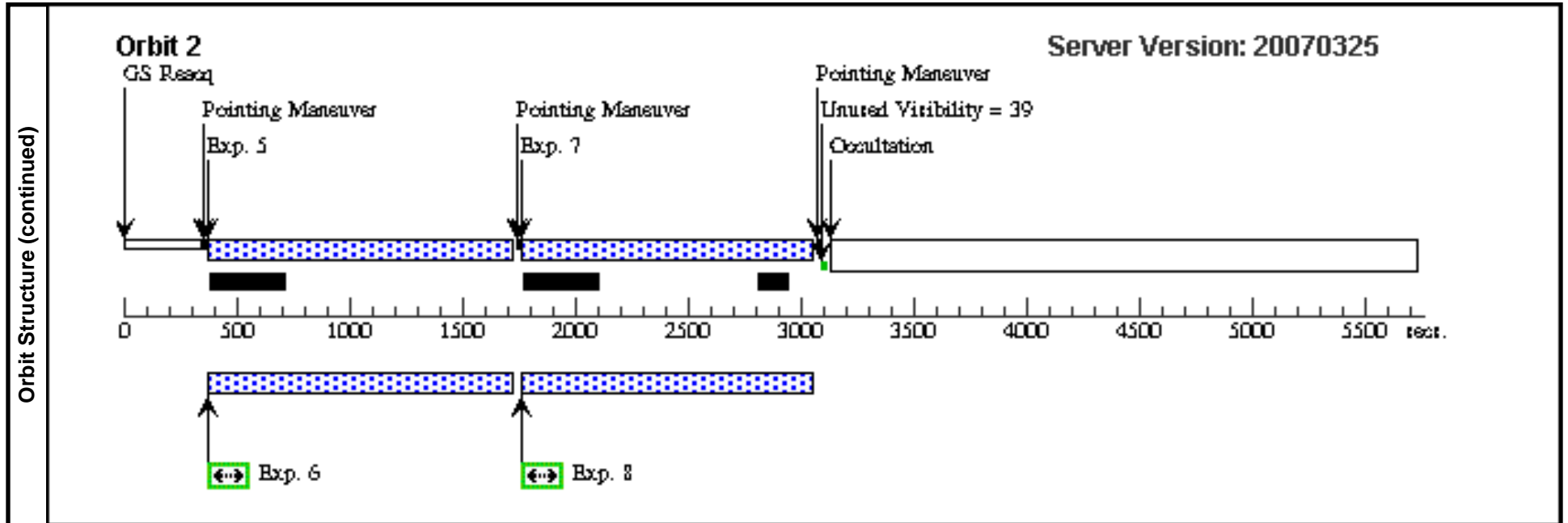
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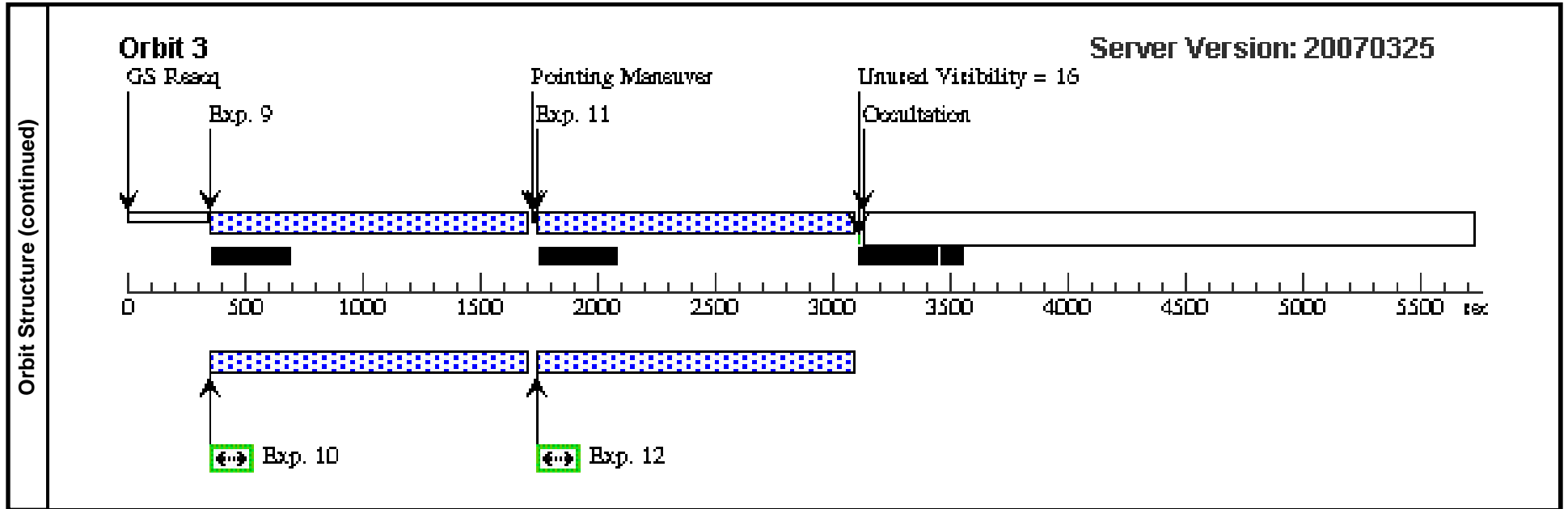
Visit	Proposal 10874, Visit 31, completed					Diagnostic Status: No Diagnostics				
	Scientific Instruments: ACS/WFC, NIC3 Special Requirements: SAME ORIENT AS 30 <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i> CL1056: 1st NIC3 pointing, 3 orbits of F160W (H band).									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
		(3)	CL1056-03-POS1	RA: 10 56 57.7233 (164.2405138d) Dec: -03 38 33.09 (-3.64252d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0,0; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]
	2		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1153.0 Secs [==>]	[1]
	3		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Group 3-4	[==>]	[1]
	4		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1233.0 Secs [==>]	[1]
	5		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 5-6	[==>]	[2]
	6		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1233.0 Secs [==>]	[2]
	7		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=22	POS TARG -0.457,0 .6585	Prime + Parallel Group 7-8	[==>]	[2]
	8		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1169.0 Secs [==>]	[2]
	9		(3) CL1056-03-POS1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585	Prime + Parallel Group 9-10	[==>]	[3]
10		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1233.0 Secs [==>]	[3]	

Proposal 10874 - Visit 31 - Search for Extremely Faint  $z > 7$  Galaxy Population with Cosmic Lenses

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
		11		(3) CL1056-03-POS 1	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 1.1172,1 .1143	Prime + Parallel Gro up 11-12	[==>]
	12		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Gro up 11-12	1233.0 Secs [==>]	[3]







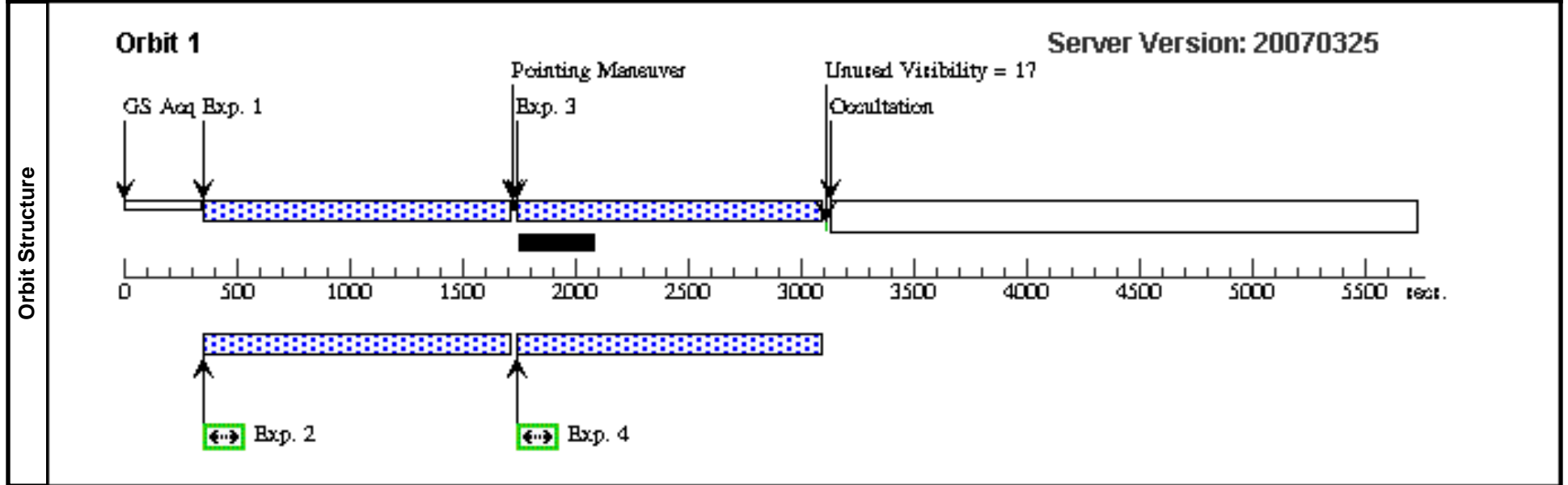
Proposal 10874 - Visit 40 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

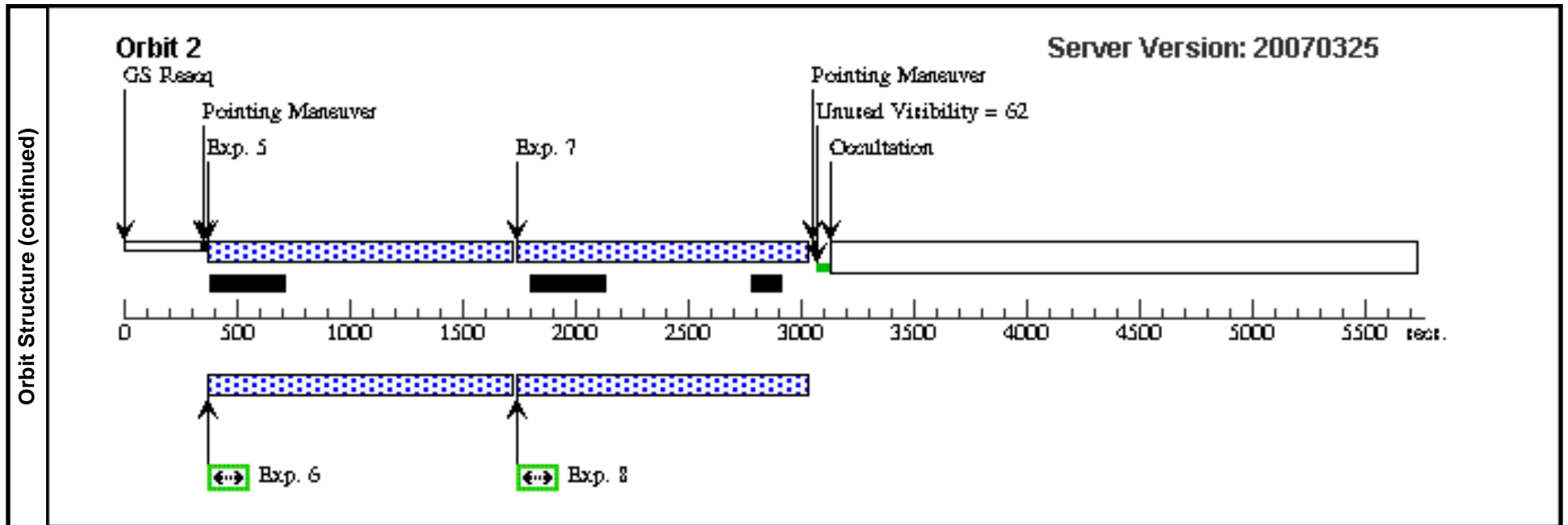
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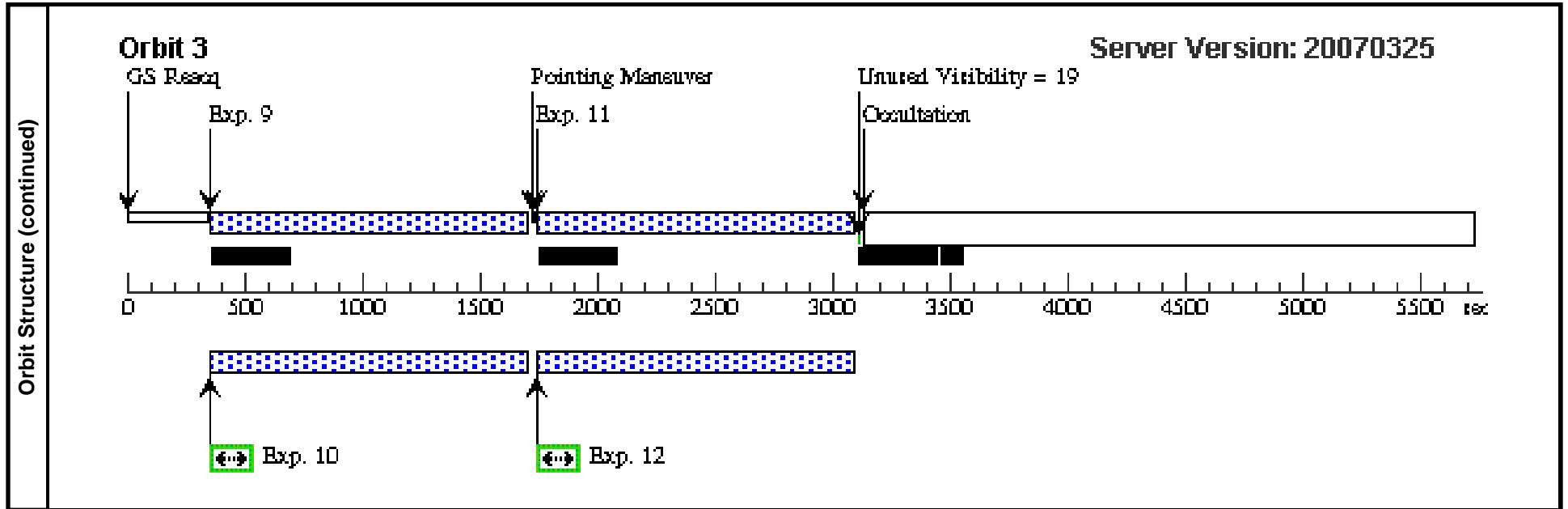
Visit	<b>Proposal 10874, Visit 40, completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC, NIC3 Special Requirements: ORIENT 25.0D TO 35.0 D; ORIENT 115.0D TO 125.0 D; ORIENT 205.0D TO 215.0 D; ORIENT 295.0D TO 305.0 D Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images. CL1056: 2nd NIC3 pointing, 1.5 orbits of F110W (J band) and F160W (H band).									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(4)	CL1056-03-POS2	RA: 10 57 3.4010 (164.2641708d) Dec: -03 37 46.56 (-3.62960d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(4) CL1056-03-POS2	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0,0; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]	
	2	ANY	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1153.0 Secs [==>]	[1]	
	3	(4) CL1056-03-POS2	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Group 3-4	[==>]	[1]	
	4	ANY	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1233.0 Secs [==>]	[1]	
	5	(4) CL1056-03-POS2	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 5-6	[==>]	[2]	
	6	ANY	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1233.0 Secs [==>]	[2]	
	7	(4) CL1056-03-POS2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=22	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 7-8	[==>]	[2]	
	8	ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1233.0 Secs [==>1114.0 Secs ]	[2]	
	9	(4) CL1056-03-POS2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0,0	Prime + Parallel Group 9-10	[==>]	[3]	
10	ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1233.0 Secs [==>]	[3]		

Proposal 10874 - Visit 40 - Search for Extremely Faint  $z > 7$  Galaxy Population with Cosmic Lenses

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	11		(4) 2	CL1056-03-POS	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Gro up 11-12	[==>]
12		ANY		ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Gro up 11-12	1233.0 Secs [==>]	[3]



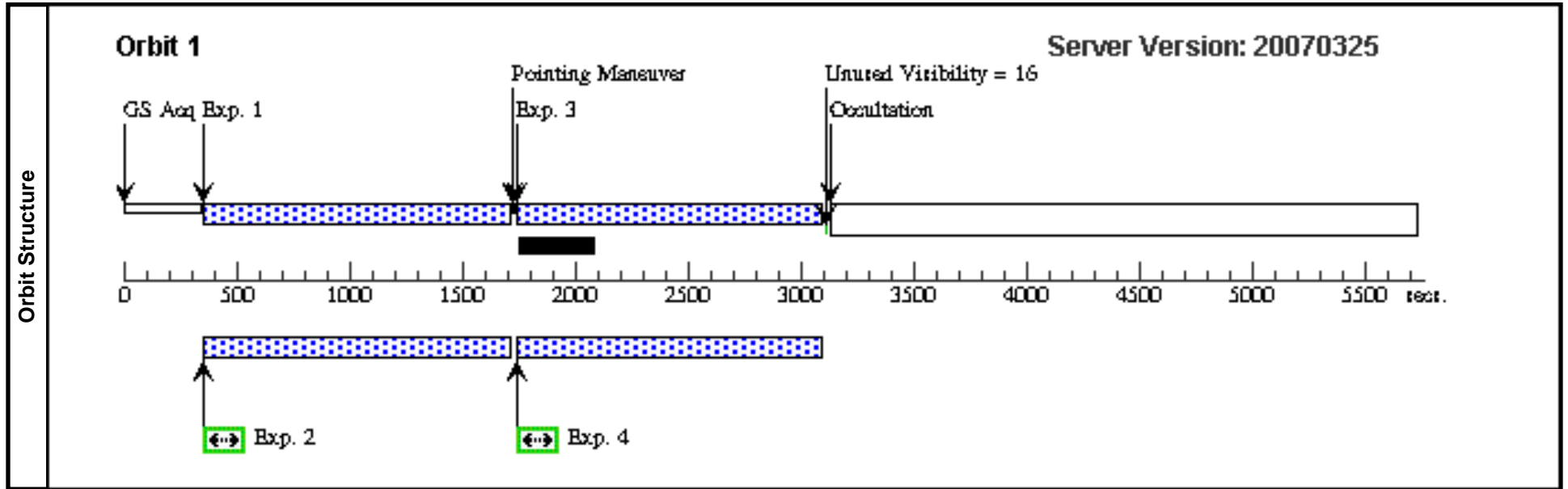


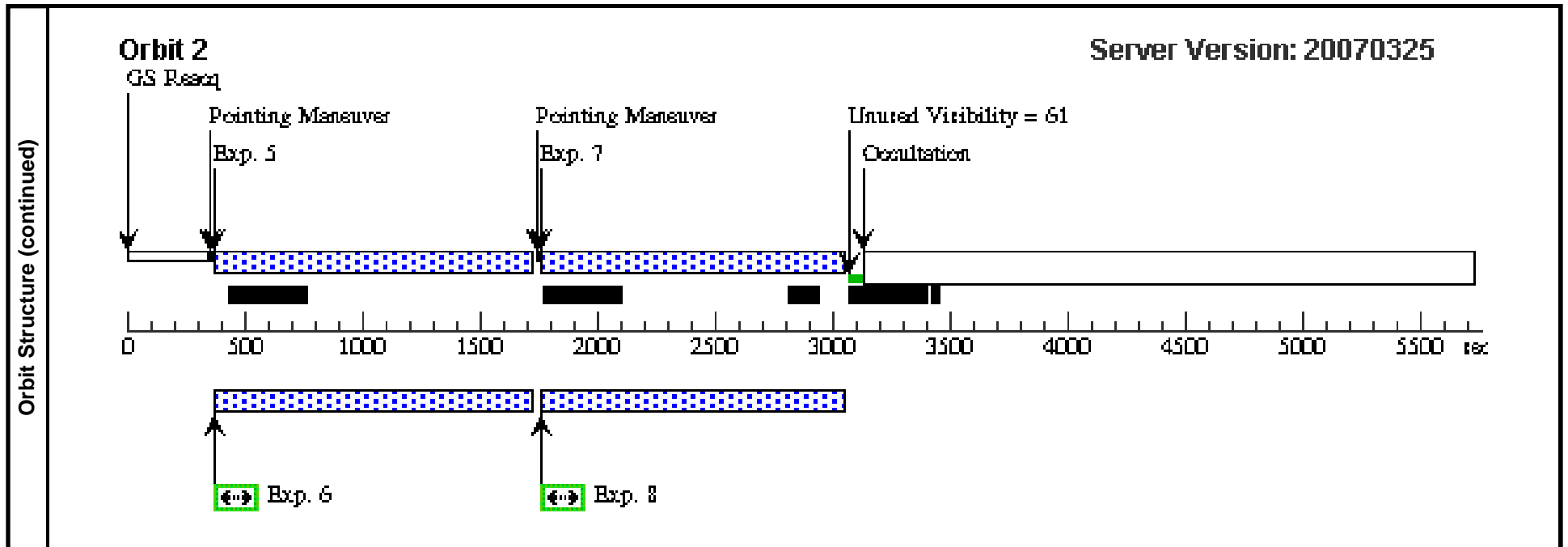


Proposal 10874 - Visit 41 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

Mon May 21 19:10:15 GMT 2007

Visit	<b>Proposal 10874, Visit 41, completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC, NIC3 Special Requirements: SAME ORIENT AS 40 <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i> CL1056: 2nd NIC3 pointing, 1 orbit of F110W (J band) and F160W (H band).									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(4)	CL1056-03-POS2	RA: 10 57 3.4010 (164.2641708d) Dec: -03 37 46.56 (-3.62960d) Equinox: J2000			V=25.0+/-3.0	Reference Frame: Existing ACS Image			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) CL1056-03-POS 2	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Gro up 1-2	[==>]	[1]
	2		ANY	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 1-2	1153.0 Secs [==>]	[1]
	3		(4) CL1056-03-POS 2	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585	Prime + Parallel Gro up 3-4	[==>]	[1]
	4		ANY	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Prime + Parallel Gro up 3-4	1233.0 Secs [==>]	[1]
	5		(4) CL1056-03-POS 2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585	Prime + Parallel Gro up 5-6	[==>]	[2]
	6		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Gro up 5-6	1233.0 Secs [==>1178.0 Secs ]	[2]
	7		(4) CL1056-03-POS 2	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=22	POS TARG -0.8633, -0.6585	Prime + Parallel Gro up 7-8	[==>]	[2]
8		ANY	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Prime + Parallel Gro up 7-8	1233.0 Secs [==>1169.0 Secs ]	[2]	





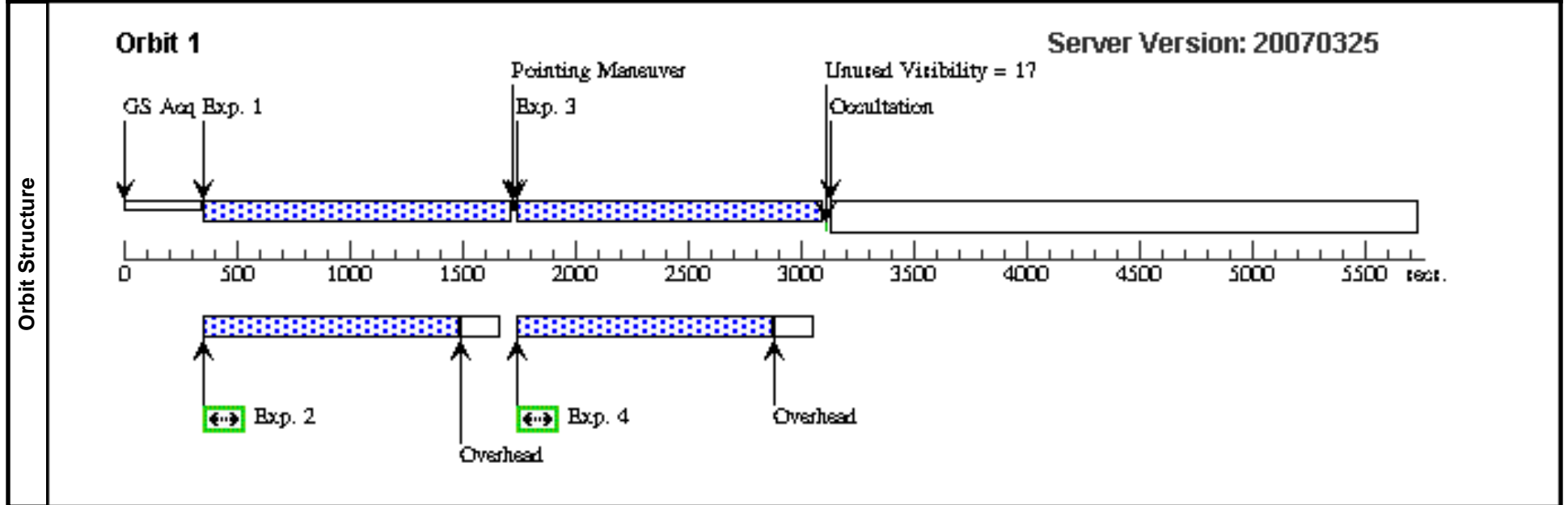
Proposal 10874 - Visit 50 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

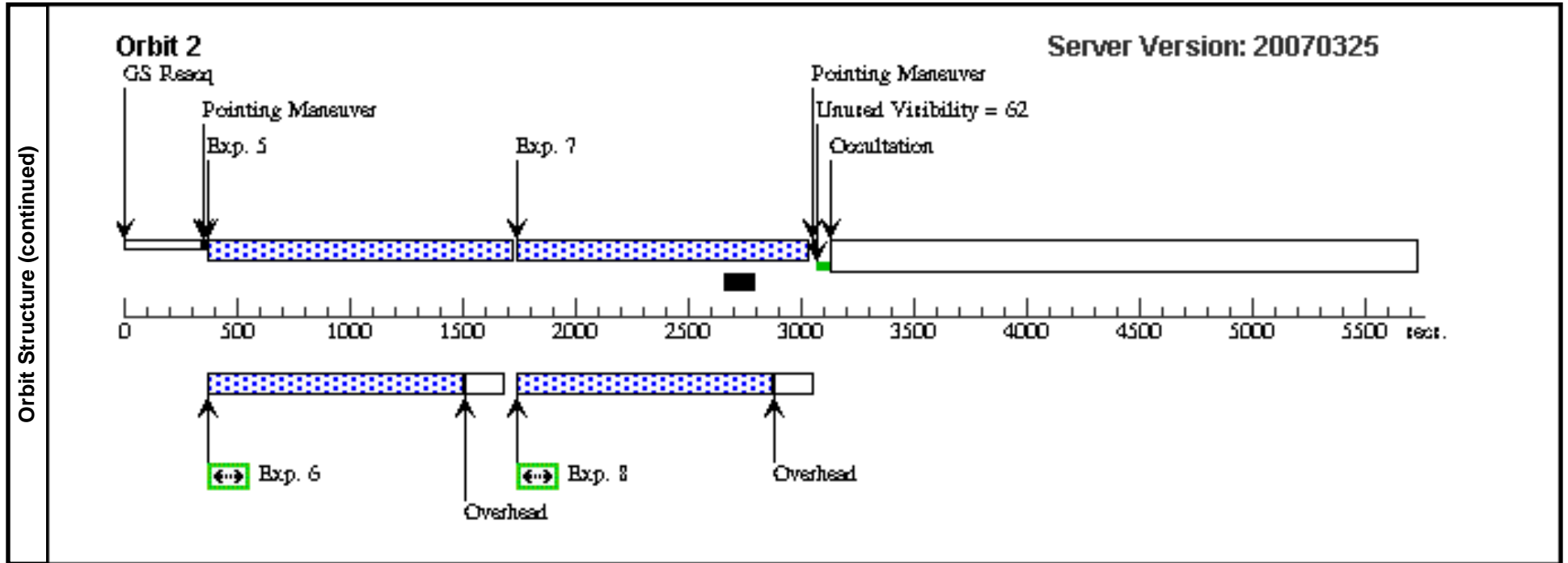
Mon May 21 19:10:15 GMT 2007

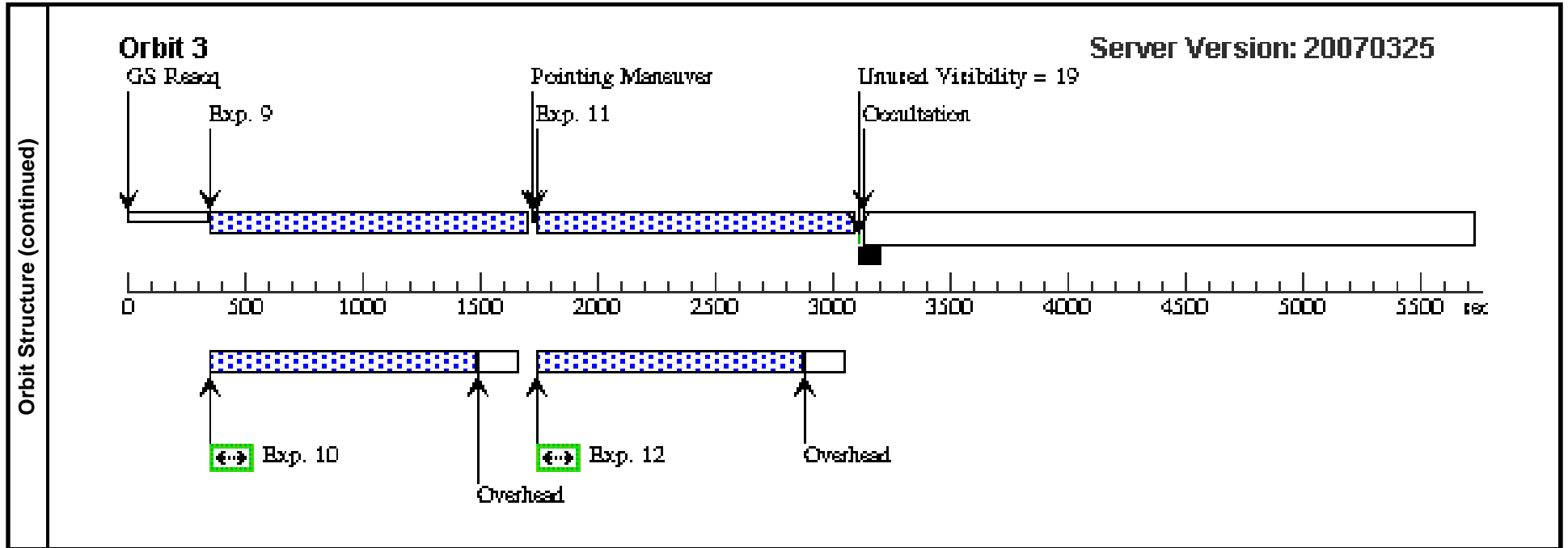
Visit	<b>Proposal 10874, Visit 50, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 25.0D TO 35.0 D; ORIENT 115.0D TO 125.0 D; ORIENT 205.0D TO 215.0 D; ORIENT 295.0D TO 305.0 D <i>Comments: Please do NOT schedule right after passage through South Atlantic Anomaly. This produces nasty residuals in the images.</i> CL1056: 3rd NIC3 pointing, 1.5 orbits of F110W (J band) and F160W (H band).									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(5)	CL1056-03-POS3	RA: 10 57 2.5500 (164.2606250d) Dec: -03 36 59.14 (-3.61643d) Equinox: J2000		V=25.0+/-3.0	Reference Frame: Existing ACS Image				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0,0; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]	
	2	ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1000.0 Secs [==>]	[1]	
	3	(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Group 3-4	[==>]	[1]	
	4	ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1000.0 Secs [==>]	[1]	
	5	(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 5-6	[==>]	[2]	
	6	ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1000.0 Secs [==>]	[2]	
	7	(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=22	POS TARG 0.6602,- 0.8611	Prime + Parallel Group 7-8	[==>]	[2]	
	8	ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1000.0 Secs [==>]	[2]	
	9	(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0,0	Prime + Parallel Group 9-10	[==>]	[3]	
10	ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 9-10	1000.0 Secs [==>]	[3]		

Proposal 10874 - Visit 50 - Search for Extremely Faint  $z>7$  Galaxy Population with Cosmic Lenses

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
		11		(5) CL1056-03-POS 3	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG 0.8633,0 .4559	Prime + Parallel Group up 11-12	[==>]
	12		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group up 11-12	1000.0 Secs [==>]	[3]







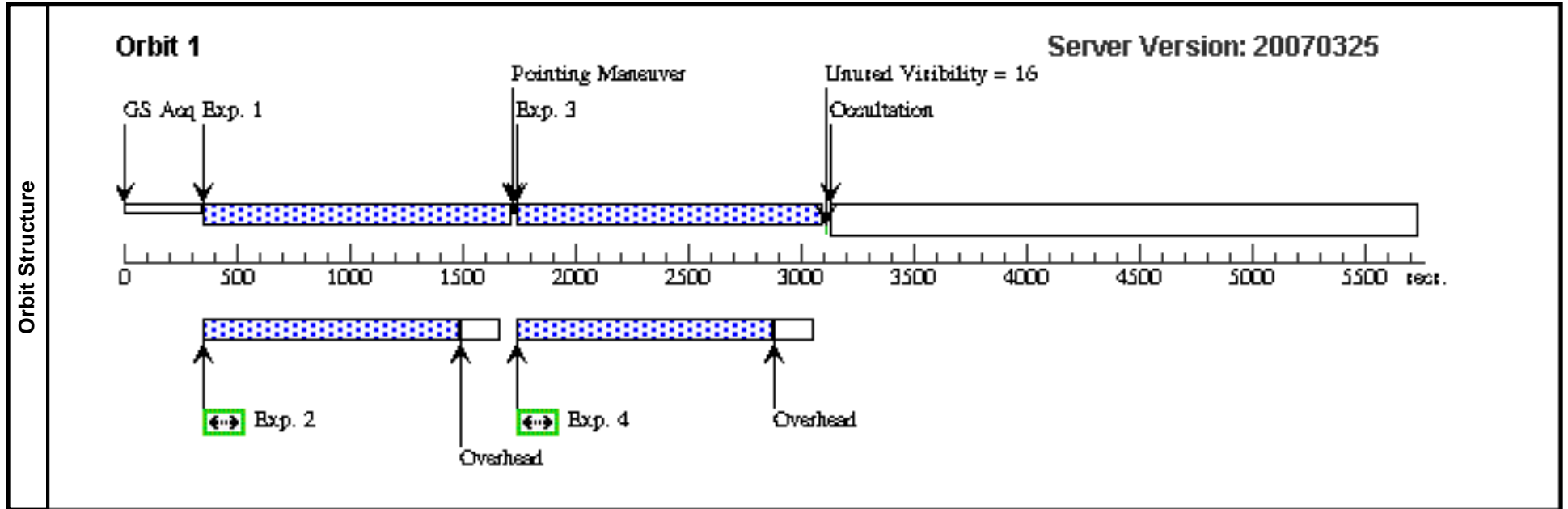
Proposal 10874 - Visit 51 - Search for Extremely Faint z>7 Galaxy Population with Cosmic Lenses

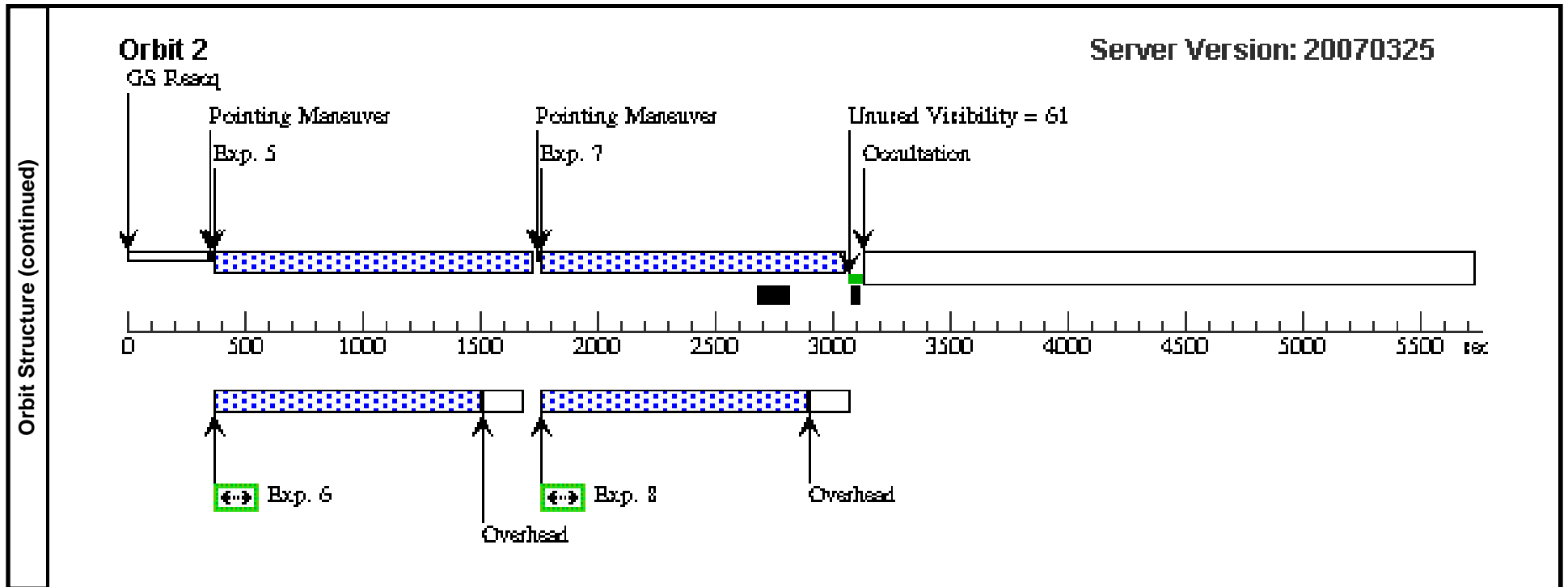
Mon May 21 19:10:16 GMT 2007

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	CL1056-03-POS3	RA: 10 57 2.5500 (164.2606250d) Dec: -03 36 59.14 (-3.61643d) Equinox: J2000			V=25.0+/-3.0

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585; GS ACQ SCENARI O BASE1TNS	Prime + Parallel Group 1-2	[==>]	[1]
2		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 1-2	1000.0 Secs [==>]	[1]	
3		(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.8633, -0.6585	Prime + Parallel Group 3-4	[==>]	[1]	
4		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 3-4	1000.0 Secs [==>]	[1]	
5		(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=23	POS TARG -0.457,0 .6585	Prime + Parallel Group 5-6	[==>]	[2]	
6		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 5-6	1000.0 Secs [==>]	[2]	
7		(5) CL1056-03-POS3	NIC3, MULTIACCUM, NIC3	F160W	SAMP-SEQ=SPARS 64; NSAMP=22	POS TARG -0.8633, -0.6585	Prime + Parallel Group 7-8	[==>]	[2]	
8		ANY	WFPC2, IMAGE, WFALL	F814W	CR-SPLIT=NO		Prime + Parallel Group 7-8	1000.0 Secs [==>]	[2]	





Proposal 10874 - Visit 60 - Search for Extremely Faint  $z>7$  Galaxy Population with Cosmic Lenses

Mon May 21 19:10:16 GMT 2007

Visit	<b>Proposal 10874, Visit 60, completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC, NIC3 Special Requirements: ORIENT 225.0D TO 285.0 D Comments: <i>CLI056: 3 orbits of ACS F850LP (z band) with the WFC.</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(6)	CL1056-03-WFC	RA: 10 56 58.4393 (164.2434971d) Dec: -03 37 45.90 (-3.62942d) Equinox: J2000			V=25.0+/-3.0	Reference Frame: Existing ACS Image			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(6) CL1056-03-WFC	ACS/WFC, ACCUM, WFC	F850LP			POS TARG 0,0	Prime + Parallel Group 1-3	2422.0 Secs [==>(Split 1)] [==>(Split 2)]	[1]
	2	ANY	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23			Prime + Parallel Group 1-3	[==>]	[1]
	3	ANY	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23			Prime + Parallel Group 1-3	[==>]	[1]
	4	(6) CL1056-03-WFC	ACS/WFC, ACCUM, WFC	F850LP			POS TARG 0.248,3	Prime + Parallel Group 4-6	2480.0 Secs [==>(Split 1)] [==>(Split 2)]	[2]
	5	ANY	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23			Prime + Parallel Group 4-6	[==>]	[2]
	6	ANY	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23			Prime + Parallel Group 4-6	[==>]	[2]
	7	(6) CL1056-03-WFC	ACS/WFC, ACCUM, WFC	F850LP			POS TARG 0.496,6	Prime + Parallel Group 7-9	2480.0 Secs [==>(Split 1)] [==>(Split 2)]	[3]
	8	ANY	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23			Prime + Parallel Group 7-9	[==>]	[3]
9	ANY	NIC3, MULTIACCUM, NIC3	F110W	SAMP-SEQ=SPARS 64; NSAMP=23			Prime + Parallel Group 7-9	[==>]	[3]	

