12020 - The Deepest Stellar X-ray/optical Census of the Bulge

Cycle: 17, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
08	(1) SWEEPS-FIELD	ACS/WFC WFC3/UVIS	2	08-Dec-2010 21:01:29.0	yes
09	(1) SWEEPS-FIELD	ACS/WFC WFC3/UVIS	2	08-Dec-2010 21:01:45.0	yes
11	(3) WFPC2-2	ACS/WFC WFC3/UVIS	3	08-Dec-2010 21:02:03.0	yes
58	(1) SWEEPS-FIELD	ACS/WFC WFC3/UVIS	1	08-Dec-2010 21:02:14.0	yes

8 Total Orbits Used

ABSTRACT

We have obtained the deepest optical dataset ever taken or planned towards the bulge, allowing bulge/disk decomposition down to F606W=23 and variability monitoring over seven days, diagnostics not available for any bulge field observed by Chandra. We propose ACIS-I imaging to identify X-ray point sources in this field. This will directly trace a number of fundamental yet poorly-constrained parameters of the inner Milky Way, for example the spin-down timescale of stars along the disk and bulge; the formation history of the bulge and, for the first time, direct constraints on the gravitational potential of the inner milky way through AGN-enabled absolute proper motions. Our proposed survey will be an essential calibrator for other X-ray/optical surveys of the bulge both past and planned.

OBSERVING DESCRIPTION

Fall 2010 - visit 08 failed and visit 09 is now not schedulable.

Field WFPC2-3 has therefore been discarded from the strategy. Instead, Visit 09 has been changed in target and orientation to match the pointing of visit 58 (i.e. 1 before). The fields SWEEPS and WFPC2-1 will now be visited with three orbits, WFPC2-1 entirely with WFC3/UVIS.

Filter and pointing strategy

==========

We place our fields to maximize the number of visits that are repeats to previous epochs, to maximize proper motion coverage. Three of four fields with previous coverage are imaged with ACS/WFC, the third with WFC3. All orients picked have schedulability according to APT. The following table gives the previous coverage within the ACIS-I footprint:

Name	archive	Coverage	Visit	PM?	Notes
SWEEPS	J9EV01010	ACS: R,Ha	1	Y	ACS/WFC previous pointing
WFPC2-1	U8W8F903	ACS: R, Ha	2	Y	NW of SWEEPS
		WFC3: R,V	1		(R in both camera)
WFPC2-2	U2KL0306	ACS: R, Ha, V	3	Y	N of SWEEPS
WFPC2-3	U3ZV9505	WFC: R, Ha, V	3	Y	NNW of SWEEPS; just within ACIS-I

WFPC2-4 n/a WFC: Ha, R 2 N Between WFPC2-2 and SWEEPS

The previous WFPC2 observations at WFPC2-1 and WFPC2-2 only have significant depth in a single filter (F606W and F555W respectively), so we obtain V, R colors for these fields.

The visits ("coverage" above) divide as follows:

Vis1 (2 orbits) -- 1 orbit each with ACS/WFC in F658N and F625W to obtain H-alpha excesses from sources for which proper motion data already exists. Parallel field - WFPC2-1, F658N and F625W with WFC3.

Vis2 (2 orbits) -- 1 orbit each with ACS/WFC in F658N and F606W to overlap WFPC2-1. Visit oriented to place WFC3 footprint between WFPC2-2 and WFPC2-3 fields. Paralllel field with WFC3: F625W and F658N in order to measure H-alpha excess for the intermediate field WFPC2-4.

Vis3 (3 orbits) -- 1 orbit each with ACS/WFC in F658N, F625W and F606W to overlap WFPC2-2. Visit oriented to catch WFPC2-3 with WFC.

Dithering
======

Want four corners of 1pix box for subpixel sampling. Want ~few pix to mitigate badpix. Also want pointing maneuver to be as short as possible (so start at POS TARG = 0,0). Input manually because exposure time varies throughout each orbit. Resulting POS TARGS:
X - 0.0, 0.0, 0.425, 0.425 arcsec
Y - 0.0, 0.425, 0.425, 0.0 arcsec

Note Feb 2010 - in practice the dithers are slightly different, but still achieve the same goals

Exposure times and buffer dumps
==========

Five requirements, somewhat in conflict:

1. Want as many samples per orbit as possible (characterize propmotion error)
2. Want 1 or more short (25s max) exposure to measure motions at and above main sequence turn-off, without saturating the red clump
3. Want depth for faint astrometry BUT want deep to saturate AT MOST 3.5 mags fainter than the short exposures (ACS/WFC position measurement hits 0.01pix rms per coord at about 3.8 mags fainter than saturation). Max exp time alllowed thus ~500s for the F606W and F625W exposures (no such restriction for F658N).
4. Want to achieve depth in stacks to look for very faint companions
5. Both ACS/WFC and WFC3 in parallel, each at full aperture.

The exposure strategies used in each visit meets these requirements to the best of our abilities.This affords at least 3 exposures each in ACS/WFC and WFC3 at >339s, in every orbit. The exposure times had to be somewhat finessed to achieve this efficiency, so the dithers are entered manually as POS TARGs.

H-alpha orbits are the ones requiring the greatest depth - use the second orbit per visit for H-alpha to take advantage of the shorter guide star acquisition time (compared to first orbit). (This additional available time is not long enough to fit another astrometry exposure.)

Contiguous exposures
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Uninterruptable sequences within each orbit are required. Also required that the orbits within each visit be observed contiguously.

Visit

Proposal 12020, Visit 08, failed Thu Dec 09 02:02:19 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC, WFC3/UVIS

Special Requirements: ORIENT 270D TO 275 D

Comments: Visit 1

Prime: SWEEPS overlap field. R (orbit 1), Ha (orbit 2).

ORIENT, target, aperture all identical with GO-10466 to re-image the field as closely as possible with the primary camera. WFC3 points at WFPC2-1 (GO-10084). Filters: R, V to measure motions.

Diagnostics

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

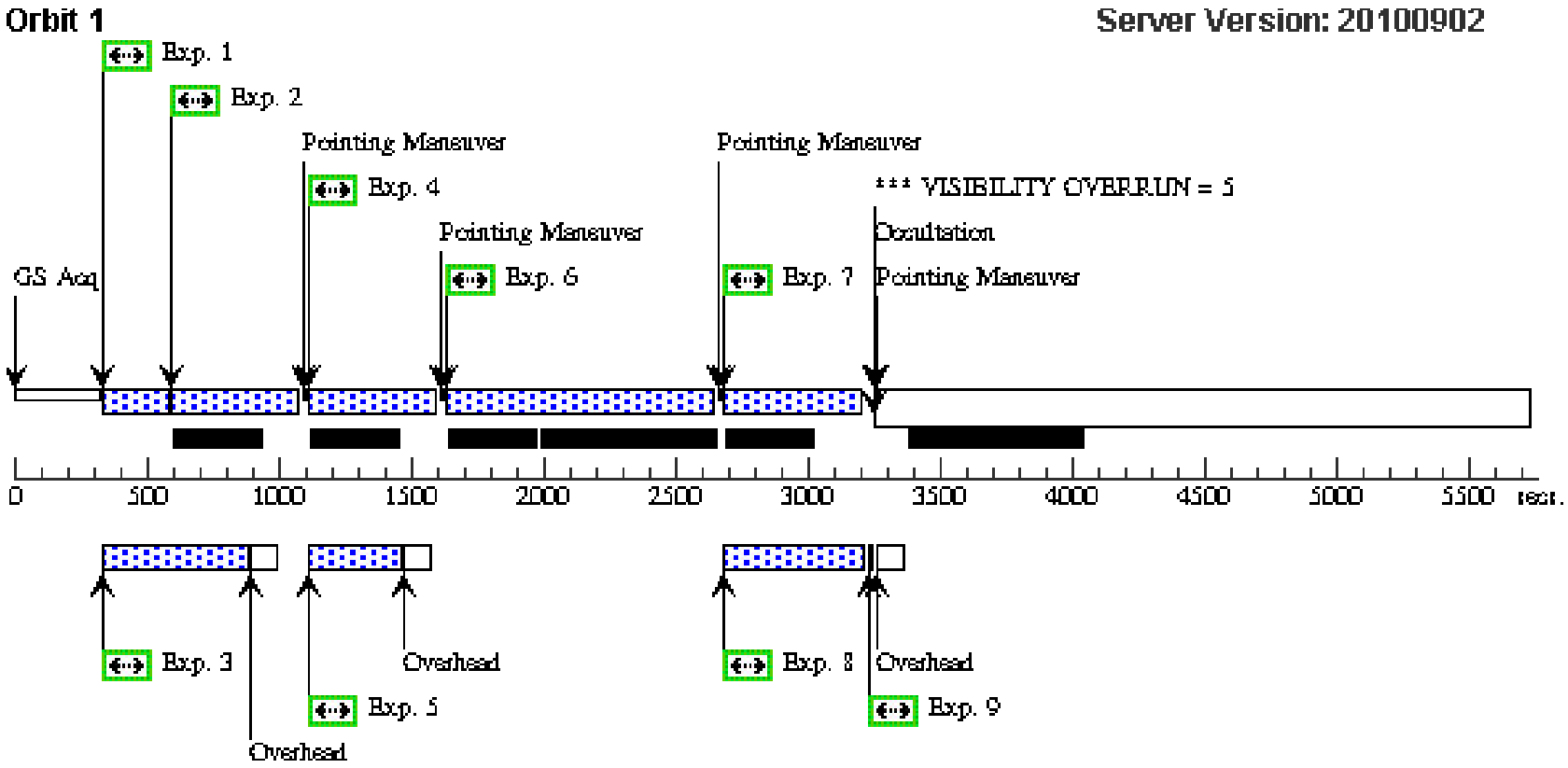
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SWEEPS-FIELD	RA: 17 59 0.8000 (269.7533333d) Dec: -29 12 0.00 (-29.20000d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=20+/-	Reference Frame: ICRS

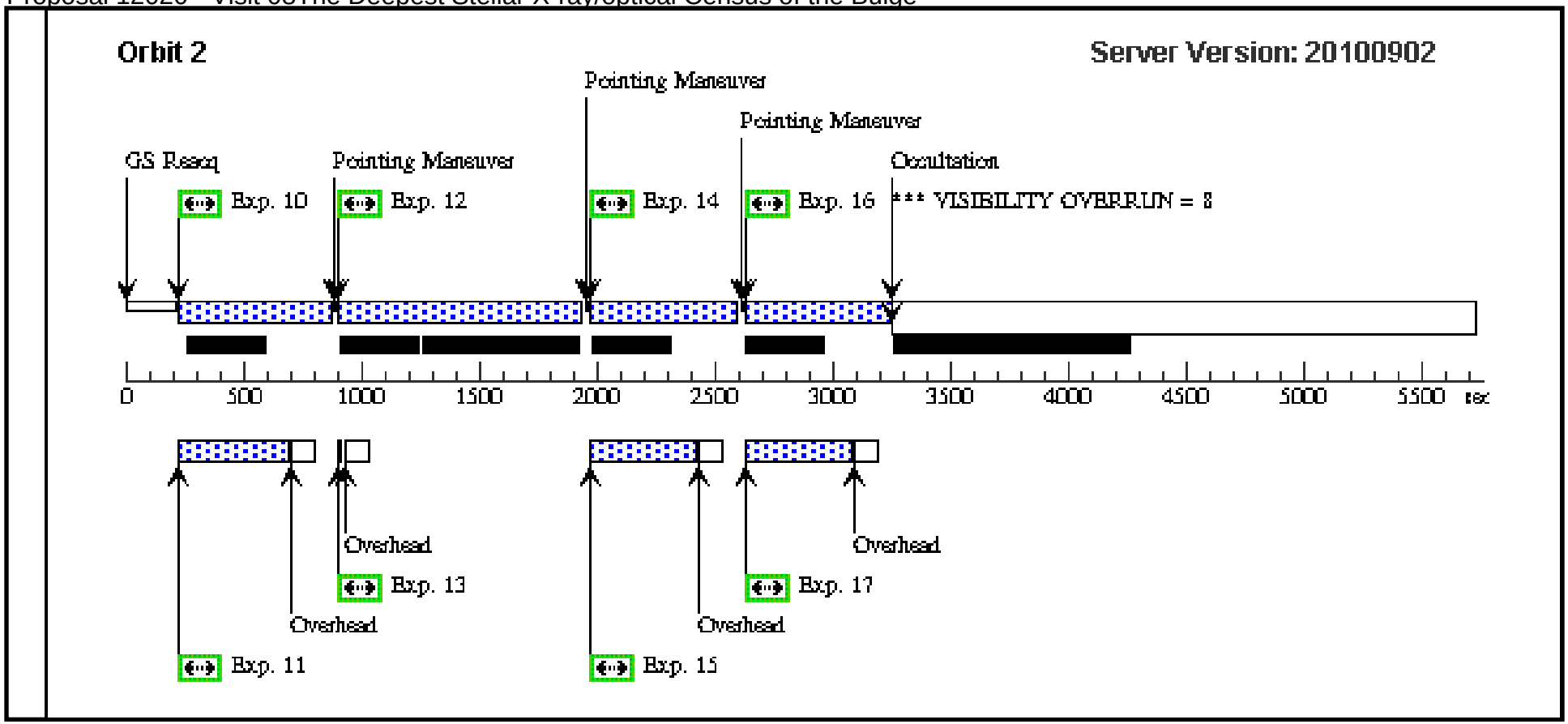
Comments: Overlap field with GO-10466 field BULGE-4.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACS_R_short	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO		Prime + Parallel Group 1-3 in Visit 08	15 Secs	
								[==>]	***[1]***
2	ACS_R_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 1-3 in Visit 08	361 Secs	
								[==>]	***[1]***
3	WFC_R_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-CENTER	F625W	CR-SPLIT=NO		Prime + Parallel Group 1-3 in Visit 08	520 Secs	
								[==>]	***[1]***
4	ACS_R_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 4-5 in Visit 08	361 Secs	
								[==>]	***[1]***
5	WFC_R_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 4-5 in Visit 08	348 Secs	
								[==>]	***[1]***
6	ACS_R_buffer	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.425,-0.425		890 Secs	
								[==>]	***[1]***
7	ACS_R_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.325,0.325	Prime + Parallel Group 7-9 in Visit 08	393 Secs	
								[==>]	***[1]***
8	WFC_R_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 7-9 in Visit 08	420 Secs	
								[==>]	***[1]***
9	WFC_R_short	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 7-9 in Visit 08	15 Secs	
								[==>]	***[1]***
10	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 10-11 in Visit 08	496 Secs	
								[==>]	***[2]***
11	WFC_V_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 10-11 in Visit 08	450 Secs	
								[==>]	***[2]***
12	ACS_Ha_buffer	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 12-13 in Visit 08	910 Secs	
								[==>]	***[2]***
13	WFC_V_short	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 12-13 in Visit 08	15 Secs	
								[==>]	***[2]***
Comments: Short exposure for bright object motions. Also minimizes the gap between ACS and WFC3 buffer dumps.									
14	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.425,-0.425	Prime + Parallel Group 14-15 in Visit 08	496 Secs	
								[==>]	***[2]***
15	WFC_V_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 14-15 in Visit 08	450 Secs	
								[==>]	***[2]***
16	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.425,-0.325	Prime + Parallel Group 16-17 in Visit 08	496 Secs	
								[==>]	***[2]***
17	WFC_V_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 16-17 in Visit 08	450 Secs	
								[==>]	***[2]***

Orbit Structure




Orbit 2
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
GS Reacq
Pointing Maneuver
Occultation
Exp. 10
Exp. 12
Exp. 14
Exp. 16
*** VISIBILITY OVERRUN = 8
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Overhead
Exp. 13
Overhead
Exp. 11
Overhead
Exp. 17
Overhead
Exp. 15

Visit

Proposal 12020, Visit 09, implementation Thu Dec 09 02:02:21 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC, WFC3/UVIS

Special Requirements: ORIENT 270D TO 275 D

Comments: Visit02

FALL 2010 - orient chosen to match visit 58

WFPC2-1 overlap field. Ha, R

ORIENT chosen to point WFC3 at the field between SWEEPS and WFPC2-2 (see proposal description for strategy).

Fixed Targets

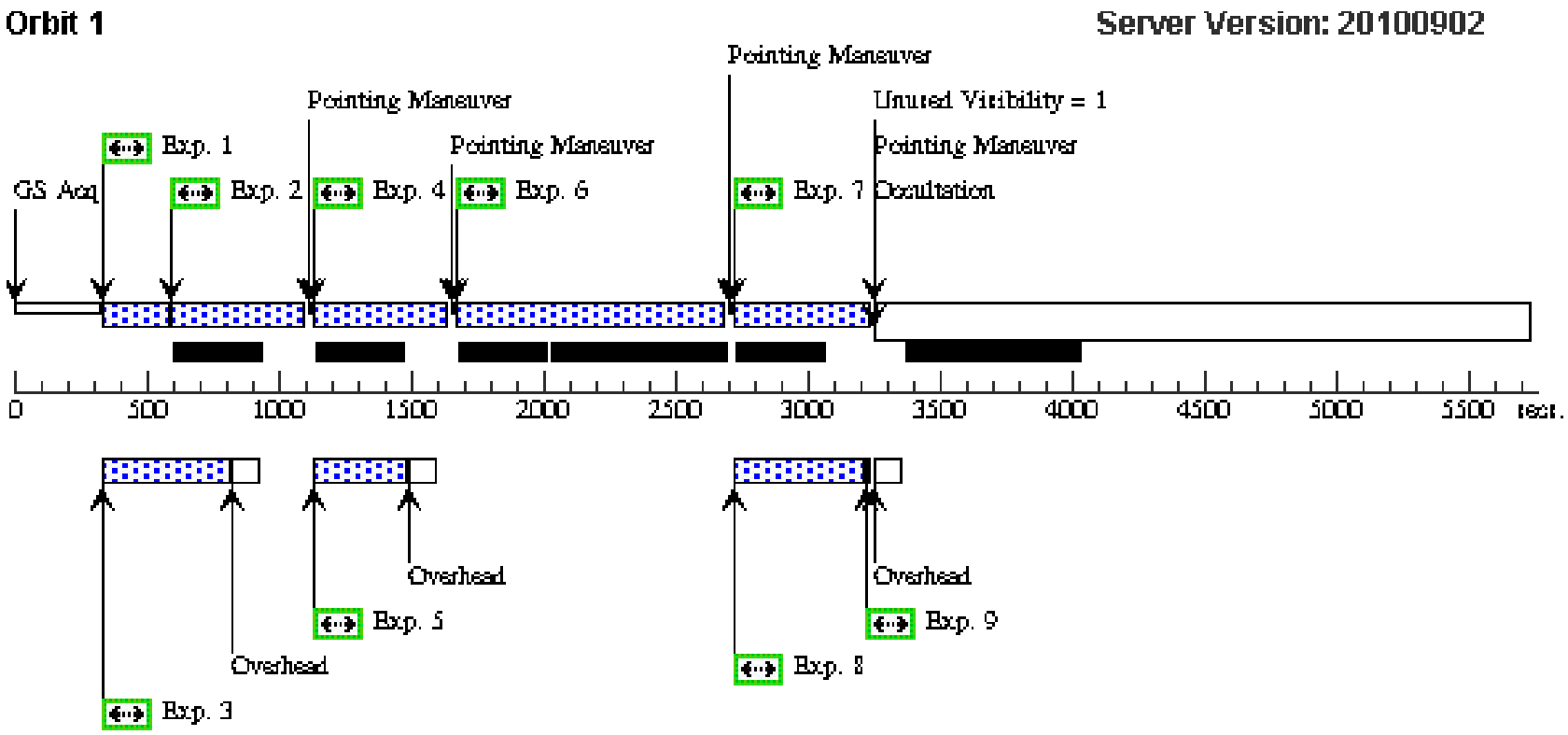
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SWEEPS-FIELD	RA: 17 59 0.8000 (269.7533333d) Dec: -29 12 0.00 (-29.20000d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=20+/-	Reference Frame: ICRS

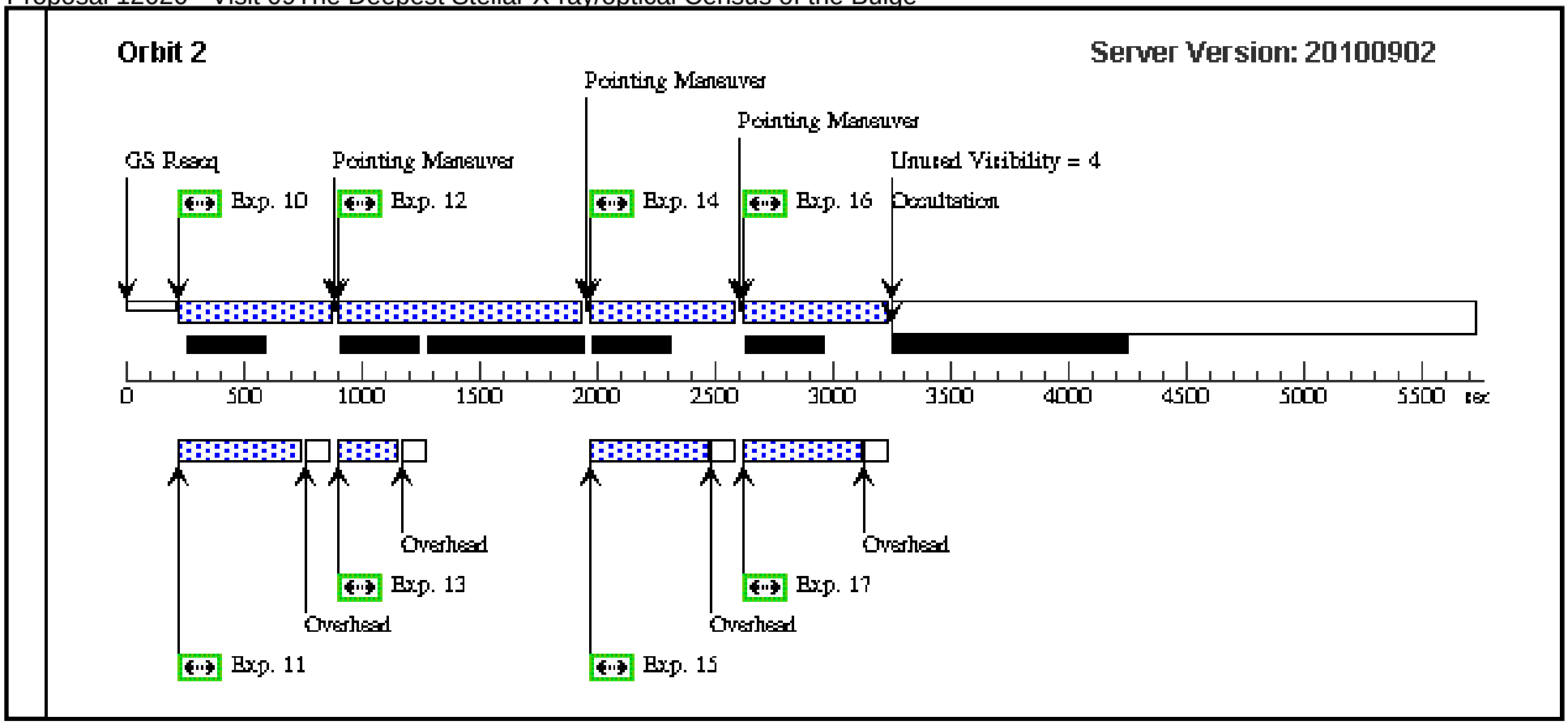
Comments: Overlap field with GO-10466 field BULGE-4.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACS_R_short	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	GS ACQ SCENARIO BASE1B3	Prime + Parallel Group 1-3 in Visit 09	15 Secs	
								[==>]	***[1]***
2	ACS_R_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 1-3 in Visit 09	380 Secs	
								[==>]	***[1]***
3	WFC_R_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 1-3 in Visit 09	450 Secs	
								[==>]	***[1]***
4	ACS_R_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 4-5 in Visit 09	380 Secs	
								[==>]	***[1]***
5	WFC_R_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 4-5 in Visit 09	348 Secs	
								[==>]	***[1]***
6	ACS_R_buffer	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.425,-0.425		890 Secs	
								[==>]	***[1]***
7	ACS_R_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.325,0.325	Prime + Parallel Group 7-9 in Visit 09	390 Secs	
								[==>]	***[1]***
8	WFC_R_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 7-9 in Visit 09	376 Secs	
								[==>]	***[1]***
9	WFC_R_short	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 7-9 in Visit 09	15 Secs	
								[==>]	***[1]***
10	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 10-11 in Visit 09	496 Secs	
								[==>]	***[2]***
11	WFC_Ha_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 10-11 in Visit 09	510 Secs	
								[==>]	***[2]***
12	ACS_Ha_buffer	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 12-13 in Visit 09	910 Secs	
								[==>]	***[2]***
13	WFC_Ha_buffer	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 12-13 in Visit 09	250 Secs	
								[==>]	***[2]***
14	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.425,-0.425	Prime + Parallel Group 14-15 in Visit 09	490 Secs	
								[==>]	***[2]***
15	WFC_Ha_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 14-15 in Visit 09	500 Secs	
								[==>]	***[2]***
16	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.425,-0.325	Prime + Parallel Group 16-17 in Visit 09	490 Secs	
								[==>]	***[2]***
17	WFC_Ha_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 16-17 in Visit 09	500 Secs	
								[==>]	***[2]***

Orbit Structure




Orbit 2
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
GS Reacq
Pointing Maneuver
Unused Visibility = 4
Exp. 10
Exp. 12
Exp. 14
Exp. 16
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Overhead
Exp. 13
Overhead
Exp. 11
Overhead
Exp. 17
Overhead
Exp. 15

Visit

Proposal 12020, Visit 11, completed Thu Dec 09 02:02:22 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC, WFC3/UVIS

Special Requirements: ORIENT 278D TO 280 D

Comments: Visit 3

Primary: WFPC2-2 overlap field. Ha, R, V.
Secondary: WFPC2-3 overlap field, Ha, R, V.

Diagnostics

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	WFPC2-2	RA: 17 59 1.4500 (269.7560417d)	Proper Motion RA: null	V=20+/-	Reference Frame: ICRS
		Dec: -29 05 22.90 (-29.08969d)	Proper Motion Dec: null		
		Equinox: J2000	Epoch of Position:		

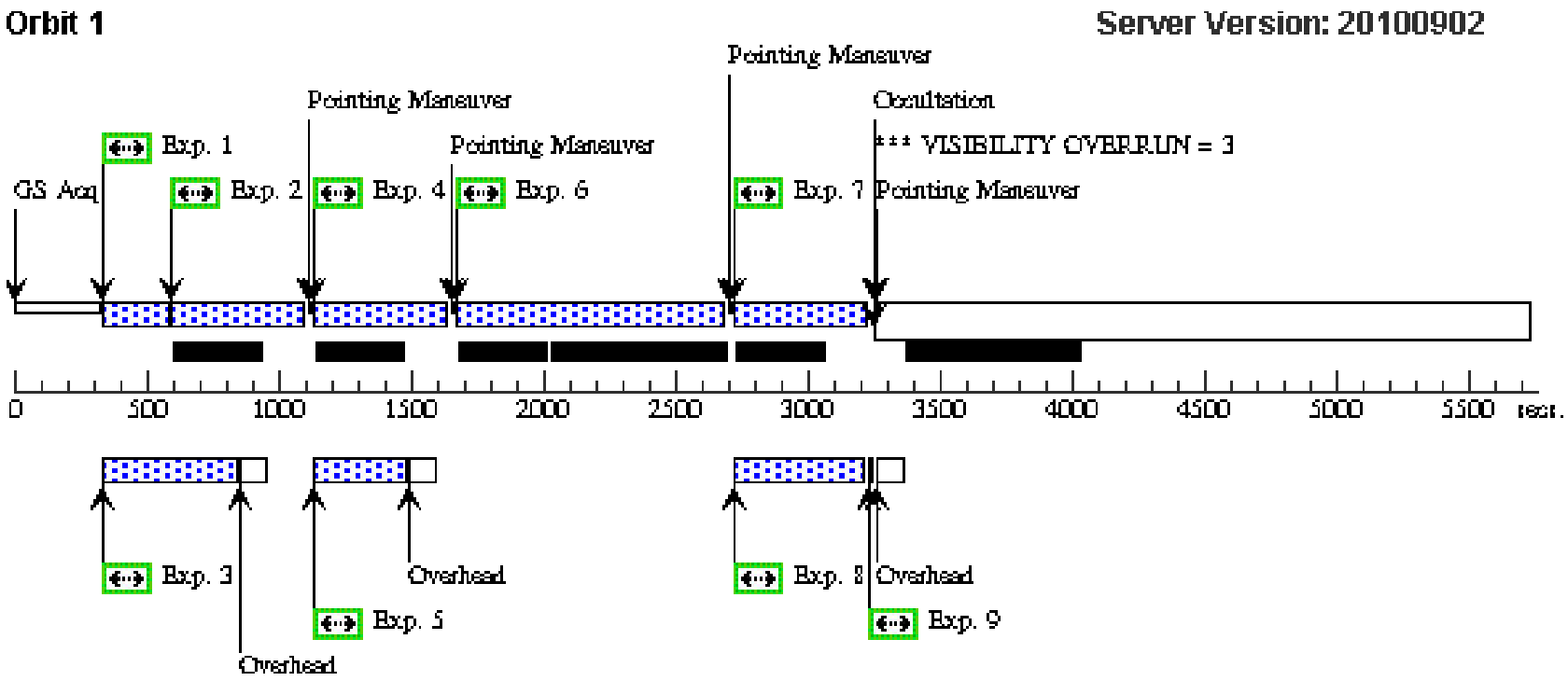
Comments: ACS/WFC overlap with WFPC2 coverage.

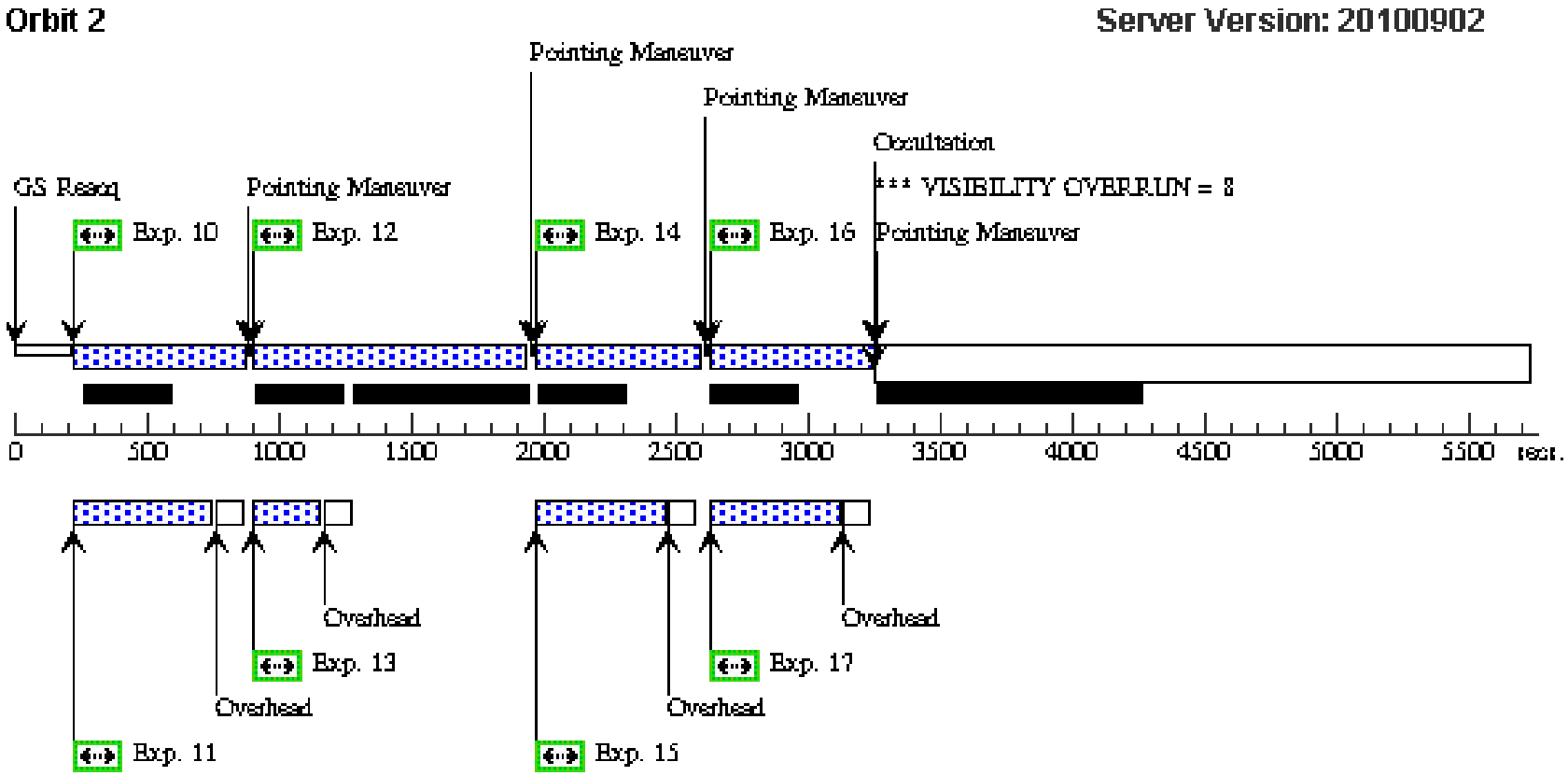
Exposures

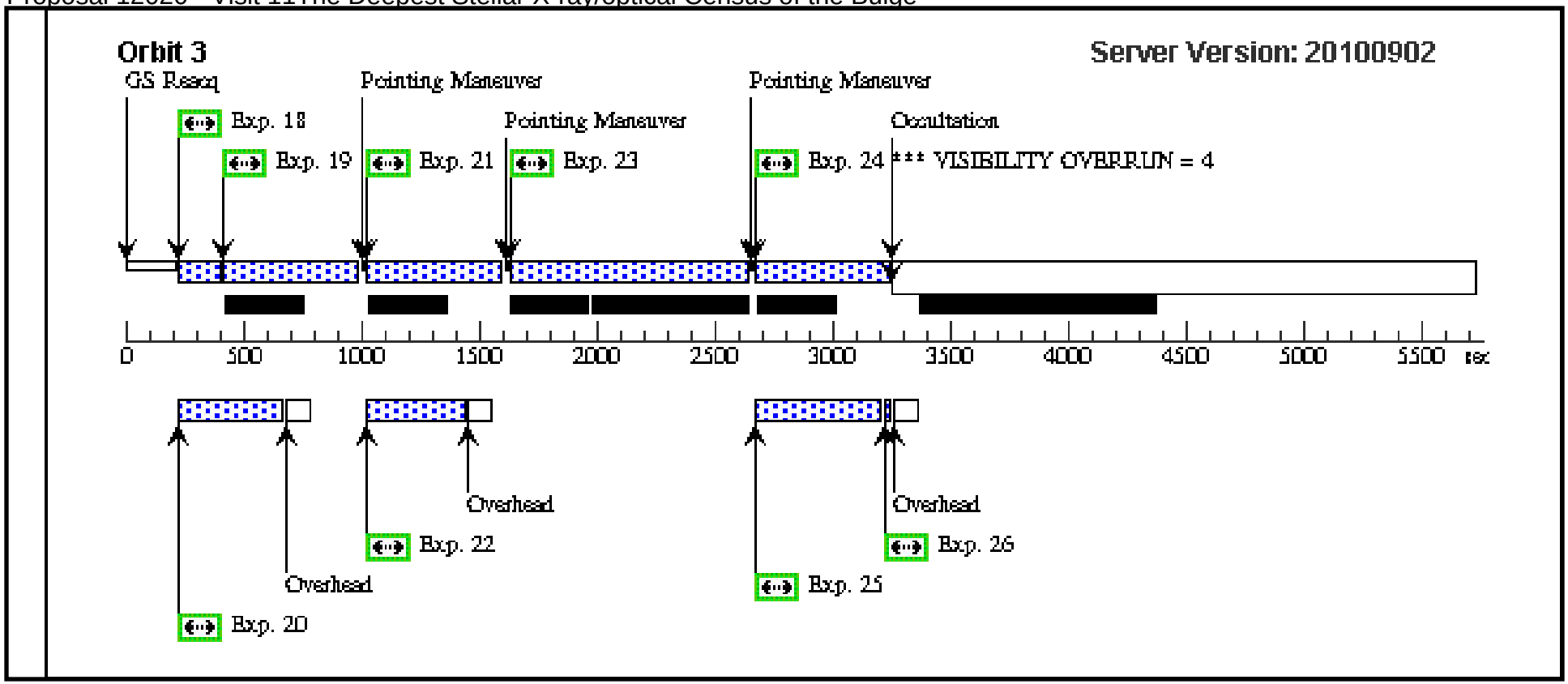
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACS_R_short	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO		Prime + Parallel Group 1-3 in Visit 11	15 Secs	
								[==>]	***[1]***
2	ACS_R_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 1-3 in Visit 11	380 Secs	
								[==>]	***[1]***
3	WFC_R_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-CENTER	F625W	CR-SPLIT=NO		Prime + Parallel Group 1-3 in Visit 11	480 Secs	
								[==>]	***[1]***
4	ACS_R_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 4-5 in Visit 11	380 Secs	
								[==>]	***[1]***
5	WFC_R_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 4-5 in Visit 11	348 Secs	
								[==>]	***[1]***
6	ACS_R_buffer	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.425,-0.425		890 Secs	
								[==>]	***[1]***
7	ACS_R_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F625W	CR-SPLIT=NO	POS TARG -0.325,0.325	Prime + Parallel Group 7-9 in Visit 11	375 Secs	
								[==>]	***[1]***
8	WFC_R_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 7-9 in Visit 11	380 Secs	
								[==>]	***[1]***
9	WFC_R_short	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F625W	CR-SPLIT=NO		Prime + Parallel Group 7-9 in Visit 11	15 Secs	
								[==>]	***[1]***
10	ACS_Ha_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 10-11 in Visit 11	496 Secs	
								[==>]	***[2]***
11	WFC_Ha_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 10-11 in Visit 11	510 Secs	
								[==>]	***[2]***
12	ACS_Ha_buffer	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 12-13 in Visit 11	910 Secs	
								[==>]	***[2]***
13	WFC_Ha_buffer	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 12-13 in Visit 11	250 Secs	
								[==>]	***[2]***
14	ACS_Ha_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.425,-0.425	Prime + Parallel Group 14-15 in Visit 11	496 Secs	
								[==>]	***[2]***
15	WFC_Ha_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 14-15 in Visit 11	490 Secs	
								[==>]	***[2]***
16	ACS_Ha_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.425,-0.325	Prime + Parallel Group 16-17 in Visit 11	496 Secs	
								[==>]	***[2]***
17	WFC_Ha_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F658N	CR-SPLIT=NO		Prime + Parallel Group 16-17 in Visit 11	490 Secs	
								[==>]	***[2]***
18	ACS_V_short	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F606W	CR-SPLIT=NO		Prime + Parallel Group 18-20 in Visit 11	25 Secs	
								[==>]	***[3]***
19	ACS_V_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F606W	CR-SPLIT=NO	POS TARG 0.0,0.0	Prime + Parallel Group 18-20 in Visit 11	450 Secs	
								[==>]	***[3]***
20	WFC_V_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 18-20 in Visit 11	420 Secs	
								[==>]	***[3]***
21	ACS_V_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F606W	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 21-22 in Visit 11	450 Secs	
								[==>]	***[3]***
22	WFC_V_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 21-22 in Visit 11	420 Secs	
								[==>]	***[3]***

	23	ACS_V_buffer	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F606W	CR-SPLIT=NO	POS TARG -0.425,-0.425		890 Secs	
									[==>]	***[3]***
	24	ACS_V_long	(3) WFPC2-2	ACS/WFC, ACCUM, WFCENTER	F606W	CR-SPLIT=NO	POS TARG -0.325,0.325	Prime + Parallel Group 24-26 in Visit 11	445 Secs	
									[==>]	***[3]***
	25	WFC_V_long	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 24-26 in Visit 11	420 Secs	
									[==>]	***[3]***
	26	WFC_V_short	(3) WFPC2-2	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 24-26 in Visit 11	20 Secs	
									[==>]	***[3]***

Orbit Structure




Orbit 2
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Occultation
GS Reacq
Pointing Maneuver
*** VISIBILITY OVERRUN = 8
Exp. 10
Exp. 12
Exp. 14
Exp. 16
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Overhead
Exp. 13
Overhead
Exp. 11
Overhead
Exp. 17
Overhead
Exp. 15


Orbit 3
Server Version: 20100902
GS Reacq
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Occultation
Exp. 18
Exp. 19
Exp. 21
Exp. 23
Exp. 24
*** VISIBILITY OVERRUN = 4
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Overhead
Exp. 22
Overhead
Exp. 20
Overhead
Exp. 26
Exp. 25

Visit

Proposal 12020, Visit 58, implementation Thu Dec 09 02:02:25 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC, WFC3/UVIS

Special Requirements: ORIENT 270D TO 275 D

Comments: Visit 1

Prime: SWEEPS overlap field. H-alpha.

ORIENT, target, aperture all identical with GO-10466 to re-image the field as closely as possible with the primary camera. WFC3 points at WFPC2-1 (GO-10084). Filters: R, V to measure motions.

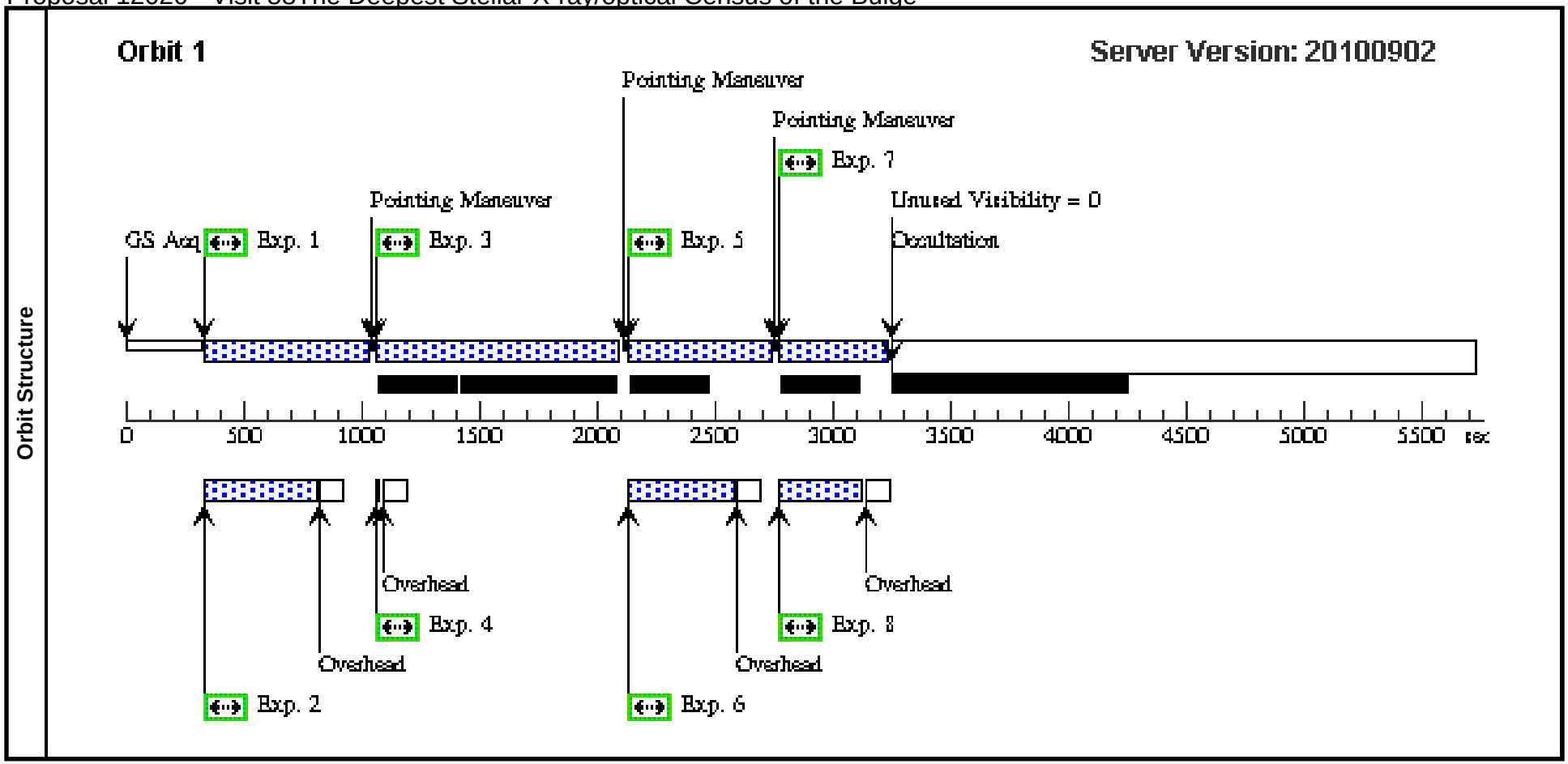
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SWEEPS-FIELD	RA: 17 59 0.8000 (269.7533333d)	Proper Motion RA: null	V=20+/-	Reference Frame: ICRS
		Dec: -29 12 0.00 (-29.20000d)	Proper Motion Dec: null		
		Equinox: J2000	Epoch of Position:		

Comments: Overlap field with GO-10466 field BULGE-4.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.0,0.0; GS ACQ SCENARIO BASE1B3	Prime + Parallel Group 1-2 in Visit 58	496 Secs	
								[==>]	***[1]***
2	WFC_V_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 1-2 in Visit 58	450 Secs	
								[==>]	***[1]***
3	ACS_Ha_buffer	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.325,0.425	Prime + Parallel Group 3-4 in Visit 58	910 Secs	
								[==>]	***[1]***
4	WFC_V_short	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 3-4 in Visit 58	15 Secs	
								[==>]	***[1]***
Comments: Short exposure for bright object motions. Also minimizes the gap between ACS and WFC3 buffer dumps.									
5	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG -0.425,-0.425	Prime + Parallel Group 5-6 in Visit 58	484 Secs	
								[==>]	***[1]***
6	WFC_V_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 5-6 in Visit 58	450 Secs	
								[==>]	***[1]***
7	ACS_Ha_long	(1) SWEEPS-FIELD	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO	POS TARG 0.425,-0.325	Prime + Parallel Group 7-8 in Visit 58	340 Secs	
								[==>]	***[1]***
8	WFC_V_long	(1) SWEEPS-FIELD	WFC3/UVIS, ACCUM, UVIS-FIX	F606W	CR-SPLIT=NO		Prime + Parallel Group 7-8 in Visit 58	350 Secs	
								[==>]	***[1]***


Orbit Structure
Orbit 1
Server Version: 20100902
Pointing Maneuver
Pointing Maneuver
Exp. 7
Pointing Maneuver
Unused Visibility = 0
GS Acq
Exp. 1
Exp. 3
Exp. 5
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Overhead
Exp. 4
Overhead
Exp. 2
Overhead
Exp. 8
Overhead
Exp. 6