



12692 - UVIS CTE Monitor: Star Clusters

Cycle: 19, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

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	(2) NGC-6791	WFC3/UVIS	1	02-May-2012 21:13:50.0	yes
02	(1) NGC-104	WFC3/UVIS	1	02-May-2012 21:14:01.0	yes
03	(4) NGC-104-CAL2	WFC3/UVIS	1	02-May-2012 21:14:11.0	yes
04	(2) NGC-6791	WFC3/UVIS	1	02-May-2012 21:14:19.0	yes
05	(1) NGC-104	WFC3/UVIS	1	02-May-2012 21:14:28.0	yes
06	(4) NGC-104-CAL2	WFC3/UVIS	1	02-May-2012 21:14:40.0	yes
07	(2) NGC-6791	WFC3/UVIS	1	02-May-2012 21:14:48.0	yes
08	(1) NGC-104	WFC3/UVIS	1	02-May-2012 21:14:56.0	yes
09	(4) NGC-104-CAL2	WFC3/UVIS	1	02-May-2012 21:15:05.0	yes
10	(5) NGC-6583	WFC3/UVIS	1	02-May-2012 21:15:13.0	yes
11	(5) NGC-6583	WFC3/UVIS	1	02-May-2012 21:15:21.0	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>
12	(4) NGC-104-CAL2	WFC3/UVIS	1	02-May-2012 21:15:29.0	yes
13	(4) NGC-104-CAL2	WFC3/UVIS	1	02-May-2012 21:15:37.0	yes

13 Total Orbits Used

ABSTRACT

This program extends the Cycle 17 and 18 external CTE calibration (CAL/WFC3 IDs 11924, 12379) program for WFC3/UVIS over Cycle 19.

Targets are (i) the sparse cluster NGC 6791 observed in Cycle 17, to continue a consistent set of observations that allows to isolate the time evolution of the CTE, and (ii) two denser fields in 47 Tuc (NGC 104). The latter will provide data to measure the dependence of the CTE on field crowding. It will also provide a consistent comparison between the CTE evolution of WFC3/UVIS and that of ACS/WFC at the same time into the flight (3 years), because ACS/WFC CTE data were based on 47 Tuc observations. Additional observations of 47 Tuc over a range of sky backgrounds will provide a wide range of background levels to measure the background dependence of the UVIS CTE.

Goals are (i) the continued monitoring of the time evolution of the WFC3/UVIS CTE, (ii) establishing the detector X,Y dependence of the CTE, (iii) CTE dependence on the source flux and the background level and (iv) an improved CTE correction model based on these measurements. These goals include CTE effects on both photometry and astrometry.

OBSERVING DESCRIPTION

Standard CTE Monitoring:

We observe three star fields of different densities, the open cluster NGC 6791 and 2 fields in 47 Tuc (NGC 104) in order to investigate the effects of crowding, differing background levels, detector position and count rates on the WFC3/UVIS channel detectors' Charge Transfer Efficiency (CTE). Sets of 3 visits, one for each target, are observed 3 times during cycle 19, spaced approximately 3-4 months apart. Exposure times are set to maximize the signal to noise over a brightness range of X-Y magnitudes. An additional observation of 47 Tuc (Visit 010) will provide a wide range of background levels to test the background dependence of the CTE.

These data will be used to measure the CTE, and compare these values to the CTE measurements obtained during Cycle 17,18, SMOV and ground

testing. We will also compare the rate of change in the WFC3 CCDs' CTE with those of the ACS CCDs.

We expect to measure the CTE to a precision of 1% in point source photometry and 5% in point source centroid shift (astrometry).

For NGC 6791 (Visits 01, 04, 07), observations will be similar to those in Cycle 17,18 / CAL/WFC3 Proposals 11924,12379, with equal exposure times, coordinates, filters, but a reduced dither pattern (2 pointings, one dithered approx. 2000 pixel in detector Y, omitting the 2000 pxl X dither). The long and short exposures, and the measurements of the same stars on both detectors, provide data to establish a CTE model as a function of various parameters.

For 47 Tuc (Visits 02,03,05,06,08,09), we will only use a detector Y direction dither to measure the main CTE component's dependence on field crowding, as well as its comparison between ACS/WFC3 and WFC3/UVIS.

Both NGC 6791 and 47 Tuc are observed in the F606W and F502N filters to increase the range of background levels useful to establish a UVIS CTE model.

Non-standard CTE monitoring:

1) Visits 10 and 11 observe the open cluster NGC 6583. This target lies on the ecliptic and allows HST to observe it at ORIENTs of 140 degrees and 320 degrees, 180 degrees rotated, within 2 days. Observing a target twice, 180 degrees rotated, on each UVIS detector, allows to measure the absolute CTE of each detector individually. The standard monitoring approach measures the CTE averaged between both UVIS detectors. At each of the 180 degrees rotated ORIENTs, we take for each detector 2 long exposures in F502N, separated by a 10 pixel detector X offset, and one short exposure in F502N. To fill the orbit, we add one long exposure in F606W on UVIS1 for each ORIENT.

2) We also step the cluster 47 Tuc across the field of view of each individual detector, in 7 equal - spaced steps on each detector, 293 pixels in detector Y direction. These observations will provide another individual measurement of the CTE for each detector.

Scheduling:

1) The CTE long-term monitoring observations (Visits 01 to 09) will be taken at 3 epochs in Cycle 19, the first epoch as soon as possible in Oct/Nov 2011, the following two epochs spaced evenly throughout the cycle.

We ask that pairs of NGC 6791 and 47 Tuc observations (Visits 01-03, Visits 04-06, Visits 07-09) are taken within 7 days from each other, to sample the CTE at similar epochs.

We have set visit-level timing requirements for visit groups accordingly.

2) The 180 degree rotated observations of NGC 6583, Visits 10 and 11, will need to be scheduled on June 25/26, within a day of each other. Scheduling requirements are set accordingly.

3) The observations that step 47 Tuc across the field of view in detector Y direction, Visits 12 and 13, should be scheduled close in time to the third epoch of the standard CTE monitoring program (Visits 07-09); 12 and 13 should also be scheduled very close in time (back to back) and at the same orientation. Scheduling requirements are set accordingly.

CALIBRATION JUSTIFICATION

These data will be used to determine the rate of change of the CTE with time, and with position on the detector. Results will be compared to CY 17 and 18 CTE measurements for WFC3/UVIS CCDs, as well as to ACS/CCDs, and where possible to CTE measurements of first and second generation HST instruments.

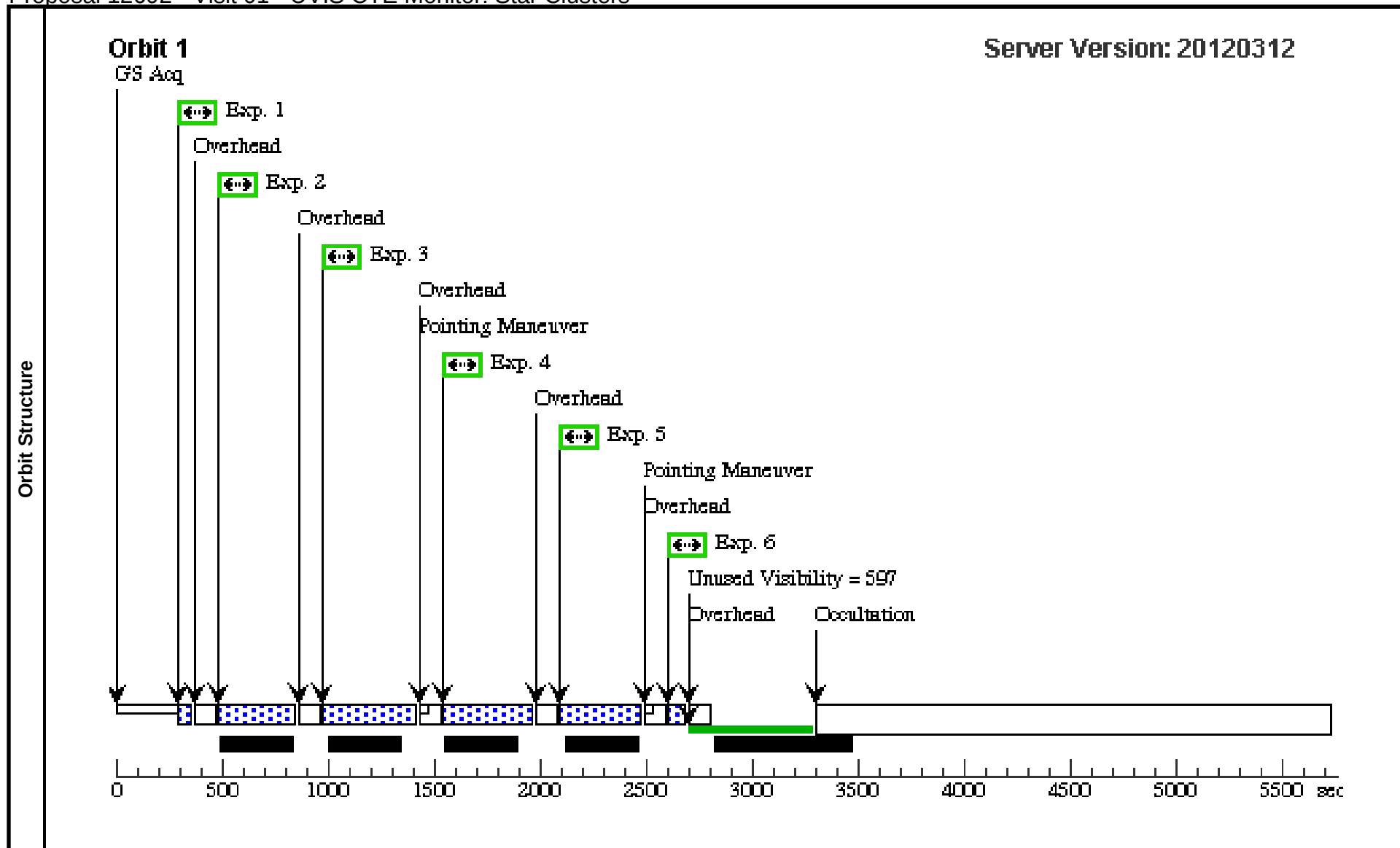
The analysis of the data will be used to obtain a model of CTE-induced losses in both FLT and DRZ UVIS images, with a precision of better than 1% for stellar photometry and less than 5% for astrometric effects from CTE-induced source centroid shifts.

ADDITIONAL COMMENTS

Methodology and results will be described in instrument science reports (ISR), and in the WFC3 instrument and data handbooks.

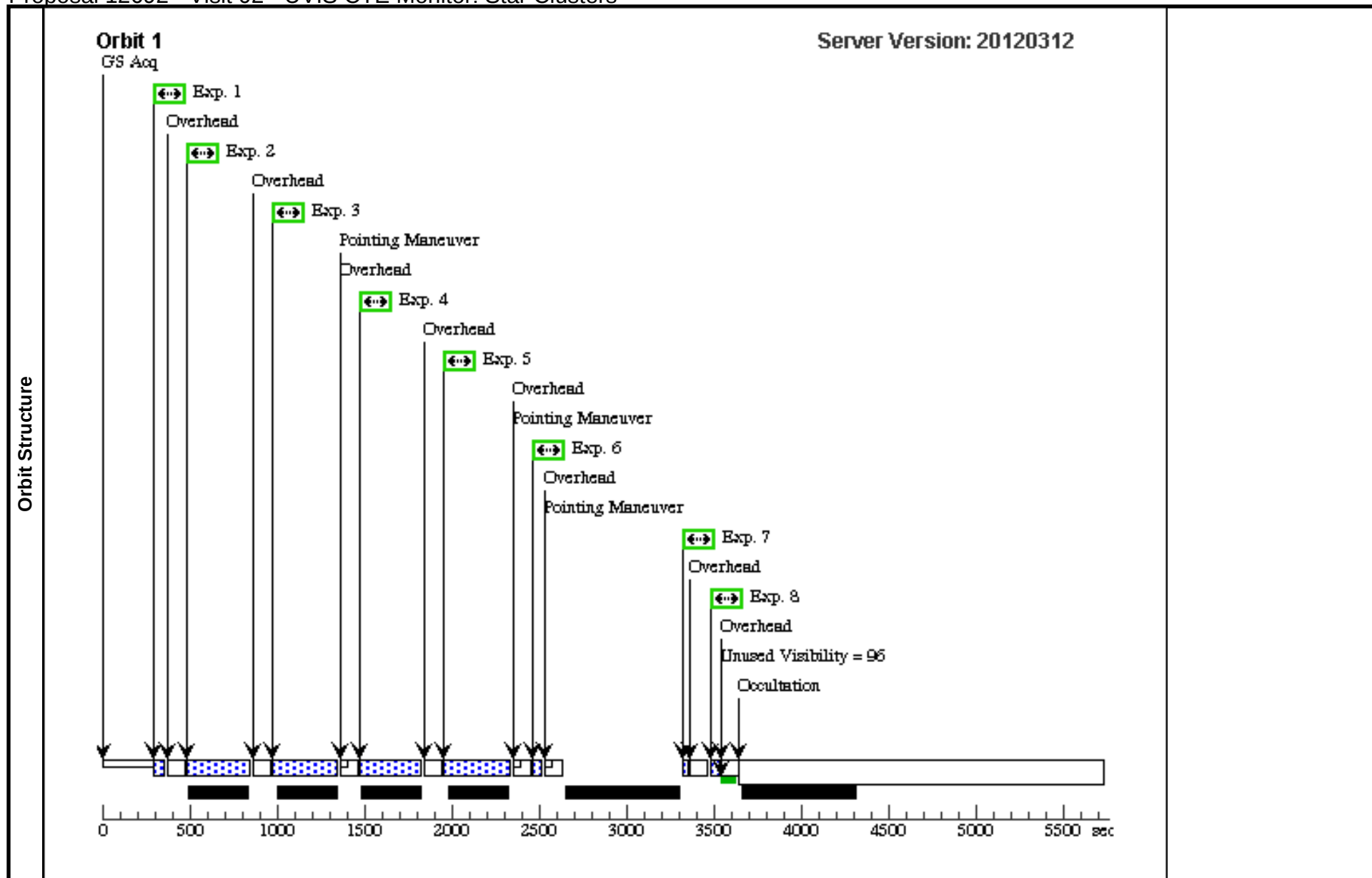
Proposal 12692 - Visit 01 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 01, completed										Thu May 03 01:15:45 GMT 2012	
	Diagnostic Status: Warning											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: BEFORE 30-NOV-2011:00:00:00											
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.											
Diagnostics	(Visit 01) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE											
	(Visit 01) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE											
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	NGC-6791	RA: 19 20 53.9500 (290.2247917d)				V=9.5		Reference Frame: ICRS			
			Dec: +37 48 9.60 (37.80267d)									
			Equinox: J2000									
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			30 Secs			
									[==>]		[1]	
	2		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			360 Secs			
									[==>]		[1]	
	3		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			420 Secs			
									[==>]		[1]	
	4		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		420 Secs			
									[==>]		[1]	
	5		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		360 Secs			
								[==>]		[1]		
6		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO				60 Secs			
									[==>]		[1]	



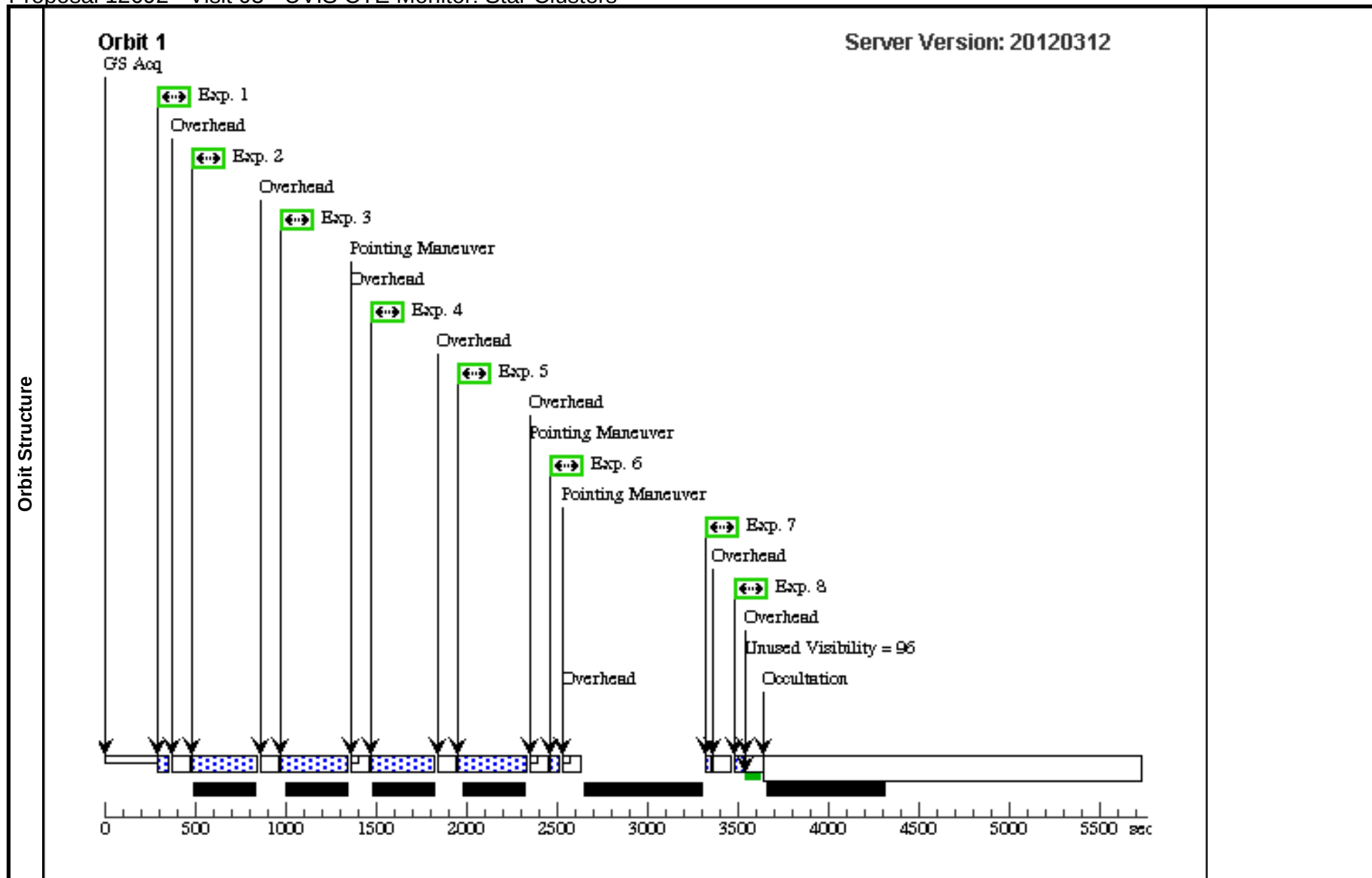
Proposal 12692 - Visit 02 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 02, completed										Thu May 03 01:15:46 GMT 2012
	Diagnostic Status: Warning										
	Scientific Instruments: WFC3/UVIS										
	Special Requirements: GROUP 02,01 WITHIN 7D										
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.										
Diagnostics	(Visit 02) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
	(Visit 02) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
	(Visit 02) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
	(Visit 02) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	NGC-104	RA: 00 22 38.2500 (5.6593750d)				V=4.91		Reference Frame: ICRS		
		Alt Name1: 47-TUC	Dec: -72 03 54.00 (-72.06500d)								
			Equinox: J2000								
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			30 Secs		
									[==>]		[1]
	2		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			360 Secs		
									[==>]		[1]
	3		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			350 Secs		
									[==>]		[1]
	4		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		350 Secs		
									[==>]		[1]
	5		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		360 Secs		
									[==>]		[1]
	6		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			30 Secs		
									[==>]		[1]
	7		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		30 Secs		
								[==>]		[1]	
8		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		30 Secs			
								[==>]		[1]	



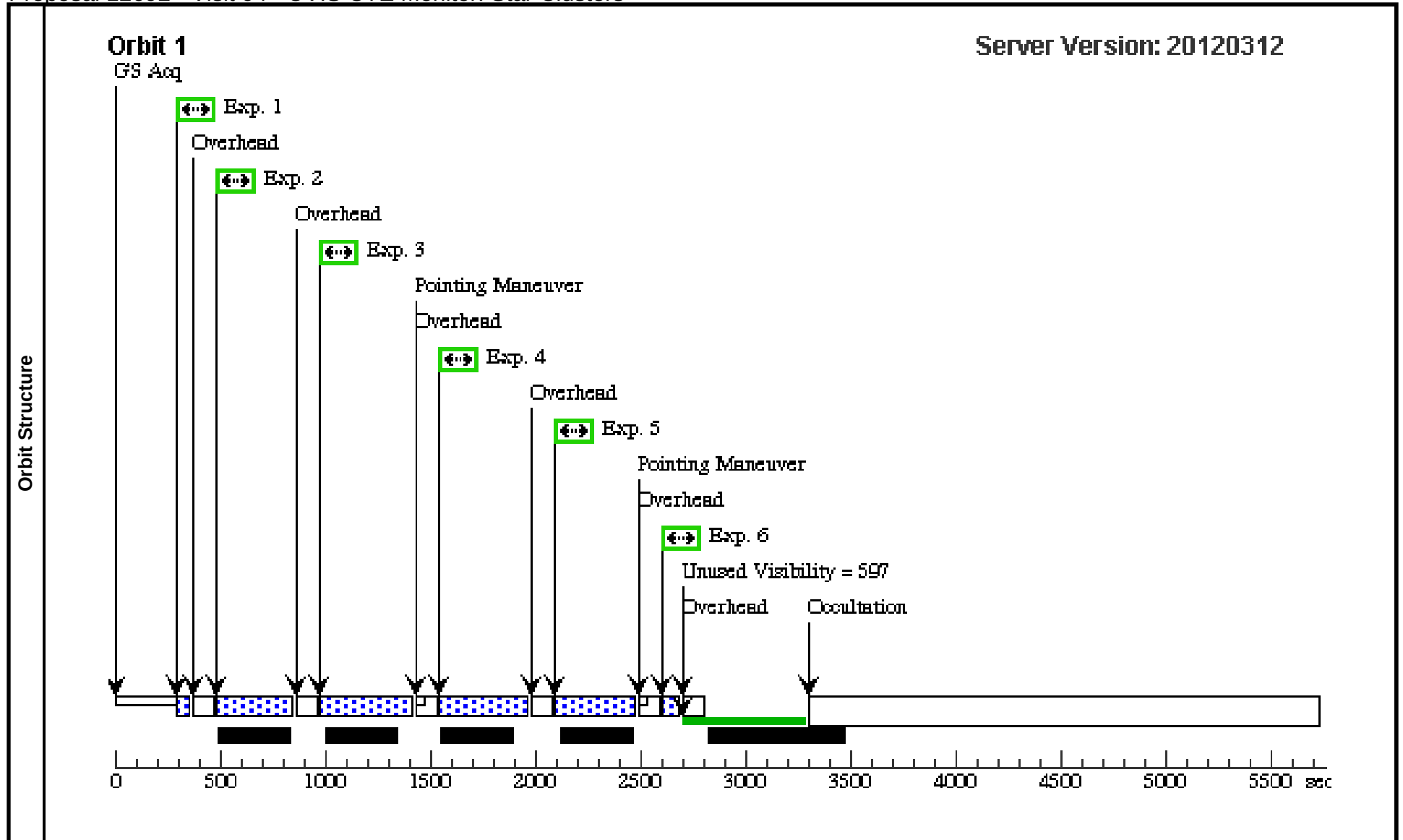
Proposal 12692 - Visit 03 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 03, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: GROUP 03,01 WITHIN 7D Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.										Thu May 03 01:15:47 GMT 2012
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(4)	NGC-104-CAL2 Alt Name1: 47-TUC	RA: 00 22 21.5800 (5.5899167d) Dec: -72 00 36.40 (-72.01011d) Equinox: J2000		V=4.91	Reference Frame: ICRS					
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG null,-50.		30 Secs		
									[==>]		[1]
	2		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG null,-50.		360 Secs		
									[==>]		[1]
	3		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG null,-50.		350 Secs		
									[==>]		[1]
	4		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,31.6		350 Secs		
									[==>]		[1]
	5		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,31.6		360 Secs		
									[==>]		[1]
	6		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG null,-50.		30 Secs		
									[==>]		[1]
	7		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,31.6		30 Secs		
									[==>]		[1]
	8		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,31.6		30 Secs		
									[==>]		[1]



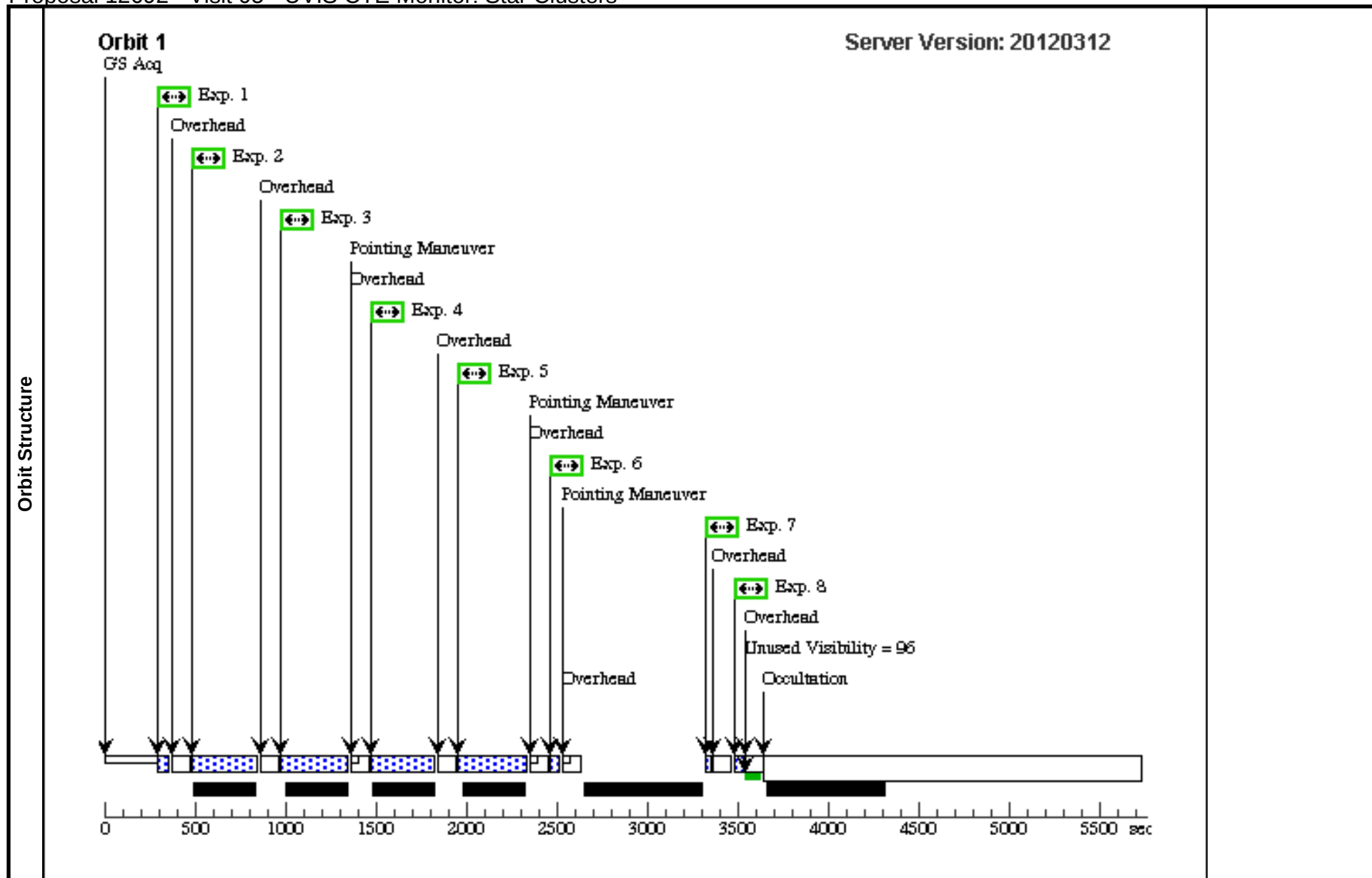
Proposal 12692 - Visit 04 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 04, completed										Thu May 03 01:15:48 GMT 2012
	Diagnostic Status: Warning										
	Scientific Instruments: WFC3/UVIS										
	Special Requirements: BETWEEN 01-MAR-2012 AND 31-MAR-2012										
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.										
Diagnostics	(Visit 04) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
	(Visit 04) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	NGC-6791	RA: 19 20 53.9500 (290.2247917d) Dec: +37 48 9.60 (37.80267d) Equinox: J2000				V=9.5		Reference Frame: ICRS		
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			30 Secs		
									[==>]		[1]
	2		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			360 Secs		
									[==>]		[1]
	3		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			420 Secs		
									[==>]		[1]
	4		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		420 Secs		
									[==>]		[1]
	5		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		360 Secs		
								[==>]		[1]	
6		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			60 Secs			
								[==>]		[1]	



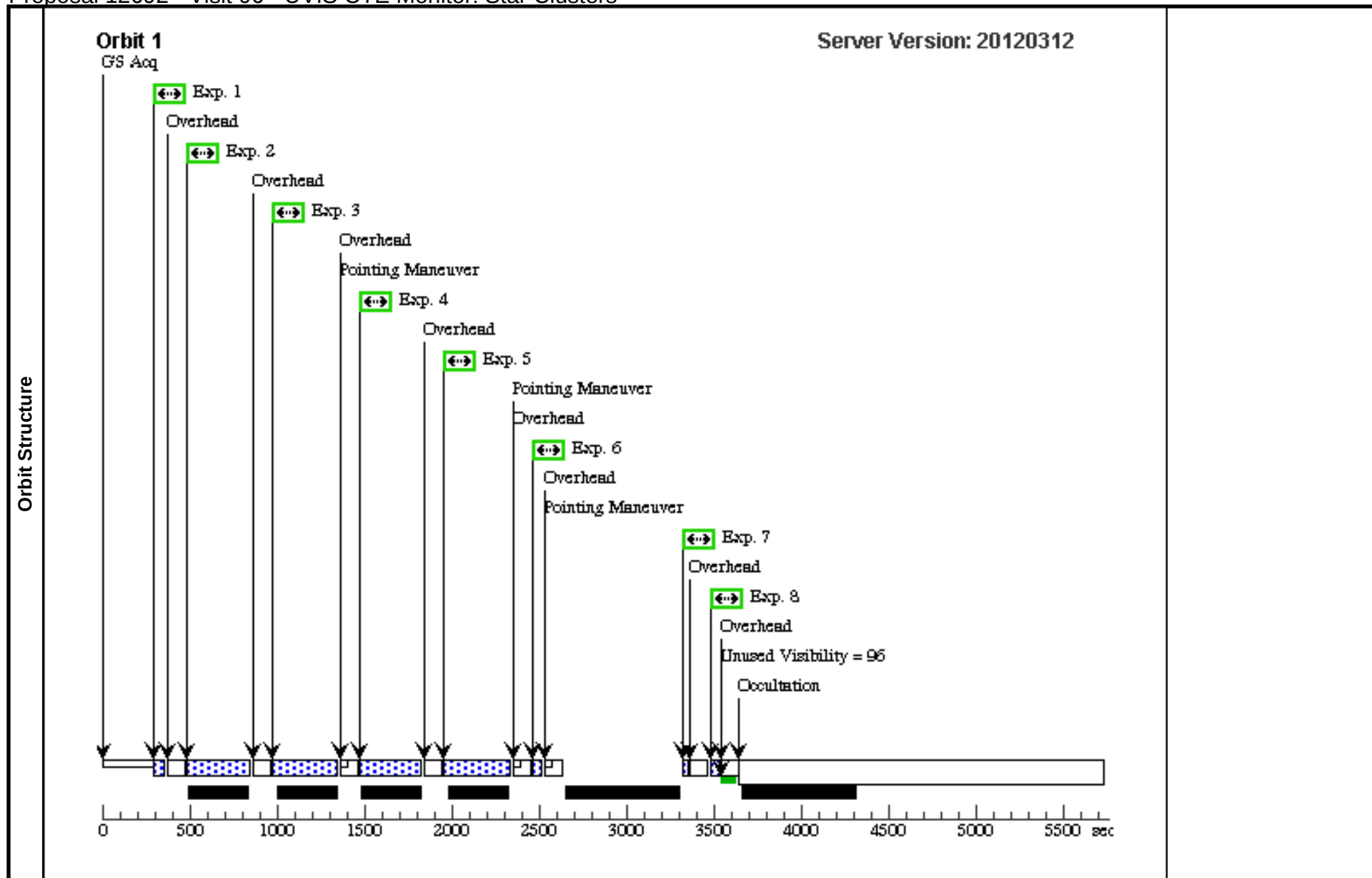
Proposal 12692 - Visit 05 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 05, completed										Thu May 03 01:15:49 GMT 2012			
	Diagnostic Status: Warning													
	Scientific Instruments: WFC3/UVIS													
	Special Requirements: GROUP 05,04 WITHIN 7D													
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.													
Diagnostics	(Visit 05) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE													
	(Visit 05) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE													
	(Visit 05) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE													
	(Visit 05) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE													
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	NGC-104	RA: 00 22 38.2500 (5.6593750d)					V=4.91		Reference Frame: ICRS				
		Alt Name1: 47-TUC	Dec: -72 03 54.00 (-72.06500d)											
			Equinox: J2000											
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.													
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit		
	1		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F502N	CR-SPLIT=NO			30 Secs				
										[==>]		[1]		
	2		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F502N	CR-SPLIT=NO			360 Secs				
										[==>]		[1]		
	3		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F606W	CR-SPLIT=NO			350 Secs				
										[==>]		[1]		
	4		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F606W	CR-SPLIT=NO	POS TARG 0.,81.6		350 Secs				
										[==>]		[1]		
	5		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F502N	CR-SPLIT=NO	POS TARG 0.,81.6		360 Secs				
										[==>]		[1]		
	6		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F606W	CR-SPLIT=NO			30 Secs				
										[==>]		[1]		
	7		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F606W	CR-SPLIT=NO	POS TARG 0.,81.6		30 Secs				
										[==>]		[1]		
	8		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS		F502N	CR-SPLIT=NO	POS TARG 0.,81.6		30 Secs				
										[==>]		[1]		



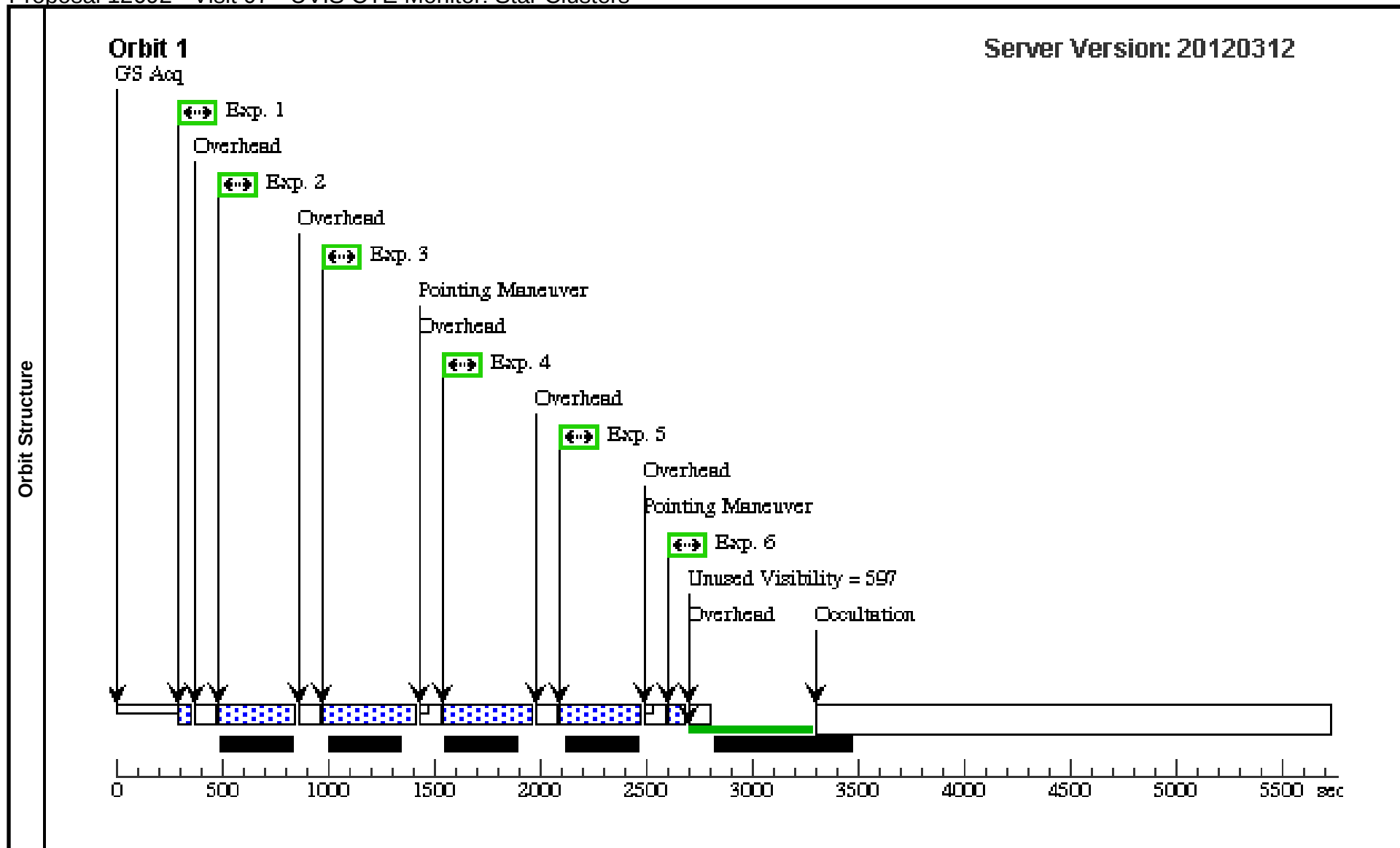
Proposal 12692 - Visit 06 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 06, completed Thu May 03 01:15:50 GMT 2012									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: GROUP 06,04 WITHIN 7D Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	NGC-104-CAL2 Alt Name1: 47-TUC	RA: 00 22 21.5800 (5.5899167d) Dec: -72 00 36.40 (-72.01011d) Equinox: J2000		V=4.91	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG null,-50.		30 Secs [==>]	[1]
	2		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG null,-50.		360 Secs [==>]	[1]
	3		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG null,-50.		350 Secs [==>]	[1]
	4		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,31.6		350 Secs [==>]	[1]
	5		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,31.6		360 Secs [==>]	[1]
	6		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG null,-50.		30 Secs [==>]	[1]
	7		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,31.6		30 Secs [==>]	[1]
	8		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,31.6		30 Secs [==>]	[1]



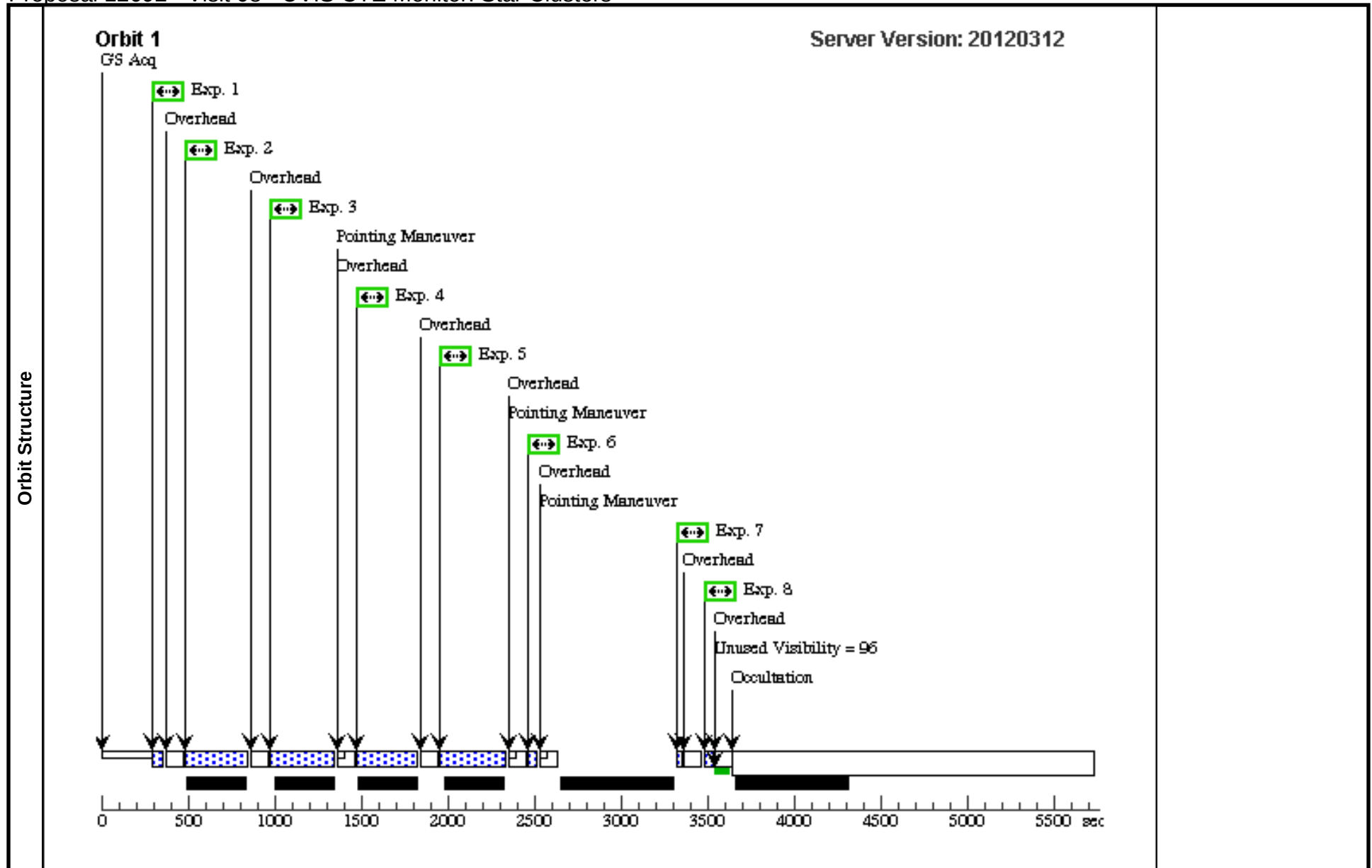
Proposal 12692 - Visit 07 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 07, scheduling										Thu May 03 01:15:50 GMT 2012
	Diagnostic Status: Warning										
	Scientific Instruments: WFC3/UVIS										
	Special Requirements: BETWEEN 15-JUL-2012 AND 15-AUG-2012										
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.										
Diagnostics	(Visit 07) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
	(Visit 07) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Fluxes		Miscellaneous		
	(2)	NGC-6791	RA: 19 20 53.9500 (290.2247917d) Dec: +37 48 9.60 (37.80267d) Equinox: J2000				V=9.5		Reference Frame: ICRS		
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			30 Secs		
									[==>]		[1]
	2		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			360 Secs		
									[==>]		[1]
	3		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			420 Secs		
									[==>]		[1]
	4		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		420 Secs		
									[==>]		[1]
	5		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		360 Secs		
								[==>]		[1]	
6		(2) NGC-6791	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO				60 Secs		
									[==>]		[1]



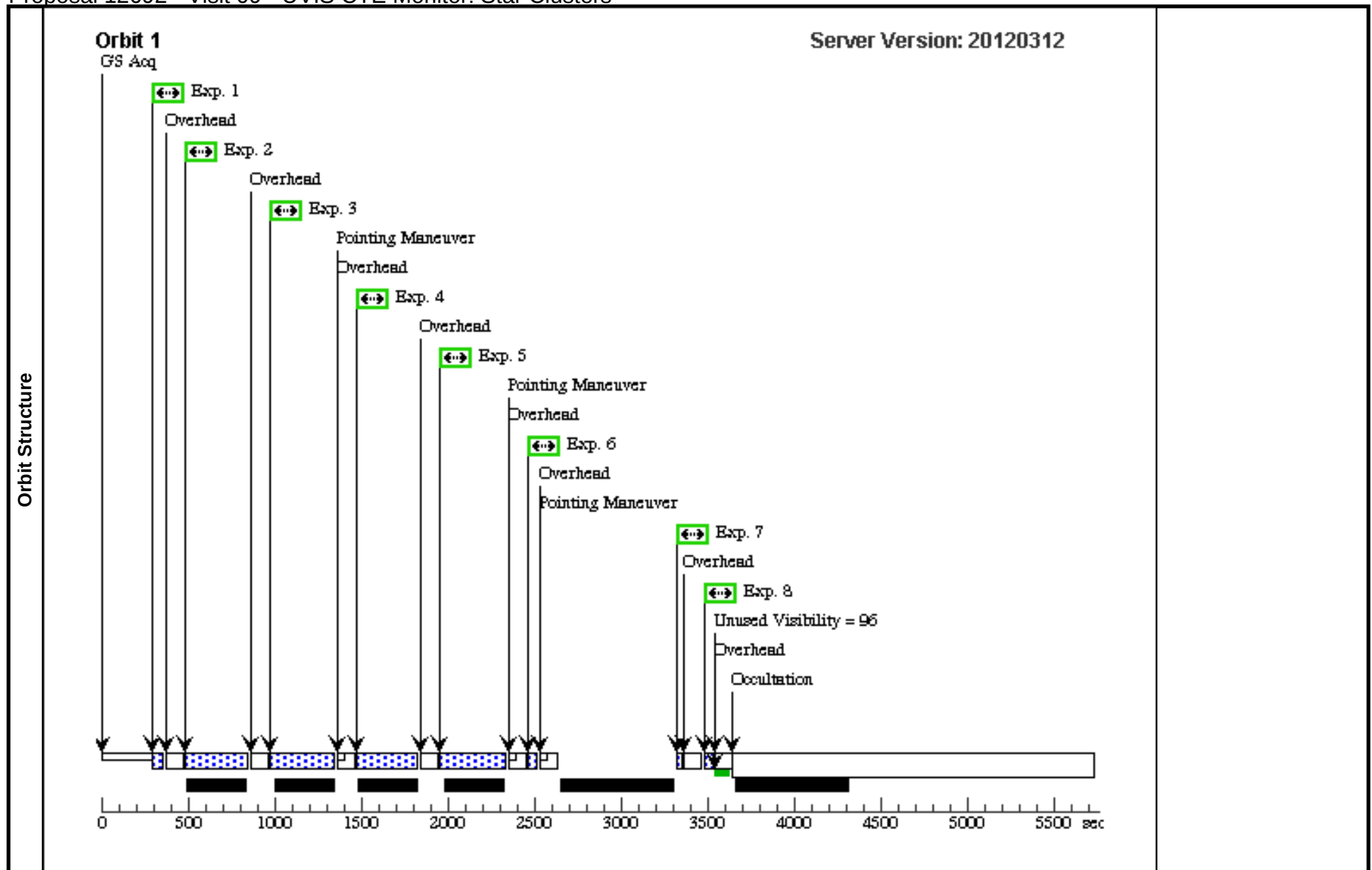
Proposal 12692 - Visit 08 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 08, scheduling									
	Diagnostic Status: Warning									
	Scientific Instruments: WFC3/UVIS									
	Special Requirements: GROUP 08,07 WITHIN 7D									
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.									
Diagnostics	(Visit 08) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE									
	(Visit 08) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE									
	(Visit 08) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE									
	(Visit 08) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	NGC-104	RA: 00 22 38.2500 (5.6593750d)			V=4.91		Reference Frame: ICRS		
		Alt Name1: 47-TUC	Dec: -72 03 54.00 (-72.06500d)							
			Equinox: J2000							
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			30 Secs	
									[==>]	[1]
	2		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			360 Secs	
									[==>]	[1]
	3		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			350 Secs	
									[==>]	[1]
	4		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		350 Secs	
									[==>]	[1]
	5		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		360 Secs	
									[==>]	[1]
	6		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO			30 Secs	
									[==>]	[1]
	7		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,81.6		30 Secs	
									[==>]	[1]
	8		(1) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,81.6		30 Secs	
									[==>]	[1]



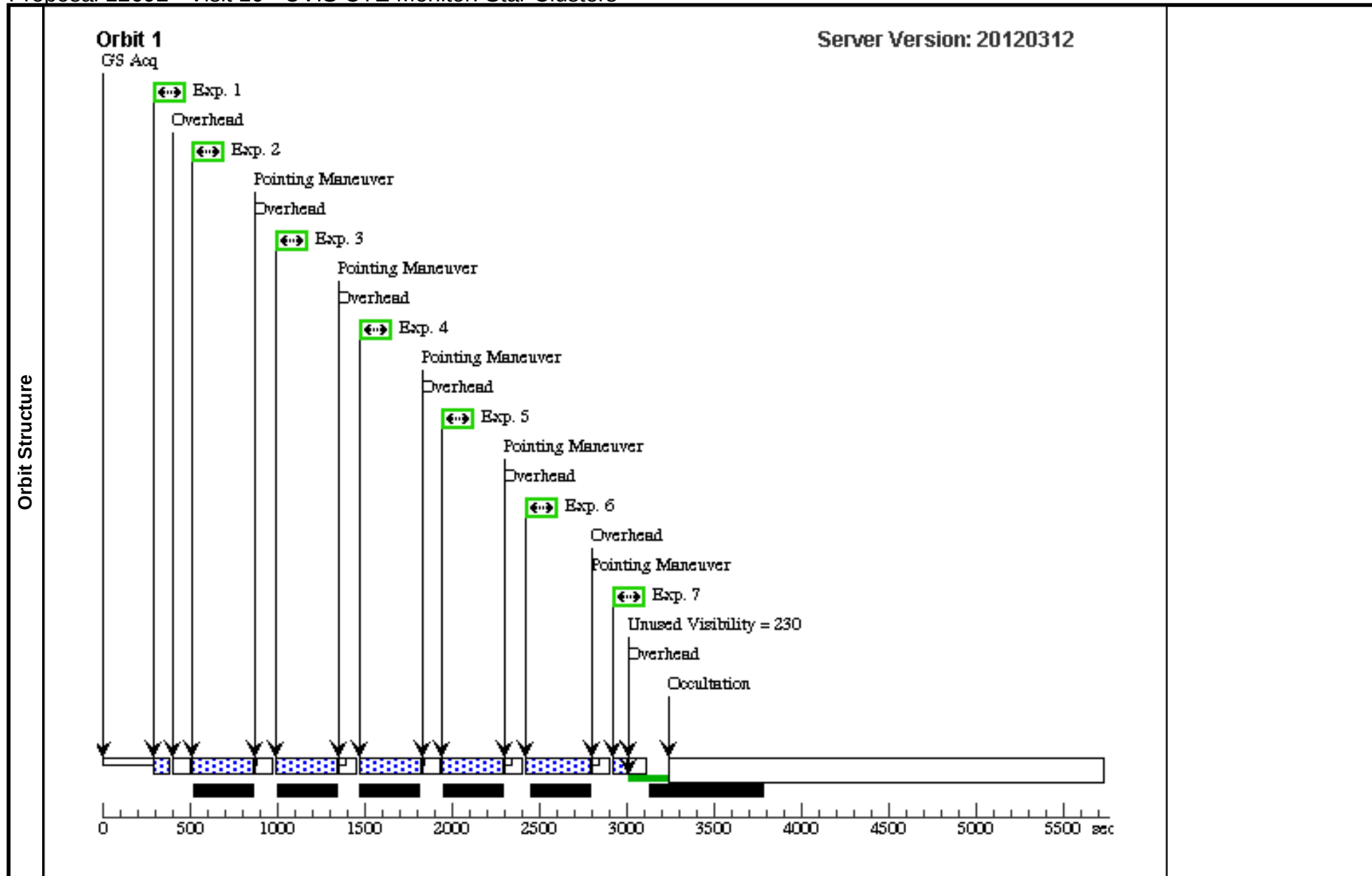
Proposal 12692 - Visit 09 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 09, scheduling Thu May 03 01:15:52 GMT 2012									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: GROUP 09,07 WITHIN 7D Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	NGC-104-CAL2 Alt Name1: 47-TUC	RA: 00 22 21.5800 (5.5899167d) Dec: -72 00 36.40 (-72.01011d) Equinox: J2000		V=4.91	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG null,-50.		30 Secs [==>]	[1]
	2		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG null,-50.		360 Secs [==>]	[1]
	3		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG null,-50.		350 Secs [==>]	[1]
	4		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,31.6		350 Secs [==>]	[1]
	5		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,31.6		360 Secs [==>]	[1]
	6		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG null,-50.		30 Secs [==>]	[1]
	7		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	POS TARG 0.,31.6		30 Secs [==>]	[1]
	8		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0.,31.6		30 Secs [==>]	[1]



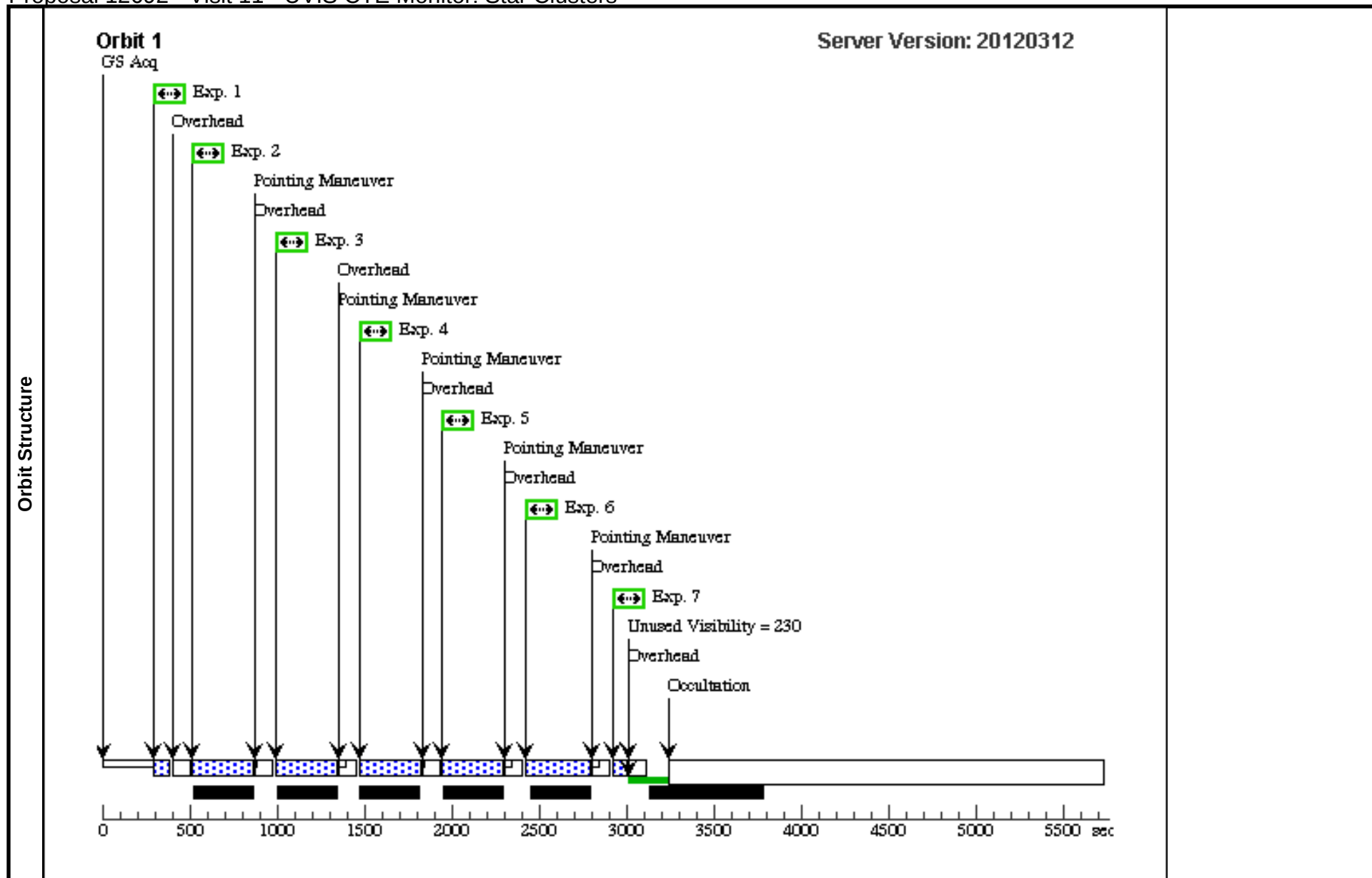
Proposal 12692 - Visit 10 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 10										Thu May 03 01:15:53 GMT 2012	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 140D TO 140 D											
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	NGC-6583	RA: 18 15 49.0000 (273.9541667d) Dec: -22 08 12.00 (-22.13667d) Equinox: J2000					V=10.0		Reference Frame: ICRS		
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Coordinates updated from Carraro, Mendez & Costa 2005, MNRAS, 356, 647											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO			60 Secs		
										[==>]		[1]
	2		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO			348 Secs		
										[==>]		[1]
	3		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG 0.396,nu ll		348 Secs		
										[==>]		[1]
	4		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS2-FIX		F502N	CR-SPLIT=NO			348 Secs		
										[==>]		[1]
	5		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS2-FIX		F502N	CR-SPLIT=NO	POS TARG 0.400,nu ll		348 Secs		
										[==>]		[1]
	6		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX		F606W	CR-SPLIT=NO			348 Secs		
										[==>]		[1]
7		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS2-FIX		F502N	CR-SPLIT=NO			60 Secs			
									[==>]		[1]	



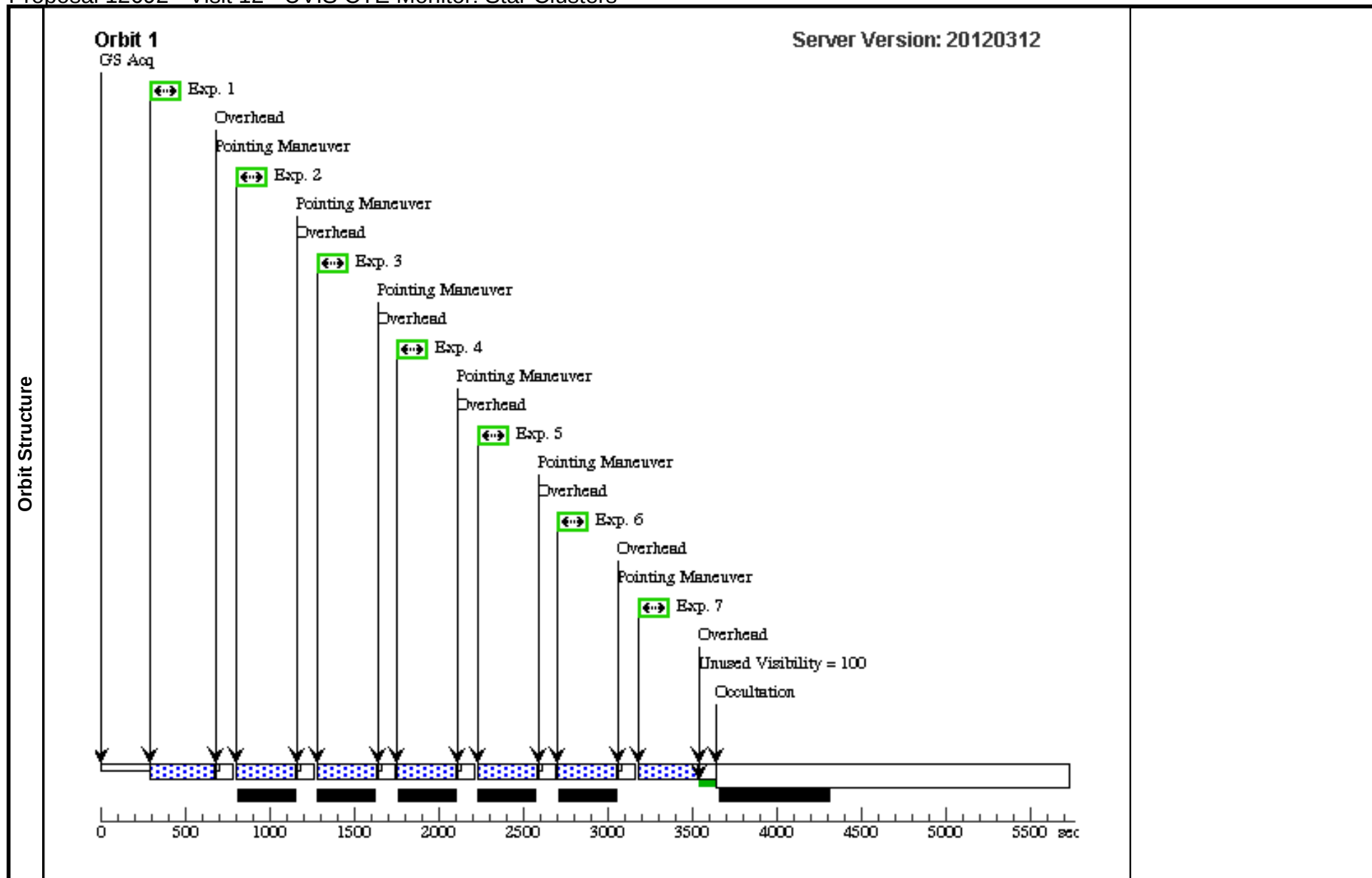
Proposal 12692 - Visit 11 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 11										Thu May 03 01:15:53 GMT 2012	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 180D TO 180D FROM 10; AFTER 10 BY 0 D TO 4 D											
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	NGC-6583	RA: 18 15 49.0000 (273.9541667d) Dec: -22 08 12.00 (-22.13667d) Equinox: J2000					V=10.0		Reference Frame: ICRS		
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Coordinates updated from Carraro, Mendez & Costa 2005, MNRAS, 356, 647											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX	F502N	CR-SPLIT=NO			60 Secs			
									[==>]		[1]	
	2		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX	F502N	CR-SPLIT=NO			348 Secs			
									[==>]		[1]	
	3		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX	F502N	CR-SPLIT=NO	POS TARG 0.396,nu ll		348 Secs			
									[==>]		[1]	
	4		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO			348 Secs			
									[==>]		[1]	
	5		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG 0.400,nu ll		348 Secs			
									[==>]		[1]	
6		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS1-FIX	F606W	CR-SPLIT=NO			348 Secs				
								[==>]		[1]		
7		(5) NGC-6583	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO			60 Secs				
								[==>]		[1]		



Proposal 12692 - Visit 12 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 12										Thu May 03 01:15:54 GMT 2012	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: GROUP 12,07 WITHIN 7D											
	Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(4)	NGC-104-CAL2 Alt Name1: 47-TUC	RA: 00 22 21.5800 (5.5899167d) Dec: -72 00 36.40 (-72.01011d) Equinox: J2000					V=4.91		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG null,34.5 447		348 Secs [==>]		[1]
	2		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG null,23.0 298		348 Secs [==>]		[1]
	3		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG 0.,11.51 49		348 Secs [==>]		[1]
	4		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG 0.,0.		348 Secs [==>]		[1]
	5		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG 0.,-11.5 149		348 Secs [==>]		[1]
	6		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG 0.,-23.0 298		348 Secs [==>]		[1]
	7		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS1-FIX		F502N	CR-SPLIT=NO	POS TARG 0.,-34.5 447		348 Secs [==>]		[1]



Proposal 12692 - Visit 13 - UVIS CTE Monitor: Star Clusters

Visit	Proposal 12692, Visit 13 Thu May 03 01:15:55 GMT 2012									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SAME ORIENT AS 12; GROUP 13,12 WITHIN 1D Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	NGC-104-CAL2 Alt Name1: 47-TUC	RA: 00 22 21.5800 (5.5899167d) Dec: -72 00 36.40 (-72.01011d) Equinox: J2000		V=4.91	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG null,34.9 842		348 Secs [==>]	[1]
	2		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG null,23.3 228		348 Secs [==>]	[1]
	3		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG 0.,11.66 14		348 Secs [==>]	[1]
	4		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG 0.,0.		348 Secs [==>]	[1]
	5		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG 0.,-11.6 614		348 Secs [==>]	[1]
	6		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG 0.,-23.3 228		348 Secs [==>]	[1]
	7		(4) NGC-104-CAL2	WFC3/UVIS, ACCUM, UVIS2-FIX	F502N	CR-SPLIT=NO	POS TARG 0.,-34.9 842		348 Secs [==>]	[1]

