



10561 - A deep UV imaging survey of the Globular Cluster M 30

Cycle: 14, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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Dr. Michael Shara (CoI)	American Museum of Natural History	
Dr. Knox S. Long (CoI)	Space Telescope Science Institute	

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) NGC7099	WFPC2	1	15-Mar-2007 21:01:03.0	yes
02	(1) NGC7099	ACS/SBC	2	15-Mar-2007 21:01:10.0	yes
03	(1) NGC7099	WFPC2	2	15-Mar-2007 21:01:17.0	yes
04	(1) NGC7099	ACS/SBC	3	15-Mar-2007 21:01:24.0	yes
05	(1) NGC7099	WFPC2	2	15-Mar-2007 21:01:36.0	yes
06	(1) NGC7099	ACS/SBC	3	15-Mar-2007 21:01:42.0	yes
07	(1) NGC7099	WFPC2	2	15-Mar-2007 21:01:49.0	yes

15 Total Orbits Used

ABSTRACT

We propose to carry out a deep FUV and NUV survey of M30 (NGC 7099) in order to find and study the hot and/or dynamically-formed stellar populations in the globular cluster. In particular, we will (i) search for the UV counterpart to a MSP binary, (ii) find and study the full population of cataclysmic variables in this cluster, (iii) study the UV properties of the cluster's extensive blue straggler population, (iv) detect the first set of white dwarfs in this cluster. Our survey will be sensitive to variability on time-scales from minutes to weeks, allowing us to search for variable stars in all of the FUV populations.

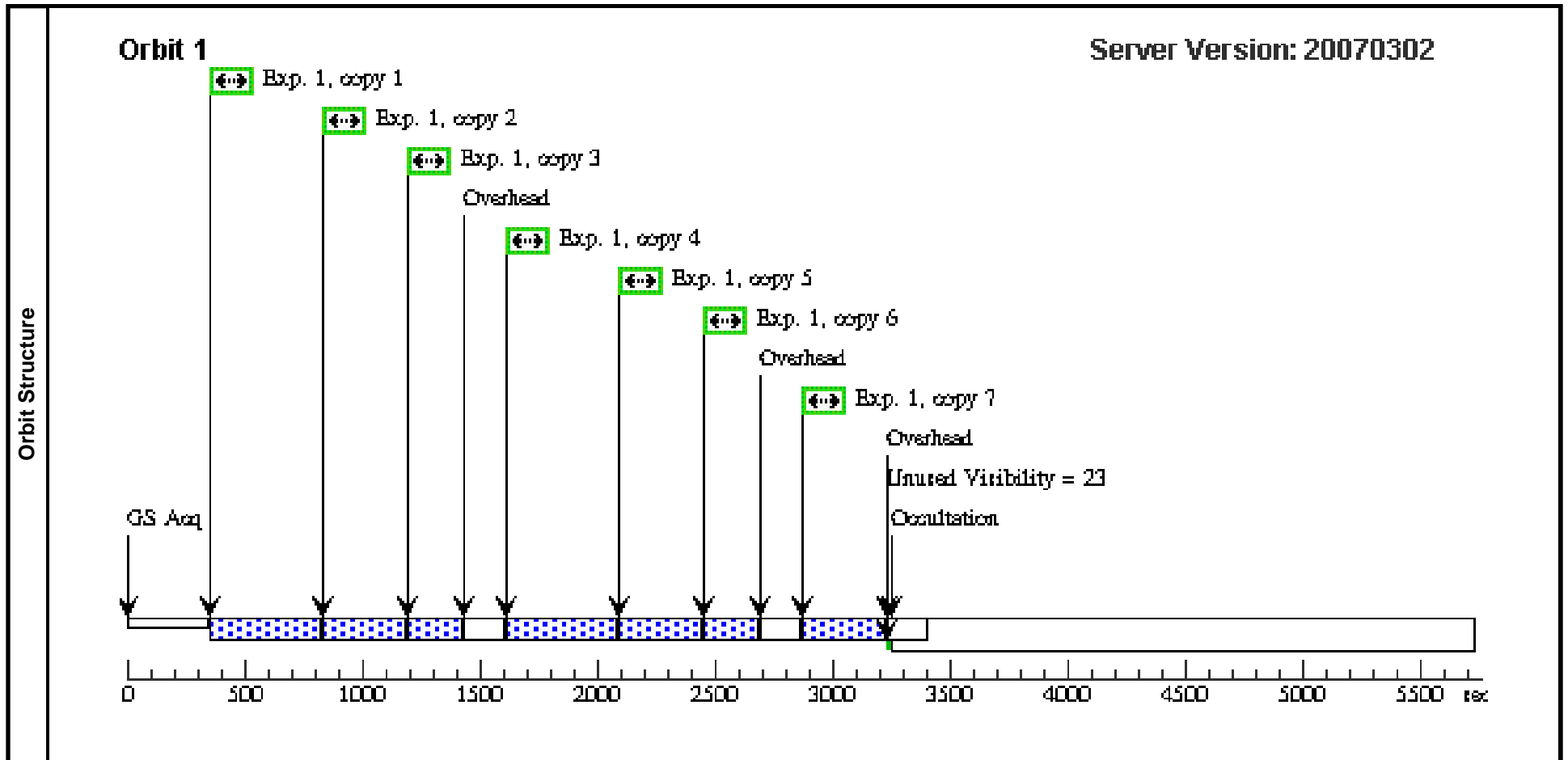
OBSERVING DESCRIPTION

Our FUV imaging study of M30 requires 15 HST orbits, spread over 6 visits. Visits 1, 3, and 5 each consist of 3 consecutive HST orbits spend on FUV imaging with the ACS/SBC/F150LP detector/filter combination. Visits 2, 4, and 6 each consist of 2 orbits spend on NUV imaging with the ACS/HRC/F250W combination. We will keep each exposure in a series of identical exposures (i.e. for one detector/filter combination) as short as 5 min, so that there will be zero overheads between the exposures in each series. Visit 2 (NUV imaging) should occur 0-1 orbits after visit 1 (FUV imaging). Visit 3 (FUV) should follow about a week later, followed after 0-1 orbits by visit 4 (NUV). Visit 5 (FUV) should occur again about a week later, followed after 0-1 orbits by visit 6 (NUV). In this way, the visits will be spaced at intervals of a week, so that we will be sensitive to variability on time-scales from minutes to weeks.

Proposal 10561 - Visit 01 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:52 GMT 2007

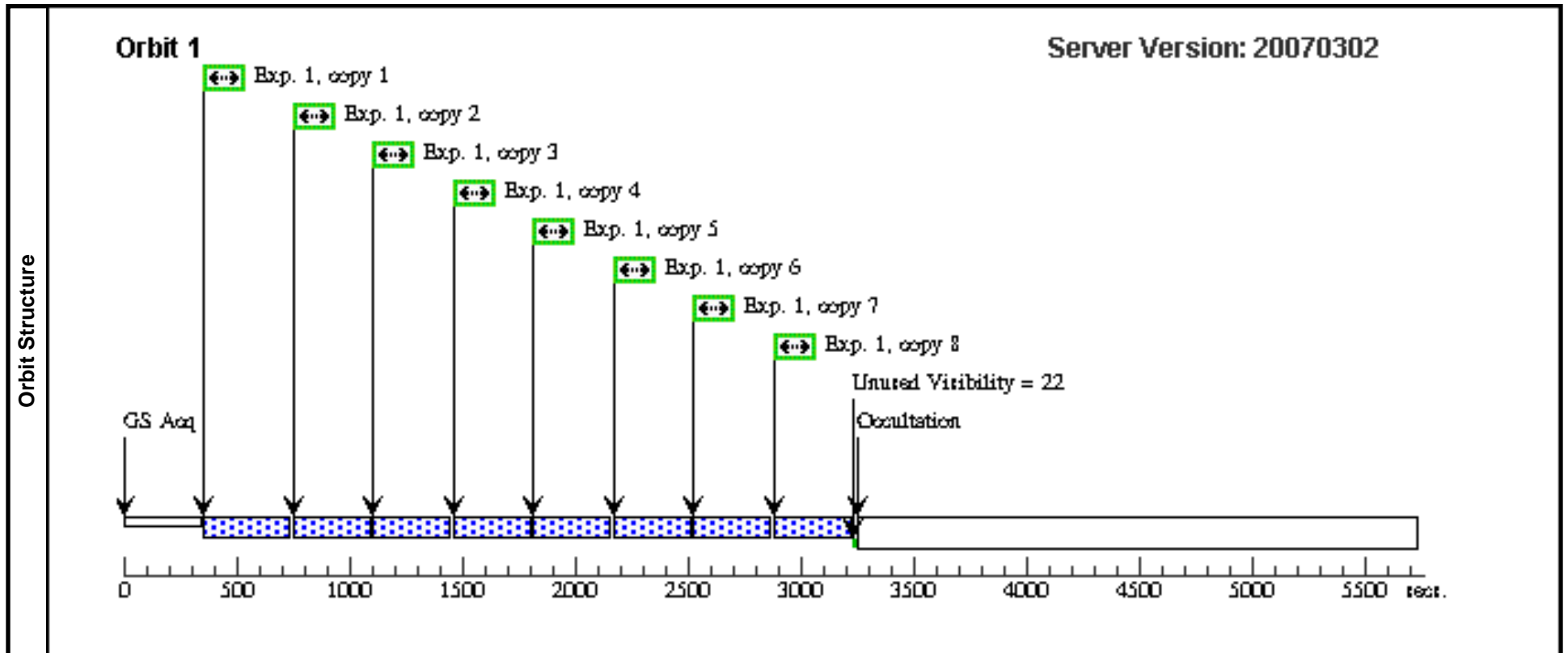
Visit	Proposal 10561, Visit 01, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
(1)		NGC7099 Alt Name1: MESSIER-030	RA: 21 40 22.0000 (325.0916667d) Dec: -23 10 45.00 (-23.17917d) Equinox: J2000		V=25.0	Coordinate Source: NED				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	WFPC2, IMAGE, WF3-FIX	F170W				180.0 Secs X 7 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)]	[1]

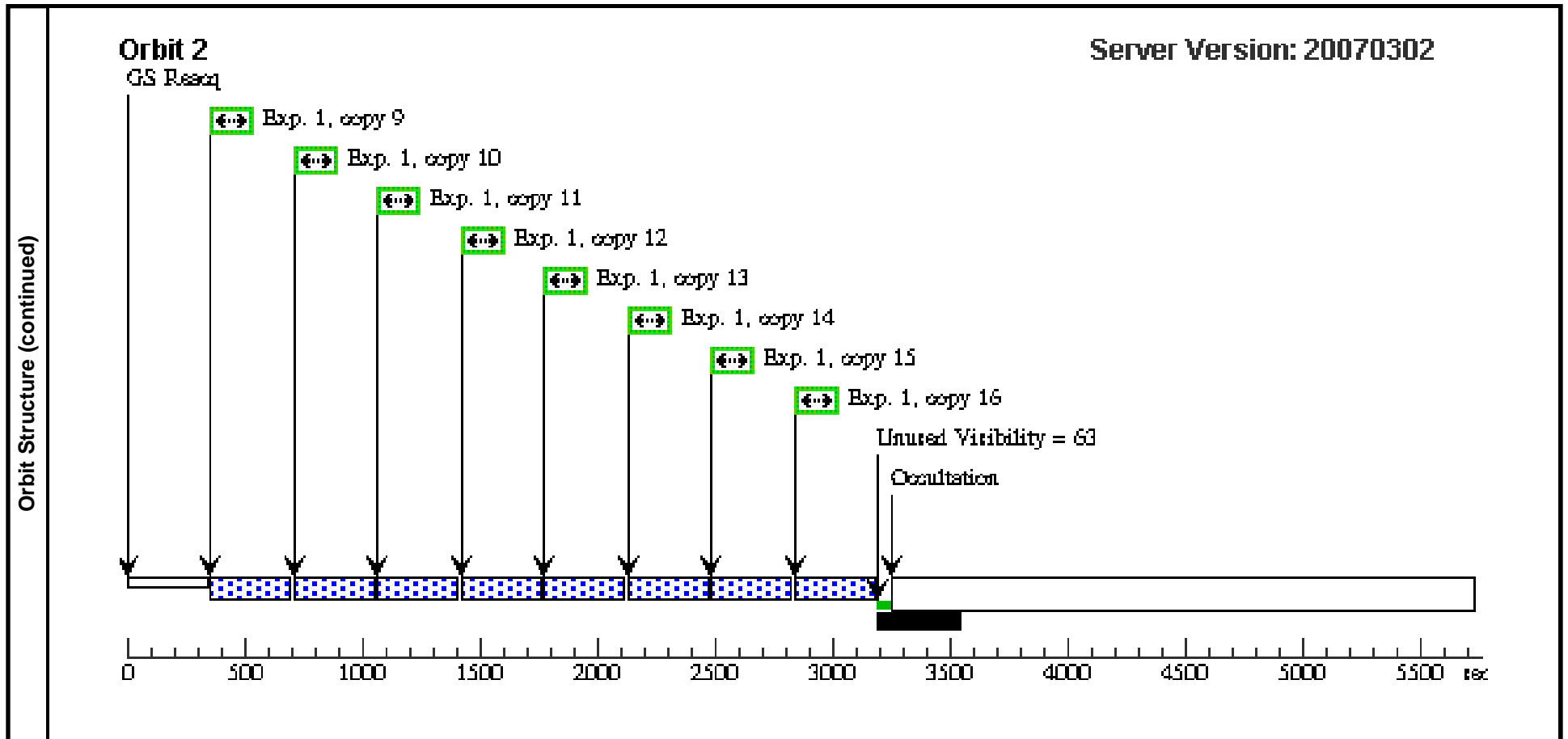


Proposal 10561 - Visit 02 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:53 GMT 2007

Visit	Proposal 10561, Visit 02, implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	NGC7099 Alt Name1: MESSIER-030	RA: 21 40 22.0000 (325.0916667d) Dec: -23 10 45.00 (-23.17917d) Equinox: J2000		V=25.0	Coordinate Source: NED				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	ACS/SBC, ACCUM, SBC-FIX	F150LP				315.0 Secs X 16	
									[=>(Copy 1)]	[1]
									[=>(Copy 2)]	
									[=>(Copy 3)]	
									[=>(Copy 4)]	
									[=>(Copy 5)]	
									[=>(Copy 6)]	
									[=>(Copy 7)]	
									[=>(Copy 8)]	
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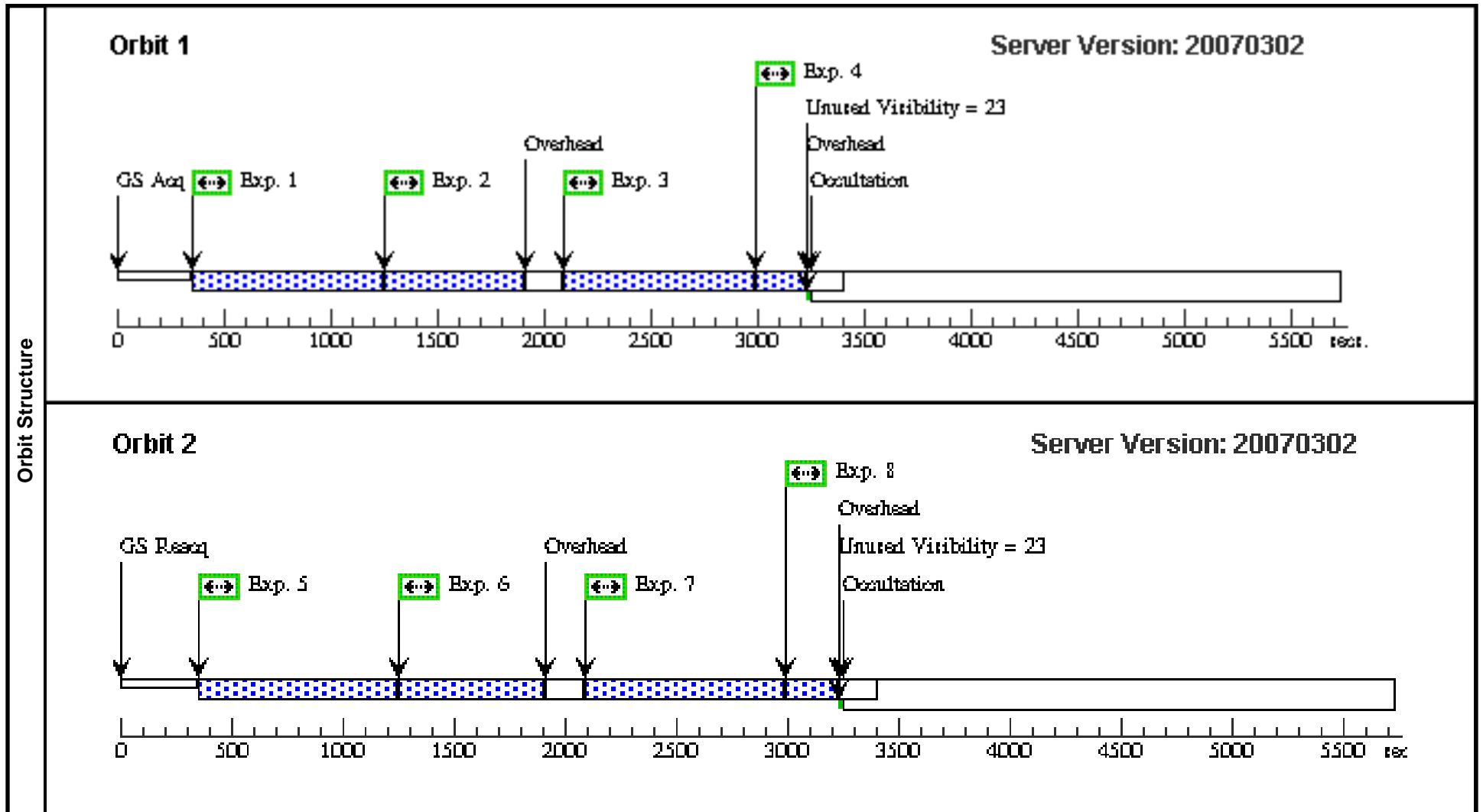




Proposal 10561 - Visit 03 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:54 GMT 2007

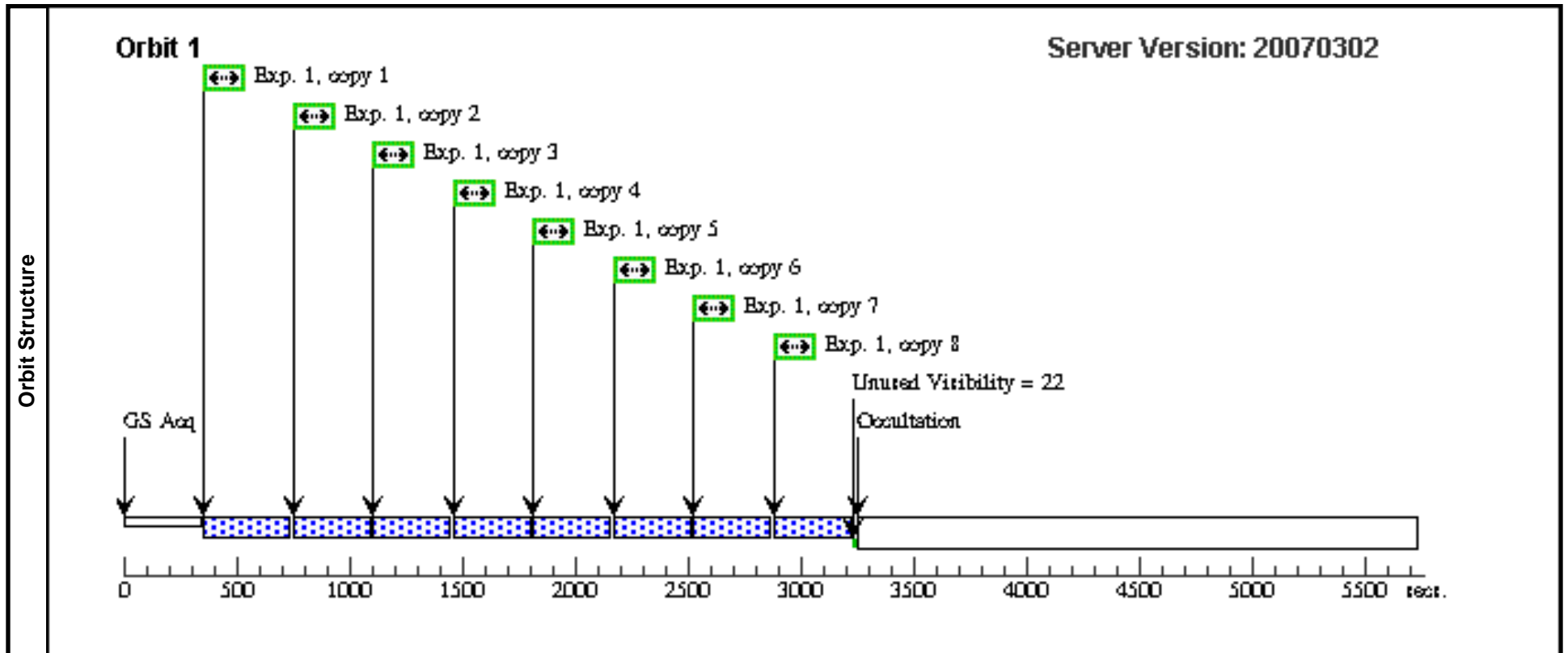
Visit	Proposal 10561, Visit 03, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: SAME ORIENT AS 02; AFTER 02 BY 0 D TO 4.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	NGC7099	RA: 21 40 22.0000 (325.0916667d) Alt Name1: MESSIER-030 Dec: -23 10 45.00 (-23.17917d) Equinox: J2000			V=25.0	Coordinate Source: NED			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	2		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	3		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	4		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>200.0 Secs]	[1]
	5		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	6		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	7		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	8		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>200.0 Secs]	[2]

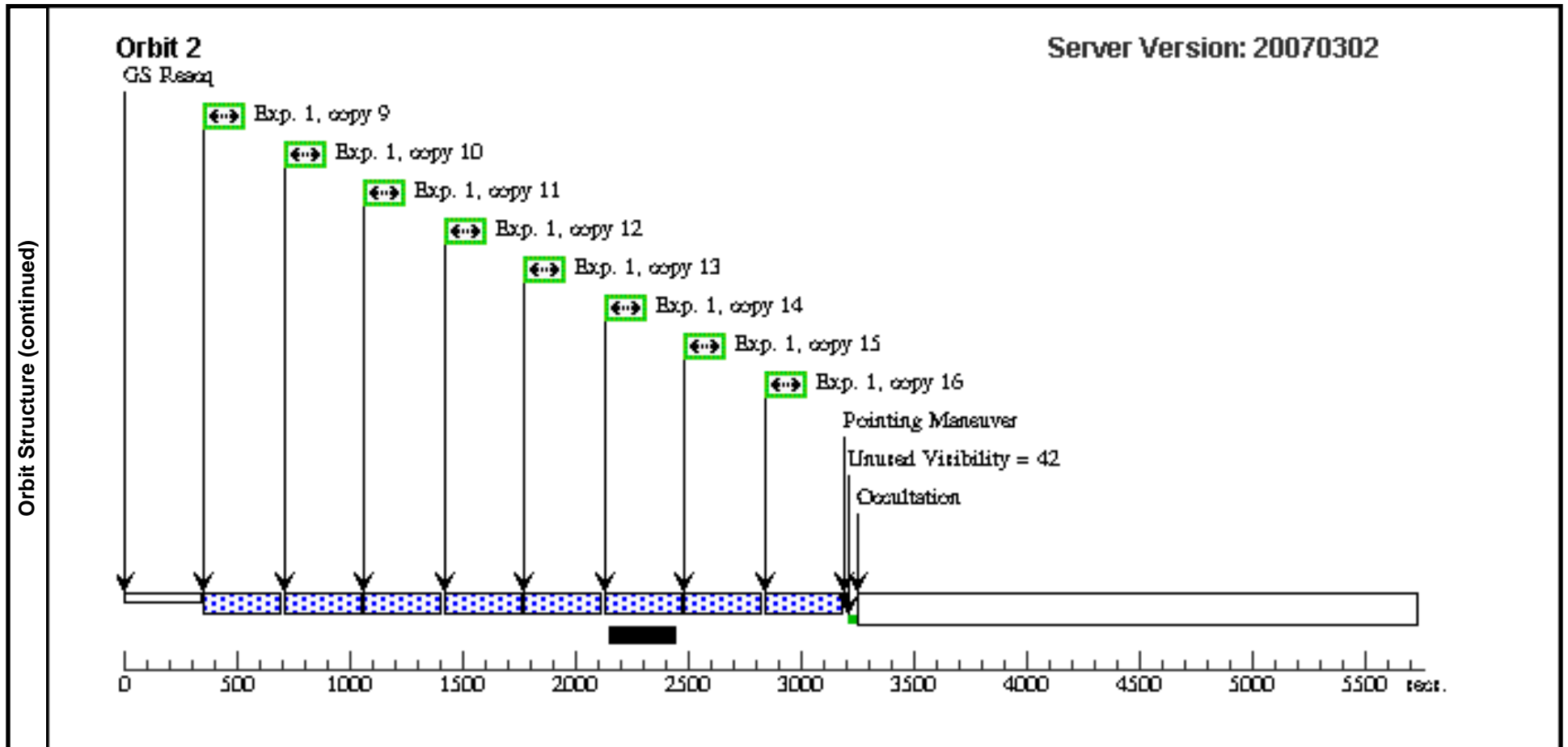


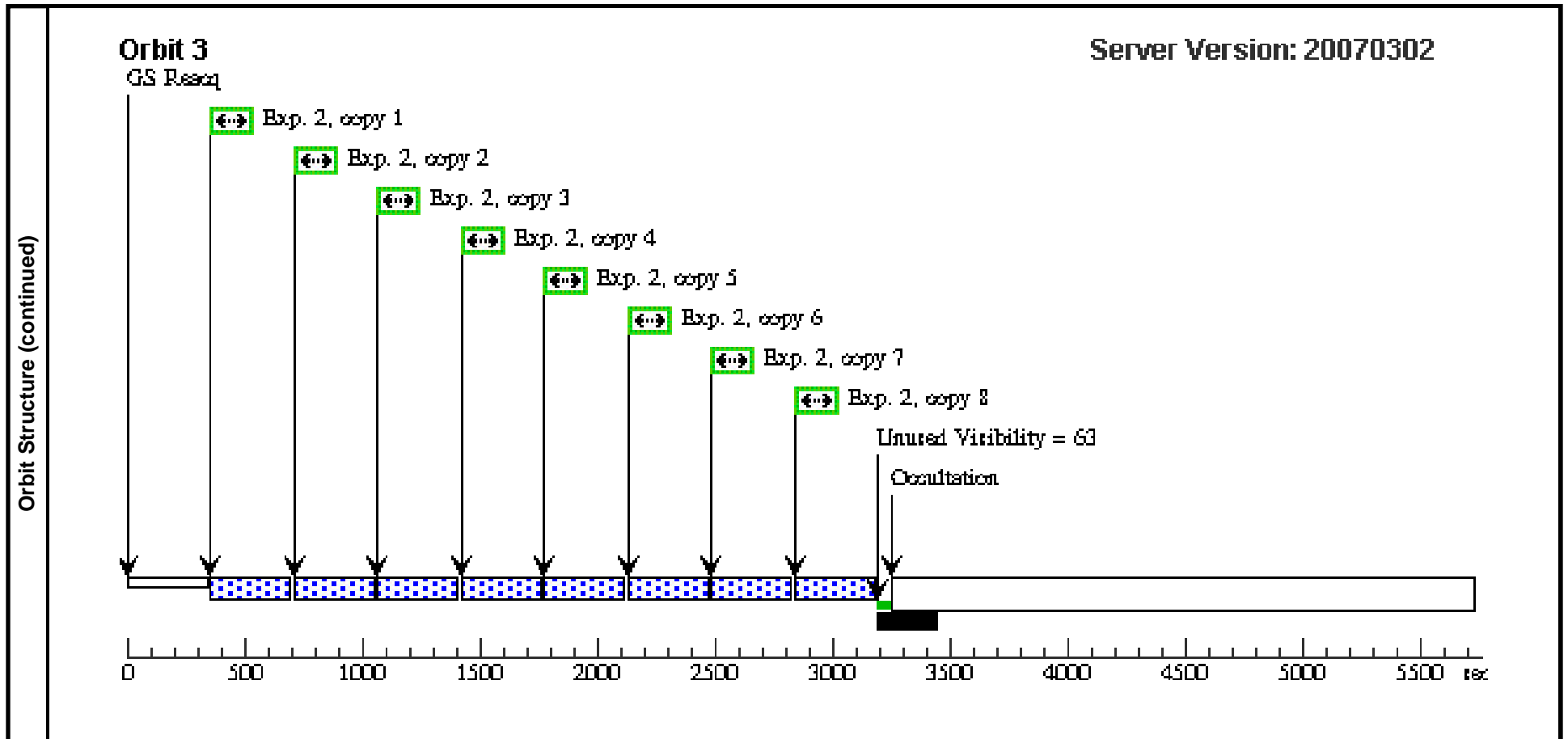
Proposal 10561 - Visit 04 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:55 GMT 2007

Visit	Proposal 10561, Visit 04, implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: SAME ORIENT AS 02; AFTER 02 BY 3 D TO 9 D									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	NGC7099	RA: 21 40 22.0000 (325.0916667d) Alt Name1: MESSIER-030 Dec: -23 10 45.00 (-23.17917d) Equinox: J2000			V=25.0	Coordinate Source: NED			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	ACS/SBC, ACCUM, SBC-FIX	F150LP				315.0 Secs X 16 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)] [=>(Copy 8)]	[1]
									[=>(Copy 9)] [=>(Copy 10)] [=>(Copy 11)] [=>(Copy 12)] [=>(Copy 13)] [=>(Copy 14)] [=>(Copy 15)] [=>(Copy 16)]	[2]
	2		(1) NGC7099	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 1,1		315.0 Secs X 8 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)] [=>(Copy 7)] [=>(Copy 8)]	[3]



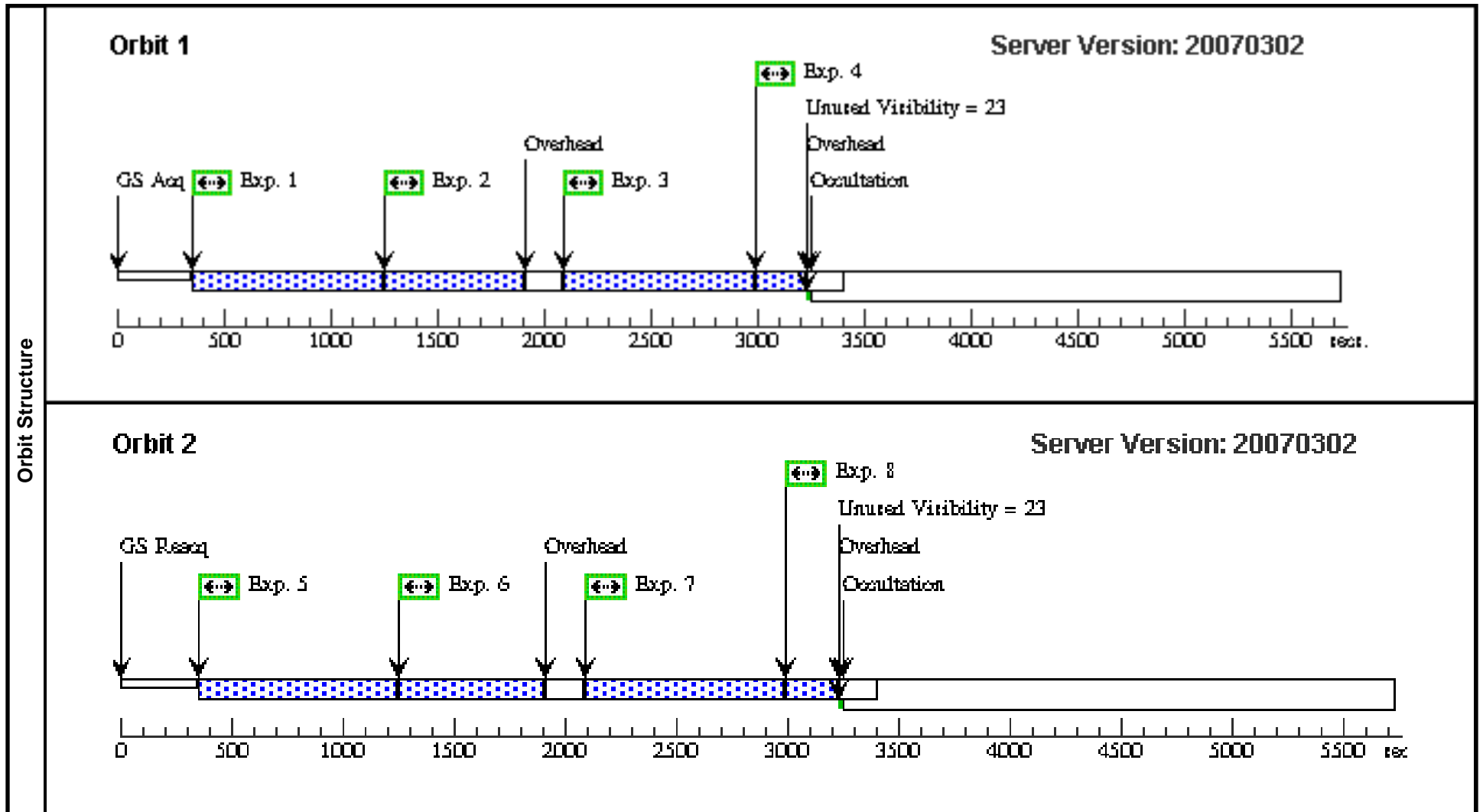




Proposal 10561 - Visit 05 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:57 GMT 2007

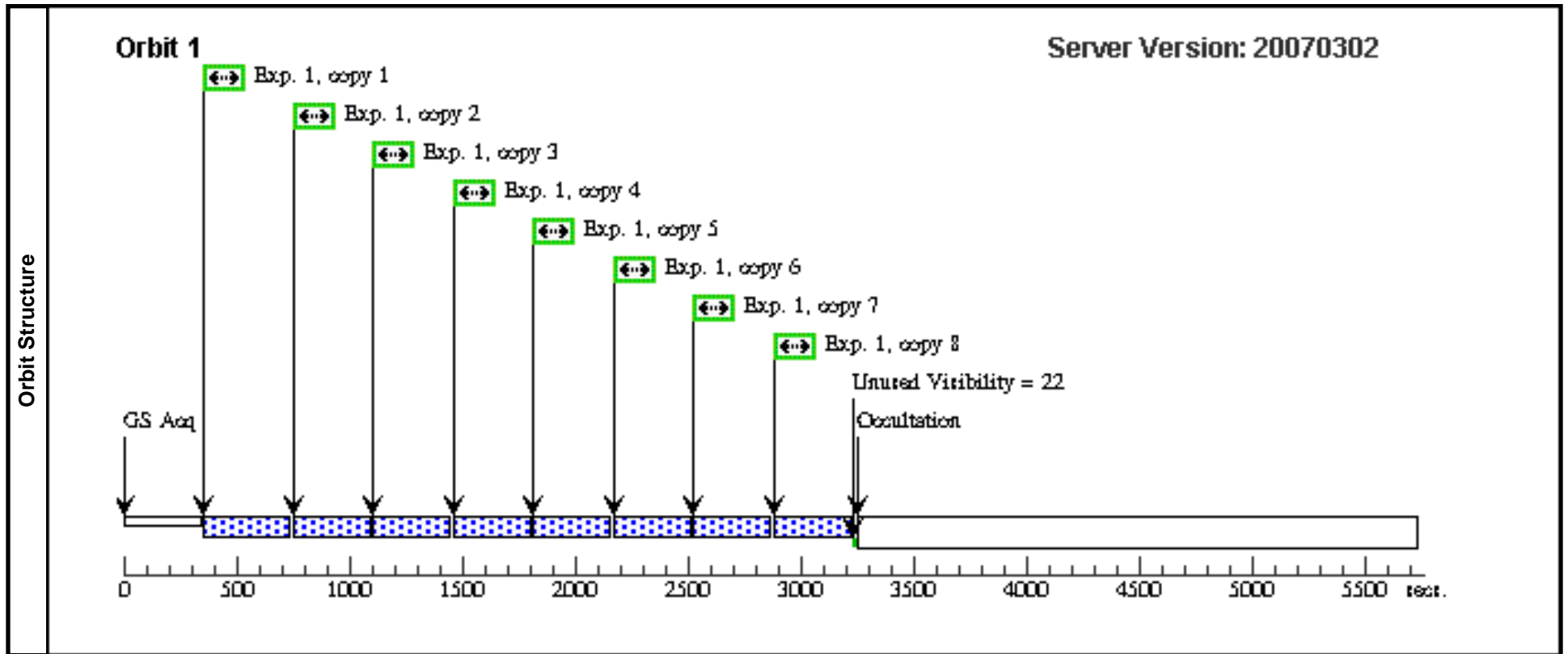
Visit	Proposal 10561, Visit 05, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: SAME ORIENT AS 02; AFTER 04 BY 0 D TO 4.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	NGC7099 Alt Name1: MESSIER-030	RA: 21 40 22.0000 (325.0916667d) Dec: -23 10 45.00 (-23.17917d) Equinox: J2000		V=25.0	Coordinate Source: NED				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	2		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	3		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	4		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>200.0 Secs]	[1]
	5		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	6		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	7		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	8		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>200.0 Secs]	[2]

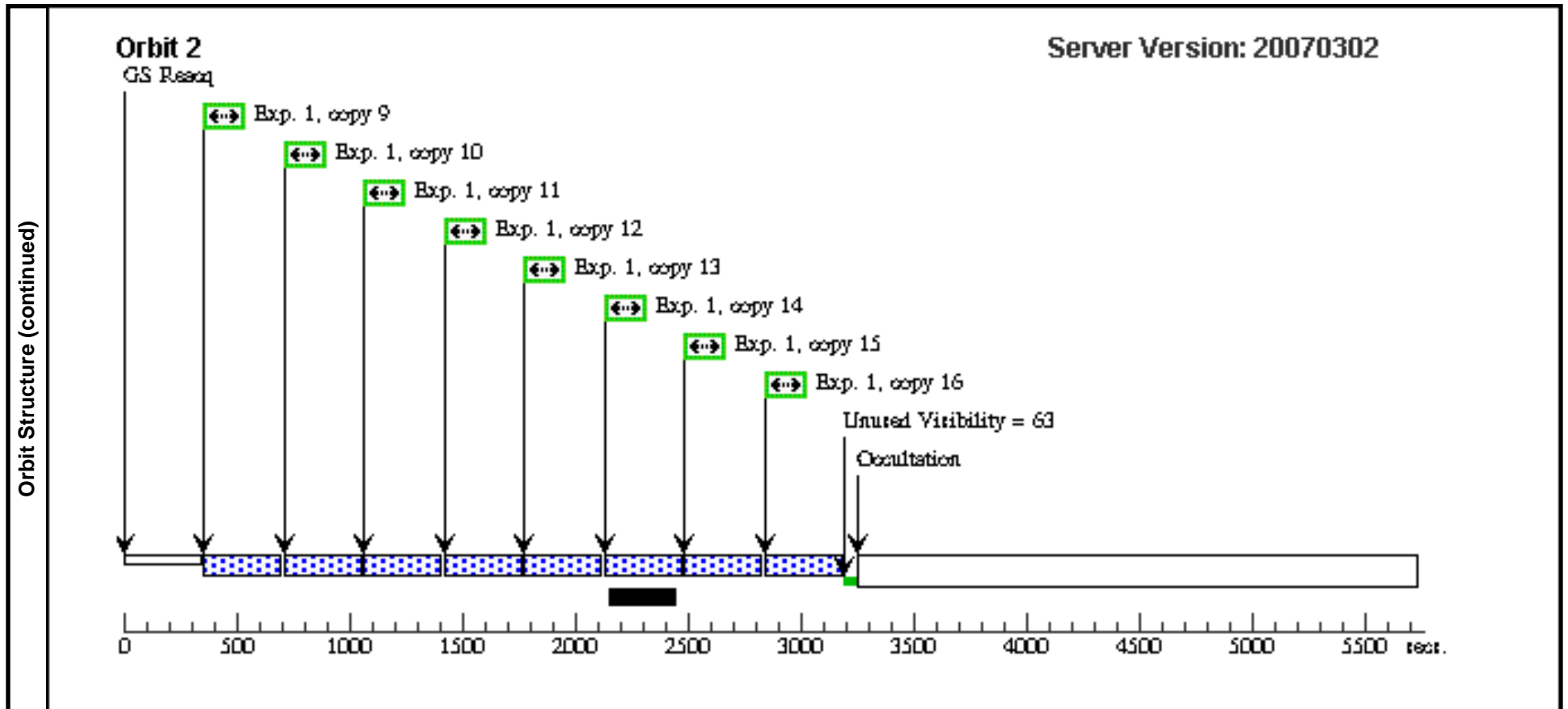


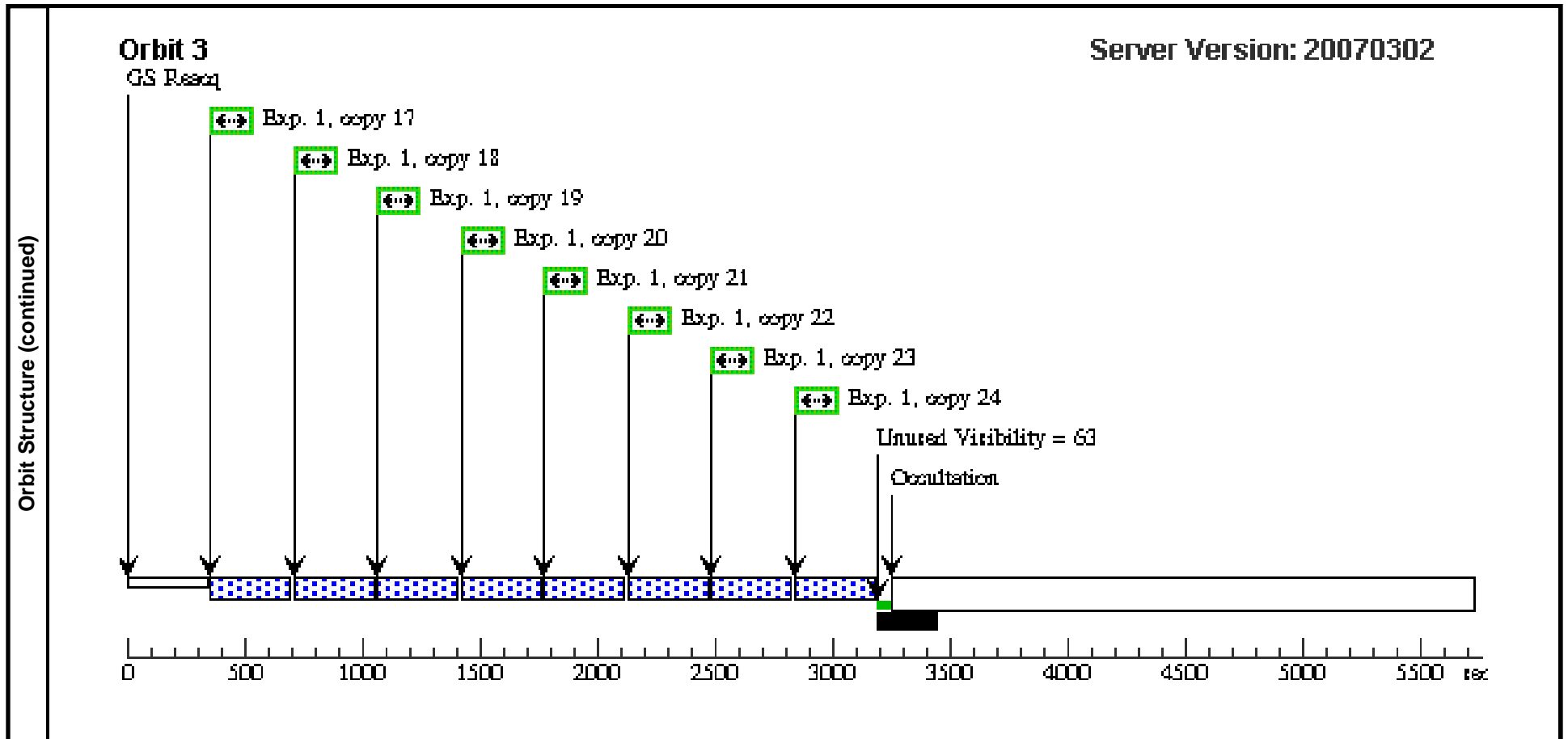
Proposal 10561 - Visit 06 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:57 GMT 2007

Visit	Proposal 10561, Visit 06, implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: SAME ORIENT AS 02; AFTER 04 BY 3 D TO 9 D									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	NGC7099	RA: 21 40 22.0000 (325.0916667d)			V=25.0	Coordinate Source: NED			
		Alt Name1: MESSIER-030	Dec: -23 10 45.00 (-23.17917d)							
			Equinox: J2000							
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 1,1		315.0 Secs X 24	
									[=>(Copy 1)]	[1]
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Proposal 10561 - Visit 07 - A deep UV imaging survey of the Globular Cluster M 30

Fri Mar 16 01:01:58 GMT 2007

Visit	Proposal 10561, Visit 07, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: SAME ORIENT AS 02; AFTER 06 BY 0 D TO 4.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	NGC7099	RA: 21 40 22.0000 (325.0916667d) Dec: -23 10 45.00 (-23.17917d) Equinox: J2000		V=25.0	Coordinate Source: NED				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	2		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	3		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[1]
	4		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>200.0 Secs]	[1]
	5		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	6		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	7		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>600.0 Secs]	[2]
	8		(1) NGC7099	WFPC2, IMAGE, PC1-FIX	F300W				300.0 Secs [=>200.0 Secs]	[2]

