



10433 - The Cepheid PL-Z

Cycle: 13, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets</i>	<i>Configurations</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) NGC3627	ACS/WFC	5	23-Mar-2006 23:30:37.0	yes
02	(2) NGC3368	ACS/WFC	5	31-Aug-2005 14:24:37.0	yes

10 Total Orbits Used

ABSTRACT

We are proposing to empirically calibrate the metallicity sensitivity of the Cepheid Period-Luminosity relation at the highest metallicity range so far observed in nearby galaxies.

To do this we will obtain the I-band Population II Tip of the Red Giant Branch (TRGB) distances to two galaxies, NGC 3627 and NGC 3368, both of which have comparable (Cepheid) distances of 11 Mpc and have almost identical (very high) metallicities of $12 + \log[\text{O}/\text{H}] = +9.3$.

At present, observers have extremely divergent views on the magnitude of the metallicity effect on the Cepheid zero point, and theorists cannot even

Proposal 10433 - Overview

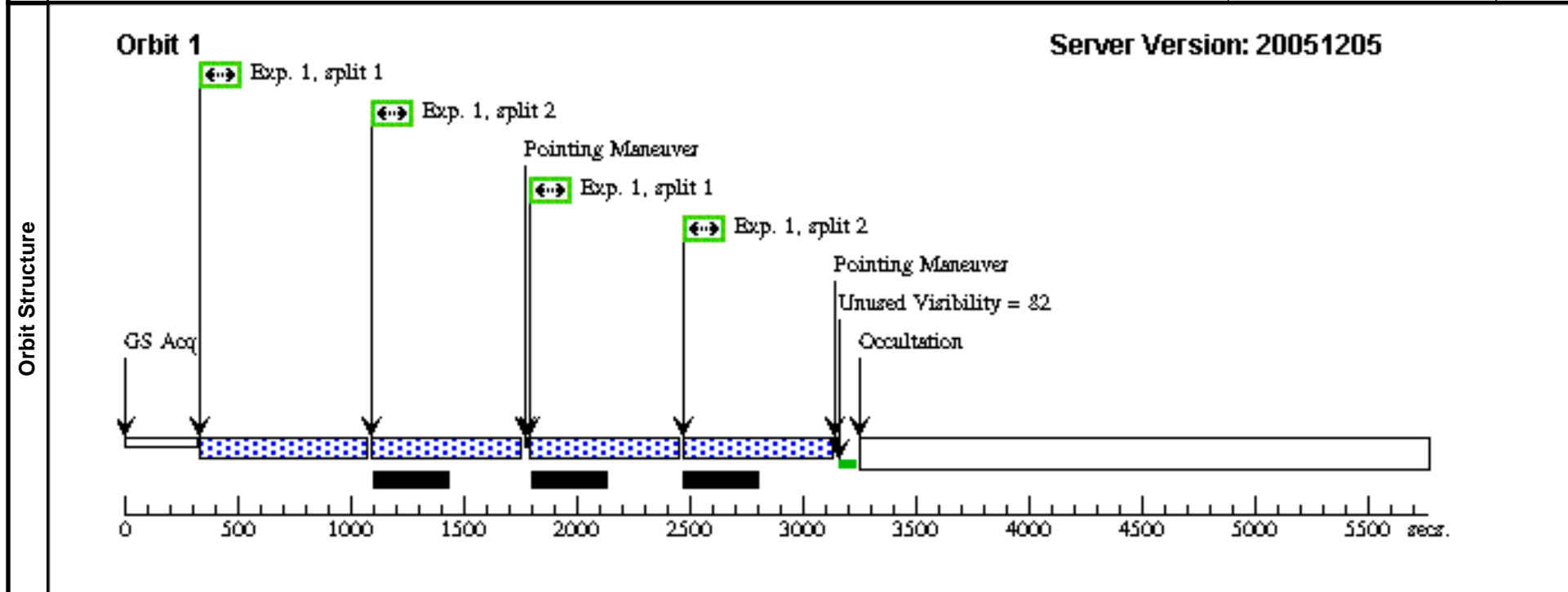
agree upon the sign of the effect.

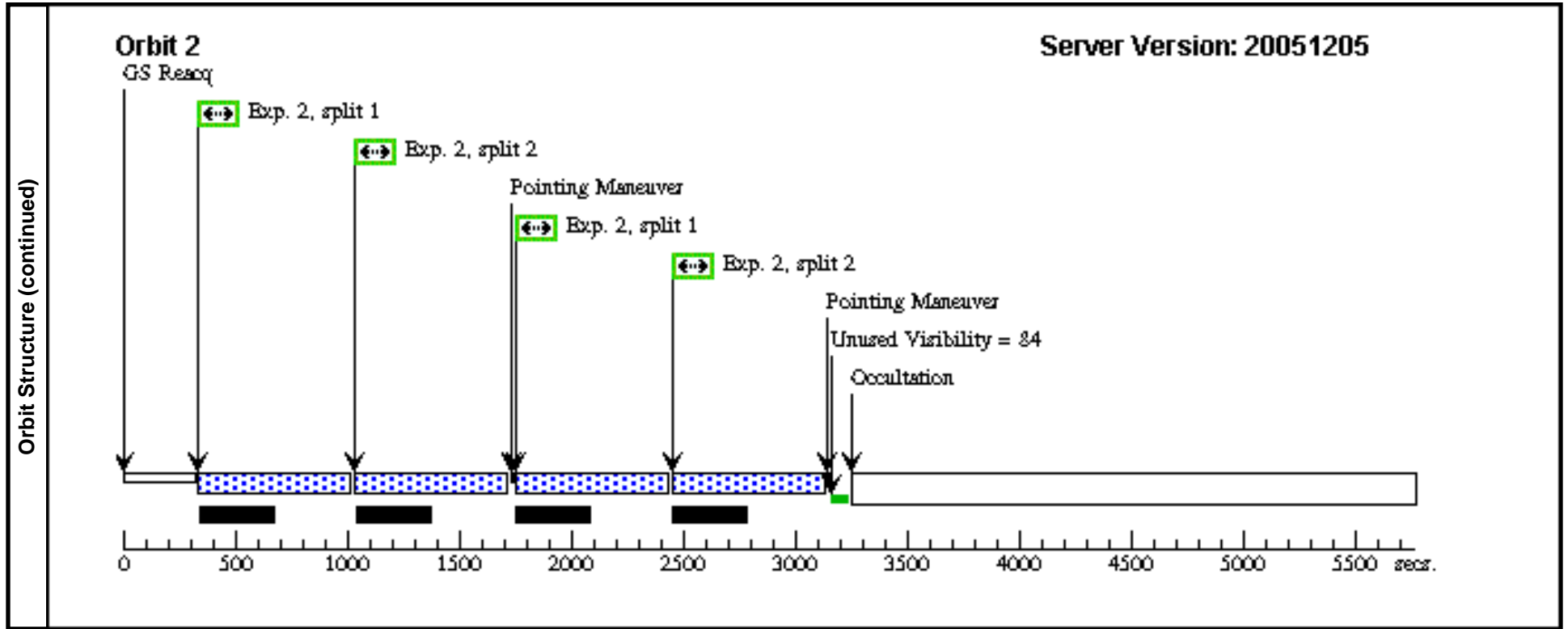
OBSERVING DESCRIPTION

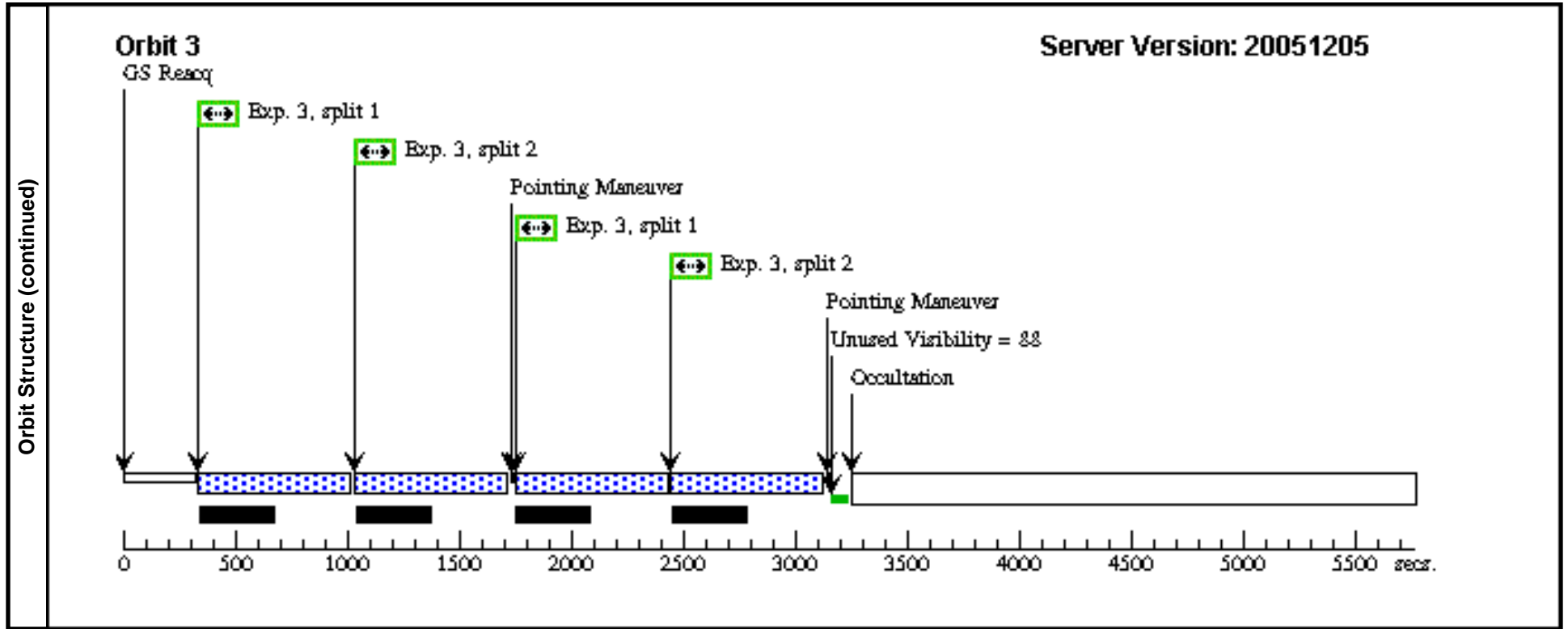
V and I-band observations of the halo population of red giant stars surrounding M66 and M96 are to be obtained.

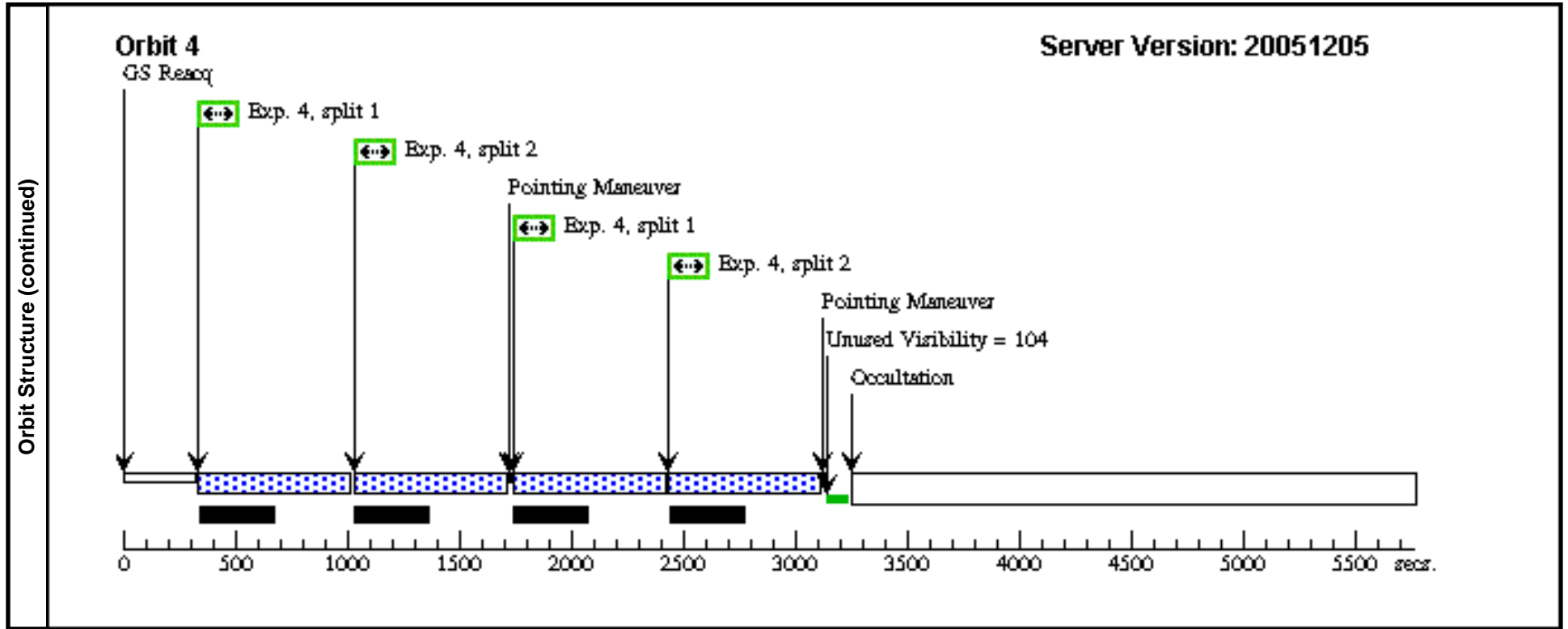
Visit		Proposal 10433, Visit 01 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE								
Patterns	#	Primary Pattern	Secondary Pattern				Exposures			
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true					(1), (2), (3), (4), (5)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	NGC3627 Alt Name1: M66	RA: 11 19 59.6000 (169.9983333d) Dec: +12 59 28.00 (12.99111d) Equinox: J2000 Plate Id: (?)		V=27.0+/-0.5	Coordinate Source: IMAGE_TIED_TO_GSC_FRAME				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) NGC3627	(1) NGC3627	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 1-1 (1)	1082.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2	(1) NGC3627	(1) NGC3627	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 2-2 (1)	1122.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[2]
	3	(1) NGC3627	(1) NGC3627	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 3-3 (1)	1120.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[3]
	4	(1) NGC3627	(1) NGC3627	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 4-4 (1)	1112.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[4]

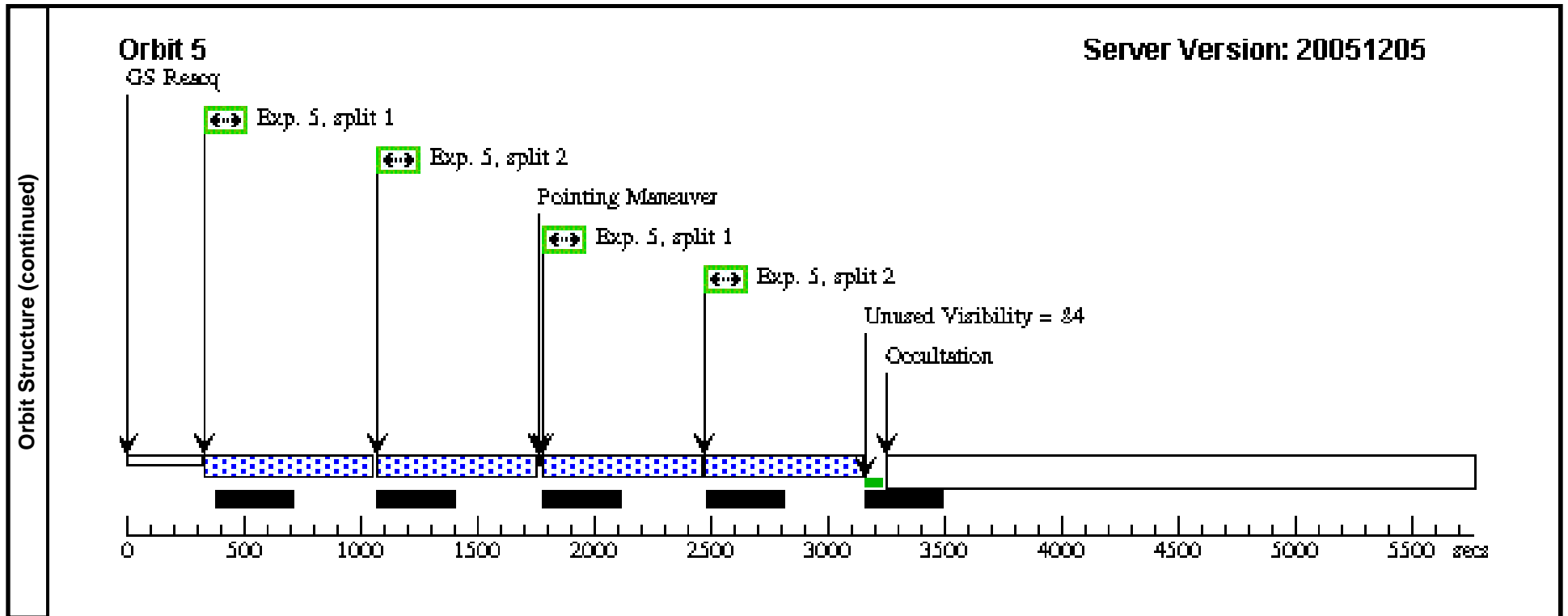
Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5		(1) NGC3627	ACS/WFC, ACCUM, WFC	F555W	CR-SPLIT=2; GAIN=2		Pattern 5-5 (1)	1112.0 Secs [=>(Pattern 1, Split 1)] [=>(Pattern 1, Split 2)] [=>(Pattern 2, Split 1)] [=>(Pattern 2, Split 2)]	[5]











Visit	Proposal 10433, Visit 02 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true		(1), (2), (3), (4), (5)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NGC3368 Alt Name1: M96	RA: 10 46 32.1000 (161.6337500d) Dec: +11 48 23.00 (11.80639d) Equinox: J2000 Plate Id: (?)		V=27.0+/-0.5	Coordinate Source: IMAGE_TIED_TO_GSC_FRAME				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NGC3368	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 1-1 (1)	1118.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2		(2) NGC3368	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 2-2 (1)	1150.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[2]
	3		(2) NGC3368	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 3-3 (1)	1148.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[3]
	4		(2) NGC3368	ACS/WFC, ACCUM, WFC	F814W	GAIN=2; CR-SPLIT=2		Pattern 4-4 (1)	1140.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[4]

Proposal 10433 - Visit 02 - The Cepheid PL-Z

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5		(2) NGC3368	ACS/WFC, ACCUM, WFC	F555W	CR-SPLIT=2; GAIN=2		Pattern 5-5 (1)	1140.0 Secs [=>(Pattern 1, Split 1)] [=>(Pattern 1, Split 2)] [=>(Pattern 2, Split 1)] [=>(Pattern 2, Split 2)]	[5]