



# 13010 - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binaries in the LMC

Cycle: 20, 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>
01	(1) OGLE-LMC-CEP-0227	WFC3/UVIS	1	03-Oct-2012 21:17:35.0	yes
02	(2) OGLE-LMC-CEP-1812 (3) LMC-SC9-230659	WFC3/UVIS	1	03-Oct-2012 21:17:55.0	yes
03	(4) LMC133.8-66 (5) LMC135.3-14680	WFC3/UVIS	1	03-Oct-2012 21:18:15.0	yes
04	(6) LMC119.7-26856 (7) LMC-SC10-1838	WFC3/UVIS	1	03-Oct-2012 21:18:33.0	yes
05	(8) LMC-SC7-432968 (9) LMC110.2-45043	WFC3/UVIS	1	03-Oct-2012 21:18:54.0	yes
06	(10) LMC162.5-138723 (11) LMC168.4-31120	WFC3/UVIS	1	03-Oct-2012 21:19:12.0	yes

6 Total Orbits Used

## **ABSTRACT**

Eclipsing binaries represent one of the most accurate distance measurement tools available. This is especially true for systems composed of late-type stars, for which a reliable surface brightness-color relationship is now at hand. We have discovered 31 G-type eclipsing binary systems in the LMC wading through 100,000 eclipsing systems catalogued by the OGLE project. We have also uncovered two rare and unique systems in which one of the two components is a Cepheid variable. We have collected near-IR photometry and high-resolution spectroscopy from the ground for all the new systems in order to derive orbital and stellar parameters, and distances. Recently, we published the results for the first of our systems, obtaining a distance modulus to the LMC of  $18.50 \pm 0.06$ . We also derived the dynamical mass of a Cepheid variable contained in one of our binaries with an unprecedented accuracy of 1%. We are now in a position to measure the distance to the LMC, the main anchor point of the extragalactic distance scale, with an accuracy of 1%, using the large number of binaries at our disposal. However, our photometric solutions for the eclipsing binaries assume that there is no blending with nearby companions. Therefore, in order to make full use of the very special stellar systems that we have discovered and obtain a very accurate distance to the LMC, we request multi-band, high spatial resolution WFC3 imaging of 11 of the best systems to check for the presence of companions and characterize their spectral energy distribution.

## **OBSERVING DESCRIPTION**

The program obtains images in 4 filters of single stellar targets (eclipsing binaries) in the LMC. The 512 pixel subarray is used in order to reduce readout times and observe two targets in single-orbit visits (the targets are separated by less than 1 degree). One of the visits observes a single target. A 2-point dithering is used. For the longer exposures (with filters F336W, F438W) we include a CR-SPLIT requirement to better handle cosmic ray events.

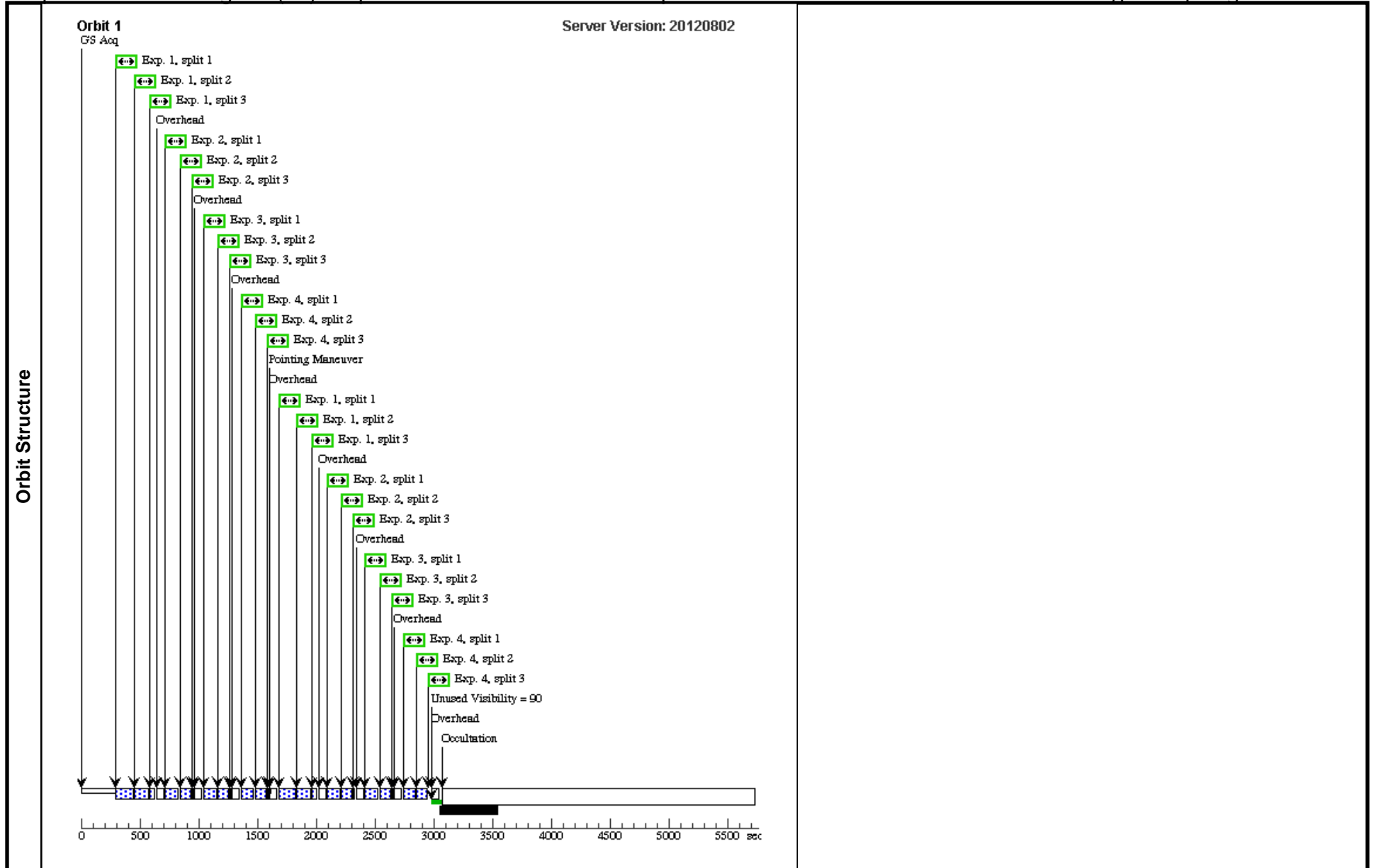
Proposal 13010 - Target 1 (01) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binaries in...

Thu Oct 04 01:19:25 GMT 2012

<b>Visit</b>	<b>Proposal 13010, Target 1 (01), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(1)	OGLE-LMC-CEP-0227	RA: 04 52 15.7000 (73.0654167d) Dec: -70 14 31.30 (-70.24203d) Equinox: J2000		V=15.3+/-0.1 Cepheid in binary	Reference Frame: ICRS

Proposal 13010 - Target 1 (01) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binaries in...

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) OGLE-LMC-CE P-0227	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F336W	CR-SPLIT=3		Pattern 1, Exps 1-4 in Target 1 (01) (1)	120 Secs	
									[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 1, Split 3)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 2, Split 3)]	[1]
	2		(1) OGLE-LMC-CE P-0227	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F438W	CR-SPLIT=3		Pattern 1, Exps 1-4 in Target 1 (01) (1)	30 Secs	
									[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 1, Split 3)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 2, Split 3)]	[1]
3		(1) OGLE-LMC-CE P-0227	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F555W	CR-SPLIT=3		Pattern 1, Exps 1-4 in Target 1 (01) (1)	30 Secs		
								[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 1, Split 3)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 2, Split 3)]	[1]	
4		(1) OGLE-LMC-CE P-0227	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F814W	CR-SPLIT=3		Pattern 1, Exps 1-4 in Target 1 (01) (1)	30 Secs		
								[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 1, Split 3)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 2, Split 3)]	[1]	



Proposal 13010 - Targets 2-3 (02) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

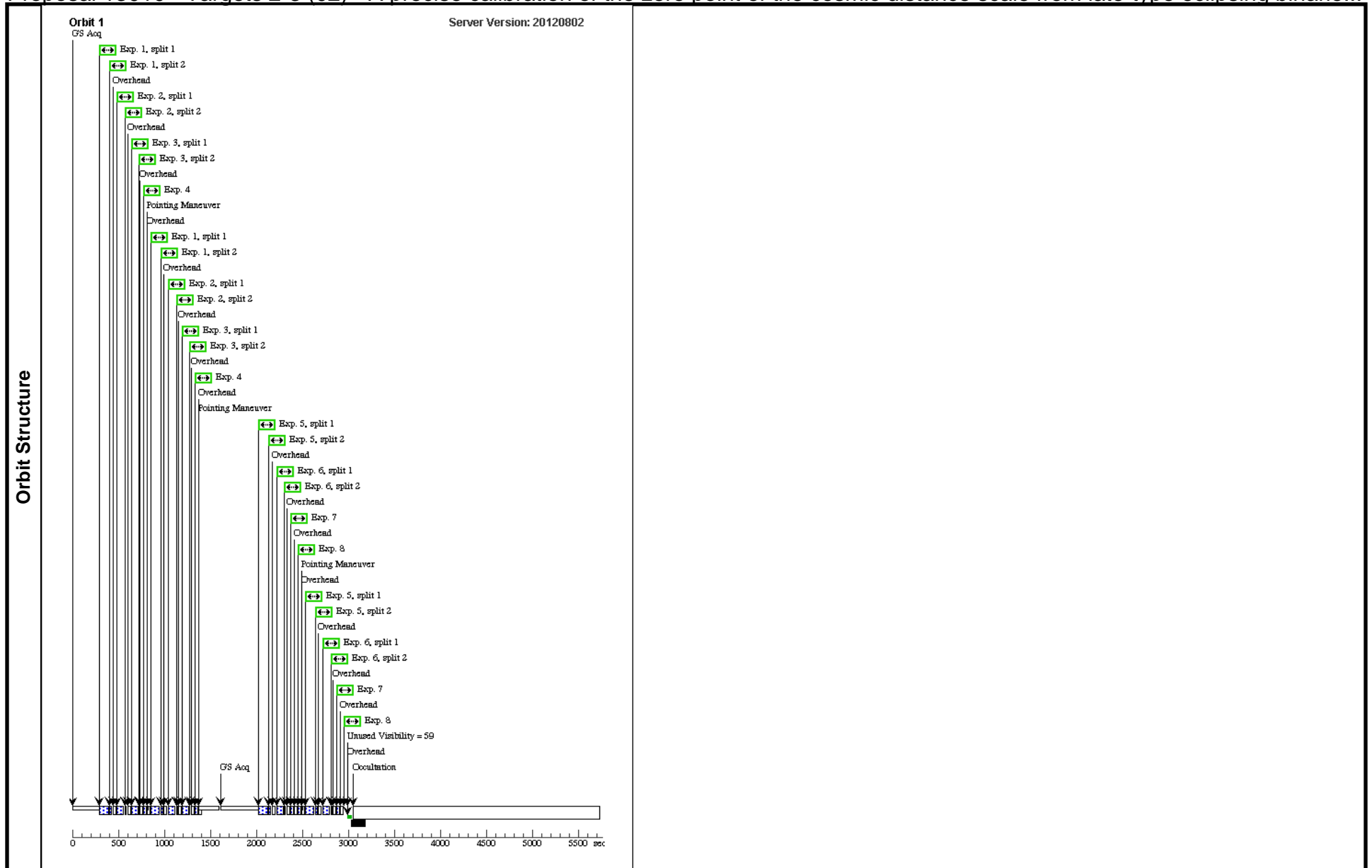
Thu Oct 04 01:19:27 GMT 2012

<b>Visit</b>	<b>Proposal 13010, Targets 2-3 (02), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4), (5-8)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(2)	OGLE-LMC-CEP-1812	RA: 05 23 7.7100 (80.7821250d) Dec: -69 33 49.90 (-69.56386d) Equinox: J2000		V=16.7+/-0.1 Cepheid in binary	Reference Frame: ICRS
	(3)	LMC-SC9-230659 Alt Name1: 2MASSJ05140595- 6915568	RA: 05 14 6.0400 (78.5251667d) Dec: -69 15 56.90 (-69.26581d) Equinox: J2000		V=16.6+/-0.1	Reference Frame: ICRS

Proposal 13010 - Targets 2-3 (02) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(2) OGLE-LMC-CE P-1812	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 1-4 in Targets 2-3 (02) (1)	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2	(2) OGLE-LMC-CE P-1812	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 1-4 in Targets 2-3 (02) (1)	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	3	(2) OGLE-LMC-CE P-1812	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	CR-SPLIT=2		Pattern 1, Exps 1-4 in Targets 2-3 (02) (1)	6 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	4	(2) OGLE-LMC-CE P-1812	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 1-4 in Targets 2-3 (02) (1)	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	(3) LMC-SC9-23065 9	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 5-8 in Targets 2-3 (02) (1)	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	6	(3) LMC-SC9-23065 9	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 5-8 in Targets 2-3 (02) (1)	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	7	(3) LMC-SC9-23065 9	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W			Pattern 1, Exps 5-8 in Targets 2-3 (02) (1)	6 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	(3) LMC-SC9-23065 9	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 5-8 in Targets 2-3 (02) (1)	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]

Proposal 13010 - Targets 2-3 (02) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...



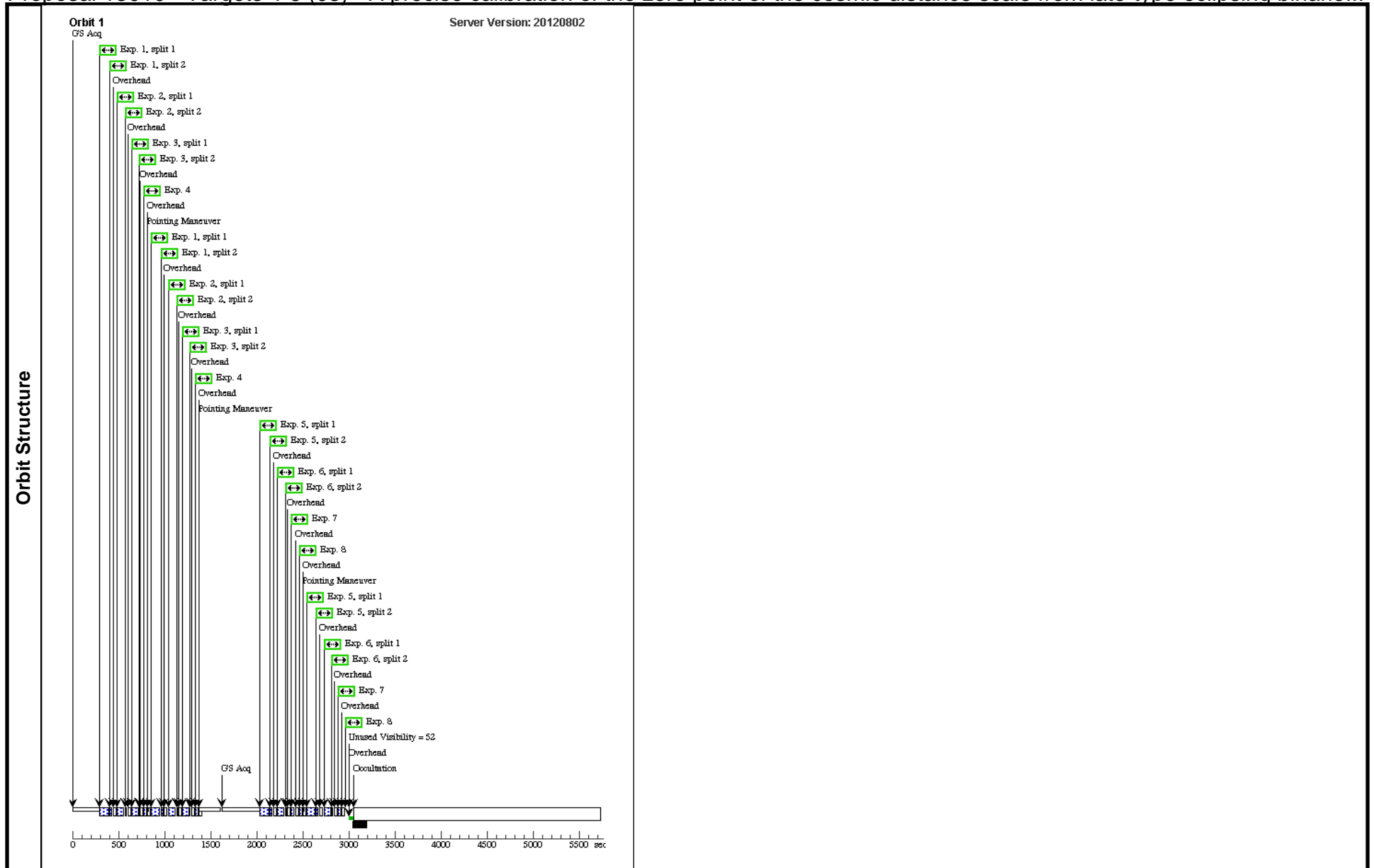
Proposal 13010 - Targets 4-5 (03) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

Thu Oct 04 01:19:30 GMT 2012

<b>Visit</b>	<b>Proposal 13010, Targets 4-5 (03), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4), (5-8)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(4)	LMC133.8-66	RA: 04 52 15.2800 (73.0636667d)		V=15.7+/-0.1	Reference Frame: ICRS
		Alt Name1: MACHO47.1884.17	Dec: -68 19 10.30 (-68.31953d) Equinox: J2000			
(5)	LMC135.3-14680	RA: 04 55 51.4800 (73.9645000d)		V=16.9+/-0.1	Reference Frame: ICRS	
	Alt Name1: 2MASSJ04555149- 6913479	Dec: -69 13 48.00 (-69.23000d) Equinox: J2000				

Proposal 13010 - Targets 4-5 (03) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(4) LMC133.8-66	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 1-4 in Targets 4-5 (03) (1)	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2	(4) LMC133.8-66	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 1-4 in Targets 4-5 (03) (1)	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	3	(4) LMC133.8-66	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	CR-SPLIT=2		Pattern 1, Exps 1-4 in Targets 4-5 (03) (1)	6 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	4	(4) LMC133.8-66	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 1-4 in Targets 4-5 (03) (1)	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	(5) LMC135.3-1468 0	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 5-8 in Targets 4-5 (03) (1)	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	6	(5) LMC135.3-1468 0	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 5-8 in Targets 4-5 (03) (1)	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	7	(5) LMC135.3-1468 0	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W			Pattern 1, Exps 5-8 in Targets 4-5 (03) (1)	6 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	(5) LMC135.3-1468 0	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 5-8 in Targets 4-5 (03) (1)	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]



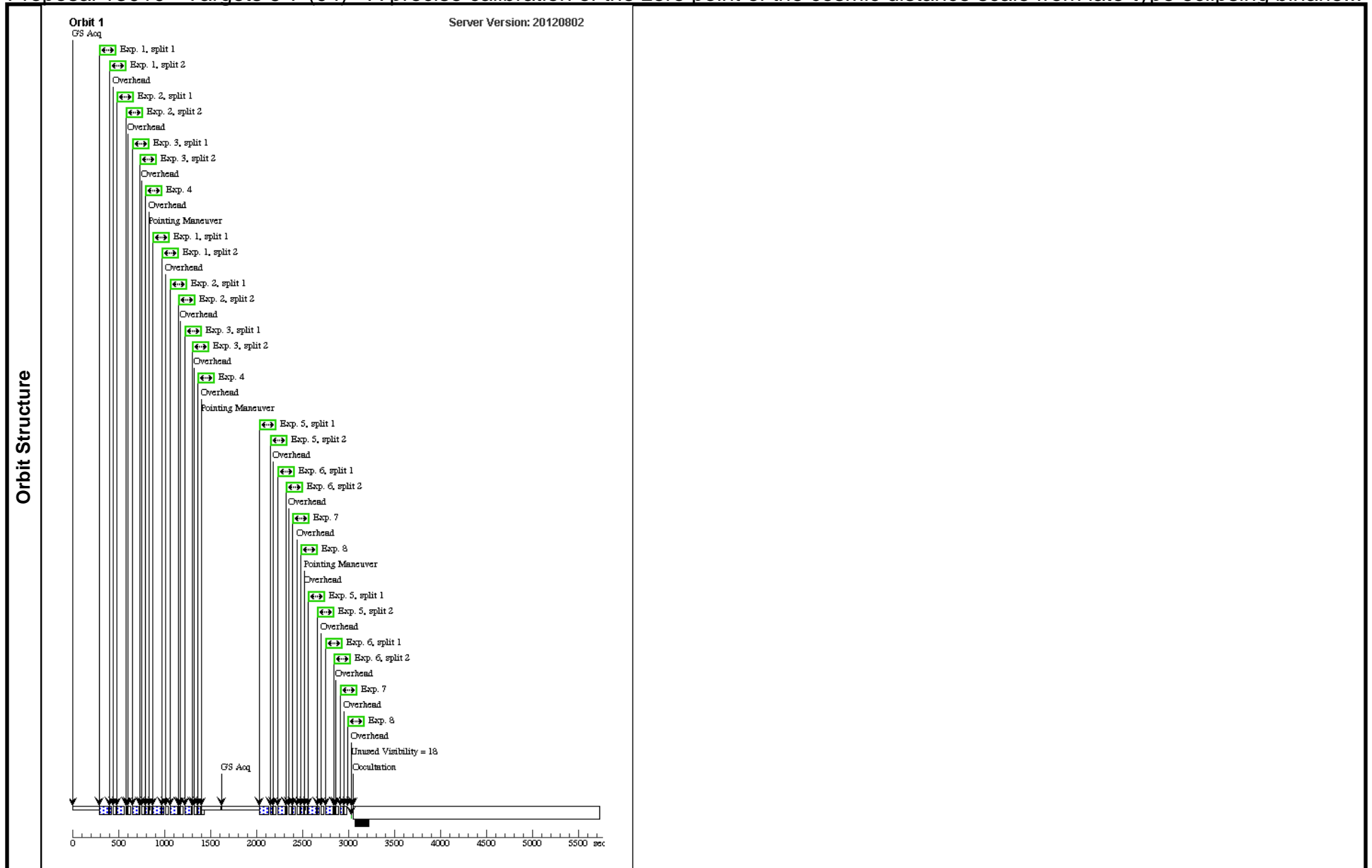
Proposal 13010 - Targets 6-7 (04) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

Thu Oct 04 01:19:31 GMT 2012

<b>Visit</b>	<b>Proposal 13010, Targets 6-7 (04), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4), (5-8)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(6)	LMC119.7-26856	RA: 05 04 32.8700 (76.1369583d)		V=15.4+/-0.1	Reference Frame: ICRS
		Alt Name1: 2MASSJ05043288- 6920509	Dec: -69 20 51.00 (-69.34750d) Equinox: J2000			
(7)	LMC-SC10-1838	RA: 05 10 19.6400 (77.5818333d)		V=16.6+/-0.1	Reference Frame: ICRS	
	Alt Name1: 2MASSJ05101965- 6858120	Dec: -68 58 12.20 (-68.97006d) Equinox: J2000				

Proposal 13010 - Targets 6-7 (04) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(6) LMC119.7-2685 6	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 1-4 i n Targets 6-7 (04) (1 )	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2	(6) LMC119.7-2685 6	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 1-4 i n Targets 6-7 (04) (1 )	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	3	(6) LMC119.7-2685 6	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	CR-SPLIT=2		Pattern 1, Exps 1-4 i n Targets 6-7 (04) (1 )	6 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	4	(6) LMC119.7-2685 6	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 1-4 i n Targets 6-7 (04) (1 )	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	(7) LMC-SC10-1838	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 5-8 i n Targets 6-7 (04) (1 )	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	6	(7) LMC-SC10-1838	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 5-8 i n Targets 6-7 (04) (1 )	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	7	(7) LMC-SC10-1838	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W			Pattern 1, Exps 5-8 i n Targets 6-7 (04) (1 )	6 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	(7) LMC-SC10-1838	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 5-8 i n Targets 6-7 (04) (1 )	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]



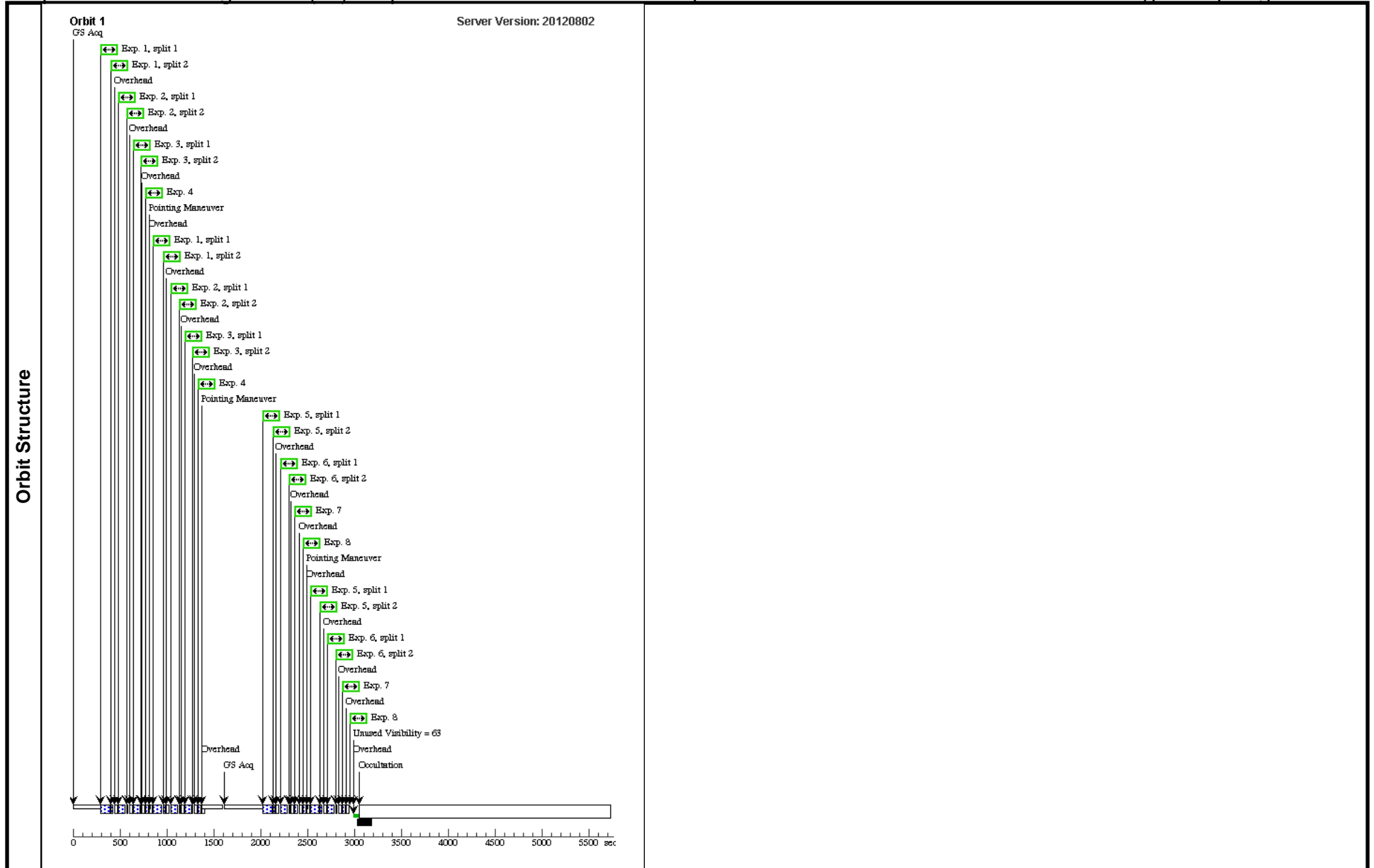
Proposal 13010 - Targets 8-9 (05) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

Thu Oct 04 01:19:33 GMT 2012

<b>Visit</b>	<b>Proposal 13010, Targets 8-9 (05), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4), (5-8)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(8)	LMC-SC7-432968	RA: 05 19 53.8100 (79.9742083d)		V=17.4	Reference Frame: ICRS
		Alt Name1: 2MASSJ05195369- 6917204	Dec: -69 17 20.50 (-69.28903d) Equinox: J2000			
(9)	LMC110.2-45043	RA: 05 14 1.8900 (78.5078750d)		V=16.5+/-0.1	Reference Frame: ICRS	
	Alt Name1: 2MASSJ05140190- 6841184	Dec: -68 41 18.20 (-68.68839d) Equinox: J2000				

Proposal 13010 - Targets 8-9 (05) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binarie...

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(8) LMC-SC7-43296 8	(8) LMC-SC7-43296 8	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 1-4 in Targets 8-9 (05) (1 )	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2	(8) LMC-SC7-43296 8	(8) LMC-SC7-43296 8	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 1-4 in Targets 8-9 (05) (1 )	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	3	(8) LMC-SC7-43296 8	(8) LMC-SC7-43296 8	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	CR-SPLIT=2		Pattern 1, Exps 1-4 in Targets 8-9 (05) (1 )	6 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	4	(8) LMC-SC7-43296 8	(8) LMC-SC7-43296 8	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 1-4 in Targets 8-9 (05) (1 )	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	(9) LMC110.2-4504 3	(9) LMC110.2-4504 3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 5-8 in Targets 8-9 (05) (1 )	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	6	(9) LMC110.2-4504 3	(9) LMC110.2-4504 3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 5-8 in Targets 8-9 (05) (1 )	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	7	(9) LMC110.2-4504 3	(9) LMC110.2-4504 3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W			Pattern 1, Exps 5-8 in Targets 8-9 (05) (1 )	6 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	(9) LMC110.2-4504 3	(9) LMC110.2-4504 3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 5-8 in Targets 8-9 (05) (1 )	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]



Proposal 13010 - Targets 10-11 (06) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binar...

Thu Oct 04 01:19:35 GMT 2012

<b>Visit</b>	<b>Proposal 13010, Targets 10-11 (06), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-4), (5-8)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(10)	LMC162.5-138723	RA: 05 25 25.6600 (81.3569167d)		V=16.9+/-0.1	Reference Frame: ICRS
		Alt Name1: 2MASSJ05252555- 6933044	Dec: -69 33 4.50 (-69.55125d) Equinox: J2000			
(11)	LMC168.4-31120	RA: 05 32 53.0600 (83.2210833d)		V=17.1+/-0.1	Reference Frame: ICRS	
	Alt Name1: 2MASSJ05325304- 6859123	Dec: -68 59 12.30 (-68.98675d) Equinox: J2000				

Proposal 13010 - Targets 10-11 (06) - A precise calibration of the zero point of the cosmic distance scale from late-type eclipsing binar...

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(10) LMC162.5-138 723	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2; FLASH=12		Pattern 1, Exps 1-4 i n Targets 10-11 (06) (1)	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	2	(10) LMC162.5-138 723	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 1-4 i n Targets 10-11 (06) (1)	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	3	(10) LMC162.5-138 723	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	CR-SPLIT=2		Pattern 1, Exps 1-4 i n Targets 10-11 (06) (1)	6 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	4	(10) LMC162.5-138 723	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 1-4 i n Targets 10-11 (06) (1)	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	(11) LMC168.4-311 20	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=2		Pattern 1, Exps 5-8 i n Targets 10-11 (06) (1)	40 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	6	(11) LMC168.4-311 20	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=2		Pattern 1, Exps 5-8 i n Targets 10-11 (06) (1)	20 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)]	[1]
	7	(11) LMC168.4-311 20	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W			Pattern 1, Exps 5-8 i n Targets 10-11 (06) (1)	6 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	(11) LMC168.4-311 20	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W			Pattern 1, Exps 5-8 i n Targets 10-11 (06) (1)	10 Secs [==>(Pattern 1)] [==>(Pattern 2)]	[1]

