



14657 - The wind variability in oscillating massive stars

Cycle: 24, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Lida Oskinova (PI) (ESA Member) (Contact)	Universitat Potsdam	lida@astro.physik.uni-potsdam.de
Prof. Richard Ignace (CoI) (AdminUSPI)	East Tennessee State University	ignace@etsu.edu
Luis Balona (CoI)	South African Astronomical Observatory	lab@sao.ac.za
Dr. Derck L. Massa (CoI)	Space Science Institute	dmassa@spacescience.org
Dr. Raman K. Prinja (CoI) (ESA Member)	University College London	rkp@star.ucl.ac.uk
Dr. Wolf-Rainer Hamann (CoI) (ESA Member)	Universitat Potsdam	wrh@astro.physik.uni-potsdam.de
Dr. Helge Todt (CoI) (ESA Member)	Universitat Potsdam	htodt@astro.physik.uni-potsdam.de
Dr. David Huenemoerder (CoI)	Massachusetts Institute of Technology	dph@space.mit.edu
Dr. Svetlana Hubrig (CoI) (ESA Member)	Leibniz-Institut für Astrophysik Potsdam (AIP)	shubrig@aip.de

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) -BET-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:11.0	yes
02	(1) -BET-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:12.0	yes
03	(1) -BET-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:14.0	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>
04	(1) -BET-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:15.0	yes
05	(1) -BET-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:17.0	yes
06	(1) -BET-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:18.0	yes
07	(2) -KSI1-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:19.0	yes
08	(2) -KSI1-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:21.0	yes
09	(2) -KSI1-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:22.0	yes
10	(2) -KSI1-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:24.0	yes
11	(2) -KSI1-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:25.0	yes
12	(2) -KSI1-CMA	STIS/CCD STIS/FUV-MAMA	1	30-Jan-2017 21:05:27.0	yes

12 Total Orbits Used

ABSTRACT

The majority of massive stars have the spectral type B and pulsate. Their interiors and photospheres have been extensively studied over decades by means of high-precision photometry and spectroscopy in the optical. However, very little is known about the physics of their stellar winds, and in particular about the connections between stellar pulsations and winds. We propose to close this gap and obtain monitoring of important UV lines formed in wind of two representative massive stars over their pulsation period.

This proposal takes advantage of the unique capabilities of HST/STIS for UV spectroscopy. We focus on two well studied beta Cephei variables that have similar stellar parameters, but different magnetic field strengths and pulsational behavior. From spectral monitoring of beta CMA and xi1

CMa we will study how wind ionization, mass flux, and wind velocity change over the stellar pulsation cycle. We already secured complementary observations in X-ray and optical. Unexpectedly, we discovered that one target, $\xi 1$ CMa, pulsates in X-rays in phase with the optical oscillations.

Our state-of-the-art non-LTE expanding stellar atmospheres and 3-D stellar wind simulations will allow thorough exploitation of the STIS spectra. As a result, we will empirically establish how changes in stellar effective temperature and radius lead to the changes in the stellar wind properties. This will provide new and important insights for the theoretical understanding of stellar wind driving in massive stars.

OBSERVING DESCRIPTION

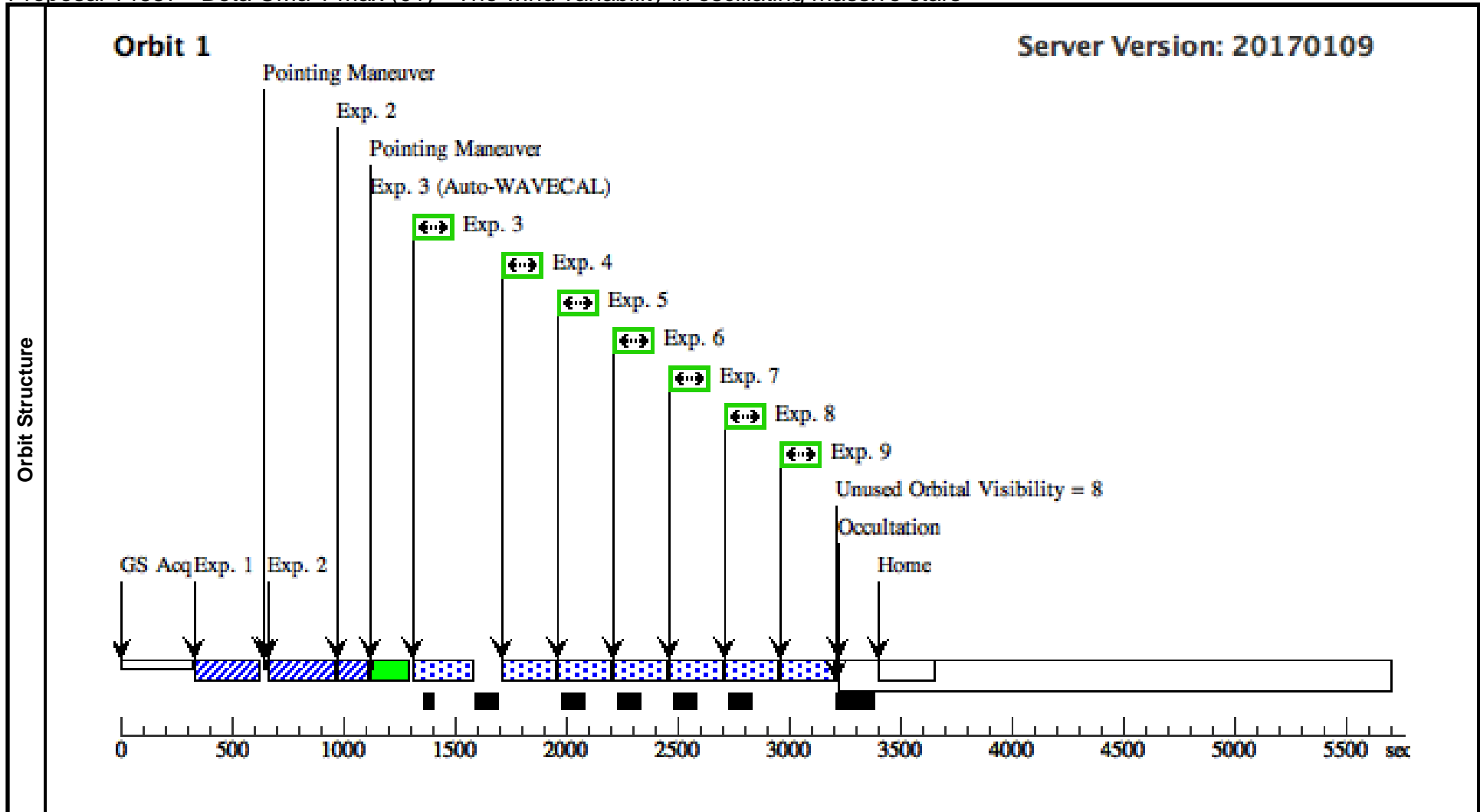
We observe two pulsating B-type stars. For each target, the goal is to obtain the STIS spectra at the maximum of the optical light curve, and at the minimum of the light curve. Each HST orbit covers about 0.2 in phase. We will observe three maxima and three minima for each target, i.e. 6 observations per target. As we have 2 targets, all together this is 12 orbits.

The pulsation periods of our targets are ~5hr and ~6 hr. If possible, the six observations should be best done consecutively, using the following scheme: phase 1, phase 2, phase 1, phase 2, phase 1, phase 2, where phase 1 corresponds to either the maximum (phase = 0.1 - 0.3) or minimum light (phase = 0.6 to 0.8) and phase 2 corresponds to either the minimum or the maximum light, i.e., the opposite of phase 1. This means that once the first HST observation is executed, there must be a gap of ~2.5 hr, before the next HST orbit. While the observations are phase constrained, the date of the observation of the first phase is unimportant.

Proposal 14657 - Beta CMa 1 max (01) - The wind variability in oscillating massive stars

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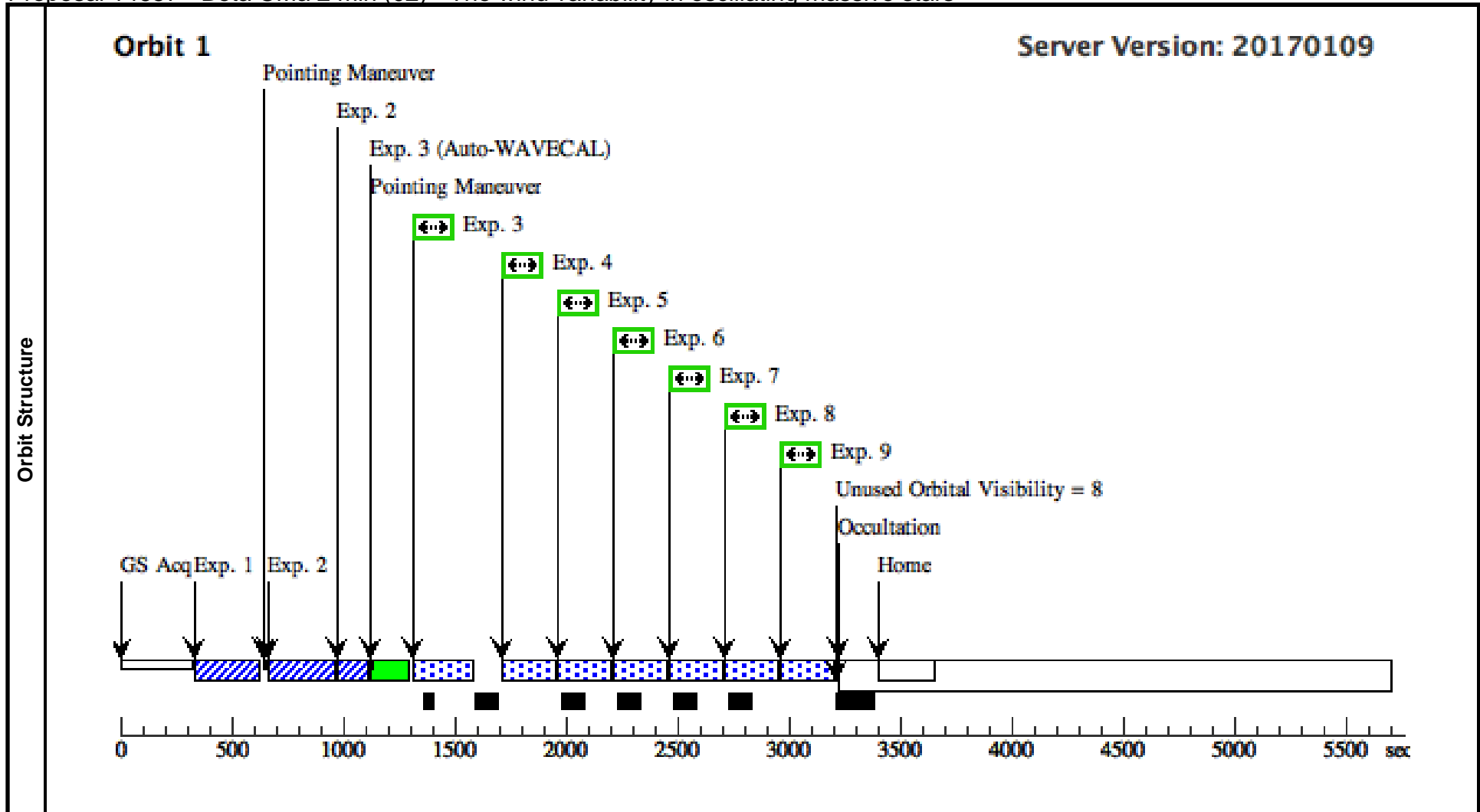
Visit	Proposal 14657, Beta CMa 1 max (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: SEQ 01.02.03.04.05.06 WITHIN 1.1 D									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	-BET-CMA	RA: 06 22 41.9853 (95.6749387d) Dec: -17 57 21.31 (-17.95592d) Equinox: J2000	Proper Motion RA: -3.23 mas/yr Proper Motion Dec: -0.78 mas/yr Epoch of Position: 2000	V=1.97	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	beta CMa 1 ACQ (STIS.ta.825 227)	(1) -BET-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	beta CMa 1 ACQ peak (STIS.ta.825 229)	(1) -BET-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	4	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	5	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	6	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	7	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	8	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	9	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]



Proposal 14657 - Beta CMa 2 min (02) - The wind variability in oscillating massive stars

Tue Jan 31 02:05:28 GMT 2017

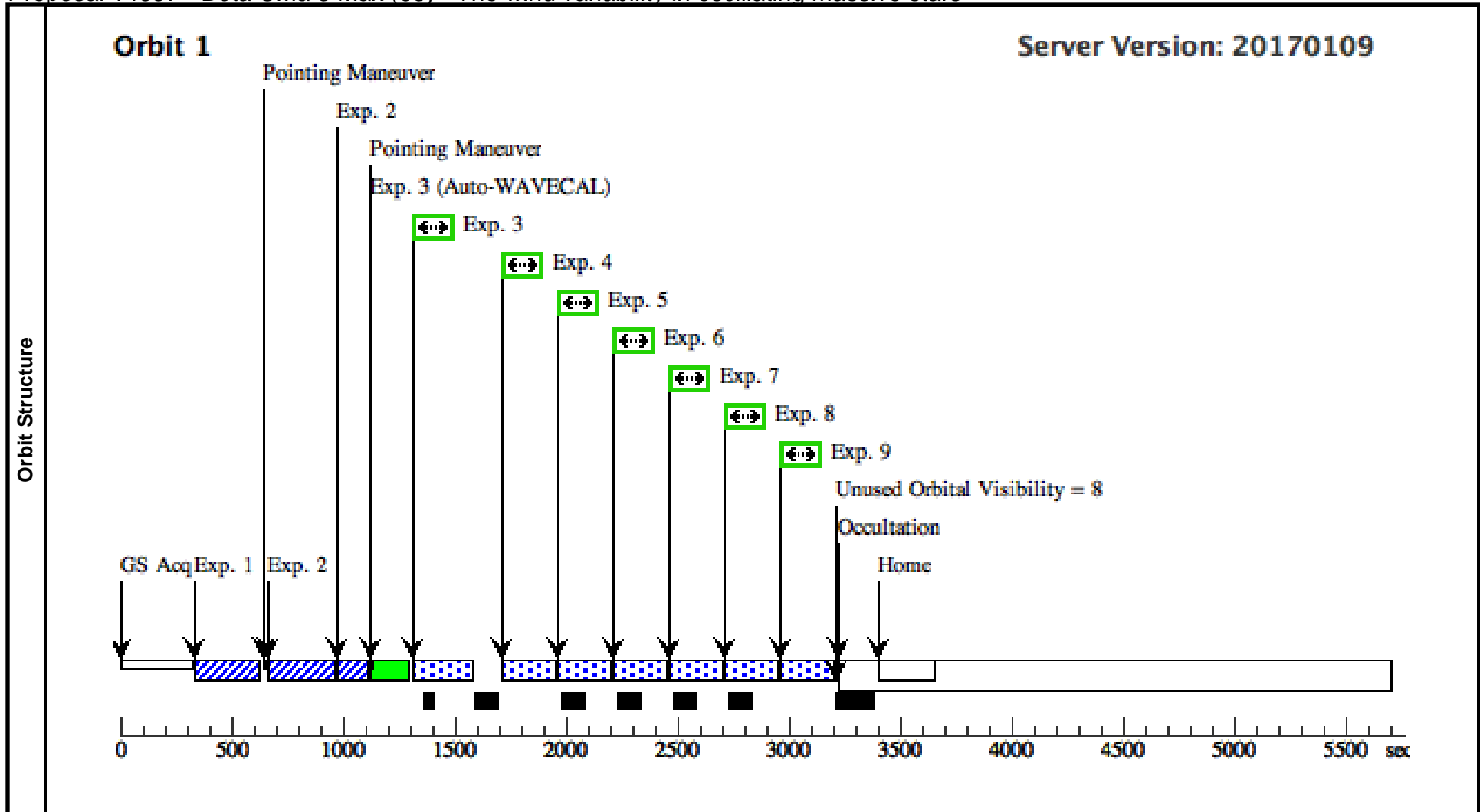
Visit	Proposal 14657, Beta CMa 2 min (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 01 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	-BET-CMA	RA: 06 22 41.9853 (95.6749387d) Dec: -17 57 21.31 (-17.95592d) Equinox: J2000	Proper Motion RA: -3.23 mas/yr Proper Motion Dec: -0.78 mas/yr Epoch of Position: 2000	V=1.97	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	beta CMa 2 ACQ	(1) -BET-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	beta CMa 1 ACQ peak (STIS.ta.825 229)	(1) -BET-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	4	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	5	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	6	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	7	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	8	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	9	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]



Proposal 14657 - Beta CMa 3 max (03) - The wind variability in oscillating massive stars

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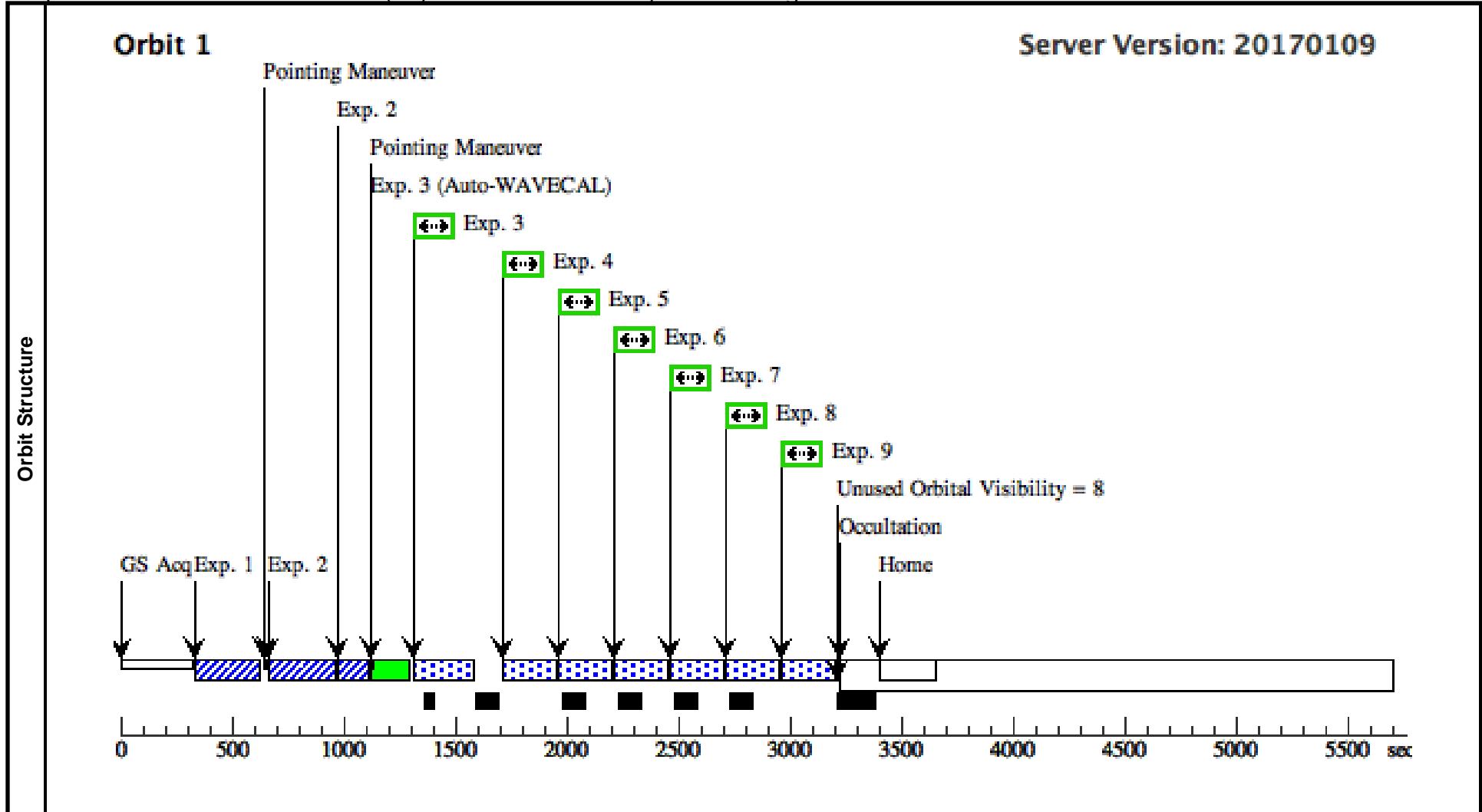
Visit	Proposal 14657, Beta CMa 3 max (03), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 02 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	-BET-CMA	RA: 06 22 41.9853 (95.6749387d) Dec: -17 57 21.31 (-17.95592d) Equinox: J2000	Proper Motion RA: -3.23 mas/yr Proper Motion Dec: -0.78 mas/yr Epoch of Position: 2000	V=1.97	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	beta CMa 1 ACQ	(1) -BET-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	beta CMa 1 ACQ peak (STIS.ta.825 229)	(1) -BET-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	4	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	5	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	6	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	7	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	8	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	9	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]



Proposal 14657 - Beta CMa 4 min (04) - The wind variability in oscillating massive stars

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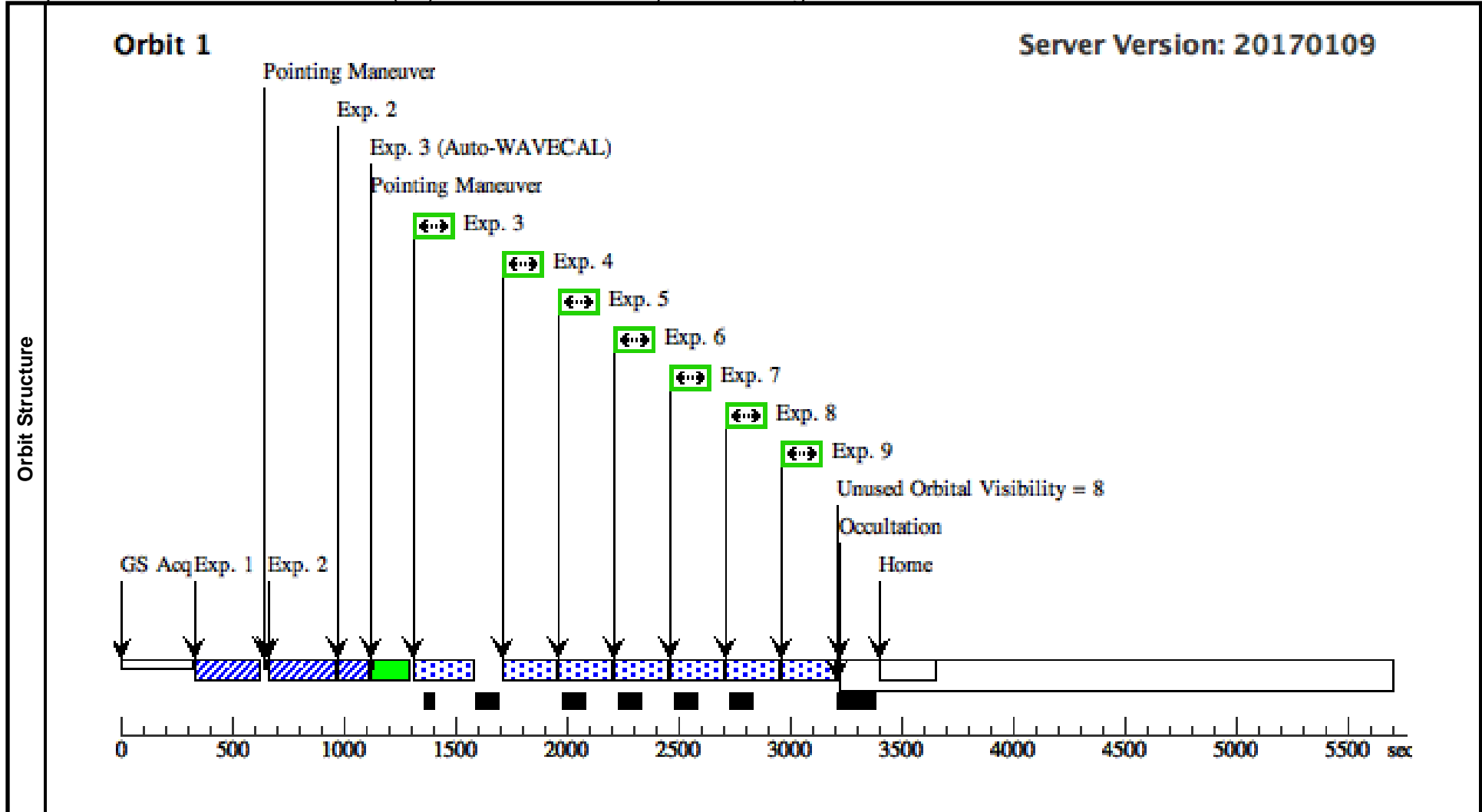
Visit	Proposal 14657, Beta CMa 4 min (04), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 03 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	-BET-CMA	RA: 06 22 41.9853 (95.6749387d) Dec: -17 57 21.31 (-17.95592d) Equinox: J2000	Proper Motion RA: -3.23 mas/yr Proper Motion Dec: -0.78 mas/yr Epoch of Position: 2000	V=1.97	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	beta CMa 2 ACQ	(1) -BET-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	beta CMa 1 ACQ peak (STIS.ta.825 229)	(1) -BET-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	4	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	5	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	6	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	7	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	8	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	9	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]



Proposal 14657 - Beta CMa 5 max (05) - The wind variability in oscillating massive stars

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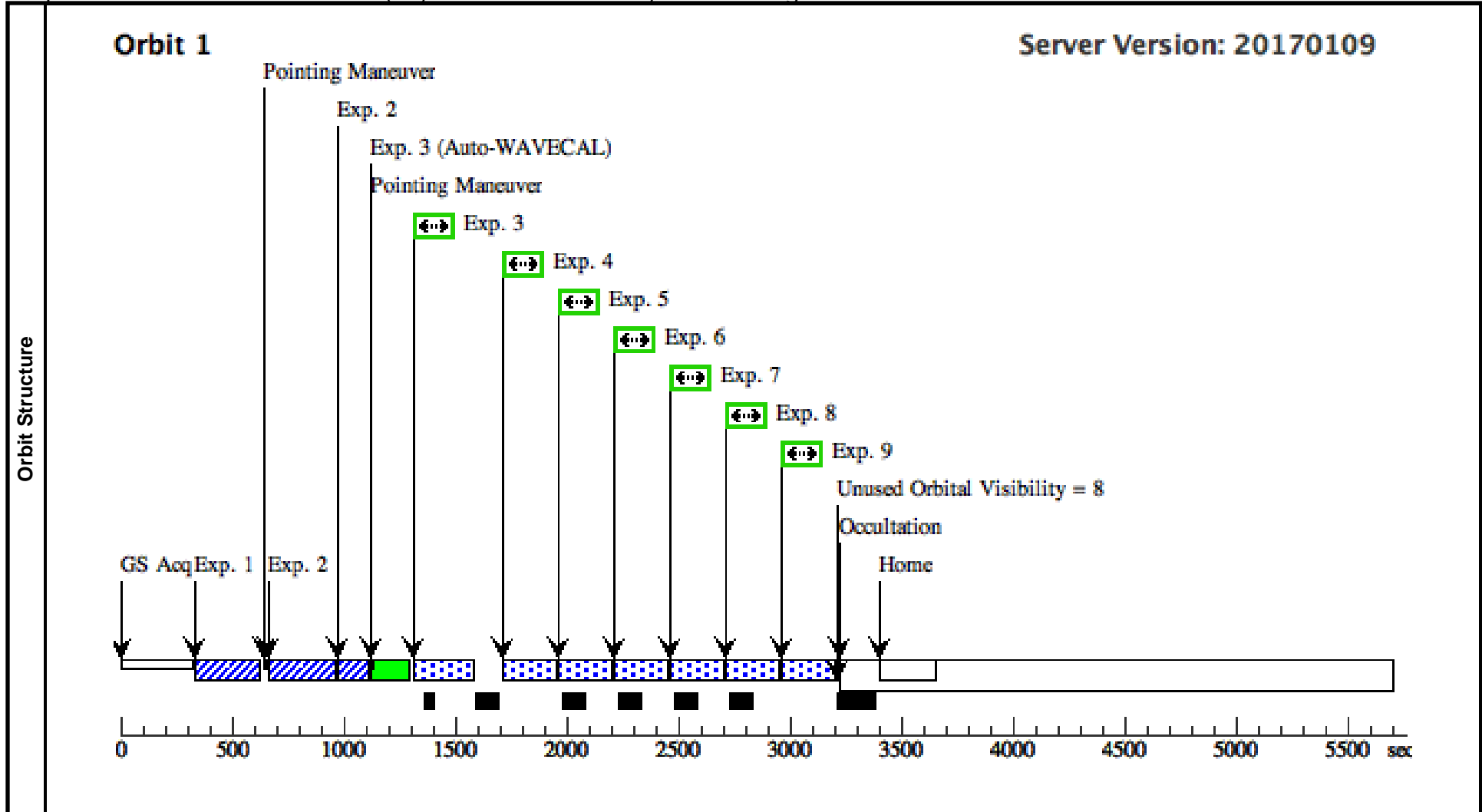
Visit	Proposal 14657, Beta CMa 5 max (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 04 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	-BET-CMA	RA: 06 22 41.9853 (95.6749387d) Dec: -17 57 21.31 (-17.95592d) Equinox: J2000	Proper Motion RA: -3.23 mas/yr Proper Motion Dec: -0.78 mas/yr Epoch of Position: 2000	V=1.97	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	beta CMa 1 ACQ	(1) -BET-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	beta CMa 1 ACQ peak (STIS.ta.825 229)	(1) -BET-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	4	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	5	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	6	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	7	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	8	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	9	(824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]



Proposal 14657 - Beta CMa 6 min (06) - The wind variability in oscillating massive stars

Tue Jan 31 02:05:29 GMT 2017

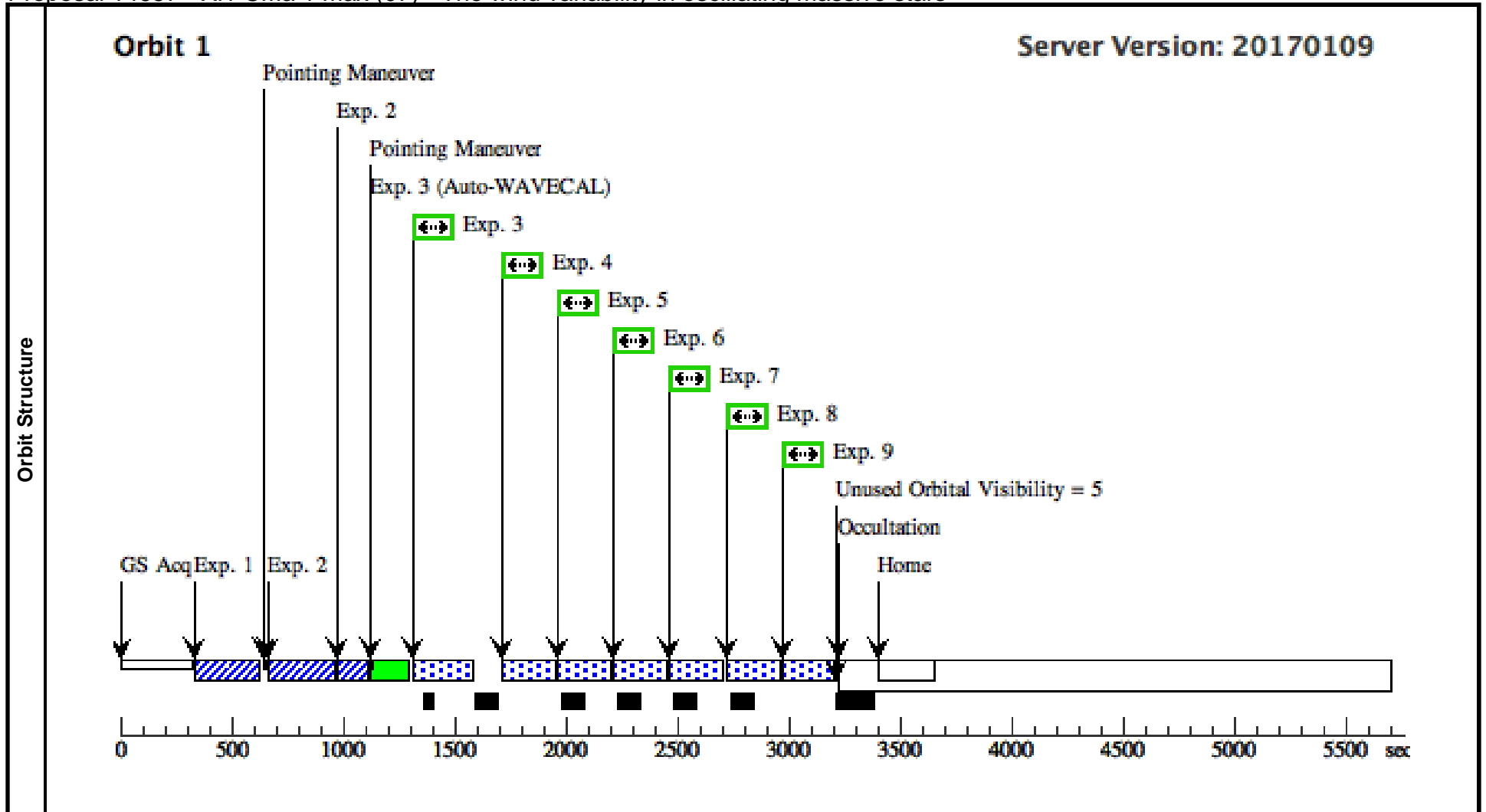
Visit	Proposal 14657, Beta CMa 6 min (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 05 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	-BET-CMA	RA: 06 22 41.9853 (95.6749387d) Dec: -17 57 21.31 (-17.95592d) Equinox: J2000	Proper Motion RA: -3.23 mas/yr Proper Motion Dec: -0.78 mas/yr Epoch of Position: 2000	V=1.97	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	beta CMa 2 ACQ	(1) -BET-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	beta CMa 1 ACQ peak (STIS.ta.825 229)	(1) -BET-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	4	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	5	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	6	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	7	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	8	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]
	9	beta CMa m in (824542)	(1) -BET-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (226 Secs) [==>226.0 Secs]	[1]



Proposal 14657 - Xi1 CMa 1 max (07) - The wind variability in oscillating massive stars

Tue Jan 31 02:05:29 GMT 2017

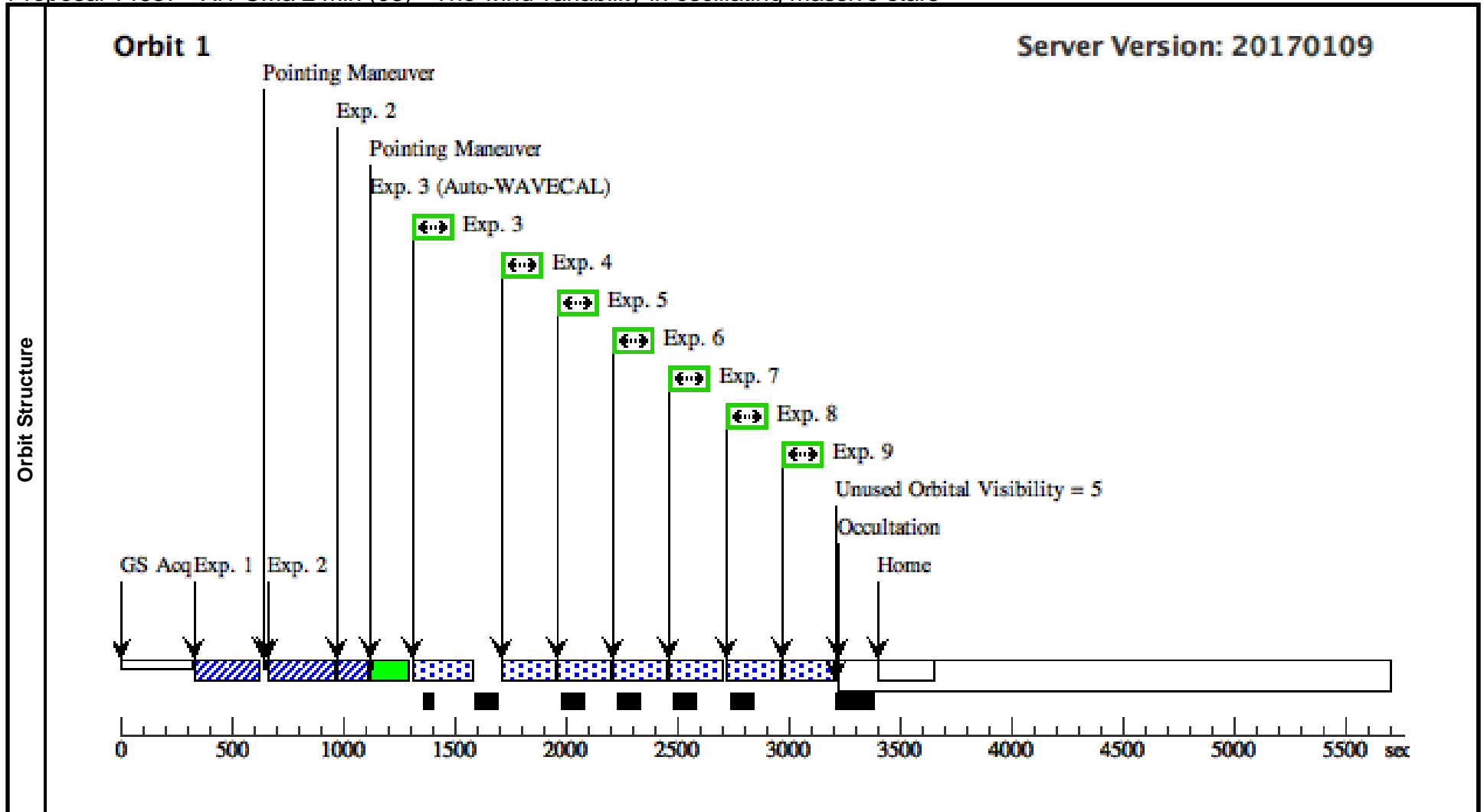
Visit	Proposal 14657, Xi1 CMa 1 max (07), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: SEQ 07,08,09,10,11,12 WITHIN 20 H									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	-KS11-CMA	RA: 06 31 51.3664 (97.9640267d) Dec: -23 25 6.32 (-23.41842d) Equinox: J2000	Proper Motion RA: -2.91 mas/yr Proper Motion Dec: 6.22 mas/yr Epoch of Position: 2000	V=4.33	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Xi1 CMa 1 ACQ (STIS.ta.825 238)	(2) -KS11-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	Xi1 CMa 1 ACQ peak (STIS.ta.825 240)	(2) -KS11-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(STIS.sp.82 5244)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	4	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	5	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	6	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	7	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	8	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	9	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				290 Secs (218 Secs) [==>218.0 Secs]	[1]



Proposal 14657 - Xi1 CMa 2 min (08) - The wind variability in oscillating massive stars

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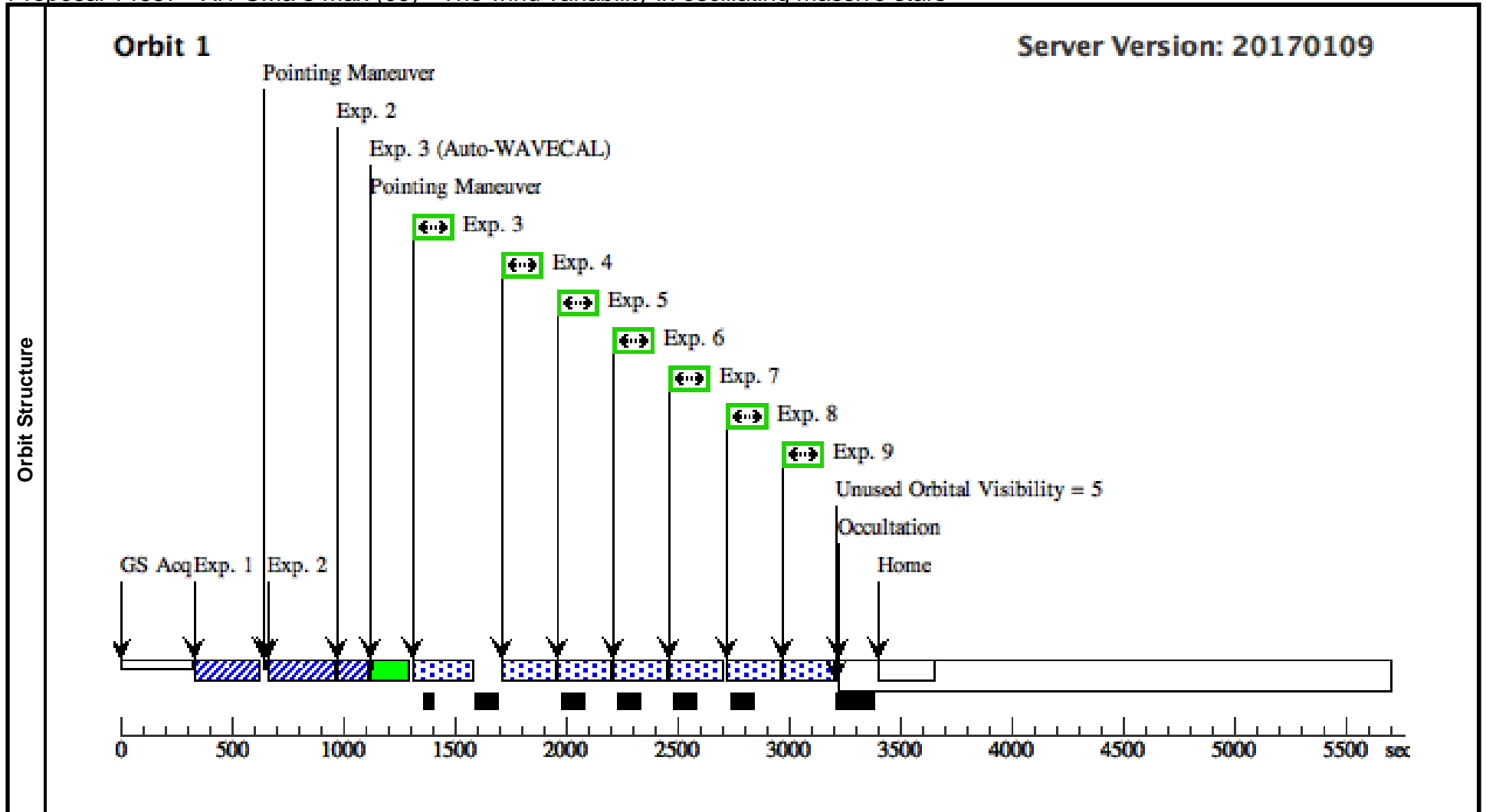
Visit	Proposal 14657, Xi1 CMa 2 min (08), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 07 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	-KS11-CMA	RA: 06 31 51.3664 (97.9640267d) Dec: -23 25 6.32 (-23.41842d) Equinox: J2000	Proper Motion RA: -2.91 mas/yr Proper Motion Dec: 6.22 mas/yr Epoch of Position: 2000	V=4.33	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Xi1 CMa 2 ACQ	(2) -KS11-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	Xi1 CMa 2 ACQ peak (STIS.ta.825 240)	(2) -KS11-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	4	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	5	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	6	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	7	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	8	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	9	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				290 Secs (218 Secs) [==>218.0 Secs]	[1]



Proposal 14657 - Xi1 CMa 3 max (09) - The wind variability in oscillating massive stars

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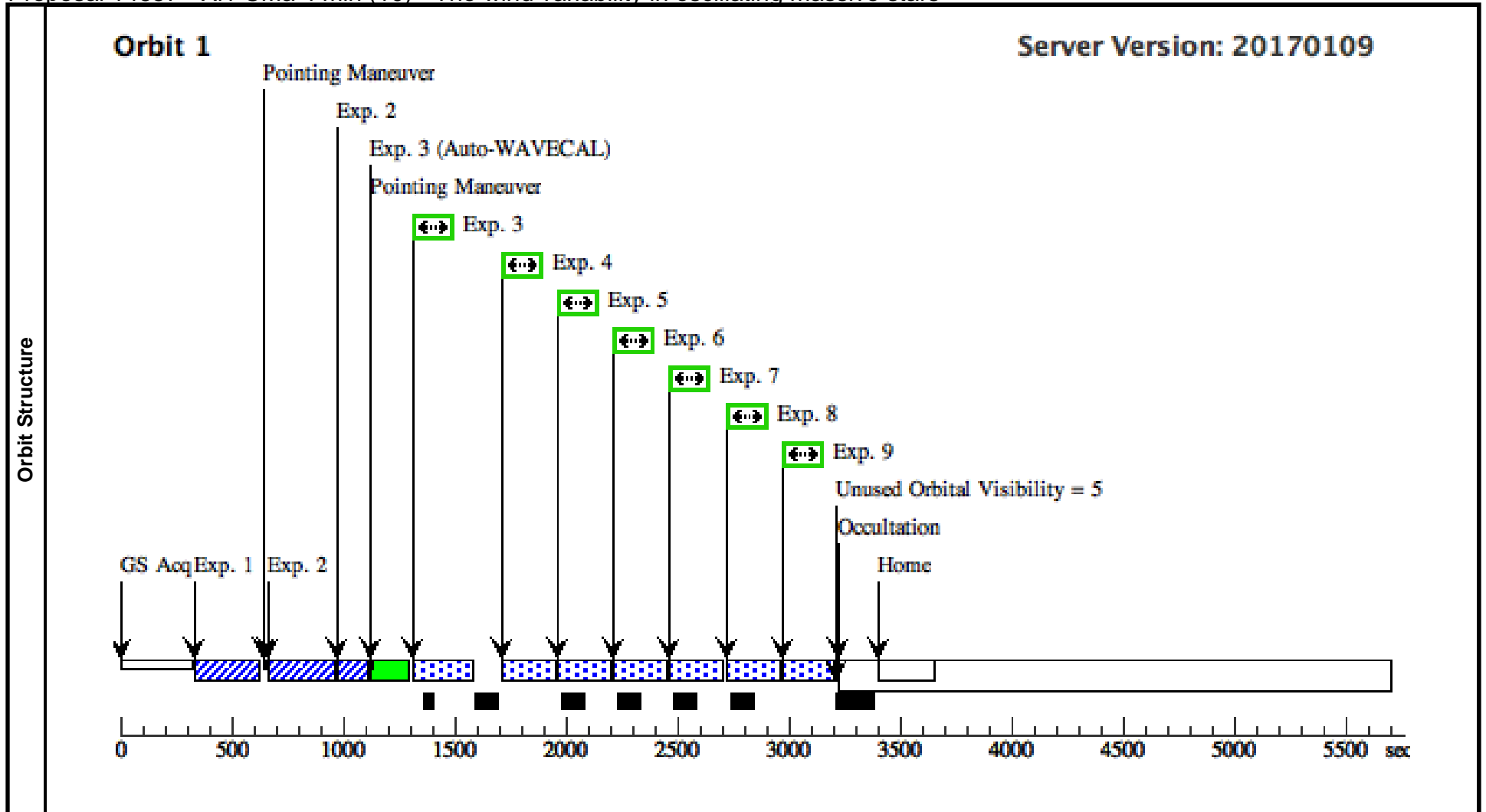
Visit	Proposal 14657, Xi1 CMa 3 max (09), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 08 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	-KS11-CMA	RA: 06 31 51.3664 (97.9640267d) Dec: -23 25 6.32 (-23.41842d) Equinox: J2000	Proper Motion RA: -2.91 mas/yr Proper Motion Dec: 6.22 mas/yr Epoch of Position: 2000	V=4.33	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Xi1 CMa 3 ACQ	(2) -KS11-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	Xi1 CMa 3 ACQ peak (STIS.ta.825 240)	(2) -KS11-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	4	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	5	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	6	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	7	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	8	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	9	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				290 Secs (218 Secs) [==>218.0 Secs]	[1]



Proposal 14657 - Xi1 CMa 4 min (10) - The wind variability in oscillating massive stars

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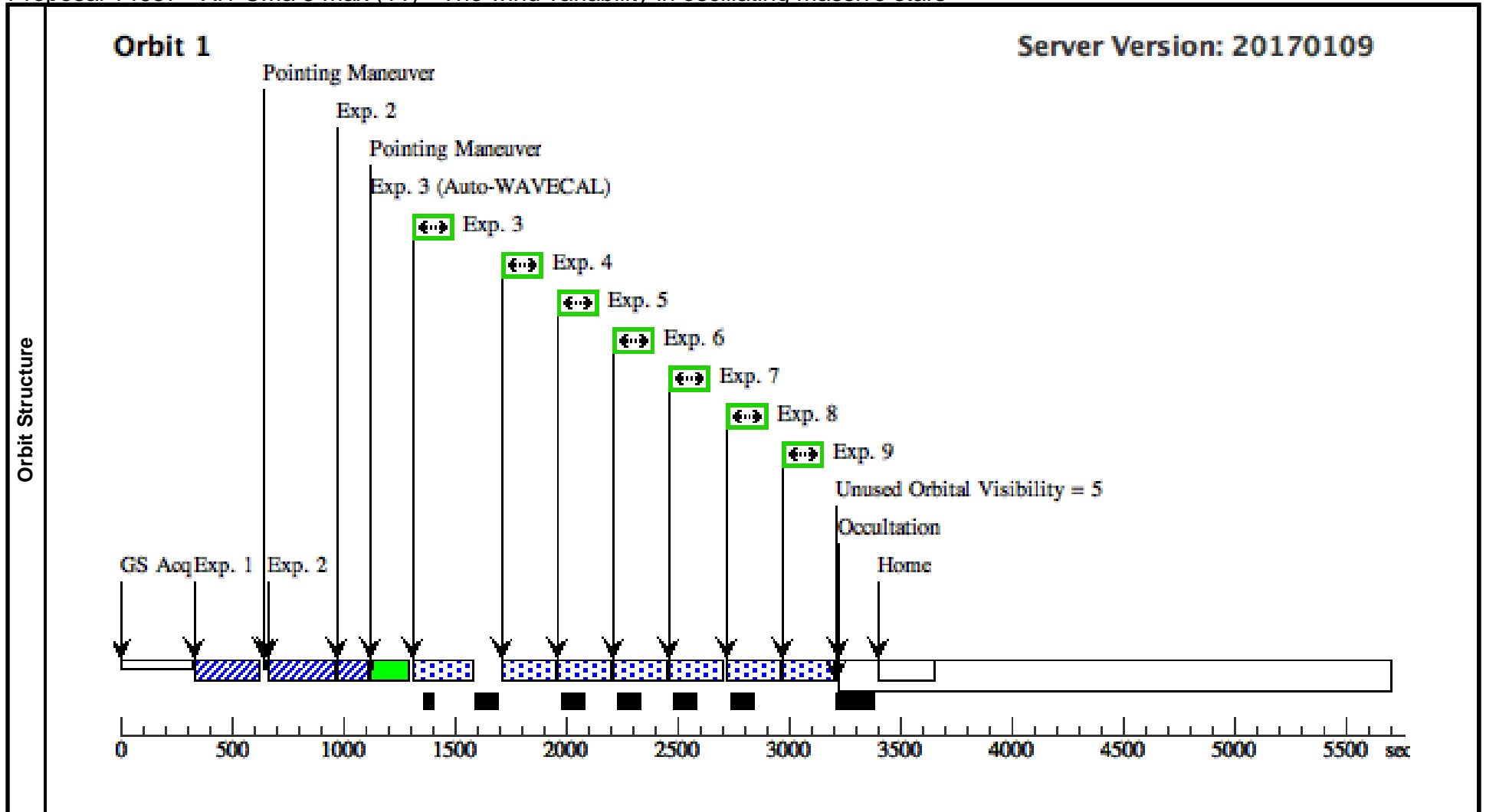
Visit	Proposal 14657, Xi1 CMa 4 min (10), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 09 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	-KS11-CMA	RA: 06 31 51.3664 (97.9640267d) Dec: -23 25 6.32 (-23.41842d) Equinox: J2000	Proper Motion RA: -2.91 mas/yr Proper Motion Dec: 6.22 mas/yr Epoch of Position: 2000	V=4.33	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Xi1 CMa 4 ACQ	(2) -KS11-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	Xi1 CMa 4 ACQ peak (STIS.ta.825 240)	(2) -KS11-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	4	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	5	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	6	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	7	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	8	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	9	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				290 Secs (218 Secs) [==>218.0 Secs]	[1]



Proposal 14657 - Xi1 CMa 5 max (11) - The wind variability in oscillating massive stars

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Visit	Proposal 14657, Xi1 CMa 5 max (11), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 10 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	-KS11-CMA	RA: 06 31 51.3664 (97.9640267d) Dec: -23 25 6.32 (-23.41842d) Equinox: J2000	Proper Motion RA: -2.91 mas/yr Proper Motion Dec: 6.22 mas/yr Epoch of Position: 2000	V=4.33	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Xi1 CMa 5 ACQ	(2) -KS11-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	Xi1 CMa 5 ACQ peak (STIS.ta.825 240)	(2) -KS11-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	4	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	5	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	6	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	7	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	8	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	9	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				290 Secs (218 Secs) [==>218.0 Secs]	[1]



Proposal 14657 - Xi1 CMa 6 min (12) - The wind variability in oscillating massive stars

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Visit	Proposal 14657, Xi1 CMa 6 min (12), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: AFTER 11 BY .9 Orbits TO 1.1 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	-KS11-CMA	RA: 06 31 51.3664 (97.9640267d) Dec: -23 25 6.32 (-23.41842d) Equinox: J2000	Proper Motion RA: -2.91 mas/yr Proper Motion Dec: 6.22 mas/yr Epoch of Position: 2000	V=4.33	Reference Frame: ICRS				
	<i>Comments: Extended=NO</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Xi1 CMa 6 ACQ	(2) -KS11-CMA	STIS/CCD, ACQ, F25ND5	MIRROR				1 Secs (1 Secs) [==>]	[1]
	2	Xi1 CMa 6 ACQ peak (STIS.ta.825 240)	(2) -KS11-CMA	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.1 Secs (0.1 Secs) [==>]	[1]
	3	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	4	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	5	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	6	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	7	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	8	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				300 Secs (228 Secs) [==>228.0 Secs]	[1]
	9	(824542)	(2) -KS11-CMA	STIS/FUV-MAMA, ACCUM, 0.3X0.05ND	E140M 1425 A				290 Secs (218 Secs) [==>218.0 Secs]	[1]

