



12013 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

Cycle: 17, Proposal Category: GO

(Availability Mode: AVAILABLE)

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) ETA-CAR WAVE	STIS/CCD	2	10-Sep-2010 21:15:41.0	yes
02	(1) ETA-CAR CCDFLAT	STIS/CCD	3	10-Sep-2010 21:18:41.0	yes

5 Total Orbits Used

ABSTRACT

Eta Car is a key object for understanding how mass and angular momentum change as a star heads towards hypernova. Periodic minima in X-rays and other wavebands show it as an extremely eccentric binary with a massive companion. A surprising change in the X-ray emission during the January 2009 X-ray minimum probably indicates a large-scale variation in the system mass loss which implies a significant change in the luminosity of one of the stars. X-ray line profiles are the best diagnostic of the wind-wind collision and the structure of the interacting winds. We propose to obtain HETGS spectra of the system during AO11 in a phase interval never before sampled, along with STIS mapping which will constrain the 3-D shape of the wind-wind interaction regions on scales of 1-1000AU.

OBSERVING DESCRIPTION

The objective of these STIS observations is to compare the outer wind structures with the model wind-wind interactions based on X-ray observations with CHANDRA and past observations with HST/STIS. CHANDRA observations and He I observations provide information on the current wind-wind interaction regions. Much of the wind structures are traceable via forbidden line emission. Low excitation forbidden emission ([Fe II], [Ni II]) trace the primary wind structure. High excitation forbidden emission ([Fe III], [Ar III], [S III]) trace outer wind-wind interaction regions photo-ionized by FUV radiation, compressed by the earlier wind-wind interactions and transitioning through critical densities leading to excitation or de-excitation of metastable states.

We map the central core of Eta Carinae with HST/STIS CCD medium dispersion gratings set at selected central wavelengths to record the wind interaction structure in a number of forbidden emission lines. The spectroimagery maps will provide a 3D structure (RA, Dec, velocity) in these forbidden emission lines and through line ratios, will provide measures of temperature/density.

We repeat these observations to follow changes in the wind-wind structure at phases 0.2 and 0.4 in the 5.54 year period of Eta Carinae. These two visits will establish the structure leading up to apastron in 2011.75.

ADDITIONAL COMMENTS

Orbit 1 has been revised to sample at half slit offsets on two grating settings.

The objective is Nyquist sampling of [Fe II], [N II] and [Fe III] showing the primary wind and the interacting wind structures in 3D mode.

We will be using these observations to test the SPH models of Tom Madura and looking for changes in the wind mass loss rate.

Visit	Proposal 12013, Visit 01 Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD Special Requirements: PCS MODE FINE; GYRO MODE 3GOBAD; SCHED 30%; BETWEEN 01-OCT-2010:00:00:00 AND 15-JAN-2011:00:00:00					
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures	
(3)		Pattern Type=STIS-PERP-TO-SLIT Coordinate Frame=POS-TARG Purpose=MOSAIC Pattern Orientation=0.0 Number Of Points=23 Angle Between Sides= Point Spacing=0.05 Center Pattern=true Line Spacing=		(3), (7)		
(4)		Pattern Type=STIS-PERP-TO-SLIT Coordinate Frame=POS-TARG Purpose=MOSAIC Pattern Orientation=0.0 Number Of Points=5 Angle Between Sides= Point Spacing=0.05 Center Pattern=true Line Spacing=		(5), (6)		
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	ETA-CAR	RA: 10 45 3.5910 (161.2649625d) Dec: -59 41 4.26 (-59.68452d) Equinox: J2000 Plate Id: ZZZQ		V=5.5+/-0.2	Reference Frame: GSC1
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>						

Proposal 12013 (STScI Edit Number: 0, Created: Friday, September 10, 2010 8:19:16 PM EST) - Overview

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Acquisition exposure	(1) ETA-CAR	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs	
								[==>]	[1]
<i>Comments: Peak=9290 e-, Total=15480 e-, S/N=123</i>									
2	ACQ/Peak	(1) ETA-CAR	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 7795 A				0.5 Secs	
								[==>]	
Exposures									[1]

Proposal 12013 (STScI Edit Number: 0, Created: Friday, September 10, 2010 8:19:16 PM EST) - Overview

3	Mapping [Fe III], [Fe II], Fe II (1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G430M 4706 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=128; WAVECAL=NO	Pattern 3, Exps 3-3 (3)	26 Secs	
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[==>(Pattern 1, Split 1)]
[==>(Pattern 1, Split 2)]
[==>(Pattern 2, Split 1)]
[==>(Pattern 2, Split 2)]
[==>(Pattern 3, Split 1)]
[==>(Pattern 3, Split 2)]
[==>(Pattern 4, Split 1)]
[==>(Pattern 4, Split 2)]
[==>(Pattern 5, Split 1)]
[==>(Pattern 5, Split 2)]
[==>(Pattern 6, Split 1)]
[==>(Pattern 6, Split 2)]
[==>(Pattern 7, Split 1)]
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[==>(Pattern 8, Split 1)]
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[==>(Pattern 19, Split 2)]
[==>(Pattern 20, Split 1)]
[==>(Pattern 20, Split 2)]
[==>(Pattern 21, Split 1)]
[==>(Pattern 21, Split 2)]
[==>(Pattern 22, Split 1)]
[==>(Pattern 22, Split 2)]
[==>(Pattern 23, Split 1)]

[1]

Proposal 12013 (STScI Edit Number: 0, Created: Friday, September 10, 2010 8:19:16 PM EST) - Overview

							[==>(Pattern 23, Split 2)]		
<i>Comments: two [Fe III] and one [Fe II] line within this grating coverage.</i>									
4	4706 WAV ECAL	WAVE	STIS/CCD, ACCUM, 52X0.1	G430M 4706 A				[==>]	[1]
<i>Comments: Placed in earth occultation</i>									
5	Submapping [Fe III], [Fe II]	(1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G430M 4706 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 4, Exps 5-5 (4)	4.0 Secs		
							[==>(Pattern 1, Split 1)]	[2]	
							[==>(Pattern 1, Split 2)]		
							[==>(Pattern 2, Split 1)]		
							[==>(Pattern 2, Split 2)]		
							[==>(Pattern 3, Split 1)]		
							[==>(Pattern 3, Split 2)]		
							[==>(Pattern 4, Split 1)]		
							[==>(Pattern 4, Split 2)]		
							[==>(Pattern 5, Split 1)]		
							[==>(Pattern 5, Split 2)]		
<i>Comments: Submapping on bright stellar positions.</i>									
6	Submapping [N II]	(1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G750M 5734 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=128	Pattern 4, Exps 6-6 (4)	4.0 Secs		
							[==>(Pattern 1, Split 1)]	[2]	
							[==>(Pattern 1, Split 2)]		
							[==>(Pattern 2, Split 1)]		
							[==>(Pattern 2, Split 2)]		
							[==>(Pattern 3, Split 1)]		
							[==>(Pattern 3, Split 2)]		
							[==>(Pattern 4, Split 1)]		
							[==>(Pattern 4, Split 2)]		
							[==>(Pattern 5, Split 1)]		
							[==>(Pattern 5, Split 2)]		
<i>Comments: Mapping [N II] 5755</i>									

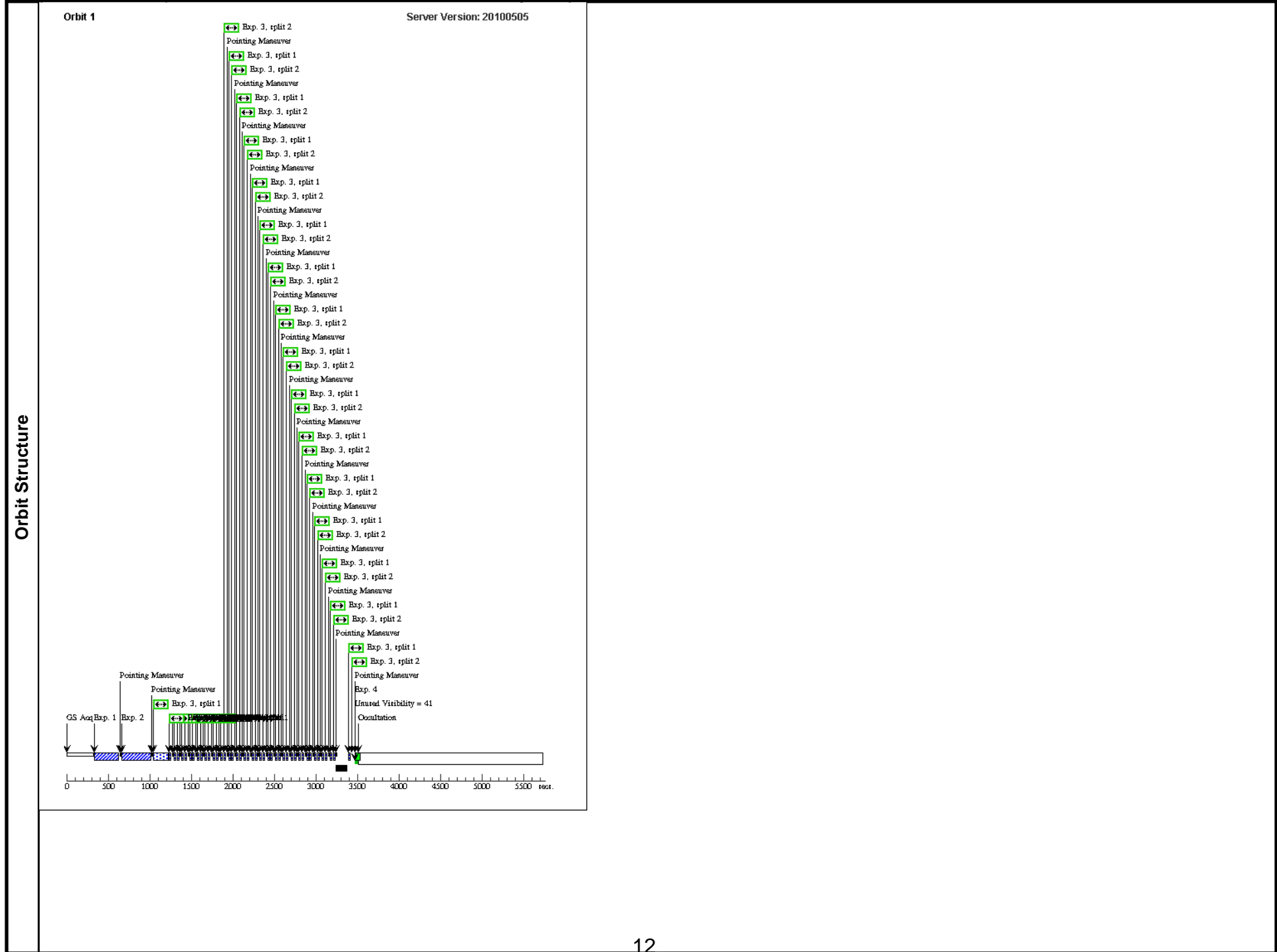
Proposal 12013 (STScI Edit Number: 0, Created: Friday, September 10, 2010 8:19:16 PM EST) - Overview

7	Mapping [N (1) ETA-CAR II], He I	STIS/CCD, ACCUM, 52X0.1	G750M 5734 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 3, Exps 7-7 (3)	34 Secs
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	<p>[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)] [==>(Pattern 4, Split 1)] [==>(Pattern 4, Split 2)] [==>(Pattern 5, Split 1)] [==>(Pattern 5, Split 2)] [==>(Pattern 6, Split 1)] [==>(Pattern 6, Split 2)] [==>(Pattern 7, Split 1)] [==>(Pattern 7, Split 2)] [==>(Pattern 8, Split 1)] [==>(Pattern 8, Split 2)] [==>(Pattern 9, Split 1)] [==>(Pattern 9, Split 2)] [==>(Pattern 10, Split 1)] [==>(Pattern 10, Split 2)] [==>(Pattern 11, Split 1)] [==>(Pattern 11, Split 2)] [==>(Pattern 12, Split 1)] [==>(Pattern 12, Split 2)] [==>(Pattern 13, Split 1)] [==>(Pattern 13, Split 2)] [==>(Pattern 14, Split 1)] [==>(Pattern 14, Split 2)] [==>(Pattern 15, Split 1)] [==>(Pattern 15, Split 2)] [==>(Pattern 16, Split 1)] [==>(Pattern 16, Split 2)] [==>(Pattern 17, Split 1)] [==>(Pattern 17, Split 2)] [==>(Pattern 18, Split 1)] [==>(Pattern 18, Split 2)] [==>(Pattern 19, Split 1)] [==>(Pattern 19, Split 2)] [==>(Pattern 20, Split 1)] [==>(Pattern 20, Split 2)] [==>(Pattern 21, Split 1)] [==>(Pattern 21, Split 2)] [==>(Pattern 22, Split 1)] [==>(Pattern 22, Split 2)] [==>(Pattern 23, Split 1)]</p>	<p>[2]</p>
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Proposal 12013 (STScI Edit Number: 0, Created: Friday, September 10, 2010 8:19:16 PM EST) - Overview

					[==>(Pattern 23, Split 2)]	
<i>Comments: Bright stellar core mapping</i>						
8	5734 WAV	WAVE	STIS/CCD, ACCUM, 52X0.1	G750M		
	ECAL			5734 A	[==>]	[2]
<i>Comments: WAVECAL inserted in earth occultation or after exposure 7-7 completed</i>						



Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

Visit	Proposal 12013, Visit 02, completed Sat Sep 11 01:19:21 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD Special Requirements: PCS MODE FINE; GYRO MODE 3GOBAD; BETWEEN 01-NOV-2009:00:00:00 AND 31-JAN-2010:00:00:00					
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures	
(1)		Pattern Type=STIS-PERP-TO-SLIT Coordinate Frame=POS-TARG Purpose=MOSAIC Pattern Orientation=0.0 Number Of Points=15 Angle Between Sides= Point Spacing=0.1 Center Pattern=true Line Spacing=		(3), (7), (8), (11), (12)		
(2)	Pattern Type=STIS-PERP-TO-SLIT Coordinate Frame=POS-TARG Purpose=MOSAIC Pattern Orientation=0.0 Number Of Points=3 Angle Between Sides= Point Spacing=0.1 Center Pattern=true Line Spacing=		(4), (5), (9), (10), (13)			
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	ETA-CAR	RA: 10 45 3.5910 (161.2649625d) Dec: -59 41 4.26 (-59.68452d) Equinox: J2000 Plate Id: ZZZQ		V=5.5+/-0.2	Reference Frame: GSC1
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>						

Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Acquisition exposure	(1) ETA-CAR	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs [==>]	[1]
<i>Comments: Peak=9290 e-, Total=15480 e-, S/N=123</i>									
2	ACQ/Peak	(1) ETA-CAR	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 7795 A				0.5 Secs [==>]	[1]
3	Mapping [Fe III], [FeII], Fe II	(1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G430M 4706 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64		Pattern 1, Exps 3-3 (1)	40.0 Secs [==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)] [==>(Pattern 4, Split 1)] [==>(Pattern 4, Split 2)] [==>(Pattern 5, Split 1)] [==>(Pattern 5, Split 2)] [==>(Pattern 6, Split 1)] [==>(Pattern 6, Split 2)] [==>(Pattern 7, Split 1)] [==>(Pattern 7, Split 2)] [==>(Pattern 8, Split 1)] [==>(Pattern 8, Split 2)] [==>(Pattern 9, Split 1)] [==>(Pattern 9, Split 2)] [==>(Pattern 10, Split 1)] [==>(Pattern 10, Split 2)] [==>(Pattern 11, Split 1)] [==>(Pattern 11, Split 2)] [==>(Pattern 12, Split 1)] [==>(Pattern 12, Split 2)] [==>(Pattern 13, Split 1)] [==>(Pattern 13, Split 2)] [==>(Pattern 14, Split 1)] [==>(Pattern 14, Split 2)] [==>(Pattern 15, Split 1)] [==>(Pattern 15, Split 2)]	[1]
<i>Comments: Mapping [Fe III] and [Fe II]</i>									

Exposures

Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

4	Submapping (1) ETA-CAR [FeIII], [FeI I]	STIS/CCD, ACCUM, 52X0.1	G430M 4706 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 2, Exps 4-4 (2)	4.0 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)]	[1]
<i>Comments: Submapping across bright stellar core</i>								
5	Submapping (1) ETA-CAR [ArIII], [FeI I], [NiII]	STIS/CCD, ACCUM, 52X0.1	G750M 7283 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 2, Exps 5-5 (2)	4.0 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)]	[1]
<i>Comments: Submapping across stellar core</i>								
6	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 7283 A				[==>(Copy 1)] [==>(Copy 2)]	[1]

Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

7	Mapping [Ar III], [Fe II], Fe II	(1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G750M	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 1, Exps 7-7 (1)	25.0 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)] [==>(Pattern 4, Split 1)] [==>(Pattern 4, Split 2)] [==>(Pattern 5, Split 1)] [==>(Pattern 5, Split 2)] [==>(Pattern 6, Split 1)] [==>(Pattern 6, Split 2)] [==>(Pattern 7, Split 1)] [==>(Pattern 7, Split 2)] [==>(Pattern 8, Split 1)] [==>(Pattern 8, Split 2)] [==>(Pattern 9, Split 1)] [==>(Pattern 9, Split 2)] [==>(Pattern 10, Split 1)] [==>(Pattern 10, Split 2)] [==>(Pattern 11, Split 1)] [==>(Pattern 11, Split 2)] [==>(Pattern 12, Split 1)] [==>(Pattern 12, Split 2)] [==>(Pattern 13, Split 1)] [==>(Pattern 13, Split 2)] [==>(Pattern 14, Split 1)] [==>(Pattern 14, Split 2)] [==>(Pattern 15, Split 1)] [==>(Pattern 15, Split 2)]	[2]
Comments: Submapping across stellar core									

Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

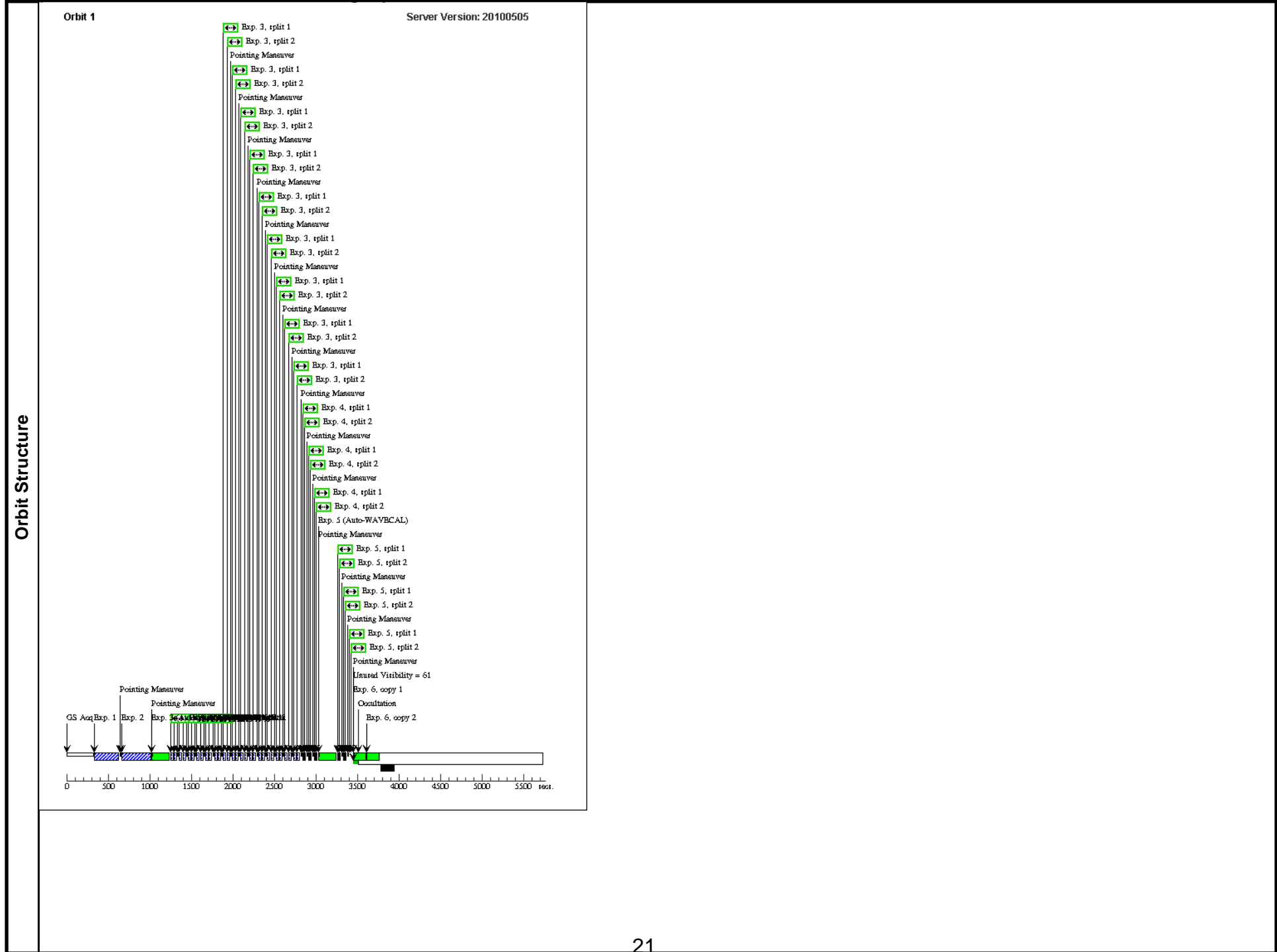
8	Mapping [N II] (1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G750M 5734 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 1, Exps 8-8 (1)	<p>30.0 Secs</p> <p>[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)] [==>(Pattern 4, Split 1)] [==>(Pattern 4, Split 2)] [==>(Pattern 5, Split 1)] [==>(Pattern 5, Split 2)] [==>(Pattern 6, Split 1)] [==>(Pattern 6, Split 2)] [==>(Pattern 7, Split 1)] [==>(Pattern 7, Split 2)] [==>(Pattern 8, Split 1)] [==>(Pattern 8, Split 2)] [==>(Pattern 9, Split 1)] [==>(Pattern 9, Split 2)] [==>(Pattern 10, Split 1)] [==>(Pattern 10, Split 2)] [==>(Pattern 11, Split 1)] [==>(Pattern 11, Split 2)] [==>(Pattern 12, Split 1)] [==>(Pattern 12, Split 2)] [==>(Pattern 13, Split 1)] [==>(Pattern 13, Split 2)] [==>(Pattern 14, Split 1)] [==>(Pattern 14, Split 2)] [==>(Pattern 15, Split 1)] [==>(Pattern 15, Split 2)]</p>	[2]
<i>Comments: Mapping [N II] across stellar core</i>							
9	Submapping [NII] (1) ETA-CAR	STIS/CCD, ACCUM, 52X0.1	G750M 5734 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 2, Exps 9-9 (2)	<p>4.0 Secs</p> <p>[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)]</p>	[2]
<i>Comments: Submapping across stellar core</i>							

Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

10	Submapping (1) ETA-CAR [SIII] 6313	STIS/CCD, ACCUM, 52X0.1	G750M 6252 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 2, Exps 10-1 0 (2)	20 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)]	[3]
<i>Comments: Submapping across stellar core</i>								
11	Mapping [SI (1) ETA-CAR II] 6313	STIS/CCD, ACCUM, 52X0.1	G750M 6252 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 1, Exps 11-1 1 (1)	6 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)] [==>(Pattern 4, Split 1)] [==>(Pattern 4, Split 2)] [==>(Pattern 5, Split 1)] [==>(Pattern 5, Split 2)] [==>(Pattern 6, Split 1)] [==>(Pattern 6, Split 2)] [==>(Pattern 7, Split 1)] [==>(Pattern 7, Split 2)] [==>(Pattern 8, Split 1)] [==>(Pattern 8, Split 2)] [==>(Pattern 9, Split 1)] [==>(Pattern 9, Split 2)] [==>(Pattern 10, Split 1)] [==>(Pattern 10, Split 2)] [==>(Pattern 11, Split 1)] [==>(Pattern 11, Split 2)] [==>(Pattern 12, Split 1)] [==>(Pattern 12, Split 2)] [==>(Pattern 13, Split 1)] [==>(Pattern 13, Split 2)] [==>(Pattern 14, Split 1)] [==>(Pattern 14, Split 2)] [==>(Pattern 15, Split 1)] [==>(Pattern 15, Split 2)]	[3]
<i>Comments: Mapping [S III] 6313</i>								

Proposal 12013 - Visit 01 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

12	Mapping [SI (I) ETA-CAR II] 9533	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 1, Exps 12-1 2 (1)	22 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)] [==>(Pattern 4, Split 1)] [==>(Pattern 4, Split 2)] [==>(Pattern 5, Split 1)] [==>(Pattern 5, Split 2)] [==>(Pattern 6, Split 1)] [==>(Pattern 6, Split 2)] [==>(Pattern 7, Split 1)] [==>(Pattern 7, Split 2)] [==>(Pattern 8, Split 1)] [==>(Pattern 8, Split 2)] [==>(Pattern 9, Split 1)] [==>(Pattern 9, Split 2)] [==>(Pattern 10, Split 1)] [==>(Pattern 10, Split 2)] [==>(Pattern 11, Split 1)] [==>(Pattern 11, Split 2)] [==>(Pattern 12, Split 1)] [==>(Pattern 12, Split 2)] [==>(Pattern 13, Split 1)] [==>(Pattern 13, Split 2)] [==>(Pattern 14, Split 1)] [==>(Pattern 14, Split 2)] [==>(Pattern 15, Split 1)] [==>(Pattern 15, Split 2)]	[3]
<i>Comments: Mapping [S III] 9533</i>								
13	Submapping [SIII] 9533	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=2; GAIN=4; SIZEAXIS2=64	Pattern 2, Exps 13-1 3 (2)	6 Secs	[==>(Pattern 1, Split 1)] [==>(Pattern 1, Split 2)] [==>(Pattern 2, Split 1)] [==>(Pattern 2, Split 2)] [==>(Pattern 3, Split 1)] [==>(Pattern 3, Split 2)]	[3]
<i>Comments: Submapping [S III] 9533</i>								
14	Flat field CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A			[==>(Copy 1)] [==>(Copy 2)]	[3]	



Proposal 12013 - Visit 02 - Monitoring Dynamical Mass Loss from Eta Car with the HETG

