15189 - Post Common Envelope Binaries as probes of M dwarf stellar wind and habitable zone radiation environments

Cycle: 25, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-CC-CET	COS/FUV	1	19-Jul-2017 22:13:23.0	yes
03	(2) V-UZ-SEX	COS/FUV	1	19-Jul-2017 22:13:19.0	yes
04	(3) V-LM-COM	COS/FUV	1	19-Jul-2017 22:13:16.0	yes
05	(4) V-EG-UMA	COS/FUV	1	19-Jul-2017 22:13:11.0	yes
06	(5) WD-0137-349	COS/FUV	1	19-Jul-2017 22:13:05.0	yes
07	(6) EGGR-38	COS/FUV	1	19-Jul-2017 22:12:58.0	yes
08	(8) WD-1339+606	COS/FUV	1	19-Jul-2017 22:12:37.0	yes
09	(9) WD-1436-216	COS/FUV	1	19-Jul-2017 22:11:25.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
10	(10) WD-1458+171	COS/FUV	1	19-Jul-2017 22:19:06.0	yes
11	(11) WD-1504+546	COS/FUV	1	19-Jul-2017 22:33:14.0	yes
12	(12) WD-2317+268	COS/FUV	1	19-Jul-2017 22:48:50.0	yes
02	(7) V-V727-CAR	STIS/CCD STIS/FUV-MAMA	1	20-Jul-2017 12:44:55.0	yes

12 Total Orbits Used

ABSTRACT

M dwarf stars are promising targets in the search for extrasolar habitable planets, as their small size and close-in habitable zones make the detection of Earth-analog planets easier than at Solar-type stars. However, the effects of the high stellar activity of M dwarf hosts has uncertain effects on such planets, and may render them uninhabitable. Studying stellar activity at M dwarfs is hindered by a lack of measurements of high-energy radiation, flare activity and, in particular, stellar wind rates. We propose to rectify this by observing a sample of Post Common Envelope Binaries (PCEBs) with HST and XMM-Newton. PCEBs consist of an M dwarf with a white dwarf companion, which experiences the same stellar wind and radiation environment as a close-in planet. The stellar wind of the M dwarf accretes onto the otherwise pure hydrogen atmosphere white dwarf, producing metal lines detectable with ultraviolet spectroscopy. The metal lines can be used to measure accretion rates onto the white dwarf, from with we can accurately infer the stellar wind mass loss rate of the M dwarf, along with abundances of key elements. Simultaneous observations with XMM-Newton will probe X-ray flare occurrence rate and strength, in addition to coronal temperatures. Performing these measurements over twelve PCEBs will provide a sample of M dwarf stellar wind strengths, flare occurrence and X-ray/UV activity that will finally shed light on the true habitability of planets around small stars.

OBSERVING DESCRIPTION

The scientific goal of the proposed observations is to obtain high-quality high-resolution FUV spectroscopy of the white dwarfs in thirteen post-common envelope binaries.

Instrument setup: We will observe all stars using COS with the G130M grating with the new central wavelength of 1223A, with the exception of BPM6502, which is too bright for COS, and will be observed using STIS with the E140M grating.

We will use all four FP-POS positions to minimize the impact of fixed pattern noise. For the COS observations, the acquisitions will be carried out in dispersed light, the STIS observation will be acquired with the STIS CCD and the F28x50LP long pass fillter. We should achieve a signal-to-noise

ratio of 25-35 in a single-orbit visit.

Since submitting the proposal, we have discovered that target WD1504+546 is an eclipsing binary. If possible, the observation should not take place during the eclipse, as little to no UV flux would be detected. Full details and the ephemeris are provided in Visit 11.

Each target will also be observed simultaneously with XMM-Newton.

Visit

Proposal 15189, CCCet (01) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

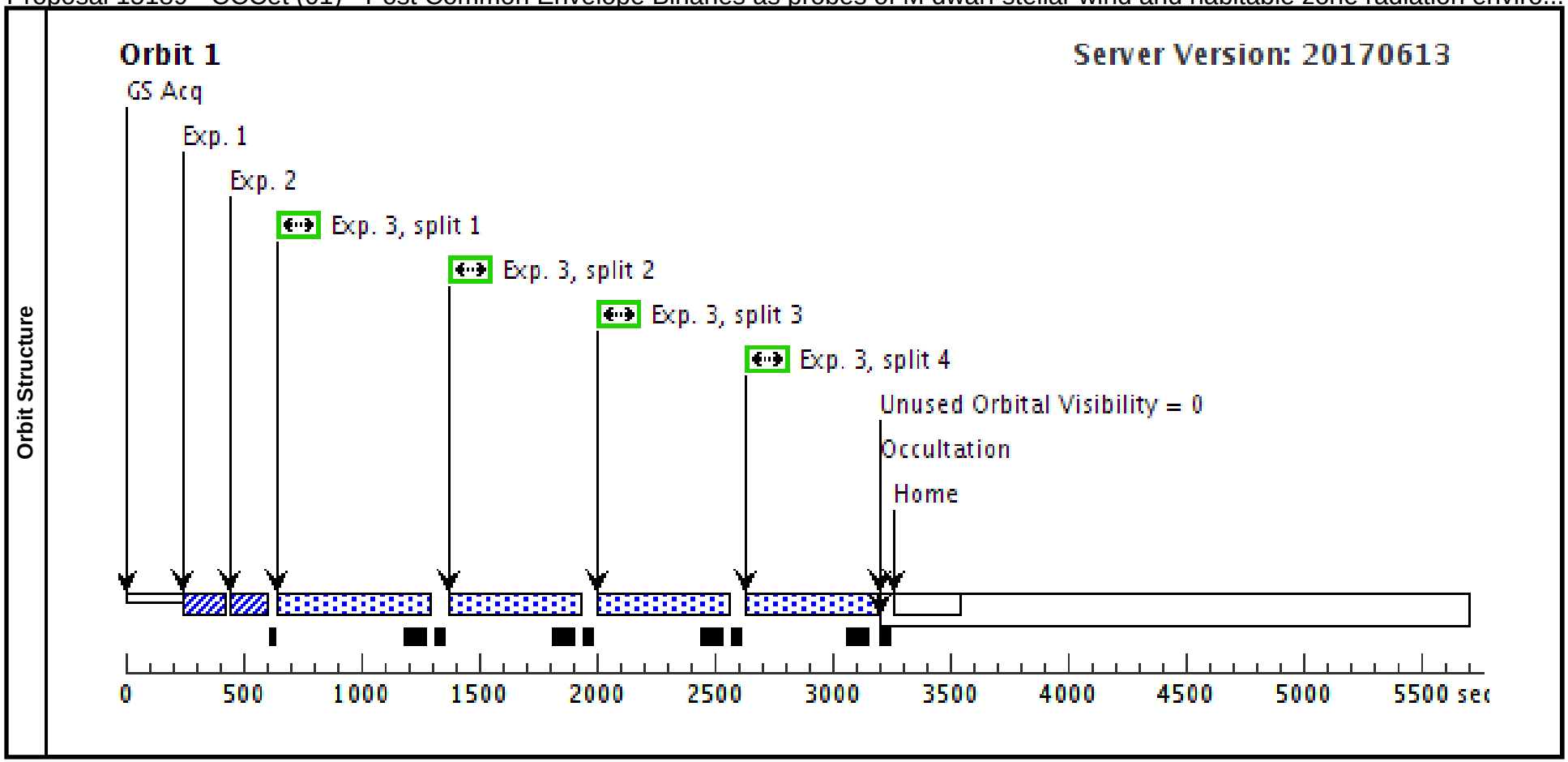
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-CC-CET	RA: 03 10 54.9862 (47.7291092d) Dec: +09 49 25.75 (9.82382d) Equinox: J2000	Proper Motion RA: 40.3 mas/yr Proper Motion Dec: -90.6 mas/yr Epoch of Position: 2000	V=15.275+/-0.243 fuv_mag: 14.03 nuv_mag: 14.51	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012489)	(1) V-CC-CET	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	ACQ/Image (COS.sa.1012489)	(1) V-CC-CET	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			1 Secs (1 Secs) *[==>]*	 ***[1]***
3	CCCET_exp (COS.sp.1012410)	(1) V-CC-CET	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=4000; FP-POS=ALL; FLASH=YES			400 Secs (2020 Secs) *[==>505.0 Secs (Split 1)]* *[==>505.0 Secs (Split 2)]* *[==>505.0 Secs (Split 3)]* *[==>505.0 Secs (Split 4)]*	 ***[1]***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Server Version: 20170613
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 0
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, UZSex (03) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

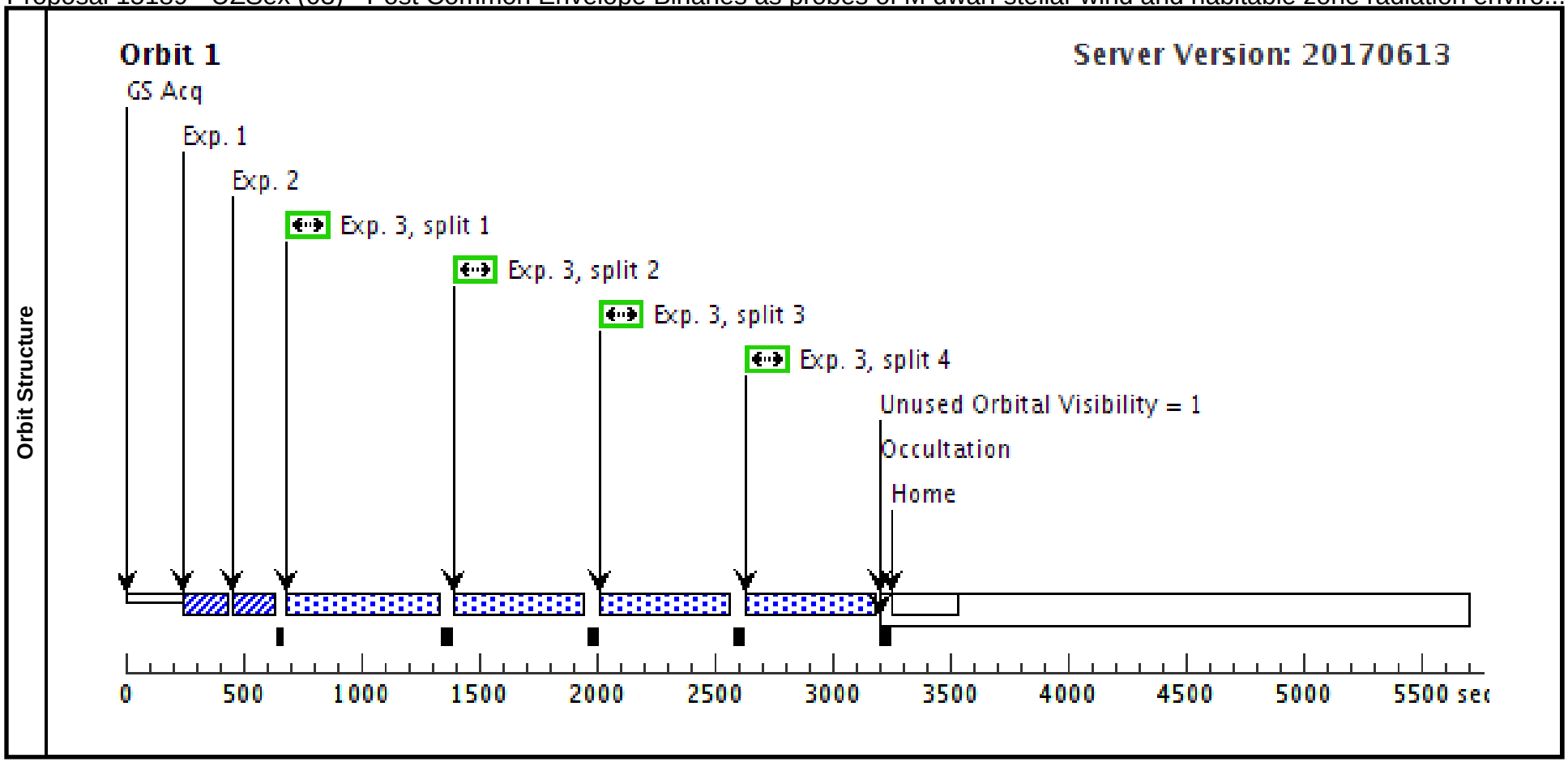
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	V-UZ-SEX	RA: 10 28 34.8816 (157.1453400d) Dec: -00 00 29.52 (-.00820d) Equinox: J2000	Proper Motion RA: 55.16 mas/yr Proper Motion Dec: -79.84 mas/yr Epoch of Position: 2000	V=13.941+/-0.032 fuv_mag 13.46 nuv_mag 14.33	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.101 2416)	(2) V-UZ-SEX	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	***[1]***
2	ACQ/Image (COS.sa.101 2416)	(2) V-UZ-SEX	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			5 Secs (5 Secs) *[==>]*	***[1]***
3	UZsex_exp (COS.sp.101 2487)	(2) V-UZ-SEX	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=16 10; FP-POS=ALL; FLASH=YES			400 Secs (1984 Secs) *[==>496.0 Secs (Split 1)]* *[==>496.0 Secs (Split 2)]* *[==>496.0 Secs (Split 3)]* *[==>496.0 Secs (Split 4)]*	***[1]***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Server Version: 20170613
Orbit Structure
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 1
Occultation
Home
0
500
1000
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2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, LMCom (04) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

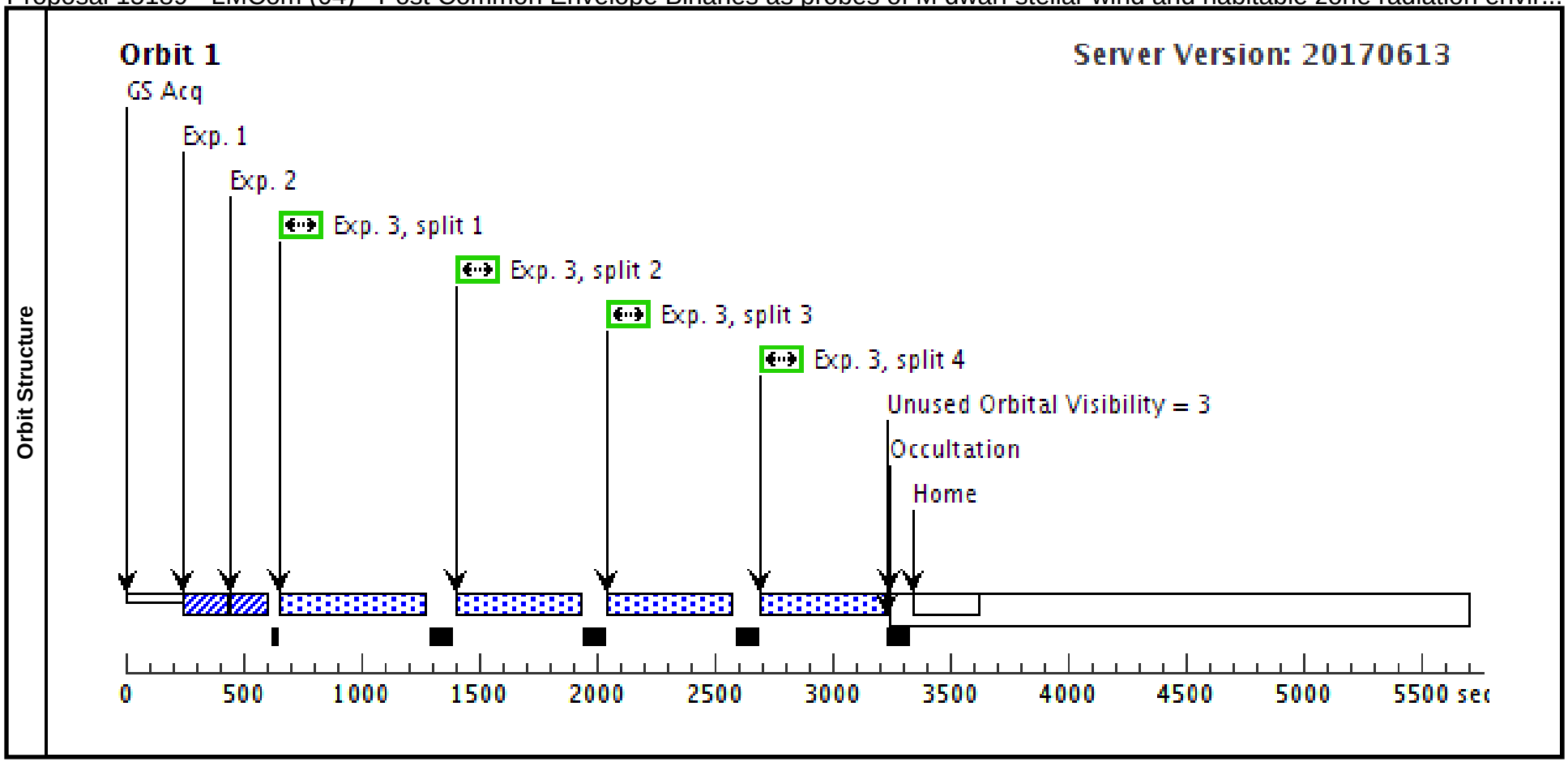
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	V-LM-COM	RA: 12 26 30.8873 (186.6286971d) Dec: +30 38 52.69 (30.64797d) Equinox: J2000	Proper Motion RA: -28.1 mas/yr Proper Motion Dec: -1.2 mas/yr Epoch of Position: 2000	V=16.15 fuv_mag: 14.70 nuv_mag: 15.18	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012493)	(3) V-LM-COM	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				2 Secs (2 Secs) *[==>]*	 ***[1]***
2	ACQ/Image (COS.sa.1012493)	(3) V-LM-COM	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			2 Secs (2 Secs) *[==>]*	 ***[1]***
3	LMcom_exp (COS.sp.1012509)	(3) V-LM-COM	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=570; FP-POS=ALL; FLASH=YES			400 Secs (1900 Secs) *[==>475.0 Secs (Split 1)]* *[==>475.0 Secs (Split 2)]* *[==>475.0 Secs (Split 3)]* *[==>475.0 Secs (Split 4)]*	 ***[1]***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Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 3
Occultation
Home
0
500
1000
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2000
2500
3000
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4500
5000
5500 sec

Visit

Proposal 15189, EGUma (05) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

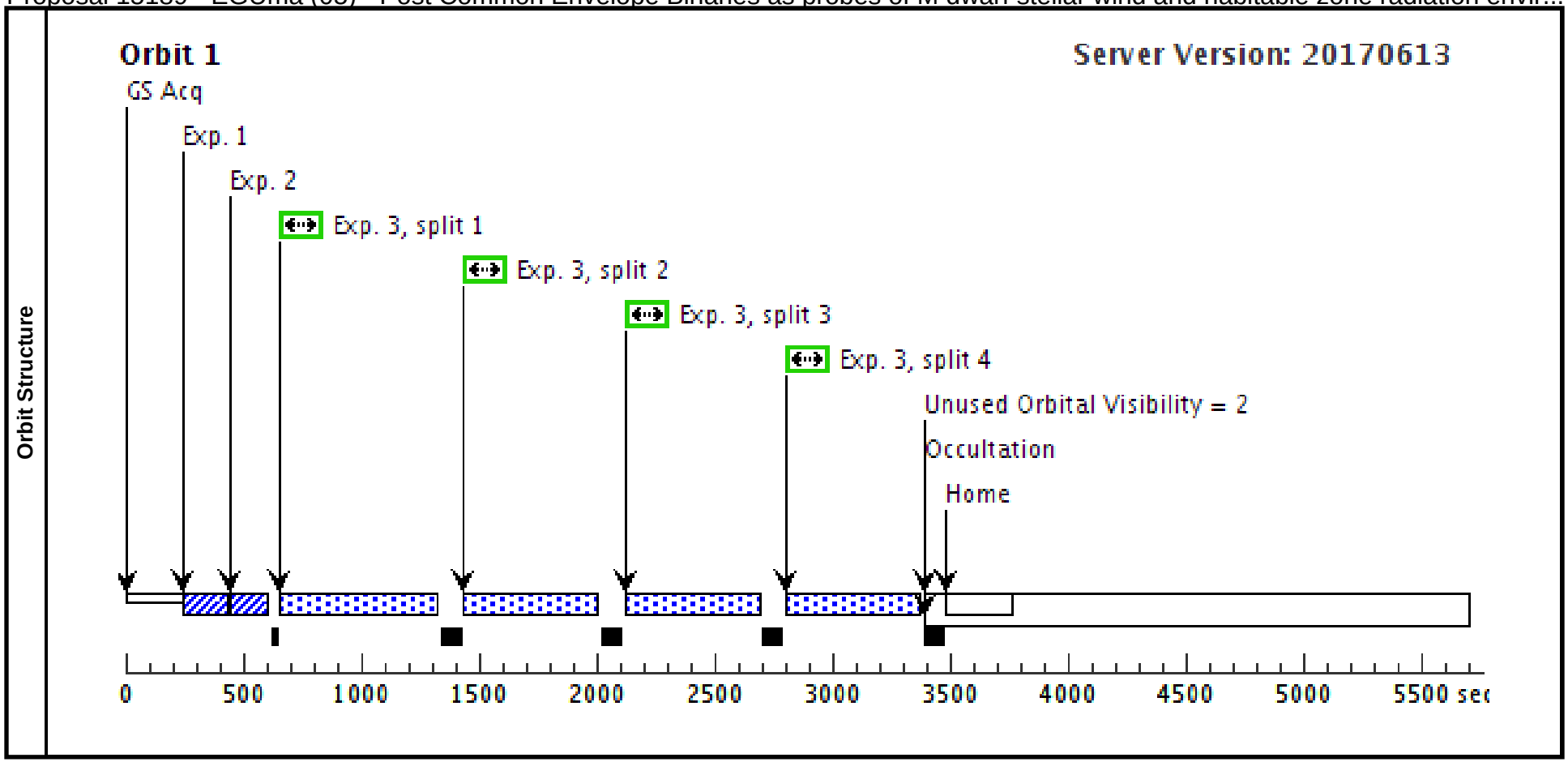
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	V-EG-UMA	RA: 12 15 44.0995 (183.9337479d) Dec: +52 31 1.25 (52.51701d) Equinox: J2000	Proper Motion RA: -74.28 mas/yr Proper Motion Dec: -127.74 mas/yr Epoch of Position: 2000	V=13.23+/-0.053 fuv_mag: n/a nuv_mag: 14.32	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012518)	(4) V-EG-UMA	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				2 Secs (2 Secs) *[==>]*	*[1]*
2	ACQ/Image (COS.sa.1012493)	(4) V-EG-UMA	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			2 Secs (2 Secs) *[==>]*	*[1]*
3	EGUma_exp (COS.sp.1012509)	(4) V-EG-UMA	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=7000; FP-POS=ALL; FLASH=YES			400 Secs (2084 Secs) *[==>521.0 Secs (Split 1)]* *[==>521.0 Secs (Split 2)]* *[==>521.0 Secs (Split 3)]* *[==>521.0 Secs (Split 4)]*	*[1]*


Orbit Structure
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Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 2
Occultation
Home
0
500
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1500
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2500
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3500
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4500
5000
5500 sec

Visit

Proposal 15189, WD0137-349 (06) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

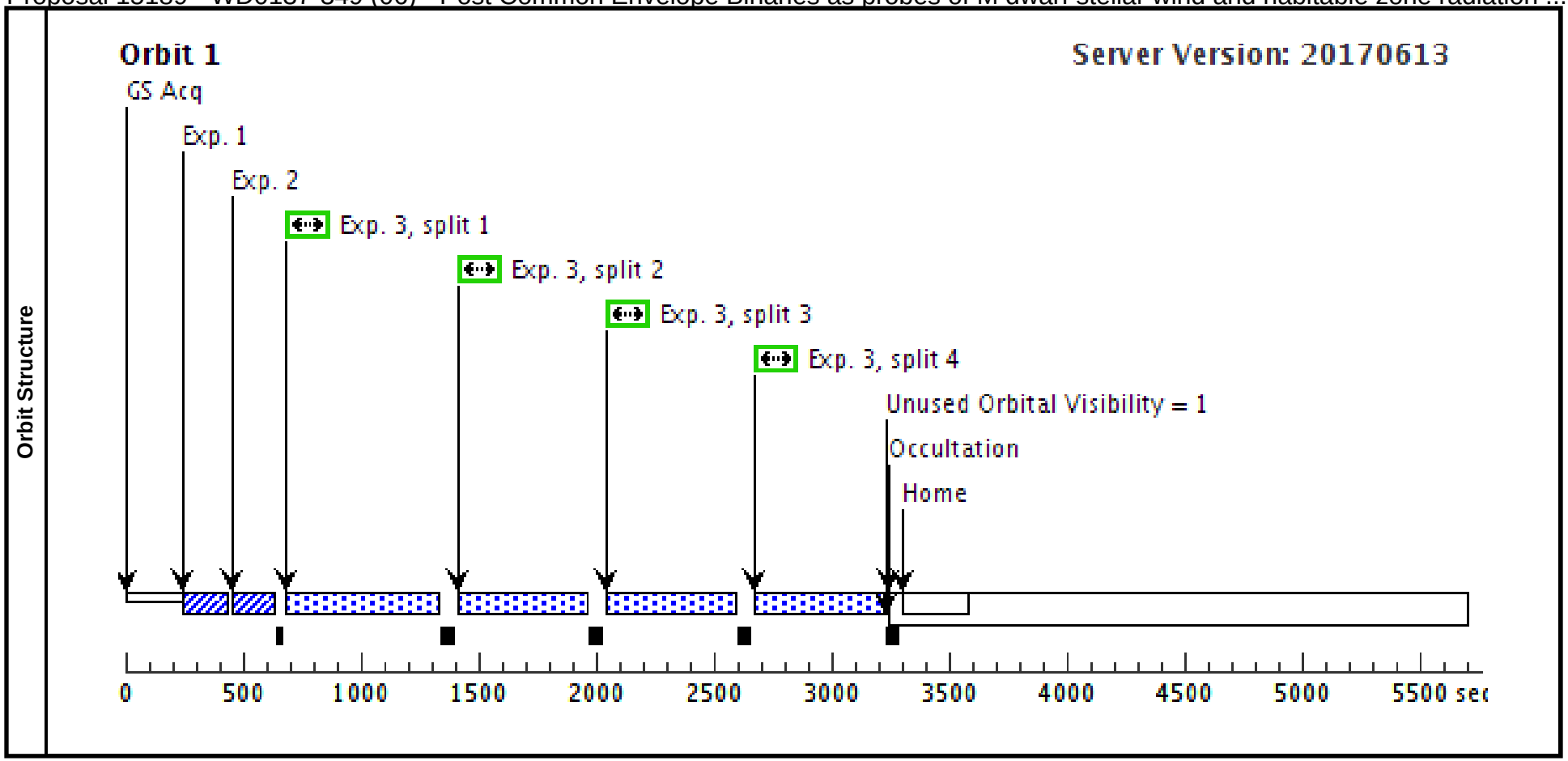
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	WD-0137-349	RA: 01 39 42.8527 (24.9285529d) Dec: -34 42 39.42 (-34.71095d) Equinox: J2000	Proper Motion RA: -42.19 mas/yr Proper Motion Dec: -33.29 mas/yr Epoch of Position: 2000	V=15.33 fuv_mag: 15.03 nuv_mag: 15.14	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012532)	(5) WD-0137-349	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	 ***[1]***
2	ACQ/Image (COS.sa.1012532)	(5) WD-0137-349	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			5 Secs (5 Secs) *[==>]*	 ***[1]***
3	WD0137_exp (COS.sp.1012540)	(5) WD-0137-349	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=1370; FP-POS=ALL; FLASH=YES			400 Secs (1992 Secs) *[==>498.0 Secs (Split 1)]* *[==>498.0 Secs (Split 2)]* *[==>498.0 Secs (Split 3)]* *[==>498.0 Secs (Split 4)]*	 ***[1]***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Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 1
Occultation
Home
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5500 sec

Visit

Proposal 15189, EGGR38 (07) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

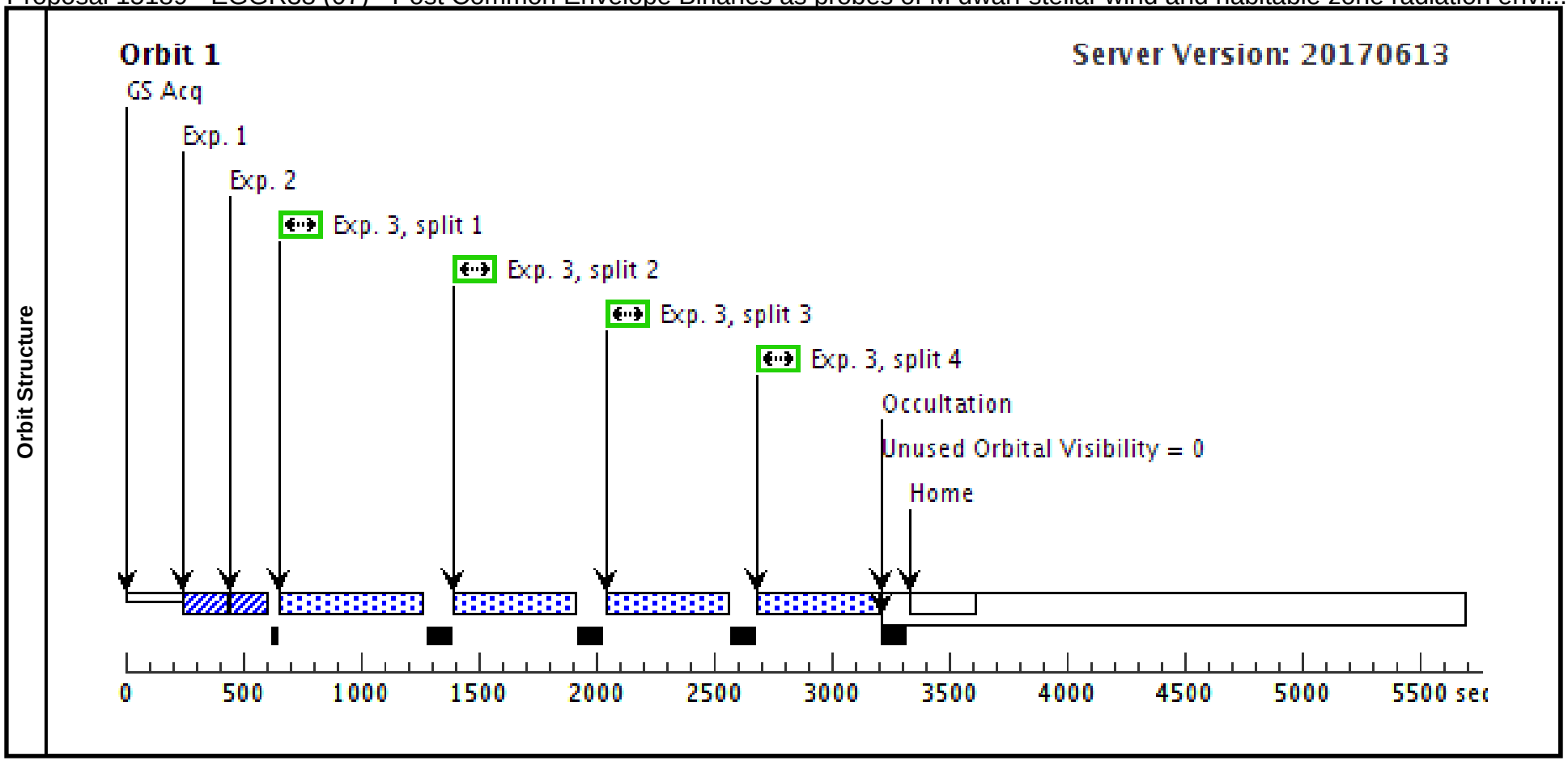
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	EGGR-38	RA: 04 32 23.7598 (68.0989992d) Dec: +17 45 2.68 (17.75074d) Equinox: J2000	Proper Motion RA: 115.69 mas/yr Proper Motion Dec: -36.99 mas/yr Epoch of Position: 2000	V=13.93 fuv_mag: n/a nuv_mag: 14.22	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012548)	(6) EGGR-38	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				2 Secs (2 Secs) *[==>]*	***[1]***
2	ACQ/Image (COS.sa.1012548)	(6) EGGR-38	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			2 Secs (2 Secs) *[==>]*	***[1]***
3	EGGR38_exp (COS.sp.1012550)	(6) EGGR-38	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=520; FP-POS=ALL; FLASH=YES			400 Secs (1852 Secs) *[==>463.0 Secs (Split 1)]* *[==>463.0 Secs (Split 2)]* *[==>463.0 Secs (Split 3)]* *[==>463.0 Secs (Split 4)]*	***[1]***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Exp. 1
Exp. 2
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Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Occultation
Unused Orbital Visibility = 0
Home
0
500
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1500
2000
2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, WD1339+606 (08) Thu Jul 20 11:52:41 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

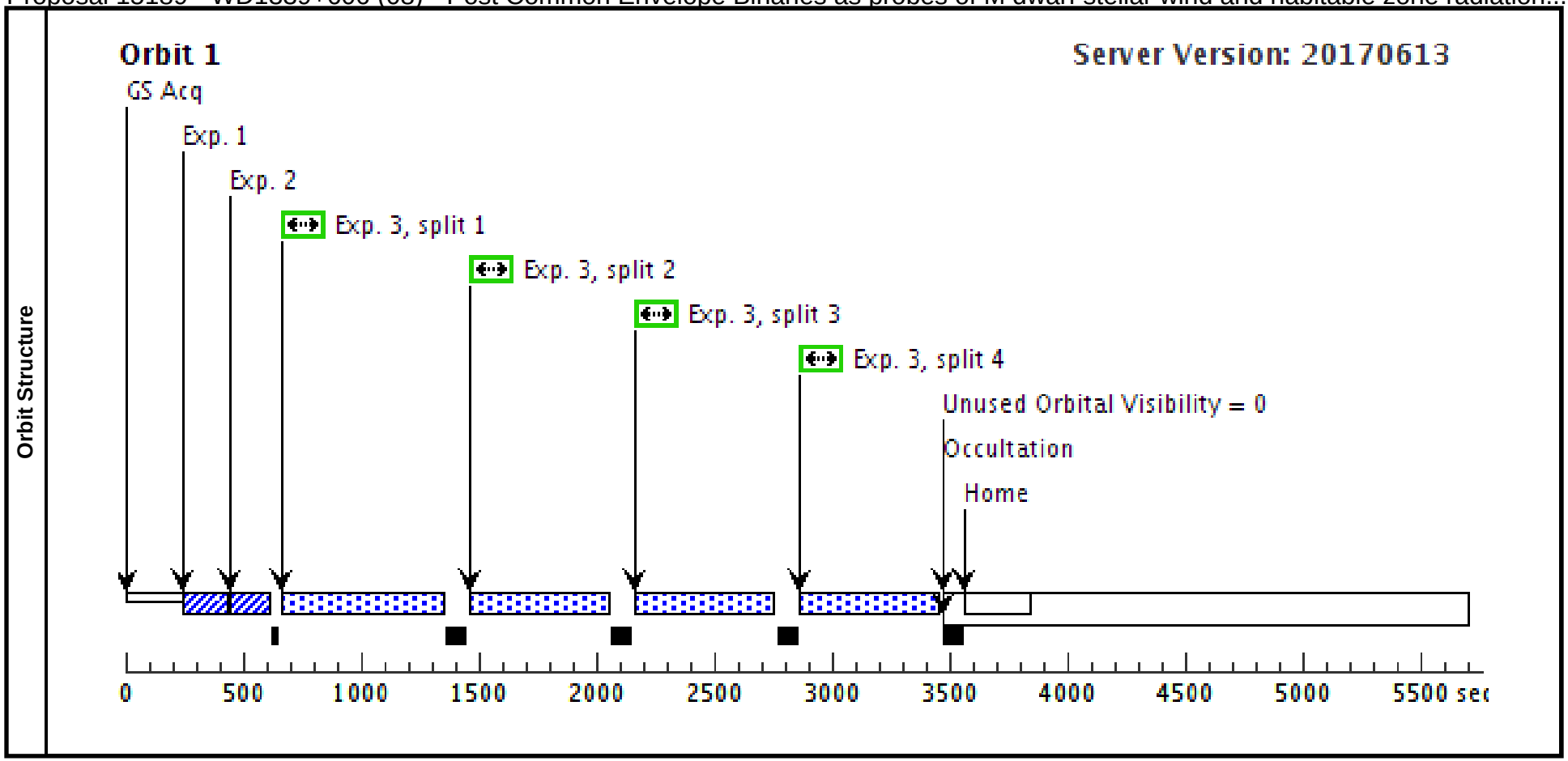
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	WD-1339+606	RA: 13 41 0.0245 (205.2501021d) Dec: +60 26 10.49 (60.43625d) Equinox: J2000	Proper Motion RA: 9.6 mas/yr Proper Motion Dec: -23 mas/yr Epoch of Position: 2000	V=16.7 fuv_mag: 15.068 nuv_mag: 15.615	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012572)	(8) WD-1339+606	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				3 Secs (3 Secs) *[==>]*	 ***[1]***
2	ACQ/Image (COS.sa.1012572)	(8) WD-1339+606	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			3 Secs (3 Secs) *[==>]*	 ***[1]***
3	WD1339_exp (COS.sp.1012576)	(8) WD-1339+606	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=742; FP-POS=ALL; FLASH=YES			400 Secs (2156 Secs) *[==>539.0 Secs (Split 1)]* *[==>539.0 Secs (Split 2)]* *[==>539.0 Secs (Split 3)]* *[==>539.0 Secs (Split 4)]*	 ***[1]***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GS Acq
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Exp. 2
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Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 0
Occultation
Home
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4500
5000
5500 sec

Visit

Proposal 15189, WD1436-216 (09)

Thu Jul 20 11:52:42 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

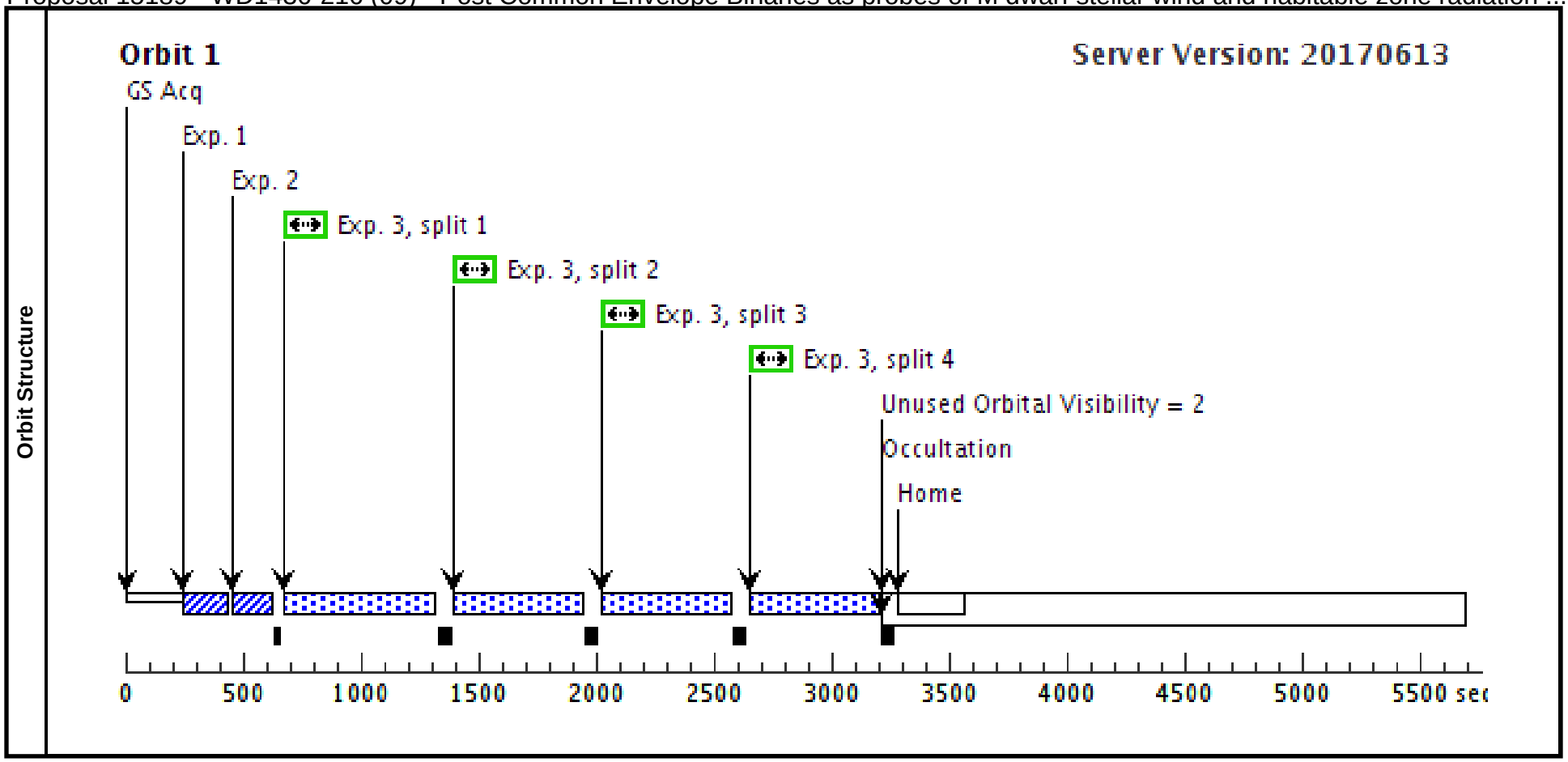
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	WD-1436-216	RA: 14 39 12.6475 (219.8026979d) Dec: -21 50 13.92 (-21.83720d) Equinox: J2000	Proper Motion RA: 6.3 mas/yr Proper Motion Dec: -20.1 mas/yr Epoch of Position: 2000	V=15.94 fuv_mag: 15.389 nuv_mag:15.809	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012577)	(9) WD-1436-216	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				4 Secs (4 Secs) *[==>]*	***[1]***
2	ACQ/Image (COS.sa.1012577)	(9) WD-1436-216	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			4 Secs (4 Secs) *[==>]*	***[1]***
3	WD1436_exp (COS.sp.1012589)	(9) WD-1436-216	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=1243; FP-POS=ALL; FLASH=YES			400 Secs (1976 Secs) *[==>494.0 Secs (Split 1)]* *[==>494.0 Secs (Split 2)]* *[==>494.0 Secs (Split 3)]* *[==>494.0 Secs (Split 4)]*	***[1]***


Orbit Structure
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Server Version: 20170613
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 2
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, WD1458+171 (10) Thu Jul 20 11:52:42 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

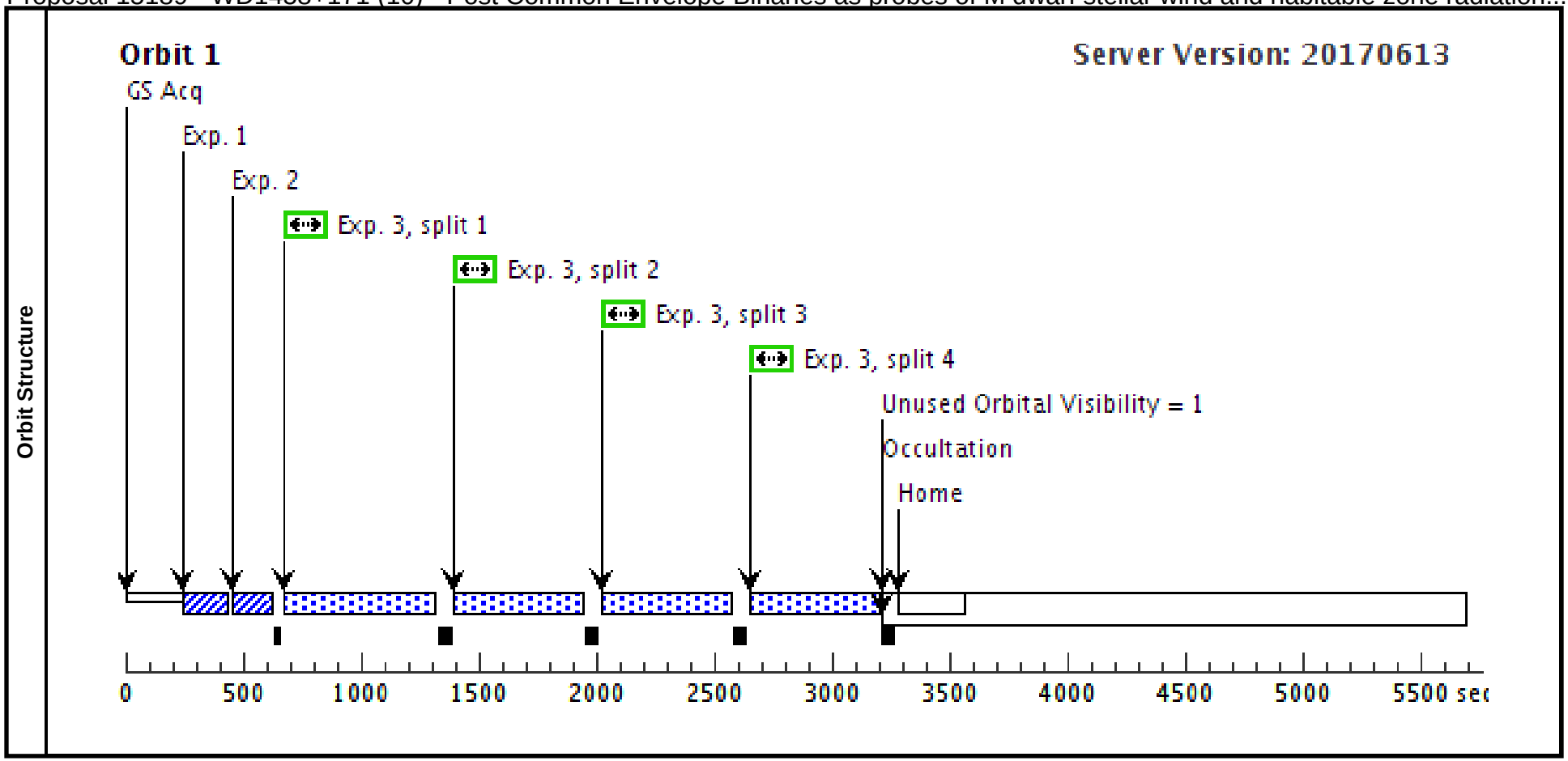
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	WD-1458+171	RA: 15 00 19.3390 (225.0805792d) Dec: +16 59 14.56 (16.98738d) Equinox: J2000	Proper Motion RA: -7.87 mas/yr Proper Motion Dec: -18.17 mas/yr Epoch of Position: 2000	V=16.21 nuv_mag: 15.5	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012602)	(10) WD-1458+171	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				4 Secs (4 Secs) *[==>]*	 ***[1]***
2	ACQ/Image (COS.sa.1012602)	(10) WD-1458+171	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			4 Secs (4 Secs) *[==>]*	 ***[1]***
3	WD1458_exp (COS.sp.1012604)	(10) WD-1458+171	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=1311; FP-POS=ALL; FLASH=YES			400 Secs (1976 Secs) *[==>494.0 Secs (Split 1)]* *[==>494.0 Secs (Split 2)]* *[==>494.0 Secs (Split 3)]* *[==>494.0 Secs (Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170613
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 1
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, WD1504+546 (11) Thu Jul 20 11:52:42 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

Comments: WD1504+546 was discovered to be an eclipsing binary after this proposal was submitted. As no UV flux is expected during the eclipse and the eclipse duration is similar to the time on target, we request that the observation completely avoid the eclipse. The ephemeris is as follows, in days:

T0 2457257.3662594743
T0_error 0.0014085256
E 0.93071526149955708
E_error 6.25E-06
Eclipse duration = 39 minutes

Please let me know if you require further details.

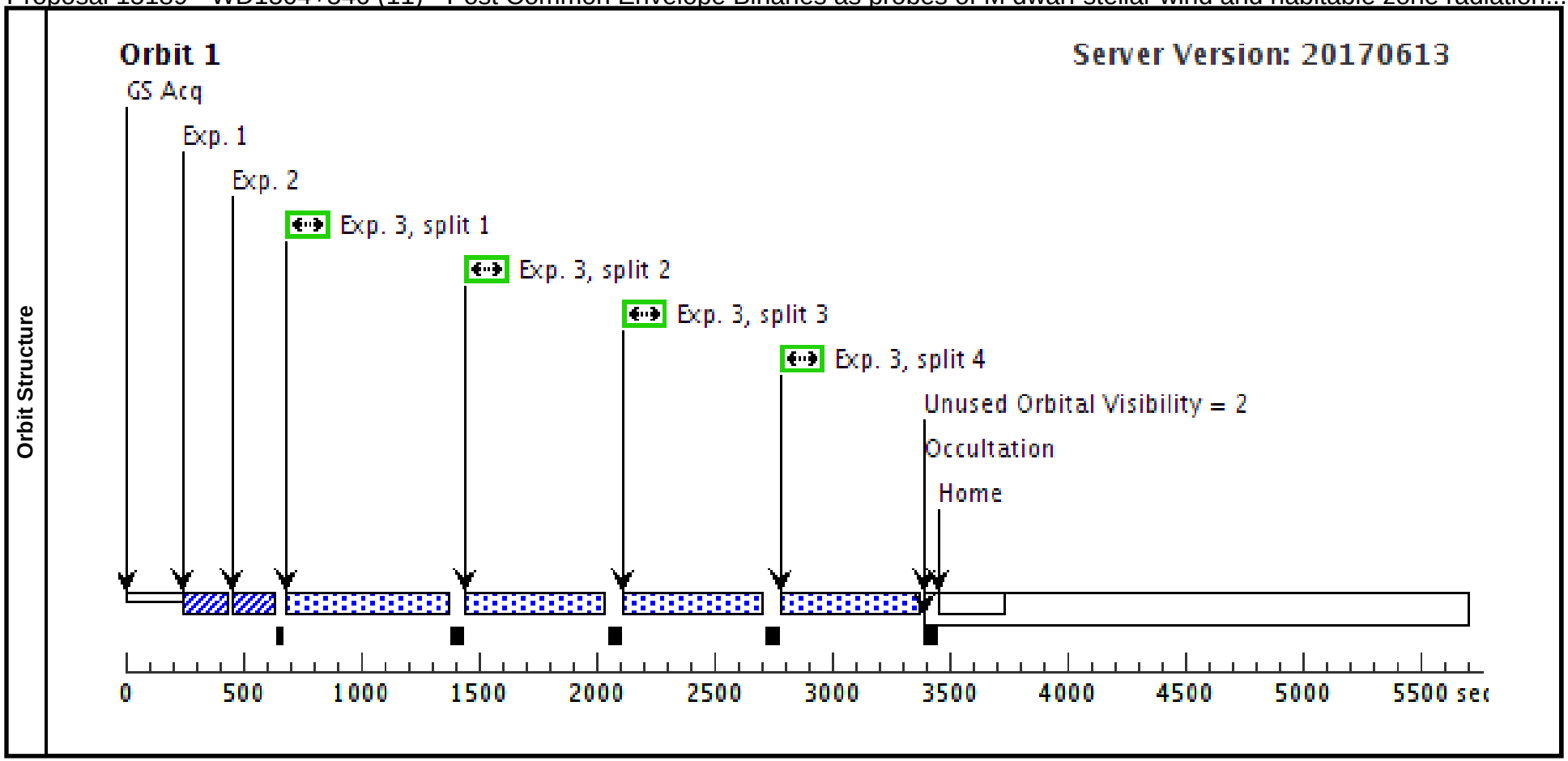
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	WD-1504+546	RA: 15 06 5.4278 (226.5226158d) Dec: +54 28 18.63 (54.47184d) Equinox: J2000	Proper Motion RA: -16 mas/yr Proper Motion Dec: 7.7 mas/yr Epoch of Position: 2000	V=16.369+/-0.077 fuv_mag: 15.476 nuv_mag: 15.919	Reference Frame: ICRS

Comments: Enhanced timing constraints due to eclipse, see visit for details
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012610)	(11) WD-1504+546	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	***[1]***
2	ACQ/Image (COS.sa.1012610)	(11) WD-1504+546	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			5 Secs (5 Secs) *[==>]*	***[1]***
3	WD1504_exp (COS.sp.1012613)	(11) WD-1504+546	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=1422; FP-POS=ALL; FLASH=YES			400 Secs (2144 Secs) *[==>536.0 Secs (Split 1)]* *[==>536.0 Secs (Split 2)]* *[==>536.0 Secs (Split 3)]* *[==>536.0 Secs (Split 4)]*	***[1]***


Orbit 1
Server Version: 20170613
Orbit Structure
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 2
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, WD2317+268 (12) Thu Jul 20 11:52:42 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

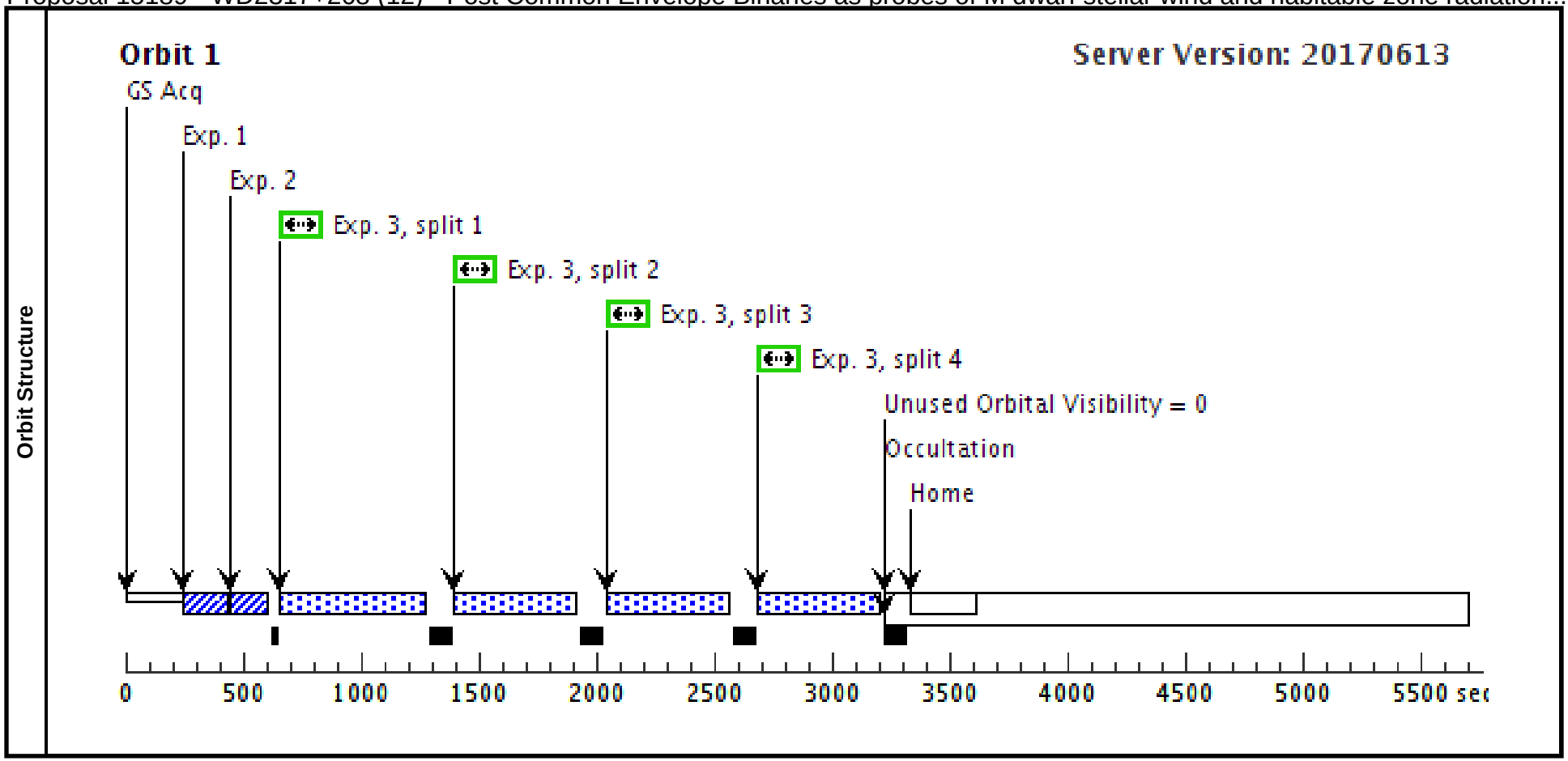
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	WD-2317+268	RA: 23 20 4.0176 (350.0167400d) Dec: +27 06 23.87 (27.10663d) Equinox: J2000	Proper Motion RA: 41.6 mas/yr Proper Motion Dec: -9.8 mas/yr Epoch of Position: 2000	V=16.3 fuv_mag: 14.747 nuv_mag:15.203	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.sa.1012624)	(12) WD-2317+268	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				2 Secs (2 Secs) *[==>]*	 ***[1]***
2	ACQ/Image (COS.sa.1012624)	(12) WD-2317+268	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=0.9; NUM-POS=5; CENTER=DEF			2 Secs (2 Secs) *[==>]*	 ***[1]***
3	WD2317_exp (COS.sp.1012626)	(12) WD-2317+268	COS/FUV, TIME-TAG, PSA	G130M 1223 A	BUFFER-TIME=598; FP-POS=ALL; FLASH=YES			400 Secs (1888 Secs) *[==>472.0 Secs (Split 1)]* *[==>472.0 Secs (Split 2)]* *[==>472.0 Secs (Split 3)]* *[==>472.0 Secs (Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170613
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 0
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500 sec

Visit

Proposal 15189, V727_CAR (02) Thu Jul 20 11:52:42 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	V-V727-CAR	RA: 10 44 10.2290 (161.0426208d) Dec: -69 18 18.32 (-69.30509d) Equinox: J2000	Proper Motion RA: -296.3 mas/yr Proper Motion Dec: 13.5 mas/yr Epoch of Position: 2000	V=13.09 IUE BPM FLux: 1.3x10^-12 erg s cm^-2 A^-1	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V727Car_Aqu (STIS.ta.1012367)	(7) V-V727-CAR	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	*[1]*
2	V727Car_exp (STIS.sp.1012944)	(7) V-V727-CAR	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=270			2500 Secs (2728 Secs) *[==>2728.0 Secs]*	*[1]*

Orbit Structure