14640 - Investigating the FUV Emission of Young M dwarfs with FUMES: the Far Ultraviolet M-dwarf Evolution Survey

Cycle: 24, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. John Sebastian Pineda (PI) (Contact)	**University of Colorado at Boulder**	**sebastian.pineda@lasp.colorado.edu**
Dr. Kevin France (CoI)	University of Colorado at Boulder	kevin.france@colorado.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
03	(10) GJ4334	STIS/CCD STIS/FUV-MAMA	2	01-Aug-2017 16:00:44.0	yes
04	(2) GJ49	STIS/CCD STIS/FUV-MAMA	2	01-Aug-2017 16:00:46.0	yes
05	(5) HIP112312	STIS/CCD STIS/FUV-MAMA	1	01-Aug-2017 16:00:47.0	yes
06	(8) LP247-13	STIS/CCD STIS/FUV-MAMA	1	01-Aug-2017 16:00:48.0	yes
07	(6) HIP17695	STIS/CCD STIS/FUV-MAMA	1	01-Aug-2017 16:00:49.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
08	(3) HIP23309	STIS/CCD STIS/FUV-MAMA	1	01-Aug-2017 16:00:50.0	yes
09	(7) CD-35-2722	STIS/CCD STIS/FUV-MAMA	1	01-Aug-2017 16:00:51.0	yes
10	(4) GJ410	STIS/CCD STIS/FUV-MAMA	1	01-Aug-2017 16:00:51.0	yes
11	(11) G249-11	STIS/CCD STIS/FUV-MAMA	3	01-Aug-2017 16:00:53.0	yes
12	(12) LP-55-41	STIS/CCD STIS/FUV-MAMA	3	01-Aug-2017 16:00:55.0	yes

16 Total Orbits Used

ABSTRACT

M dwarf stars have become attractive candidates for exoplanet searches and will be a main focus of the upcoming TESS mission, with the continued search for nearby potentially habitable worlds. However, the atmospheric characterization of these exoplanetary systems depends critically on the high energy stellar radiation environment from X-ray to NUV. Strong radiation at these energies can lead to atmospheric mass loss and is a strong driver of photochemistry in planetary atmospheres. Recently, the MUSCLES Treasury Survey (Cycles 19, 22) provided the first comprehensive assessment of the high energy radiation field around old, planet hosting M dwarfs. However, the habitability and potential for such exoplanetary atmospheres to develop life also depends on the evolution of the atmosphere and hence the evolution of the incident radiation field. The strong high energy spectrum of young M dwarfs can have devastating consequences for the potential habitability of a given system. We, thus, propose the Far Ultraviolet M-dwarf Evolution Survey (FUMES) to measure the strong FUV coronal/chromospheric emission features of young M dwarfs (12 - 650 Myr), e.g. He II, C IV, and S IV. FUMES will observe objects with a wide range of rotation rates to directly connect the emission features to the evolution of coronal heating and upper atmospheric structure, and provide observational benchmarks at young ages for models of M dwarf upper atmospheres. Building on results from MUSCLES, we will be able to estimate the whole high energy radiation field and establish the evolutionary picture of the incident radiation throughout the lifetime of exoplanetary systems around early-mid M dwarf hosts.

OBSERVING DESCRIPTION

The Far Ultraviolet M-dwarf Evolution Survey will observe 10 early to mid M-dwarf targets spanning rotation periods from ~1 day to ~80 days, focusing on objects with known young ages to understand the evolution of chormospheric/coronal heating and the history of the high-energy radiation field over time, with important implications for the evolutionary history of planetary systems around M dwarfs.

In order to measure the key coronal/chromospheric emission lines, we are observing our targets across the full FUV passband. We will use the STIS G140L mode to provide the greatest combination of spectral coverage and sensitivity, allowing us to measure, in a single exposure, coronal/chromospheric emission features that crucially probe different portions of the corona: He II, 1640 A, C II 1334 A, 1335 A, N V, 1239 A, 1243 A, Si IV 1394 A, 1403 A, and C V, 1548 A, 1550 A. The use of STIS alos protects potential flare events from damaging the more sensitive COS UV detectors.Operating in TIME-TAG mode we will observe the time vriability of the FUV spectrum as well and will be able to measure potential UV flare rates in a number of young M dwarfs. We based our expected emission fluxes on the FUV spectra of the nearby young active M dwarfs, AU Mic for M0-M2 spectral type objects and AD Leo for later type objects, and the SEDs at NUV and redder wavelengths from the MUSCLES survey of GJ876 and GJ832.

This data will be used to compare the emission strengths in objects with different rotational periods and spectral types and compare that data to literature observations to address our science goals.

Visit

Proposal 14640, GJ 4334 (03), implementation Tue Aug 01 20:00:56 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe GJ4334 over the course of 2 orbits with STIS FUV-MAMA G140L. The visit will use 2 orbits to build up the signal to noise desired in the key emission line diagnostics of the chromosphere and corona.

Uses the HST full SED of GJ876 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AD Leo from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	GJ4334	RA: 23 25 41.8683 (351.4244513d) Dec: +53 08 10.50 (53.13625d) Equinox: J2000	Proper Motion RA: 1007.1 mas/yr Proper Motion Dec: 331.9 mas/yr Parallax: 0.0402" Epoch of Position: 2014	V=14.59	Reference Frame: ICRS

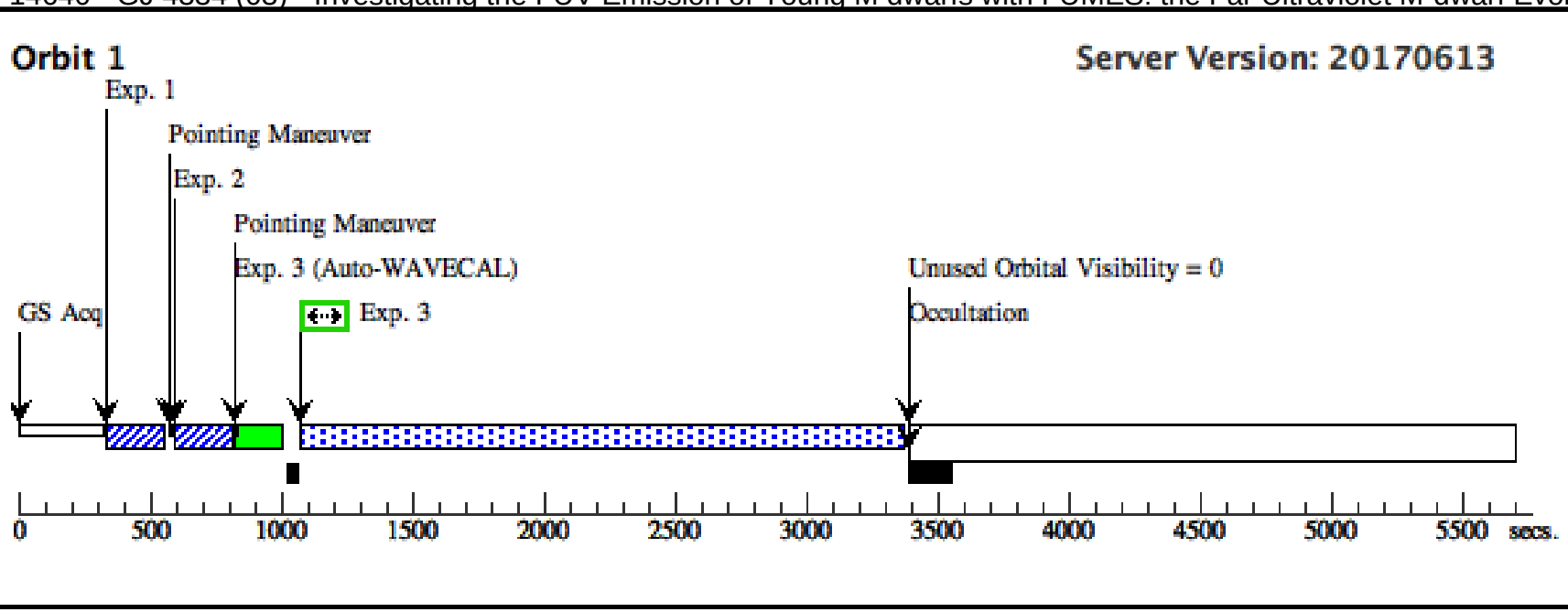
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

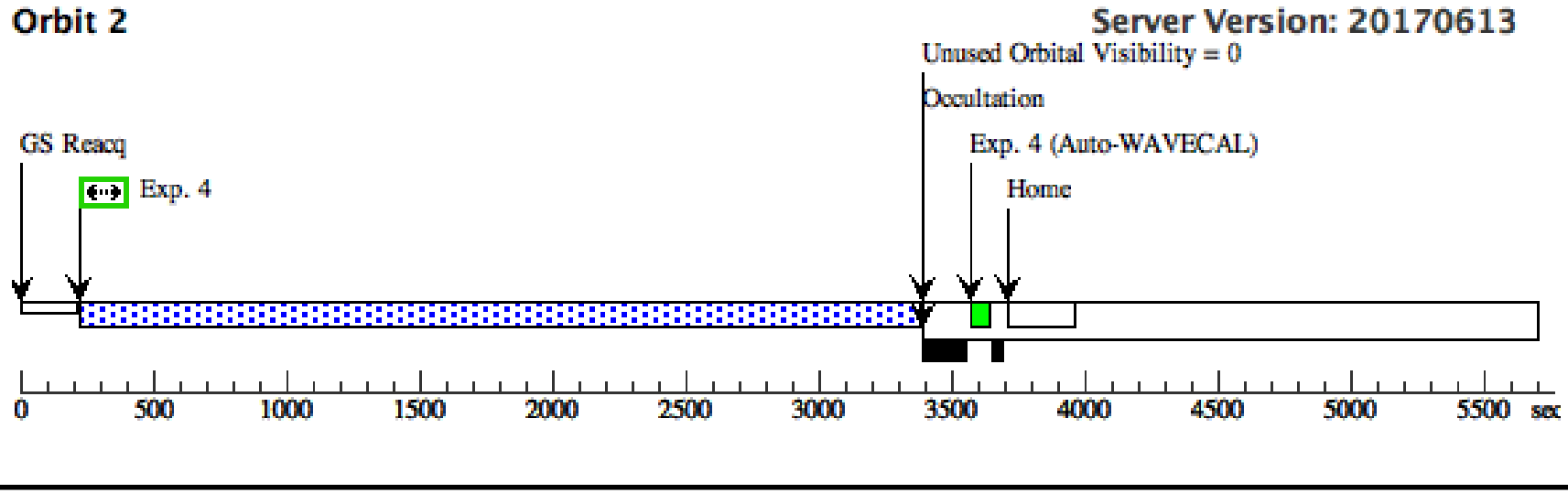
Positions and Proper Motion from URAT Parallax Catalogue
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	GJ4334_Acq (STIS.ta.1003022)	(10) GJ4334	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
2	GJ4334_AcqPeak (STIS.ta.1003025)	(10) GJ4334	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
3	GJ4334_spec1 (STIS.sp.1003026)	(10) GJ4334	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2286 Secs) *[==>2286.0 Secs]*	***[1]***
4	GJ4334_spec2 (STIS.sp.1003027)	(10) GJ4334	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=3500			2000 Secs (3143 Secs) *[==>3143.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 14640, GJ49 (04), implementation Tue Aug 01 20:00:56 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe GJ49 over the course of 2 orbits with STIS FUV-MAMA G140L. The visit will use 2 orbits to build up the signal to noise desired in the key emission line diagnostics of the chromosphere and corona.

Uses the HST full SED of GJ832 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AU Mic from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GJ49	RA: 01 02 38.8685 (15.6619521d) Dec: +62 20 42.17 (62.34505d) Equinox: J2000	Proper Motion RA: 731.5 mas/yr Proper Motion Dec: 90.4 mas/yr Parallax: 0.1004" Epoch of Position: 2000	V=9.56	Reference Frame: ICRS

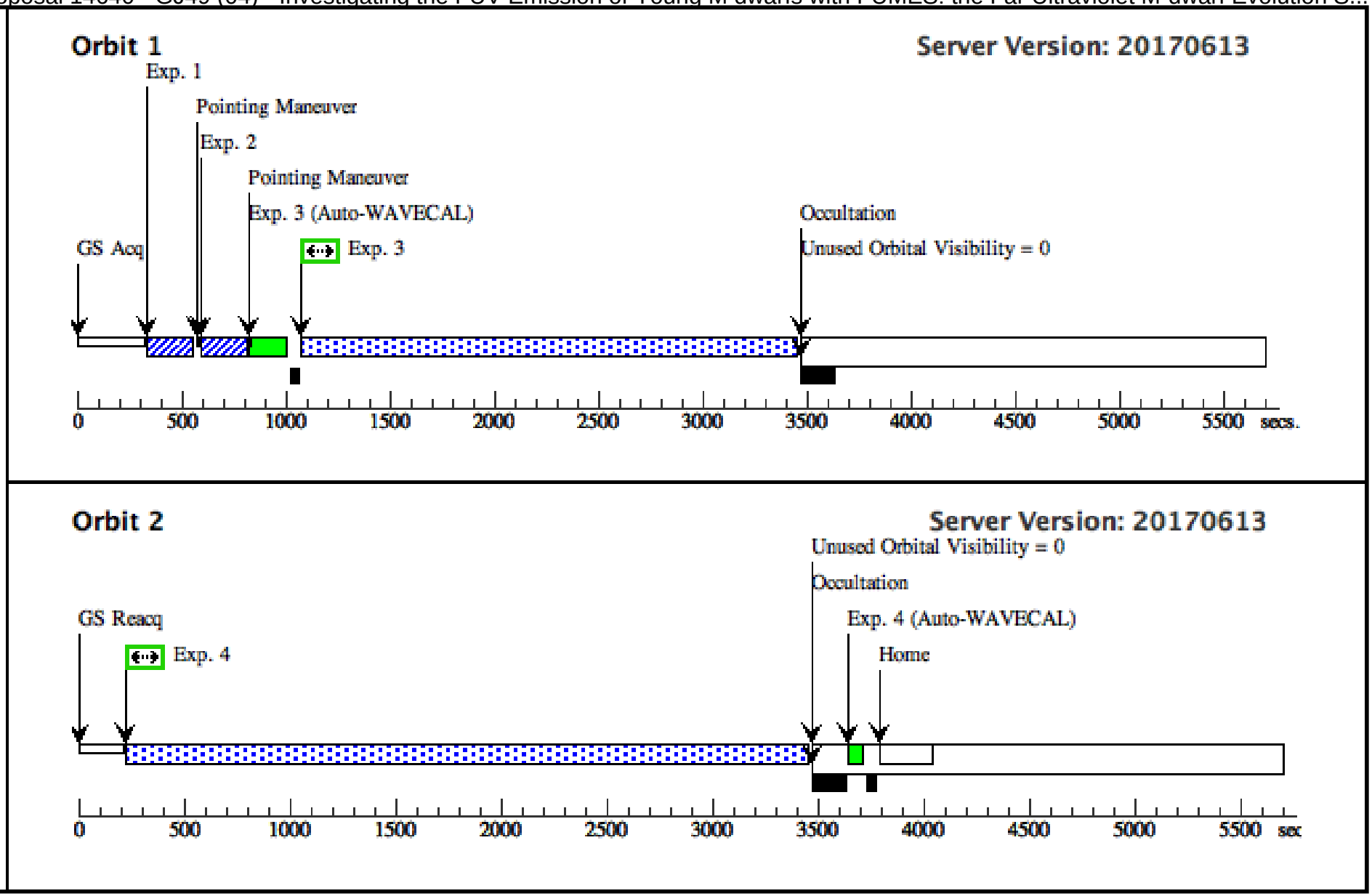
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	GJ49_Acq (STIS.ta.1003029)	(2) GJ49	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	GJ49_AcqPeak (STIS.ta.1003030)	(2) GJ49	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
3	GJ49_spec1 (STIS.sp.1003031)	(2) GJ49	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2364 Secs) *[==>2364.0 Secs]*	*[1]*
4	GJ49_spec2 (STIS.sp.1003032)	(2) GJ49	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=3500			2000 Secs (3221 Secs) *[==>3221.0 Secs]*	*[2]*

Orbit Structure



Visit

Proposal 14640, HIP112312 (05), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe HIP112312 over the course of 1 orbits with STIS FUV-MAMA E140M. This will provide continuous spectral coverage to look at several key chromospheric/coronal emission features, while dispersing the light sufficiently to prevent surpsassing detector count rates.

Uses the HST full SED of GJ876 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AD Leo from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HIP112312	RA: 22 44 57.9622 (341.2415092d) Dec: -33 15 1.74 (-33.25048d) Equinox: J2000	Proper Motion RA: 178.7 mas/yr Proper Motion Dec: -123.0 mas/yr Parallax: 0.04284" Epoch of Position: 2000	V=12.111	Reference Frame: ICRS

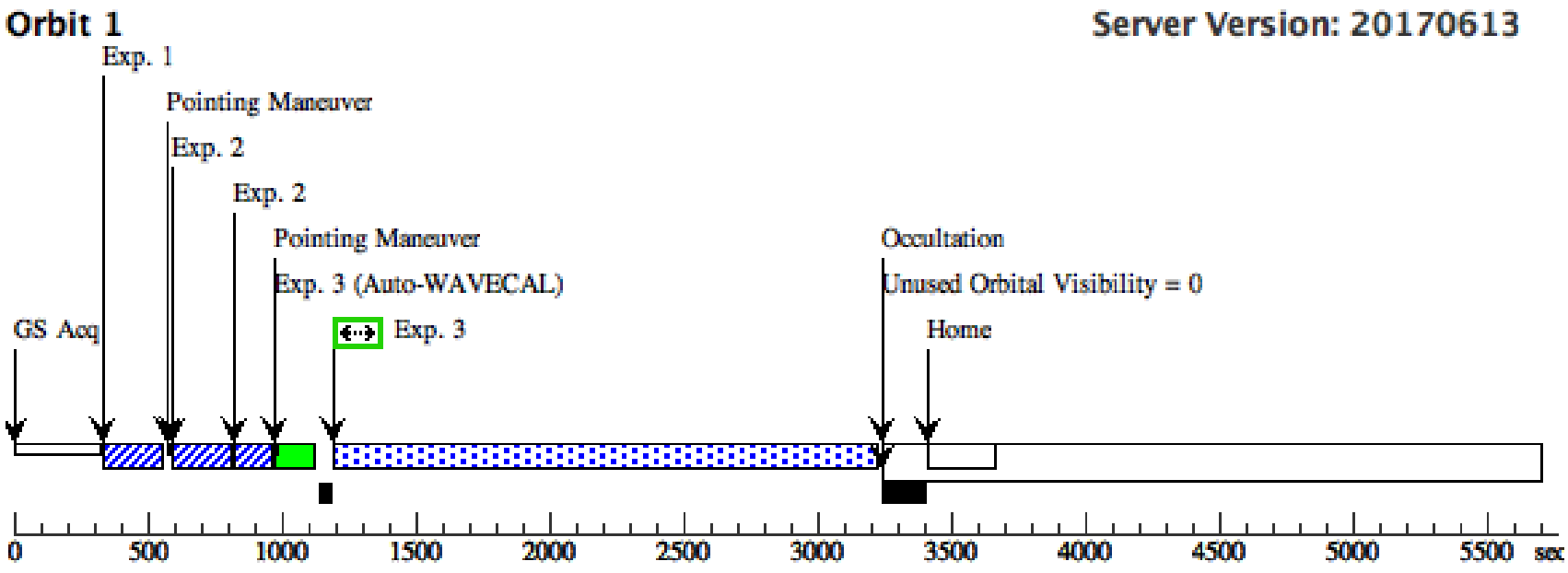
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	HIP112312_Acq (STIS.ta.1003036)	(5) HIP112312	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
2	HIP112312_AcqPeak (STIS.ta.1003038)	(5) HIP112312	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
3	HIP112312_spec1 (STIS.sp.1003039)	(5) HIP112312	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=2500			2000 Secs (2012 Secs) *[==>2012.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 14640, LP247-13 (06), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe LP247-13 over the course of 1 orbit with STIS FUV-MAMA G140L. This will provide continuous spectral coverage to sensitively measure several key chromospheric/coronal emission features.

Uses the HST full SED of GJ832 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AD Leo from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	LP247-13	RA: 03 15 37.8910 (48.9078792d) Dec: +37 24 14.02 (37.40389d) Equinox: J2000	Proper Motion RA: 209.0 mas/yr Proper Motion Dec: -97.0 mas/yr Parallax: 0.02907" Epoch of Position: 2000	V=13.12	Reference Frame: ICRS

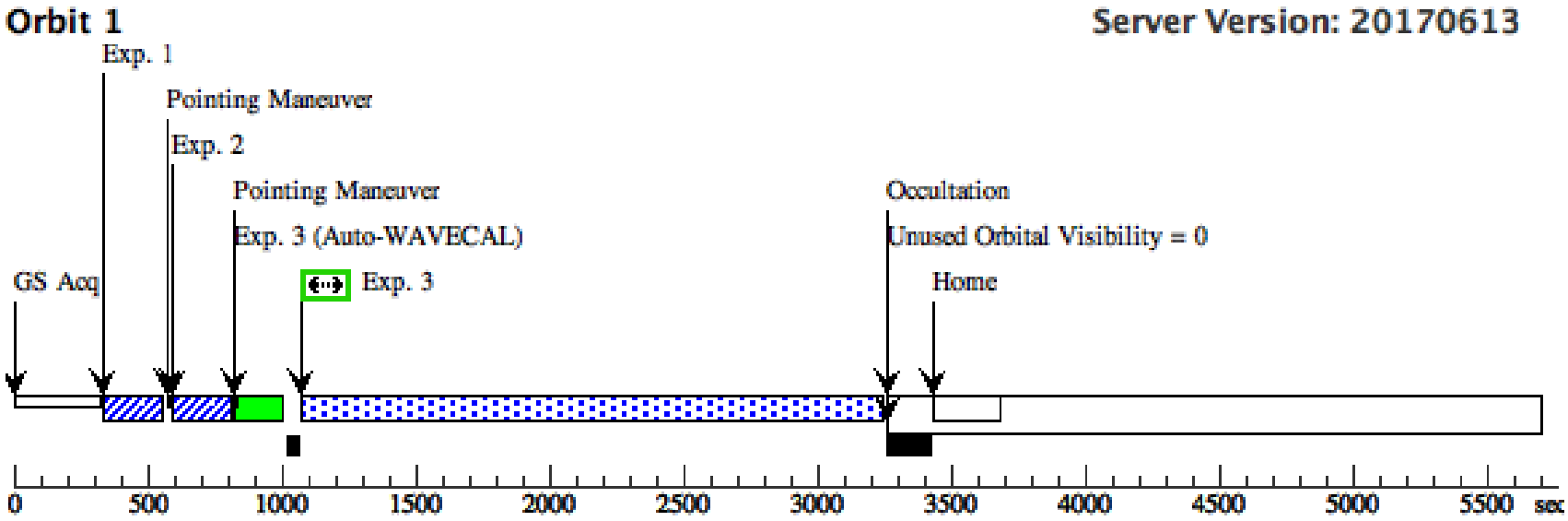
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	LP247-13_Acq (STIS.ta.1003041)	(8) LP247-13	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	LP247-13_AcqPeak (STIS.ta.1003042)	(8) LP247-13	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
3	LP247-13_spec1 (STIS.sp.1003043)	(8) LP247-13	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2153 Secs) *[==>2153.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 14640, HIP17695 (07), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe HIP17695 over the course of 1 orbits with with STIS FUV-MAMA E140M. This will provide continuous spectral coverage to look at several key chromospheric/coronal emission features, while dispersing the light sufficiently to prevent surpsassing detector count rates.

Uses the HST full SED of GJ876 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AD Leo from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	HIP17695	RA: 03 47 23.3402 (56.8472508d) Dec: -01 58 19.98 (-1.97222d) Equinox: J2000	Proper Motion RA: 178.6 mas/yr Proper Motion Dec: -278.2 mas/yr Parallax: 0.062" Epoch of Position: 2000	V=11.537	Reference Frame: ICRS

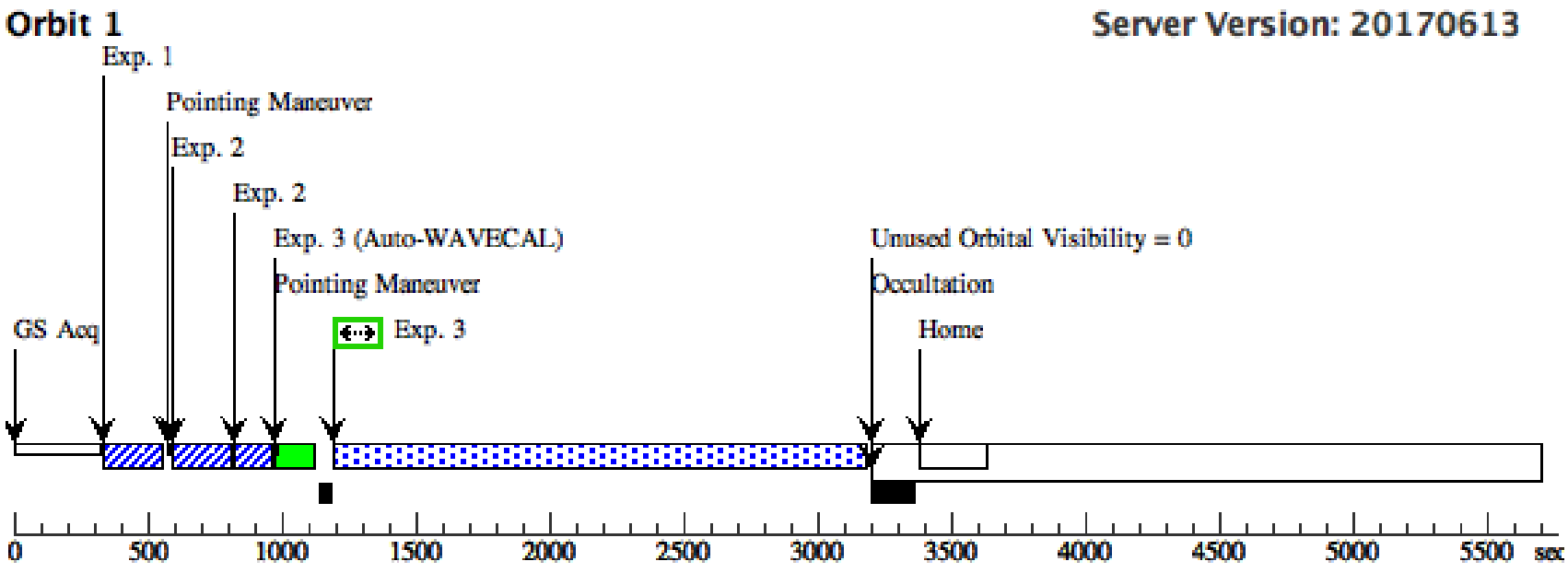
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	HIP17695_Acq (STIS.ta.1003045)	(6) HIP17695	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
2	HIP17695_AcqPeak (STIS.ta.1003046)	(6) HIP17695	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
3	HIP17695_spec1 (STIS.sp.1003047)	(6) HIP17695	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=2500			2000 Secs (1974 Secs) *[==>1974.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 14640, HIP23309 (08), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe HIP23309 over the course of 1 orbits with STIS FUV-MAMA G140L. This will provide continuous spectral coverage to sensitively measure several key chromospheric/coronal emission features.

Uses the HST full SED of GJ832 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AU Mic from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	HIP23309	RA: 05 00 47.1300 (75.1963750d) Dec: -57 15 25.45 (-57.25707d) Equinox: J2000	Proper Motion RA: 35.5 mas/yr Proper Motion Dec: 74.4 mas/yr Parallax: 0.03734" Epoch of Position: 2000	V=9.977	Reference Frame: ICRS

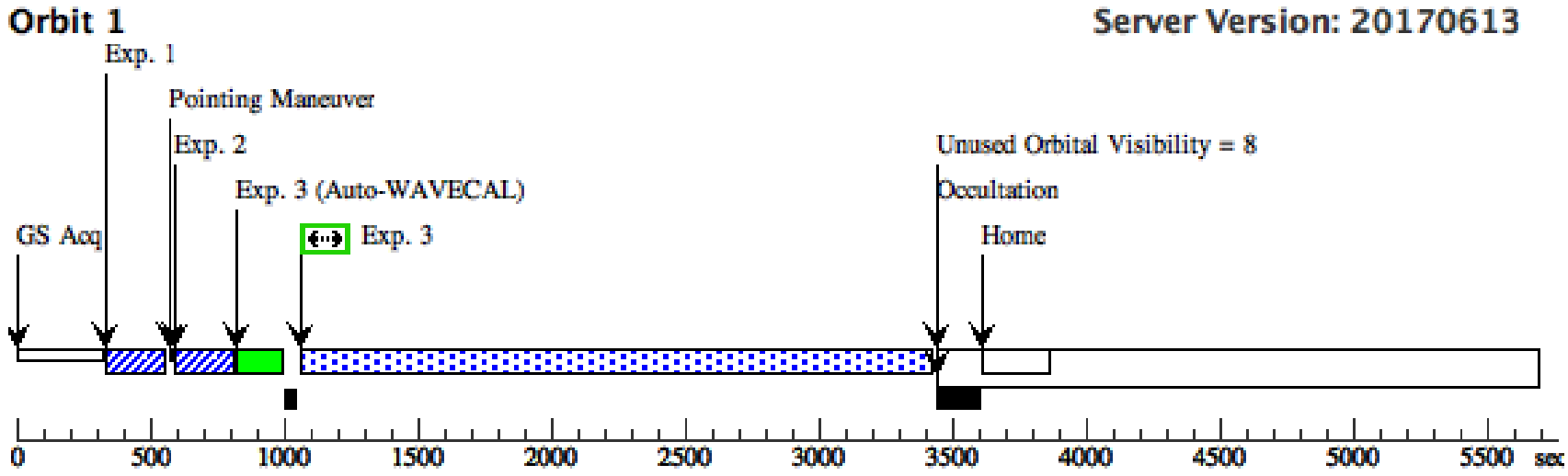
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	HIP23309_Acq (STIS.ta.1003050)	(3) HIP23309	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	HIP23309_AcqPeak (STIS.ta.1003051)	(3) HIP23309	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
3	HIP23309_spec1 (STIS.sp.1003052)	(3) HIP23309	STIS/FUV-MAMA, TIME-TAG, 52X0.1	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2350 Secs) *[==>2350.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 14640, CD-35-2722 (09), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe CD-35-2722 over the course of 1 orbit with STIS FUV-MAMA G140L. This will provide continuous spectral coverage to sensitively measure several key chromospheric/coronal emission features.

Uses the HST full SED of GJ832 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AU Mic from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	CD-35-2722	RA: 06 09 19.2062 (92.3300258d) Dec: -35 49 31.09 (-35.82530d) Equinox: J2000	Proper Motion RA: -5.0 mas/yr Proper Motion Dec: -55.1 mas/yr Parallax: 0.0436" Epoch of Position: 2000	V=11.083	Reference Frame: ICRS

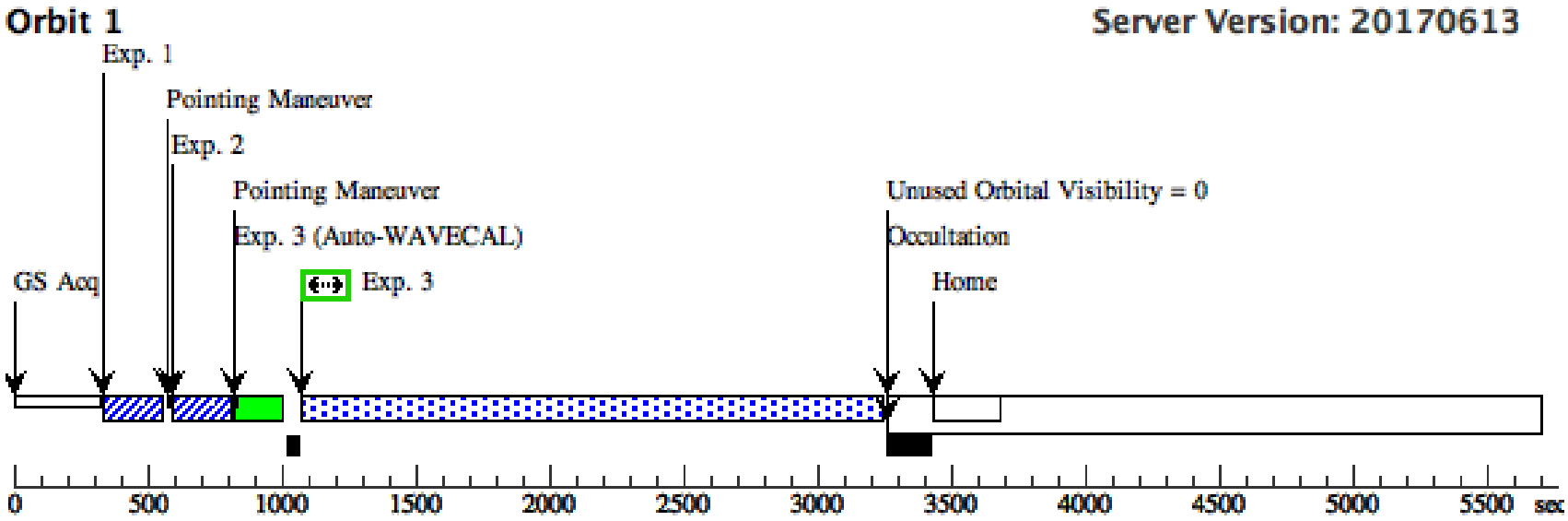
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	CD-35-2722_Acq (STIS.ta.1003054)	(7) CD-35-2722	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
2	CD-35-2722_AcqPeak (STIS.ta.1003055)	(7) CD-35-2722	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
3	CD-35-2722_spec1 (STIS.sp.1003056)	(7) CD-35-2722	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2153 Secs) *[==>2153.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 14640, GJ410 (10), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe GJ410 over the course of 1 orbits with STIS FUV-MAMA G140L. This will provide continuous spectral coverage to sensitively measure several key chromospheric/coronal emission features.

Uses the HST full SED of GJ832 from the MUSCLES program as a model for exposure time calculations as well as the FUV spectrum of AU Mic from StarCat in the FUV.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	GJ410	RA: 11 02 38.3434 (165.6597642d) Dec: +21 58 1.69 (21.96714d) Equinox: J2000	Proper Motion RA: 145 mas/yr Proper Motion Dec: -52.7 mas/yr Parallax: 0.08495" Epoch of Position: 2000	V=9.572	Reference Frame: ICRS

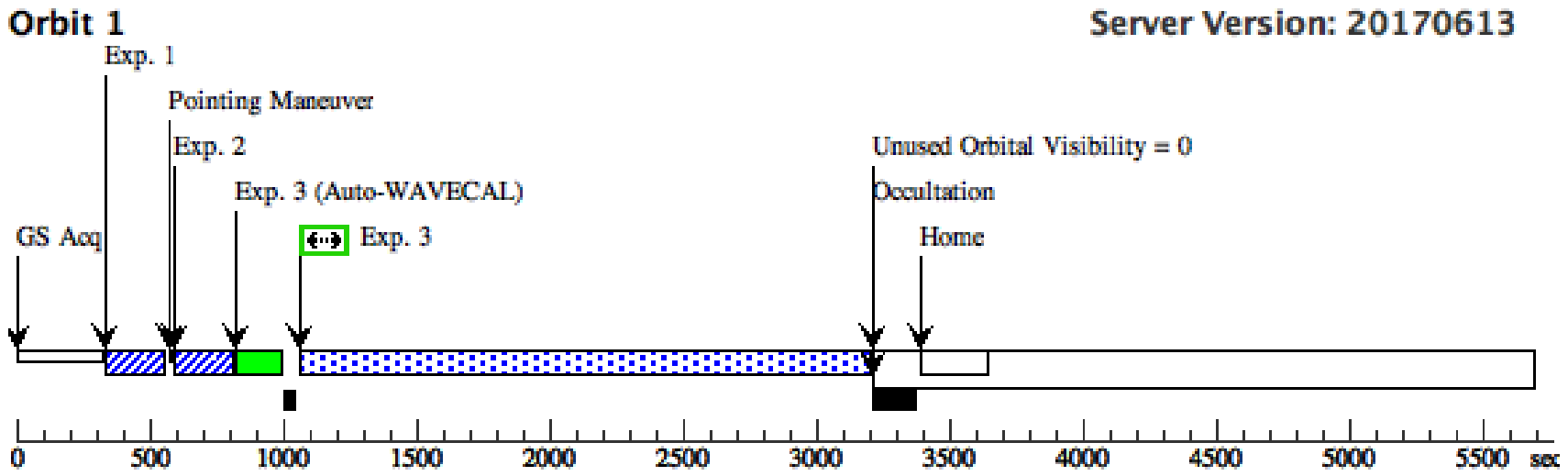
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Coordinates/PMs and Uncertainty Updated with Initial Gaia Source List
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	GJ410_Acq (STIS.ta.1003058)	(4) GJ410	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	GJ410_Acq Peak (STIS.ta.1003059)	(4) GJ410	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
3	GJ410_spec 1 (STIS.sp.1003060)	(4) GJ410	STIS/FUV-MAMA, TIME-TAG, 52X0.1	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2126 Secs) *[==>2126.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 14640, G249-11 (11), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe G249-11 over the course of 3 orbits with STIS FUV-MAMA G140L. The visit will use 3 orbits to build up the signal to noise desired in the key emission line diagnostics of the chromosphere and corona.

Uses the HST full SED of GJ876 from the MUSCLES program as a model for exposure time calculations.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	G249-11	RA: 05 30 40.7971 (82.6699879d) Dec: +68 54 4.37 (68.90121d) Equinox: J2000	Proper Motion RA: 169.6 mas/yr Proper Motion Dec: -255.2 mas/yr Parallax: 0.0461" Epoch of Position: 2014	V=14.98 B=16.3	Reference Frame: ICRS

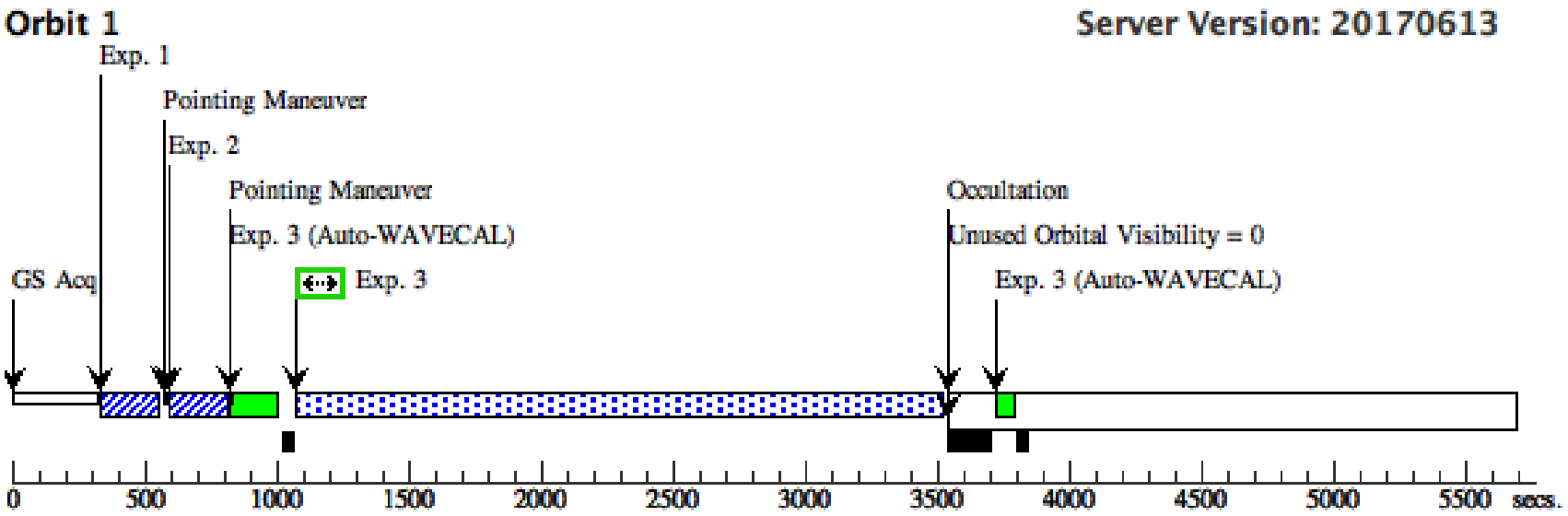
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

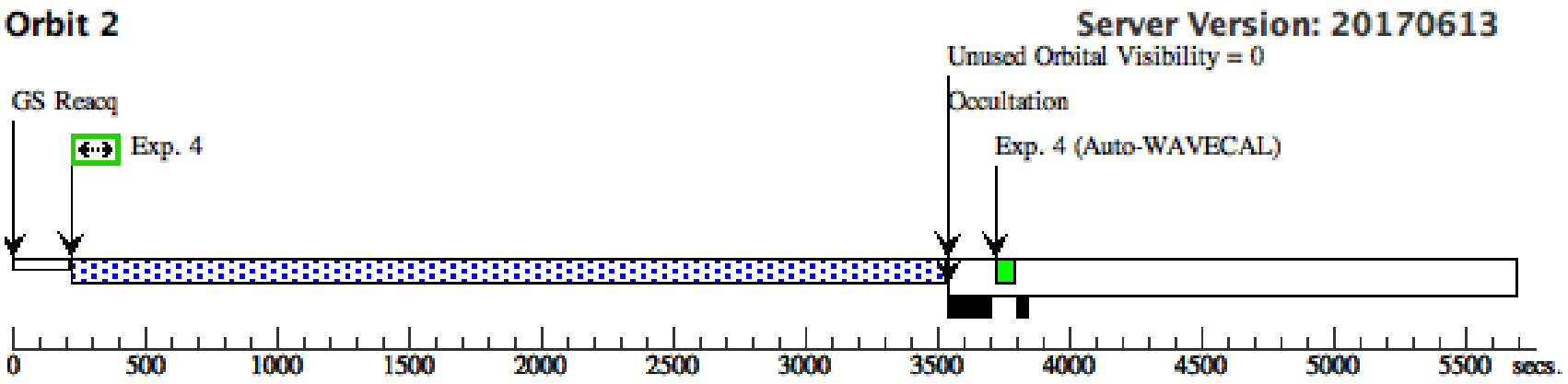
Positions and proper motions from URAT parallax catalogue
Extended=NO

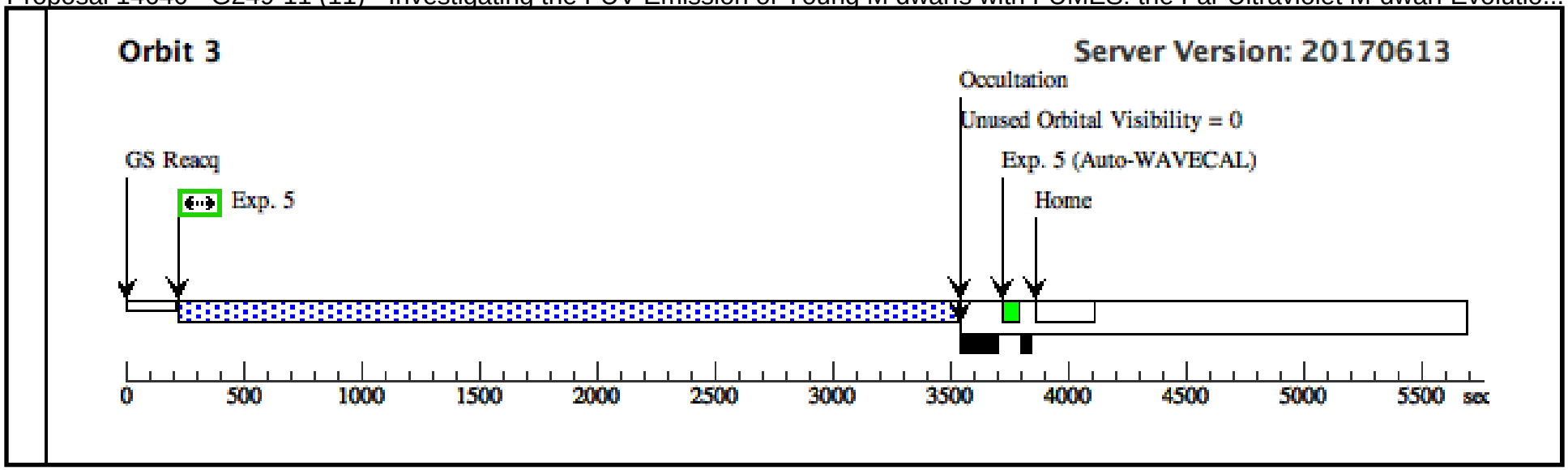
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G249-11_Acq (STIS.ta.1003062)	(11) G249-11	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	G249-11_AcqPeak (STIS.ta.1003063)	(11) G249-11	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
3	G249-11_spec1 (STIS.sp.1003064)	(11) G249-11	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=2500			2000 Secs (2439 Secs) *[==>2439.0 Secs]*	*[1]*
4	G249-11_spec2 (STIS.sp.1003065)	(11) G249-11	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=3500			3000 Secs (3296 Secs) *[==>3296.0 Secs]*	*[2]*
5	G249-11_spec3 (STIS.sp.1003065)	(11) G249-11	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=3500			3000 Secs (3296 Secs) *[==>3296.0 Secs]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20170613
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Exp. 5 (Auto-WAVECAL)
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14640, LP55-41 (12), implementation Tue Aug 01 20:00:57 GMT 2017

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Comments: Plan to observe LP55-41 over the course of 3 orbits with STIS FUV-MAMA G140L. The visit will use 3 orbits to build up the signal to noise desired in the key emission line diagnostics of the chromosphere and corona.

Uses the HST full SED of GJ876 from the MUSCLES program as a model for exposure time calculations.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	LP-55-41	RA: 05 02 5.1000 (75.5212500d) Dec: +68 27 21.81 (68.45606d) Equinox: J2000	Proper Motion RA: 10.4 mas/yr Proper Motion Dec: -250.6 mas/yr Parallax: 0.0326" Epoch of Position: 2014	V=13.858 B=14.92	Reference Frame: ICRS

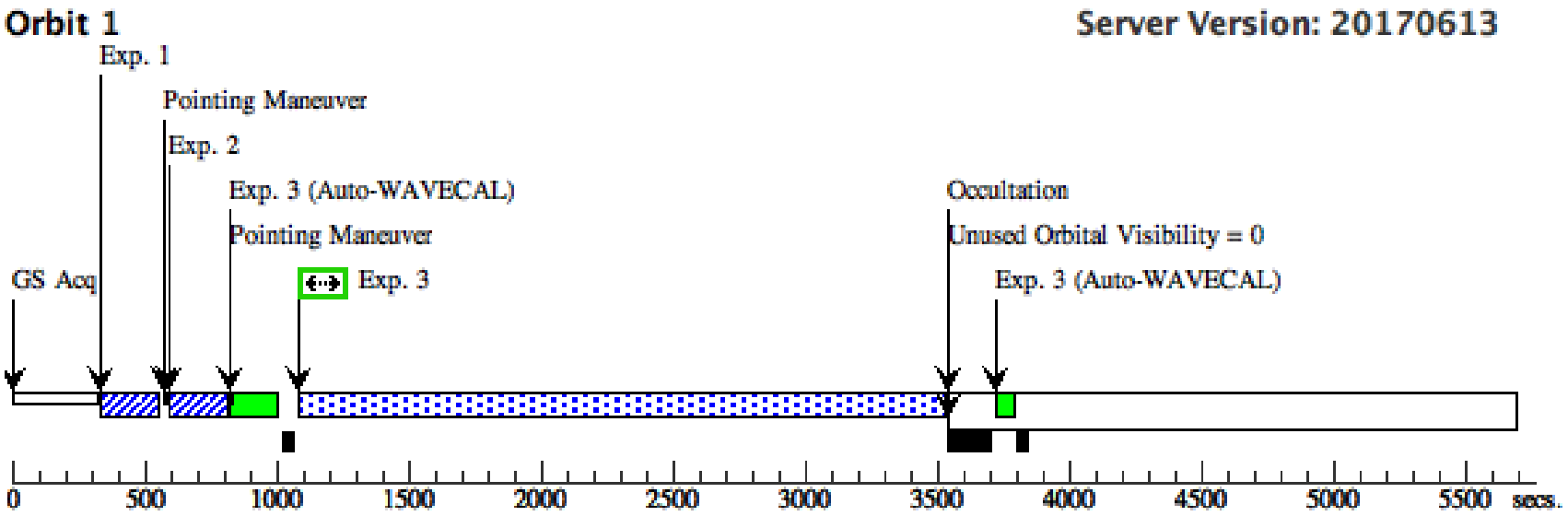
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

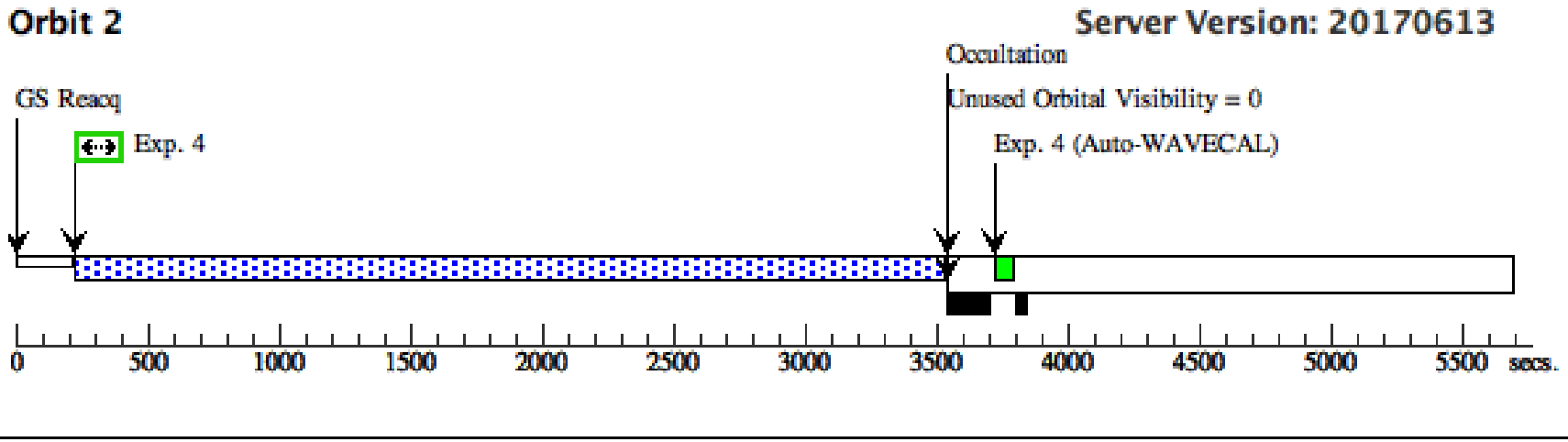
Positions and PM from URAT Finch+16
Extended=NO

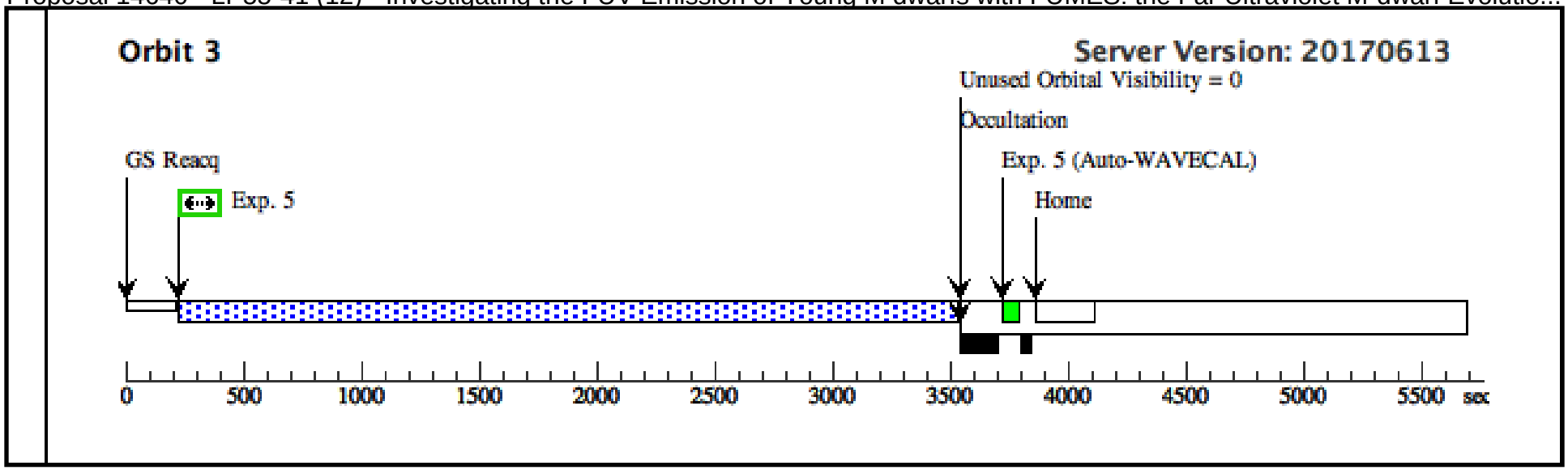
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	LP55-41_Acq (STIS.ta.1003067)	(12) LP-55-41	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
2	LP55-41_AcqPeak (STIS.ta.1003071)	(12) LP-55-41	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	***[1]***
3	LP55-41_spec1 (STIS.sp.1003074)	(12) LP-55-41	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=2600			2000 Secs (2436 Secs) *[==>2436.0 Secs]*	***[1]***
4	LP55-41_spec2 (STIS.sp.1003075)	(12) LP-55-41	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=3500			3000 Secs (3296 Secs) *[==>3296.0 Secs]*	***[2]***
5	LP55-41_spec3 (STIS.sp.1003075)	(12) LP-55-41	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=3500			3000 Secs (3296 Secs) *[==>3296.0 Secs]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20170613
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5
Exp. 5 (Auto-WAVECAL)
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec