14161 - The Intersection of Atomic Physics and Astrophysics: Identifying UV Fe I Lines from Metal-Poor Turnoff Stars

Cycle: 23, Proposal Category: GO

(UV Initiative, Treasury)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Ruth C. Peterson (PI) (Contact)	**SETI Institute**	**peterson@ucolick.org**
Dr. Robert L. Kurucz (CoI)	Smithsonian Institution Astrophysical Observatory	rkurucz@cfa.harvard.edu
Dr. Thomas R. Ayres (CoI) (Contact)	University of Colorado at Boulder	thomas.ayres@colorado.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
A0	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:18.0	yes
A1	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:21.0	yes
A2	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:23.0	yes
A3	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:26.0	yes
A4	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:28.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
A5	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:31.0	yes
A6	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:33.0	yes
A7	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:35.0	yes
A8	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:38.0	yes
A9	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:40.0	yes
AA	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	2	26-Sep-2015 21:08:43.0	yes
AB	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:45.0	yes
AC	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:47.0	yes
AD	(1) HD-84937	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:49.0	yes
B0	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:52.0	yes
B1	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:54.0	yes
B2	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:56.0	yes
B3	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:08:58.0	yes
B4	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:00.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
B5	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:02.0	yes
B6	(2) HD-94028	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:04.0	yes
C0	(3) HD-140283	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:06.0	yes
C1	(3) HD-140283	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:09.0	yes
D0	(4) HD-211998	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:11.0	yes
D1	(4) HD-211998	STIS/CCD STIS/NUV-MAMA	3	26-Sep-2015 21:09:14.0	yes

74 Total Orbits Used

ABSTRACT

Observational surveys are expanding, recording ever-fainter sources from the ultraviolet to the infrared. Needed to characterize them are observational ultraviolet templates at high spectral resolution and low metallicity for the oldest populations, and the laboratory astrophysics data essential to model objects such as stars and nebulae at all ages, metallicities, and redshifts.

We address this by proposing to complete the high-resolution UV spectral coverage of four key metal-poor turnoff stars. These are ideal as metal-poor templates of old stars and as the "laboratory source" for the identification of the thousands of lines of neutral iron that appear in stellar spectra, but are absent from or not identified in laboratory spectra. By matching existing stellar spectra to calculations of energy levels, line wavelengths, and gf-values, Peterson & Kurucz (2015) identified 66 Fe I levels with energies up to 8.4eV, yielding 2000 new lines from 1600 Angstroms to 5.4 microns, and empirical gf-values for 640 of these. The proposed work should yield ~500 new levels and ~10,000 new Fe I lines.

The new energy levels and line parameters also will be posted on the Kurucz website. The new spectra, and supporting theoretical calculations, will be integrated into the publicly available HST Advanced Spectral Library (ASTRAL) Treasury Project. This will leverage the utility of these archival spectral templates and atlases in such diverse areas as nucleosynthesis at early epochs, infrared analysis of dust-obscured giants, reconstructing the

populations of nearby globular clusters and dwarf galaxies from their integrated light, and deriving age and metallicity for old, distant galaxies.

OBSERVING DESCRIPTION

The observing program is very straightforward and follows essentially exactly that proposed at Phase I (with the exception that one target was eliminated by the TAC). The (four remaining) targets all are relatively bright stars, with accurate Hipparcos coordinates and proper motions. All of the program exposures will use standard E230H settings (2013, 2263, 2513, 2763, 3012), through the default spectroscopic slit (0.2x0.09: SPCH). All of the targets have been observed previously, safely, by STIS; and all have sufficient STIS and IUE spectra to define accurate SEDs (for use with the STIS spectroscopic ETC). The narrow SPCH slit precludes possible interference from nearly stars, which already are eliminated as a concern by virtue of the previous STIS (and IUE) NUV spectra. Even the brightest exposure is an order of magnitude below any of the NUV MAMA detector local or global bright limits. These metal-poor F/G stars are not known to flare, and even if they did, the influence on the broad-band NUV intensities would be minimal, since the major enhanced effects are confined to the FUV and X-ray regions.

Tagret acquisitions initially are by the CDD, with the MIRROR and ND3 filter; exposure times are set to yield more than adequate counts. The SPCH peak-ups are performed in dispersed light with the low-res optical grating, G430L, and the CCD; the minimal (0.2 s) exposure times yield roughly a million, or more, total counts; but avoid saturation of the spectral segment.

The (extensive) observations of targets HD-84937 and HD-94028 were divided into a series of 10 and 5 visits, respectively, of 4 orbits each. The smaller programs for HD-140283 and HD-211998 were done with pairs of 3-orbit visits. In order to minimize "breathing" effects (de-focusing of the telescope image due to environmental changes), the shortest-wavelength exposures (most susceptible to these effects) were placed at the ends of each visit. The visits were designed to ensure maximum fixed-pattern mitigation.

Postscript (24 September 2015)

After the Phase2 submission, we were asked by the Long Range Planning Group to convert our fifteen 4-orbit visits (for HD-84937 and HD-94028) into shorter versions to help the scheduling process. The Telescope Time Review Board then approved two additional orbits for the program, to make up for the loss of exposure time that accompanies the somewhat less efficient 3-orbit visits. The modified program (which affects only the HD-84937 and HD-94028 visits) consists of fourteen 3-orbit visits and one 2-orbit visit for HD-84937, and seven 3-orbit visits for HD-94028. The visits were restructured so that, aside from one exception, each consists of exposures in a single setting. The effective time sequence in each visit allows

breathing effects to be recognized more easily. The shorter sequences also make throughput losses due to slight pointing drifts less likely.

Visit

Proposal 14161, HD-84937 (A0), implementation Sun Sep 27 01:09:17 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

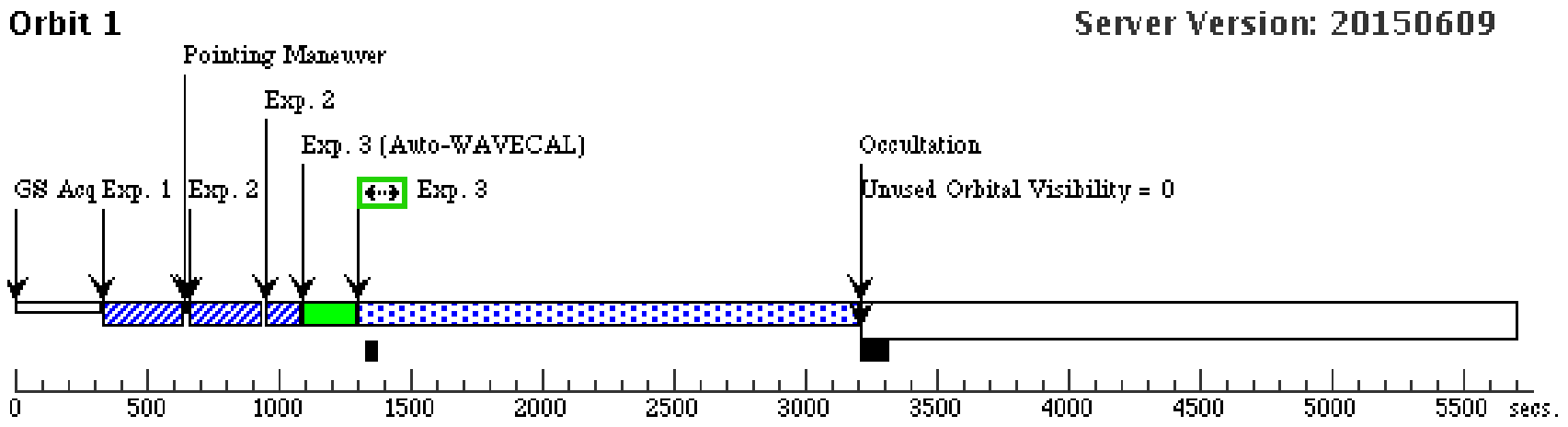
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

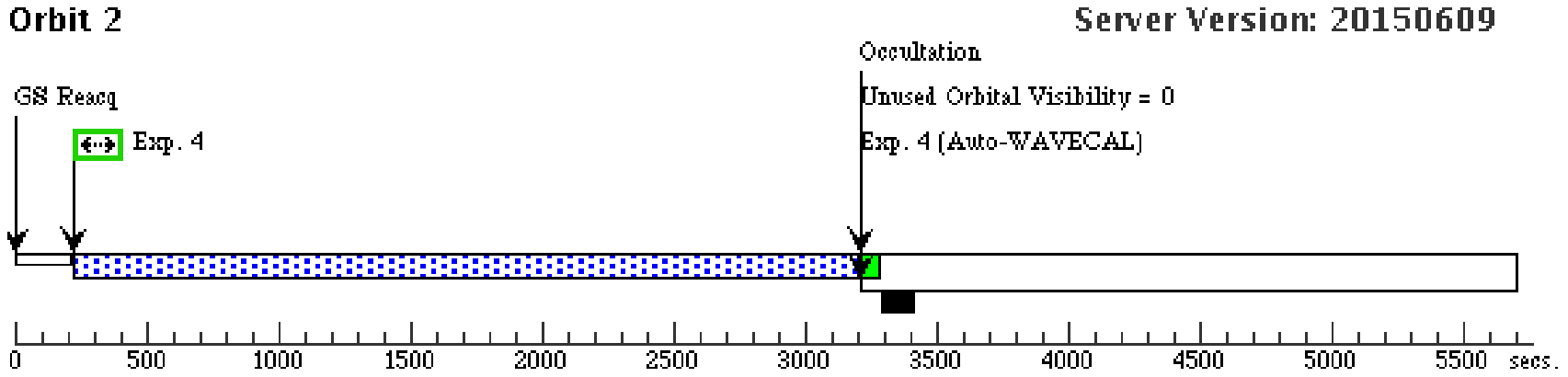
coordinates revised for epoch 2016.
Extended=NO

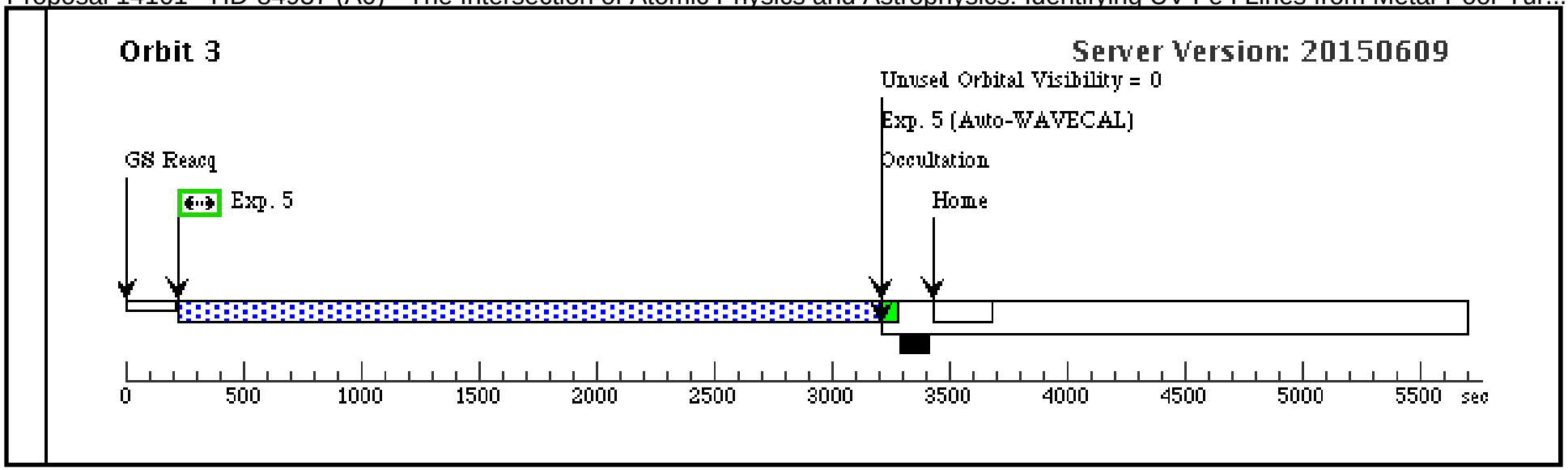
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
Occultation
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A1) Sun Sep 27 01:09:17 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

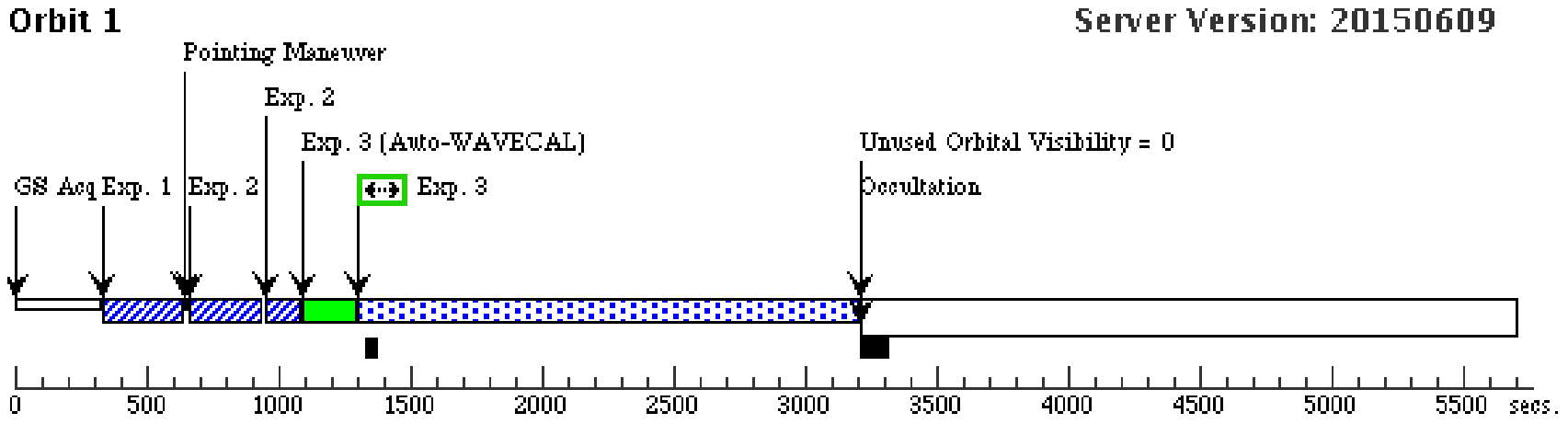
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

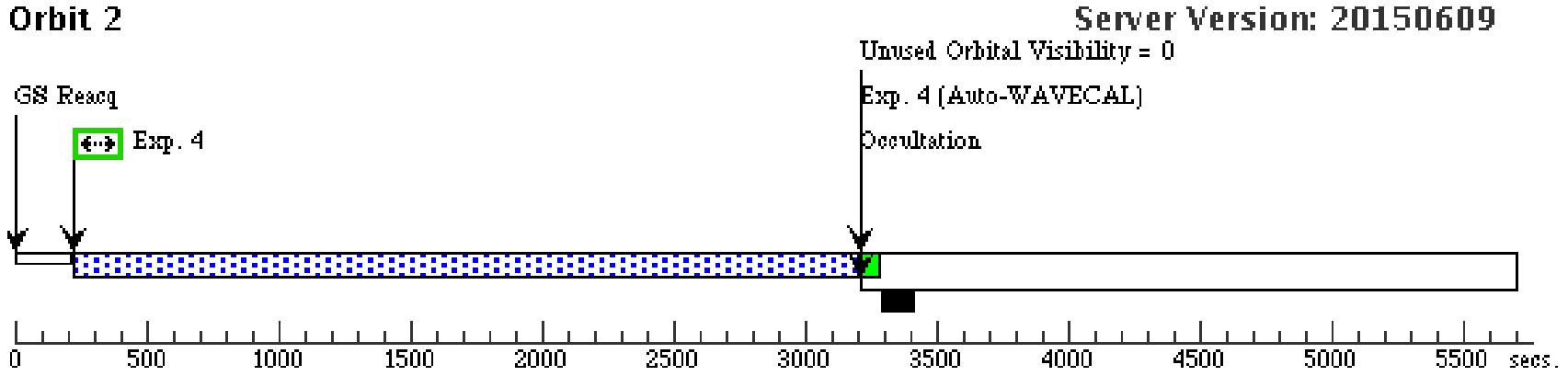
coordinates revised for epoch 2016.
Extended=NO

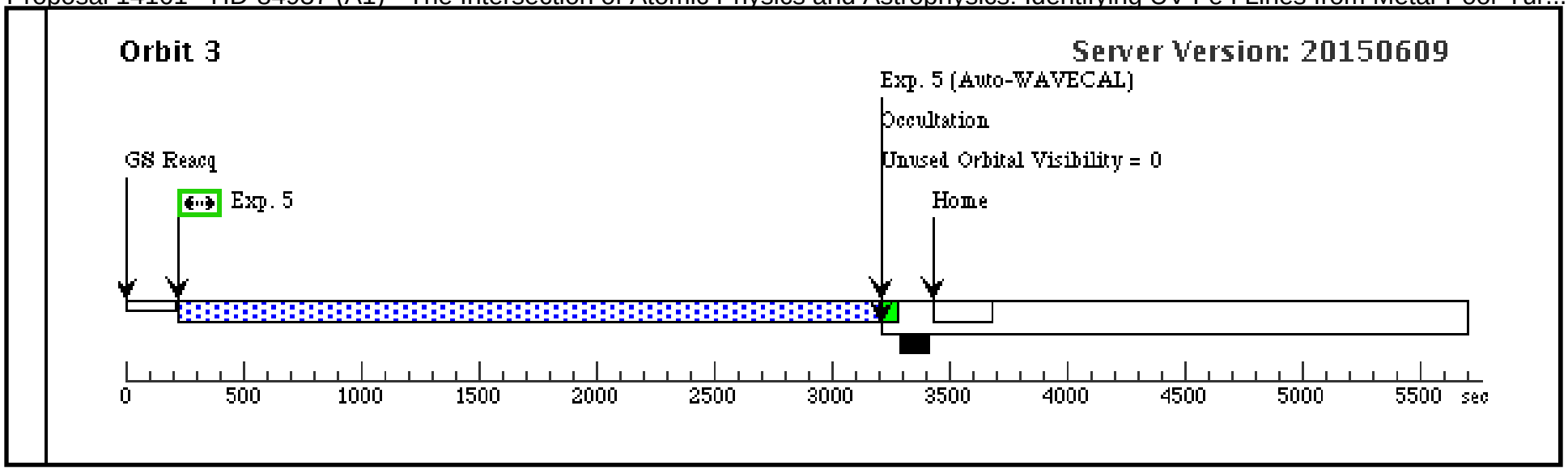
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				1880 Secs (1880 Secs) *[==>]*	***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Exp. 5 (Auto-WAVECAL)
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A2) Sun Sep 27 01:09:18 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

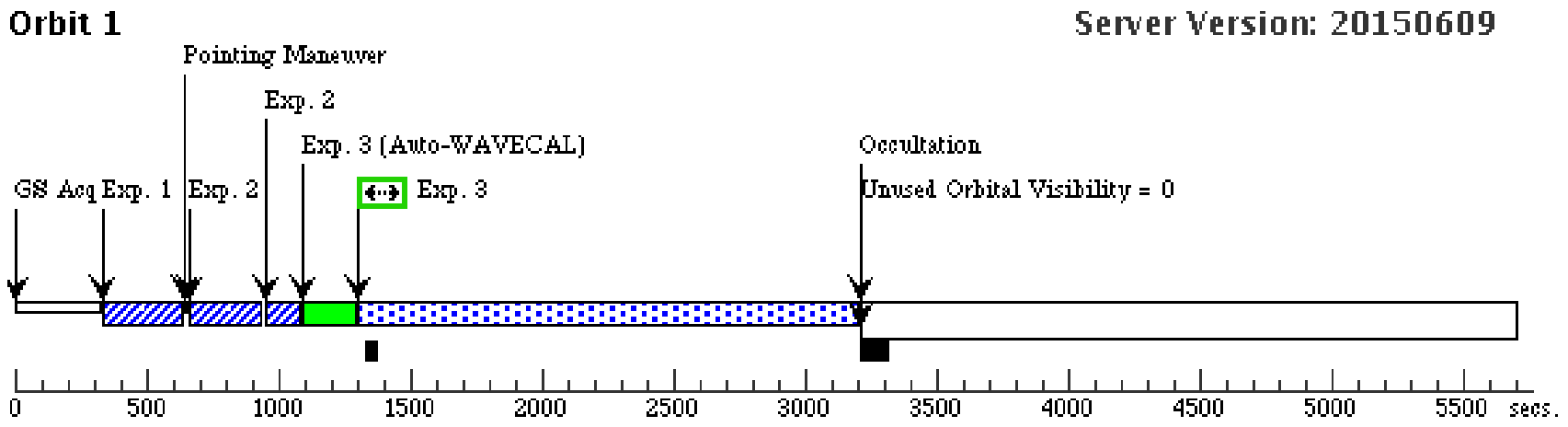
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

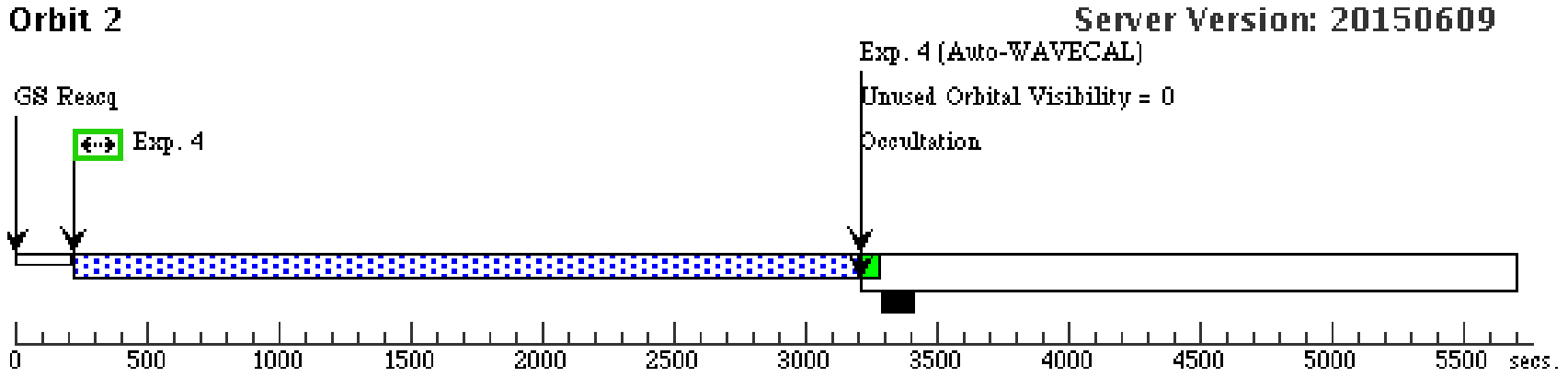
coordinates revised for epoch 2016.
Extended=NO

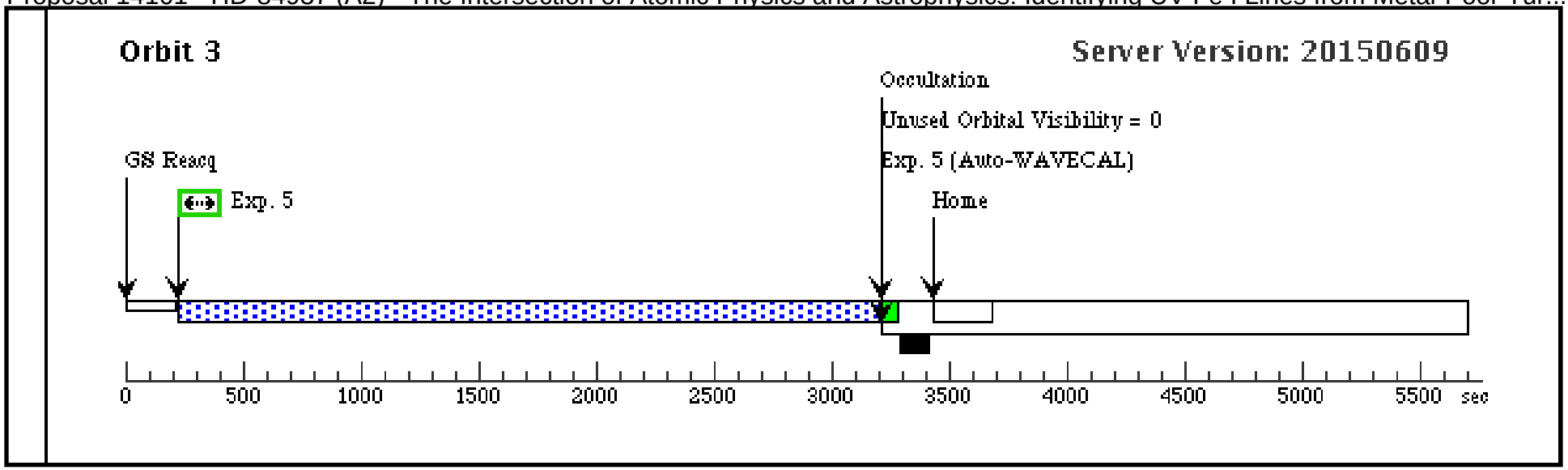
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				1880 Secs (1880 Secs) *[==>]*	***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A3) Sun Sep 27 01:09:18 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

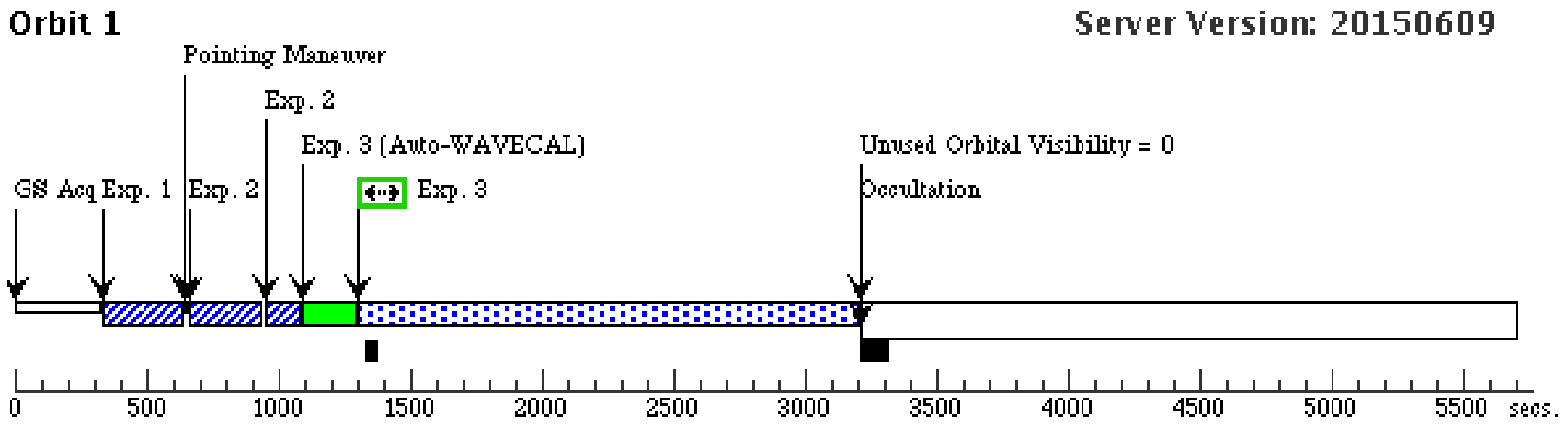
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

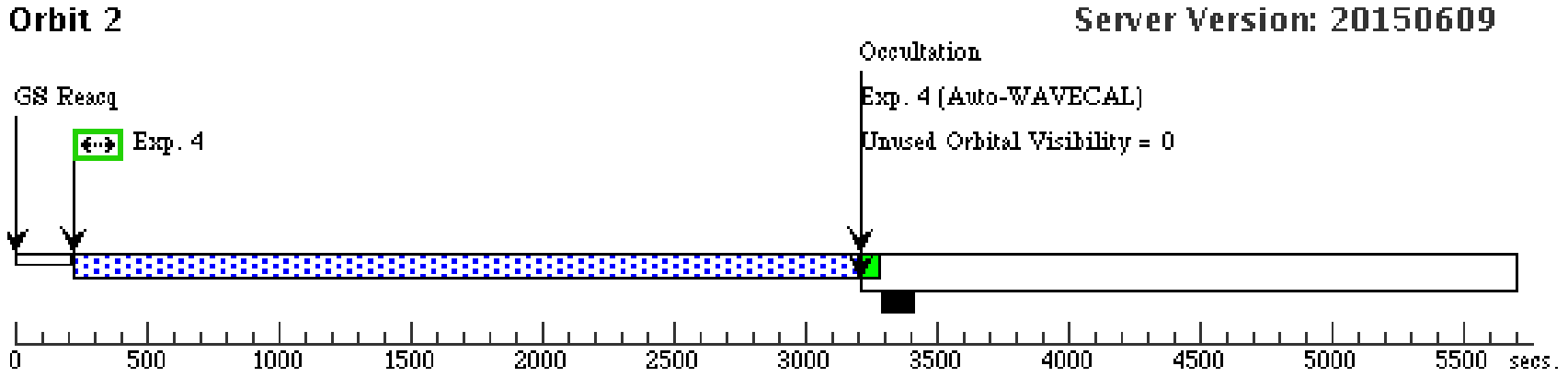
coordinates revised for epoch 2016.
Extended=NO

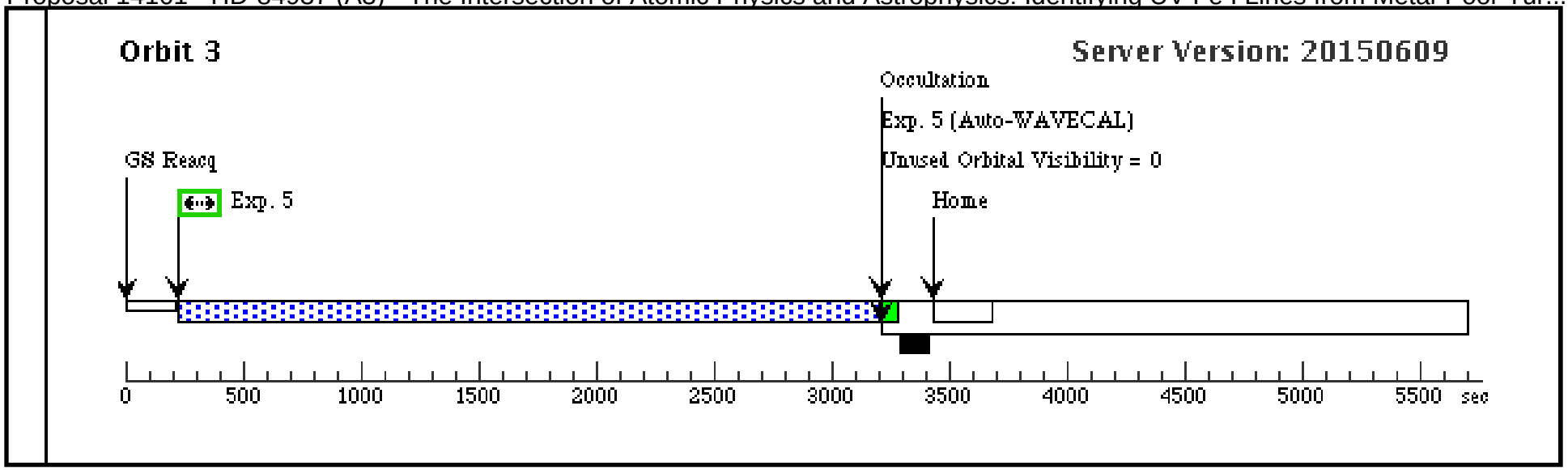
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				1880 Secs (1880 Secs) *[==>]*	***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
Exp. 5 (Auto-WAVECAL)
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A4) Sun Sep 27 01:09:18 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

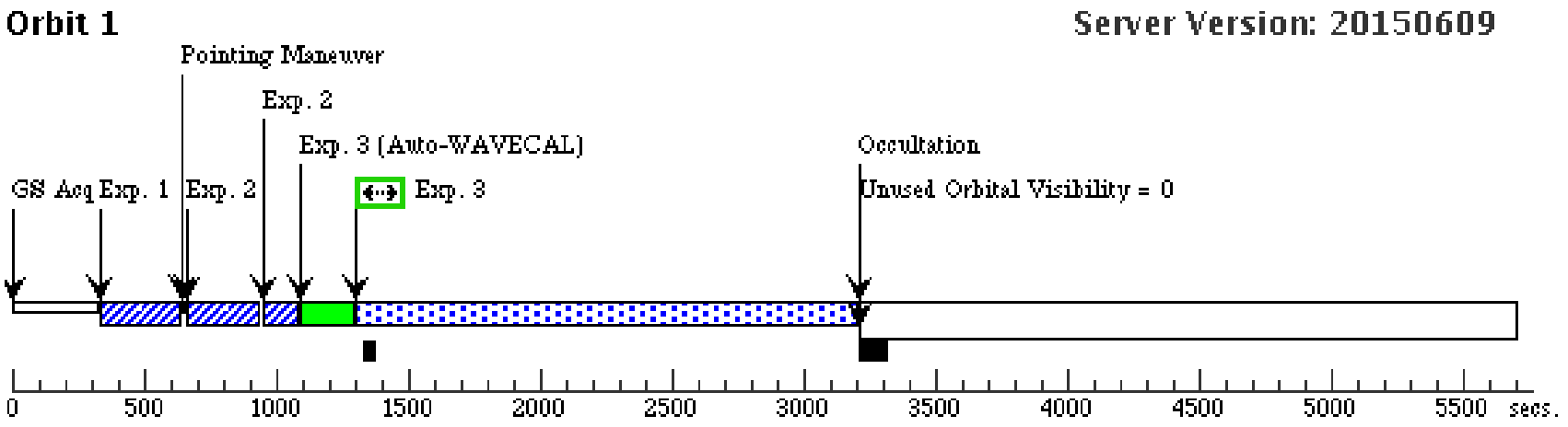
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

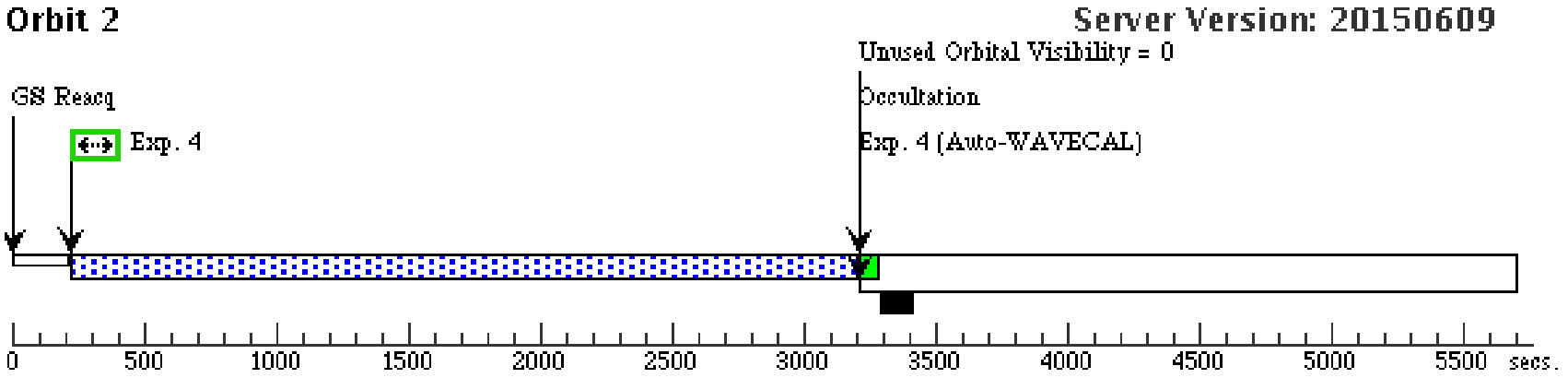
coordinates revised for epoch 2016.
Extended=NO

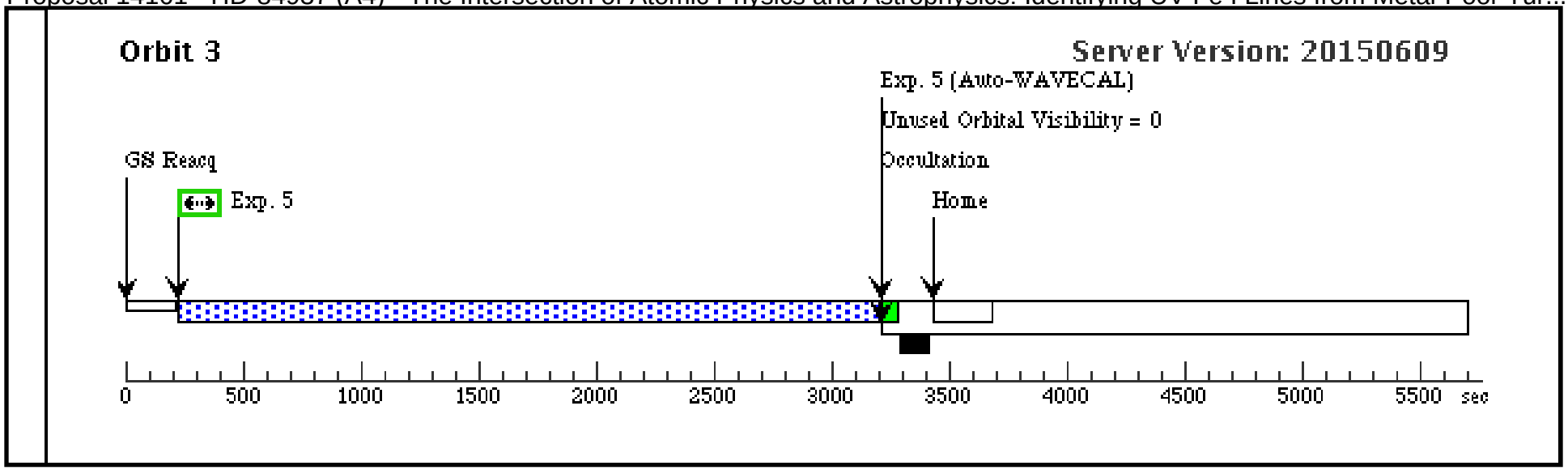
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Exp. 5 (Auto-WAVECAL)
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A5) Sun Sep 27 01:09:18 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

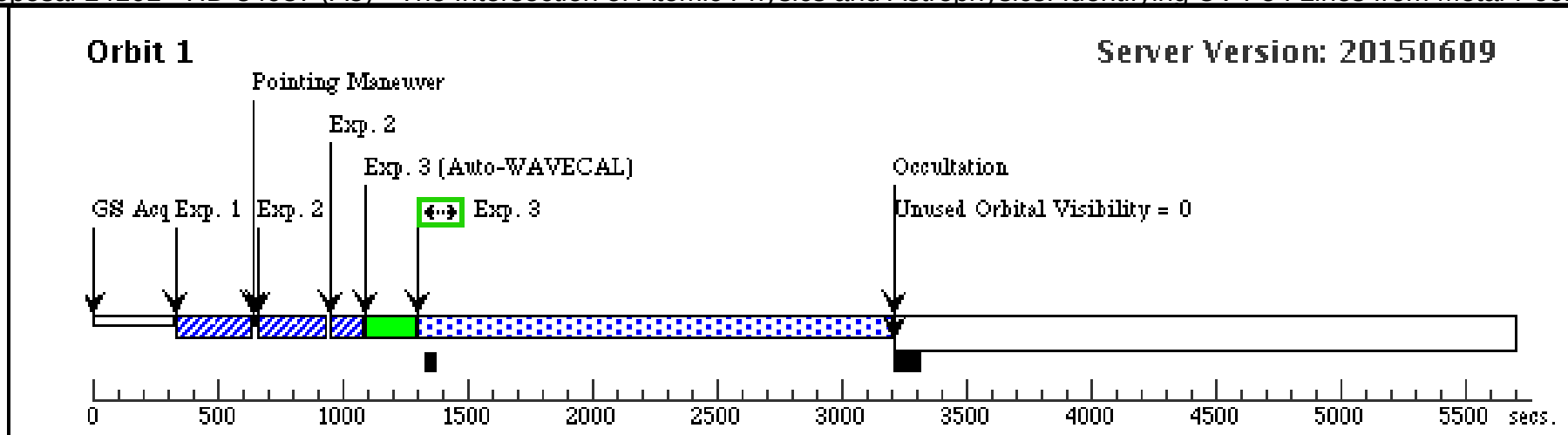
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

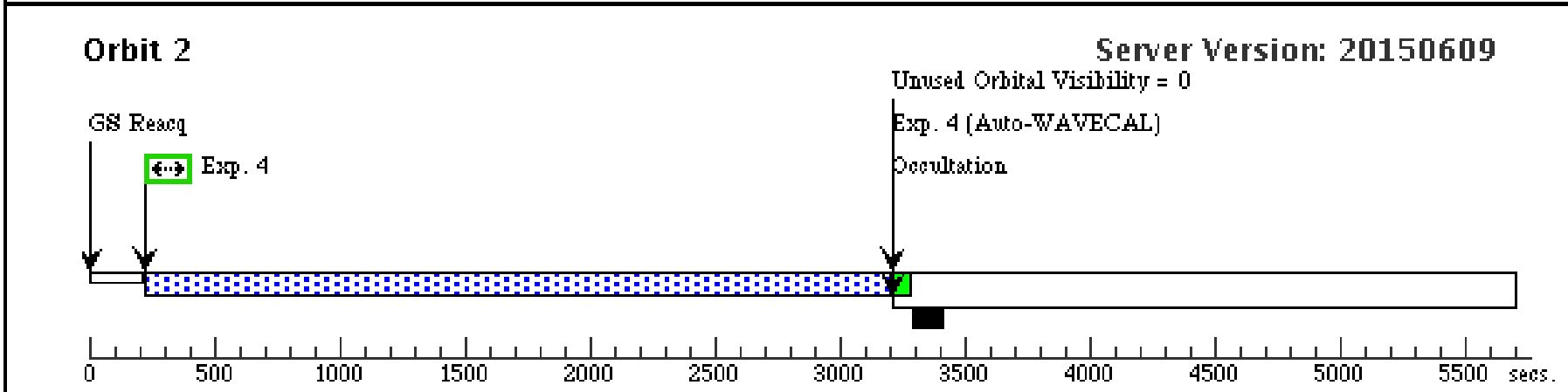
coordinates revised for epoch 2016.
Extended=NO

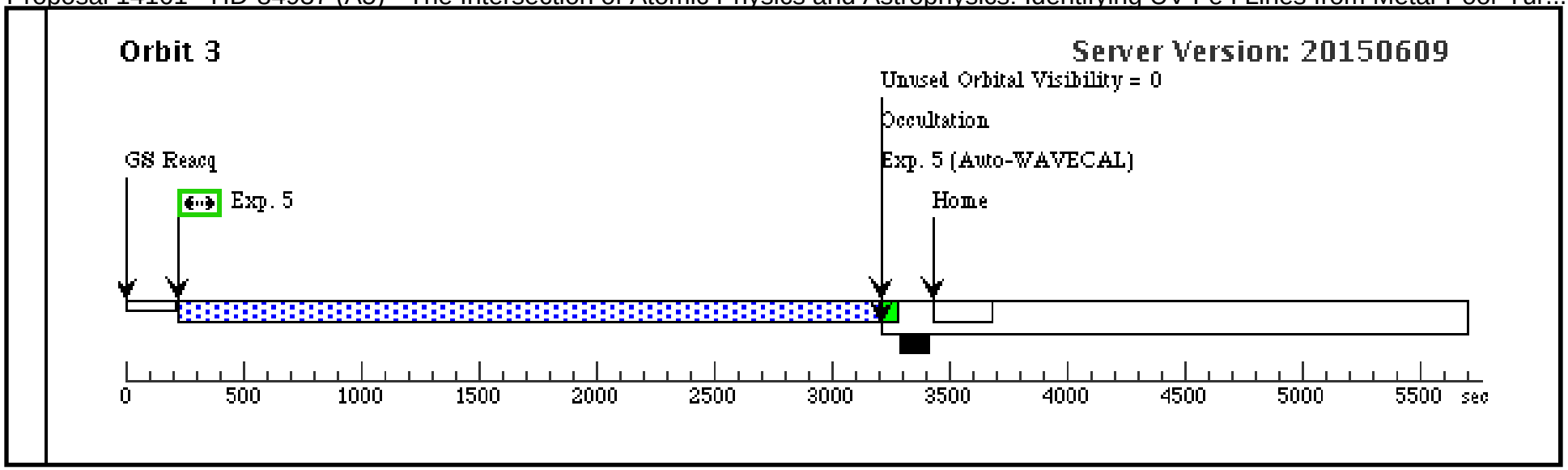
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A6) Sun Sep 27 01:09:19 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

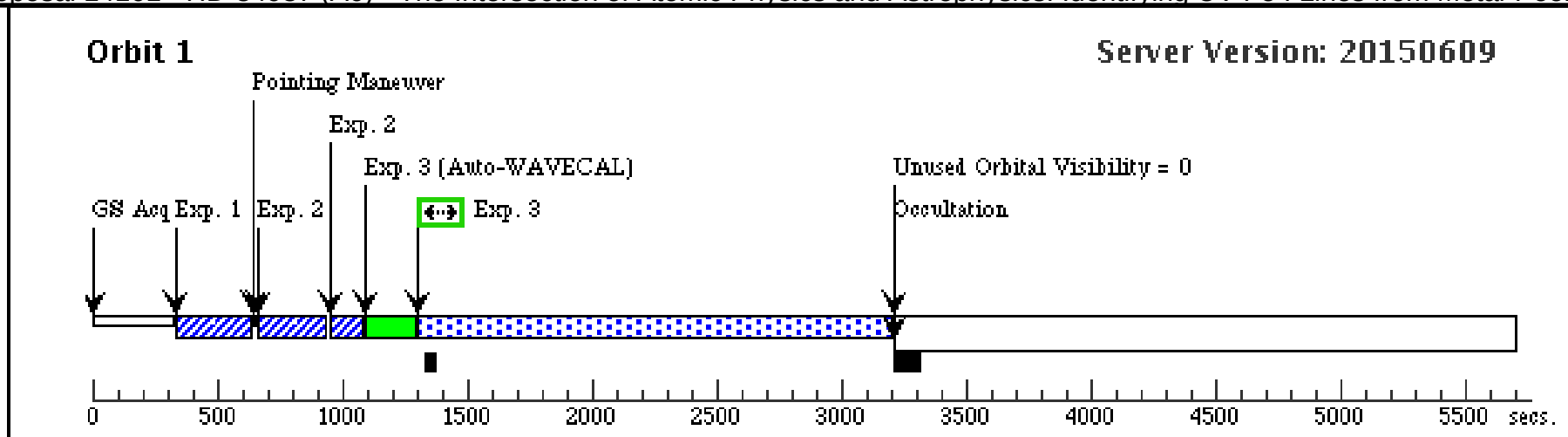
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

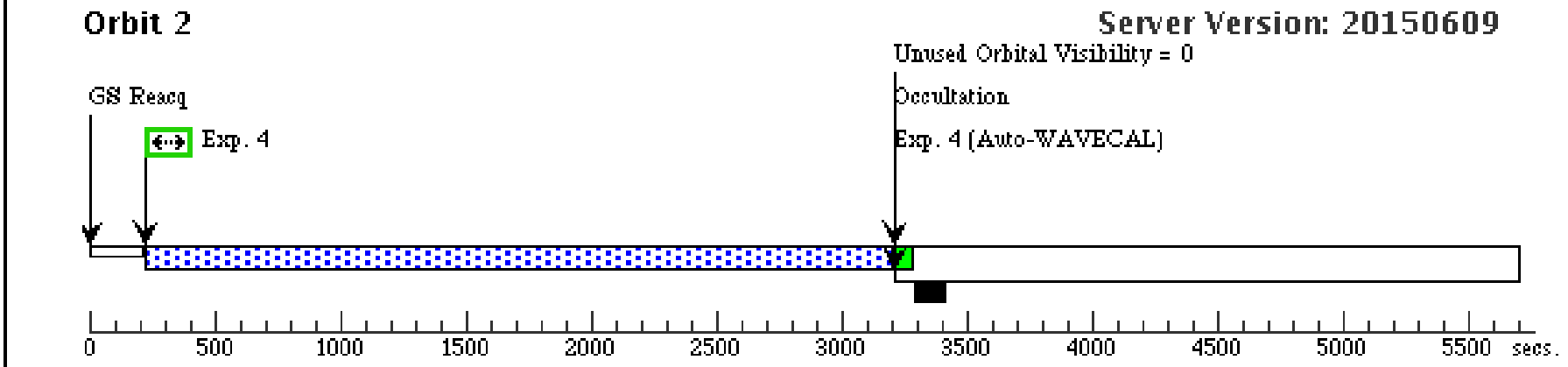
coordinates revised for epoch 2016.
Extended=NO

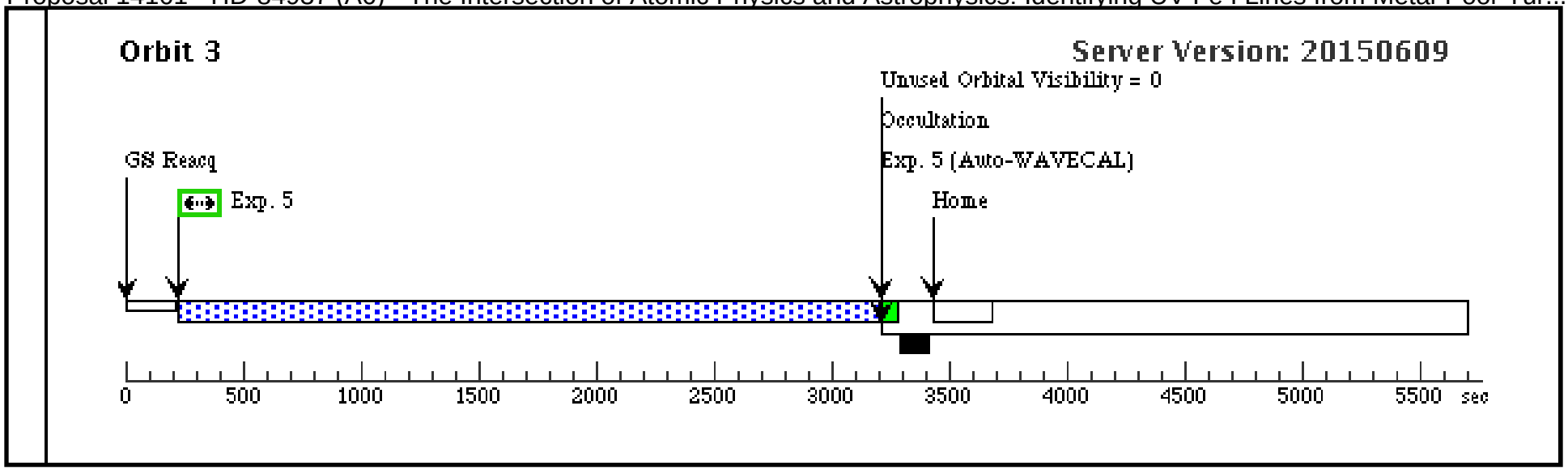
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A7) Sun Sep 27 01:09:19 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

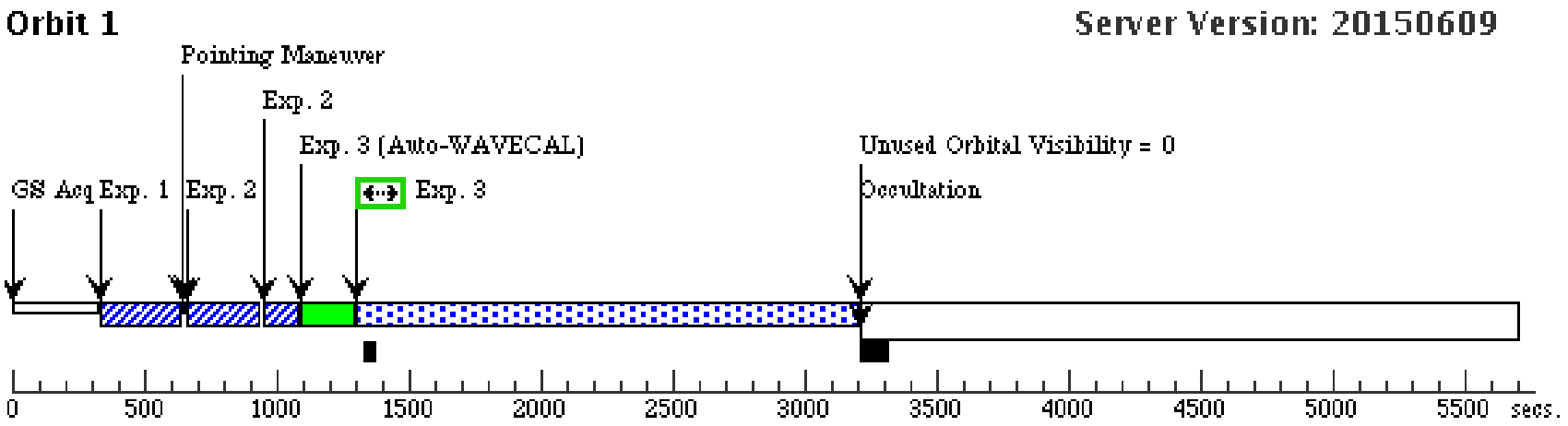
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

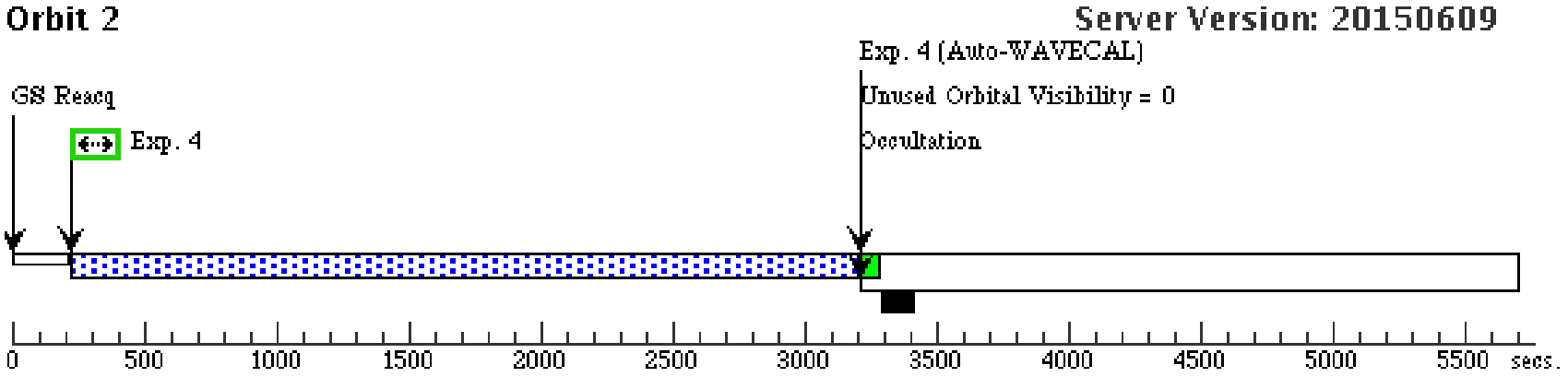
coordinates revised for epoch 2016.
Extended=NO

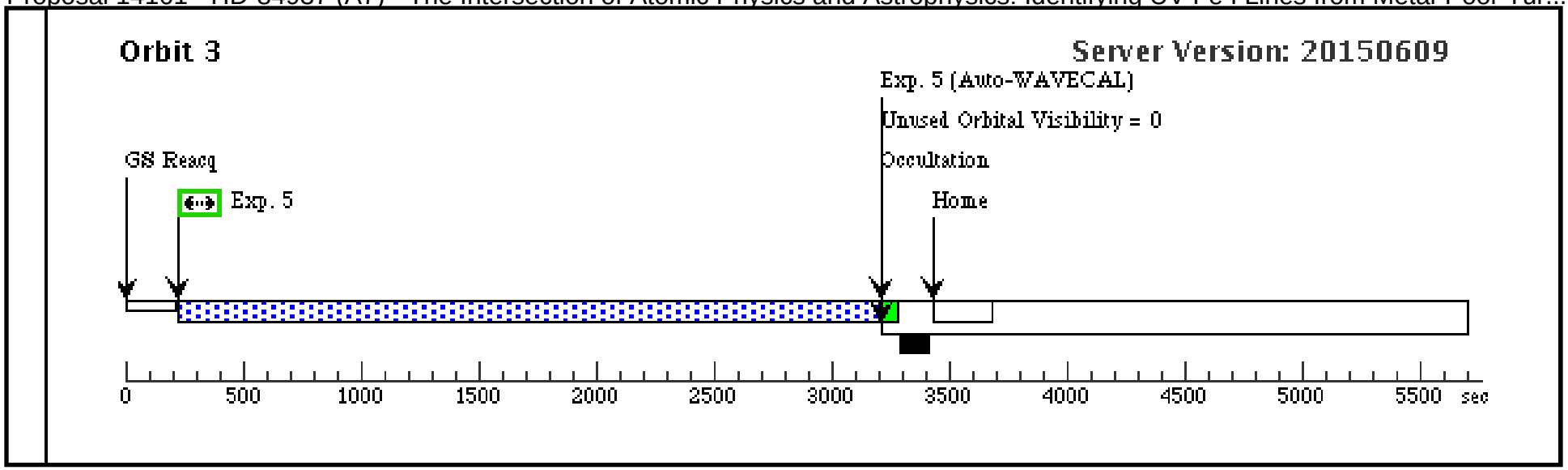
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Exp. 5 (Auto-WAVECAL)
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A8) Sun Sep 27 01:09:19 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

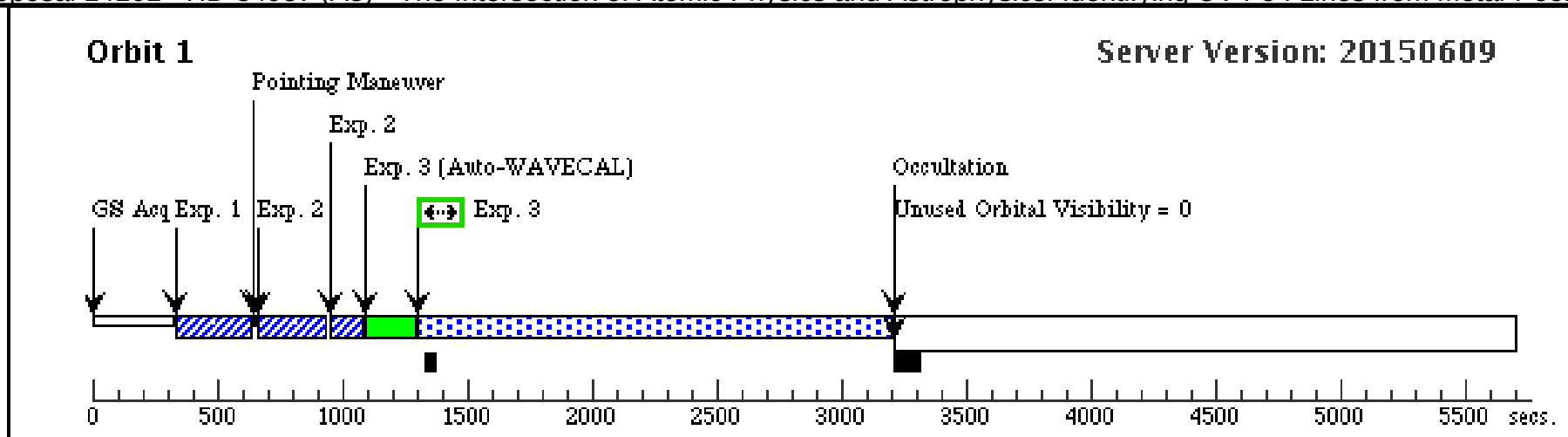
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

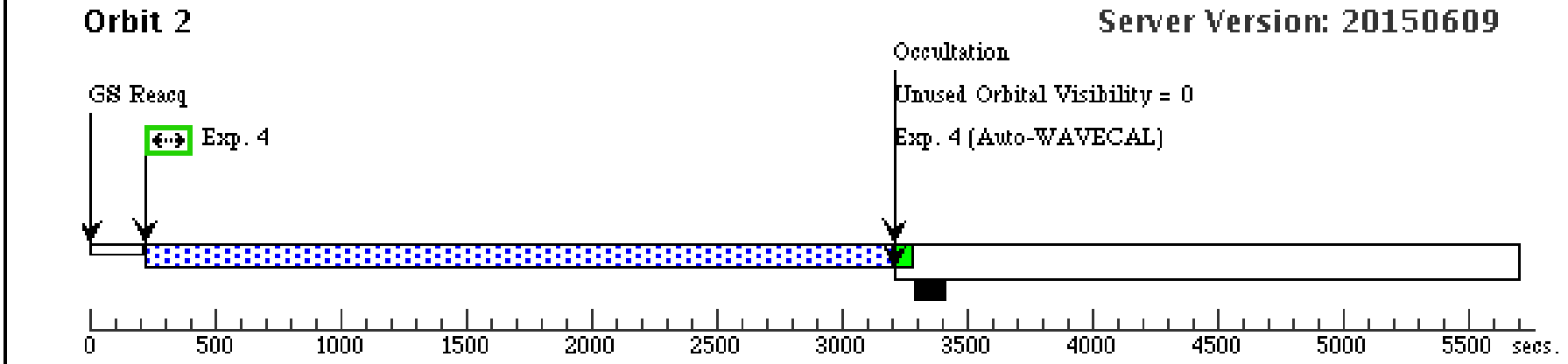
coordinates revised for epoch 2016.
Extended=NO

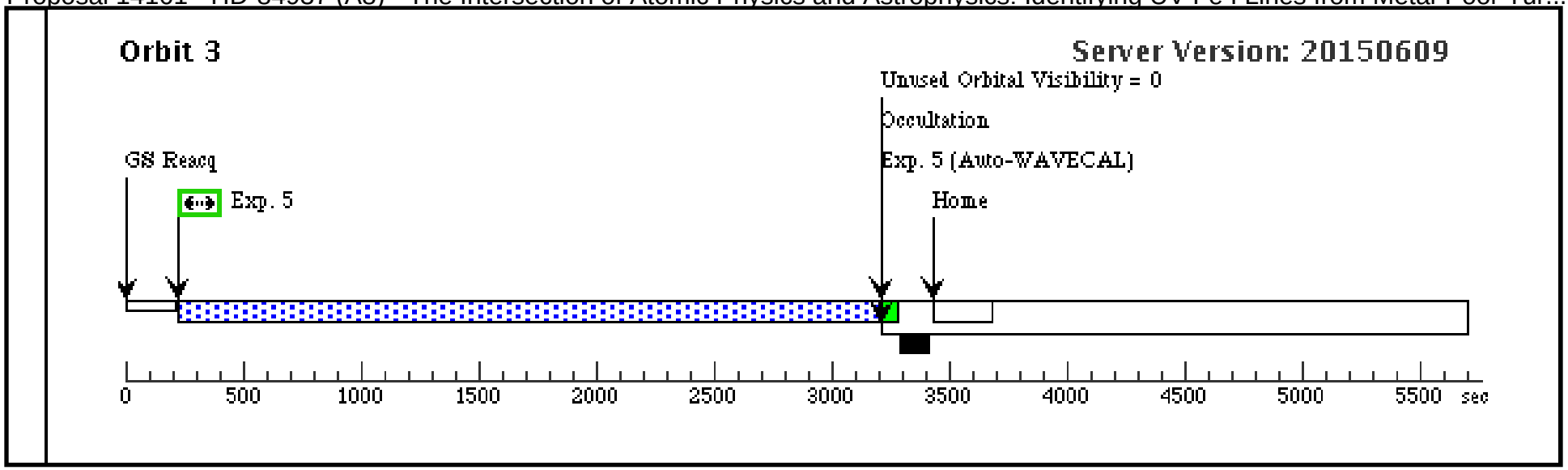
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (A9) Sun Sep 27 01:09:19 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

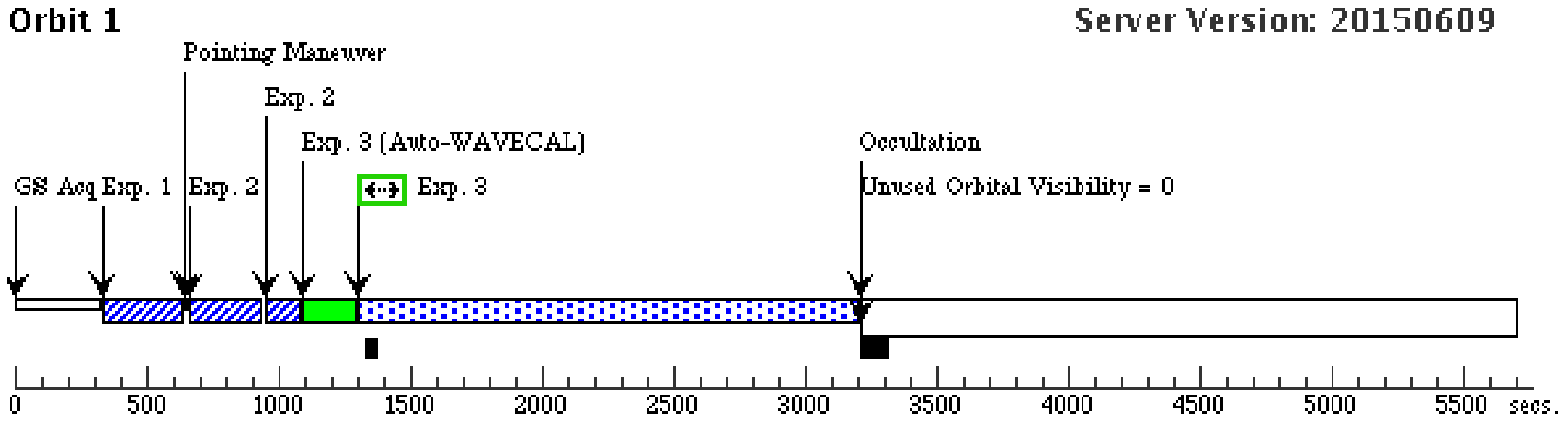
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

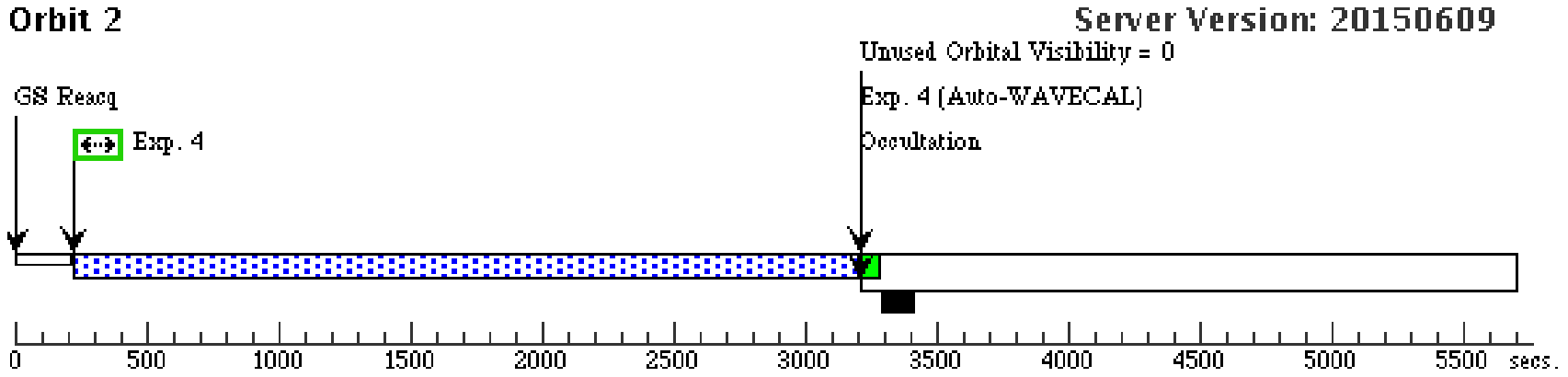
coordinates revised for epoch 2016.
Extended=NO

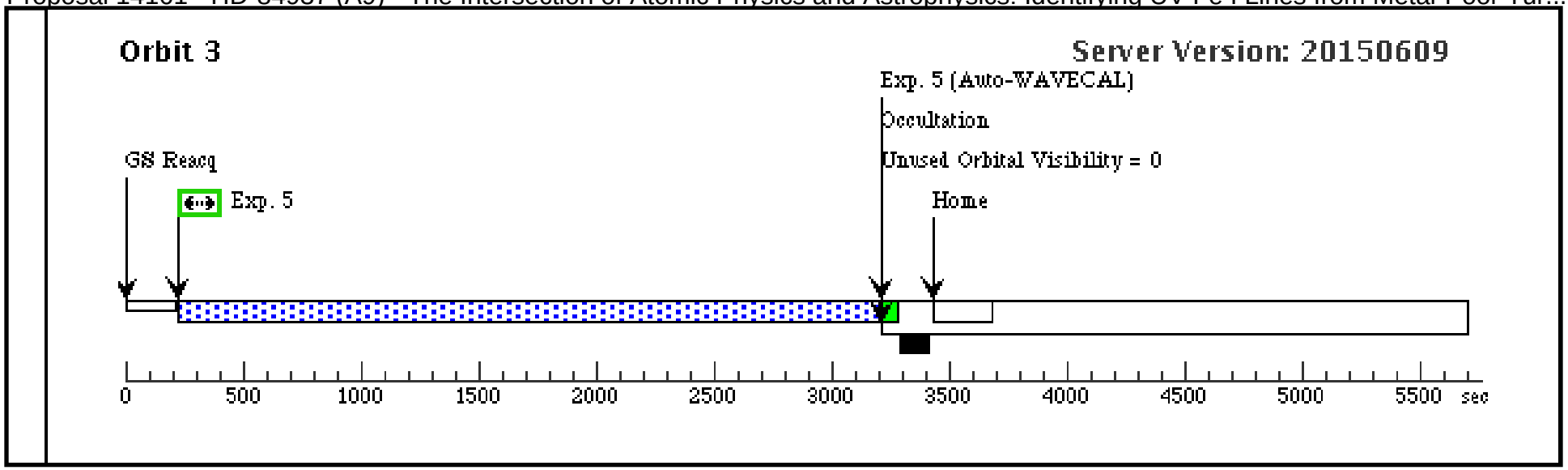
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Exp. 5 (Auto-WAVECAL)
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (AA) Sun Sep 27 01:09:19 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

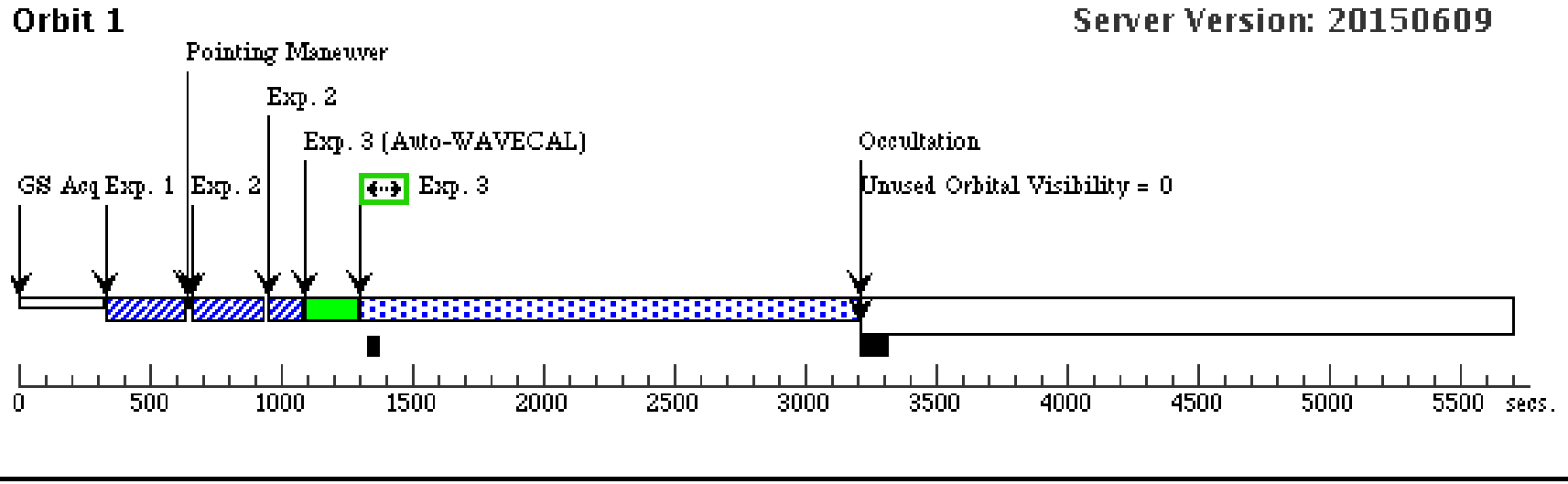
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

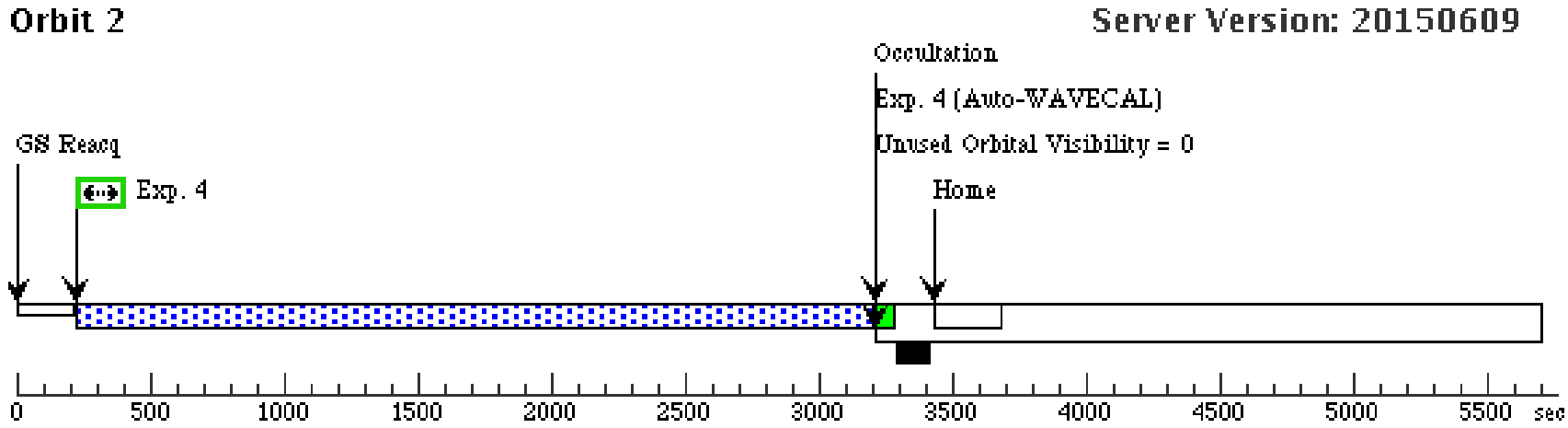
coordinates revised for epoch 2016.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***

Orbit Structure





Visit

Proposal 14161, HD-84937 (AB) Sun Sep 27 01:09:19 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

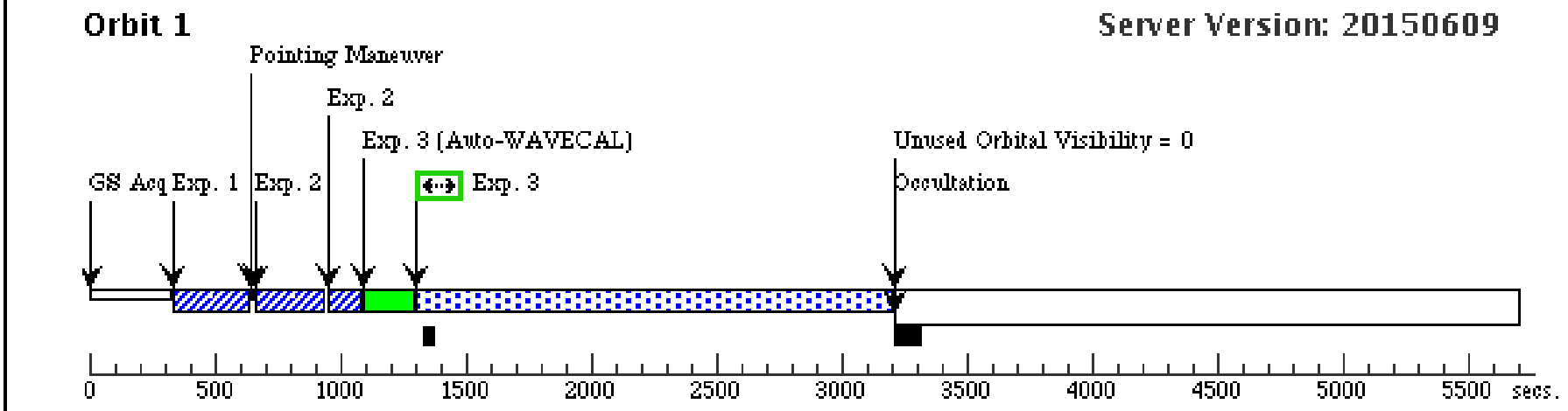
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

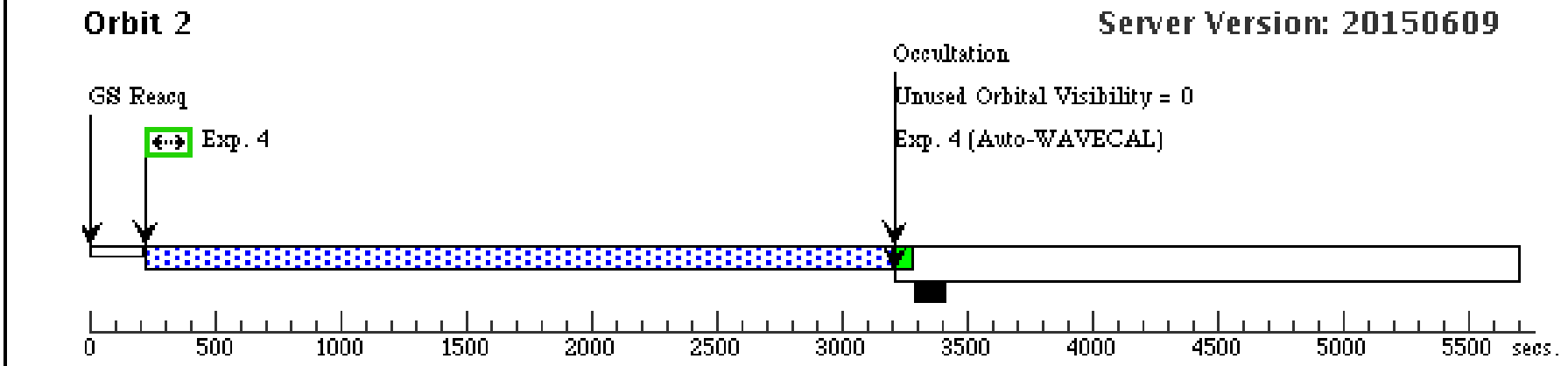
coordinates revised for epoch 2016.
Extended=NO

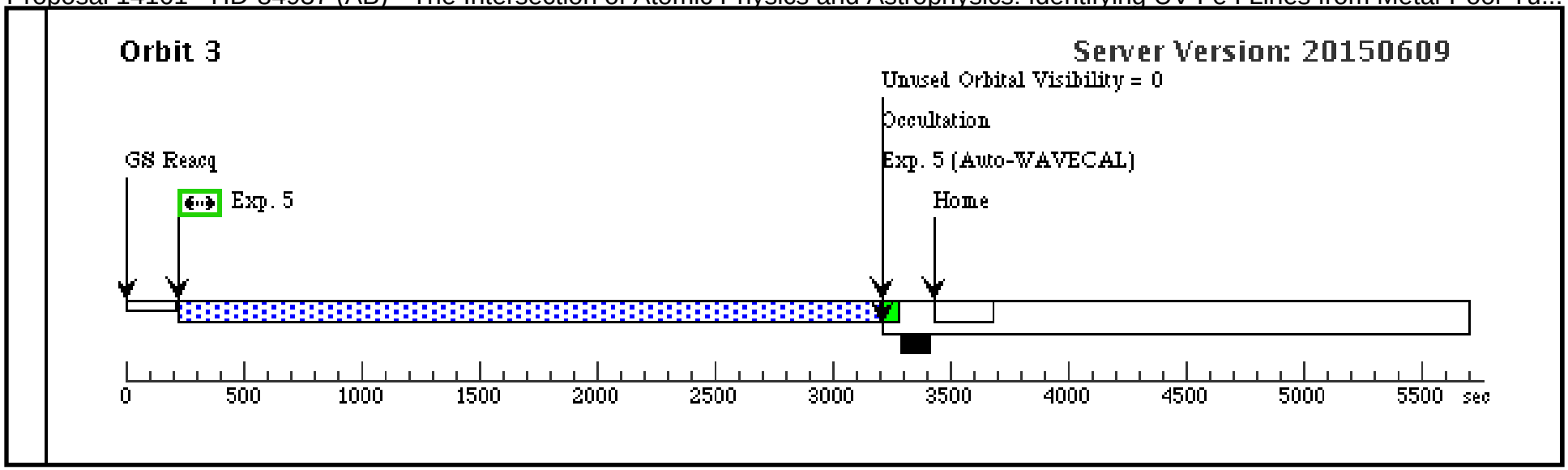
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				1880 Secs (1880 Secs) *[==>]*	***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				2966 Secs (2966 Secs) *[==>]*	***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				2966 Secs (2966 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
Exp. 5 (Auto-WAVECAL)
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (AC) Sun Sep 27 01:09:20 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

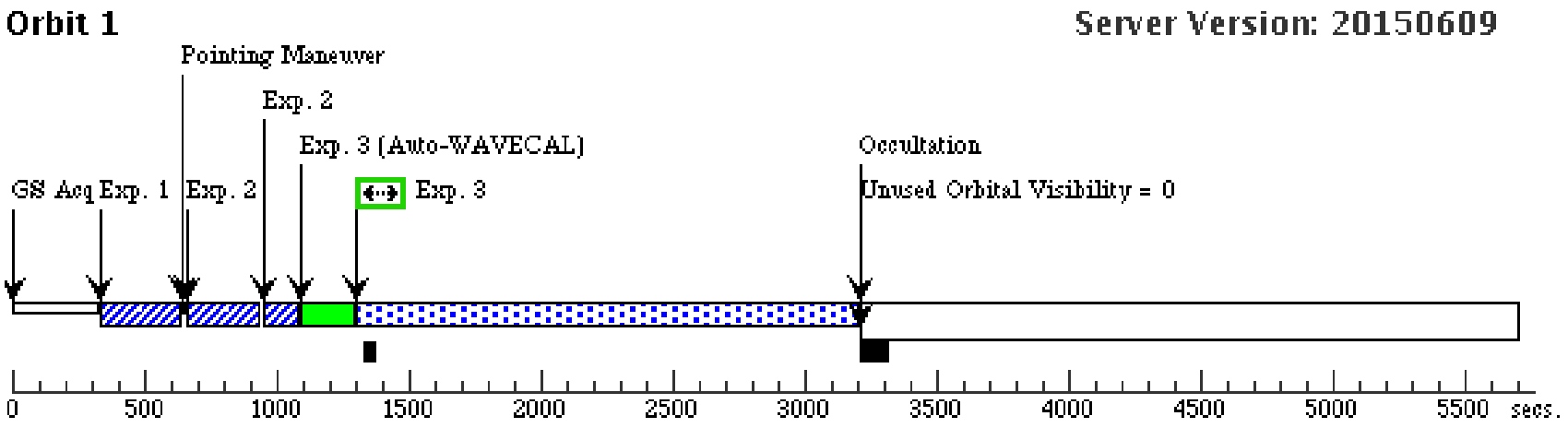
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

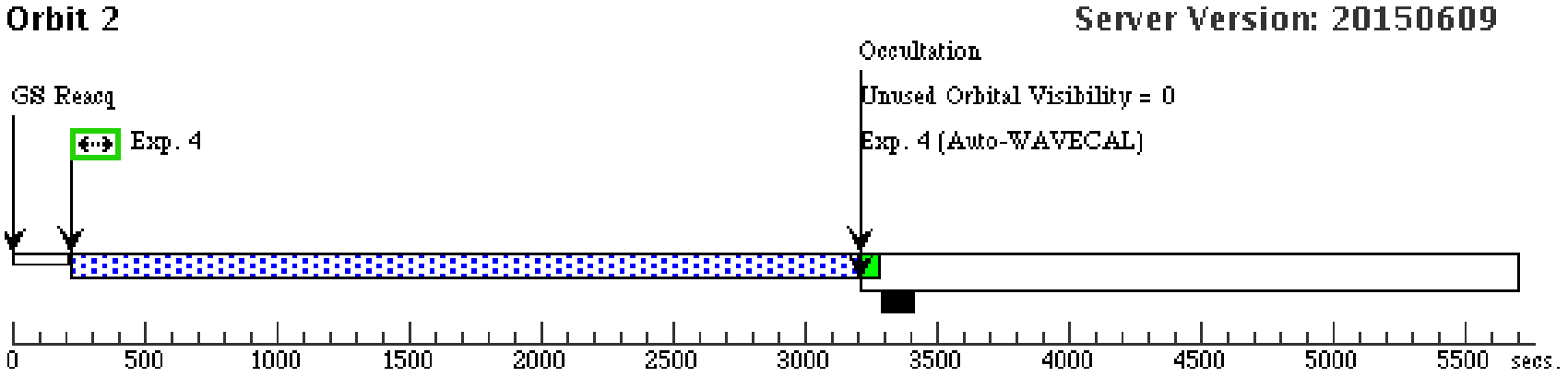
coordinates revised for epoch 2016.
Extended=NO

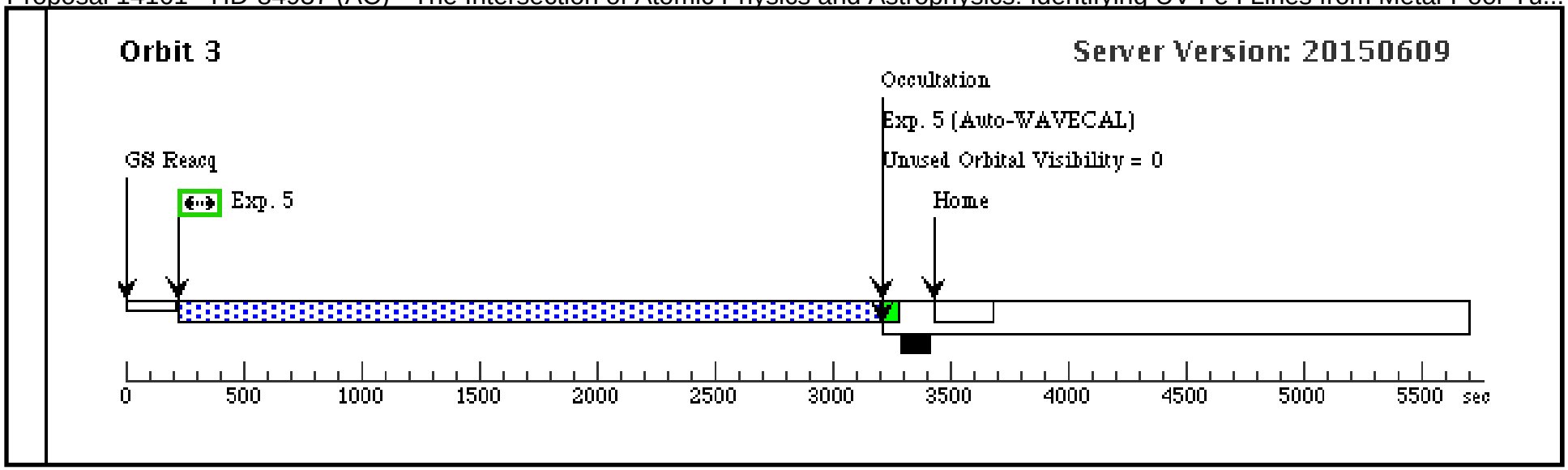
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
Exp. 5 (Auto-WAVECAL)
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-84937 (AD) Sun Sep 27 01:09:20 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-84937	RA: 09 48 56.5077 (147.2354488d) Dec: +13 44 26.93 (13.74081d) Equinox: J2000	Proper Motion RA: +373.1 mas/yr Proper Motion Dec: -774.4 mas/yr Parallax: 0.014" Epoch of Position: 2016 Radial Velocity: -15 km/sec	V=8.32+/-0.1	Reference Frame: ICRS

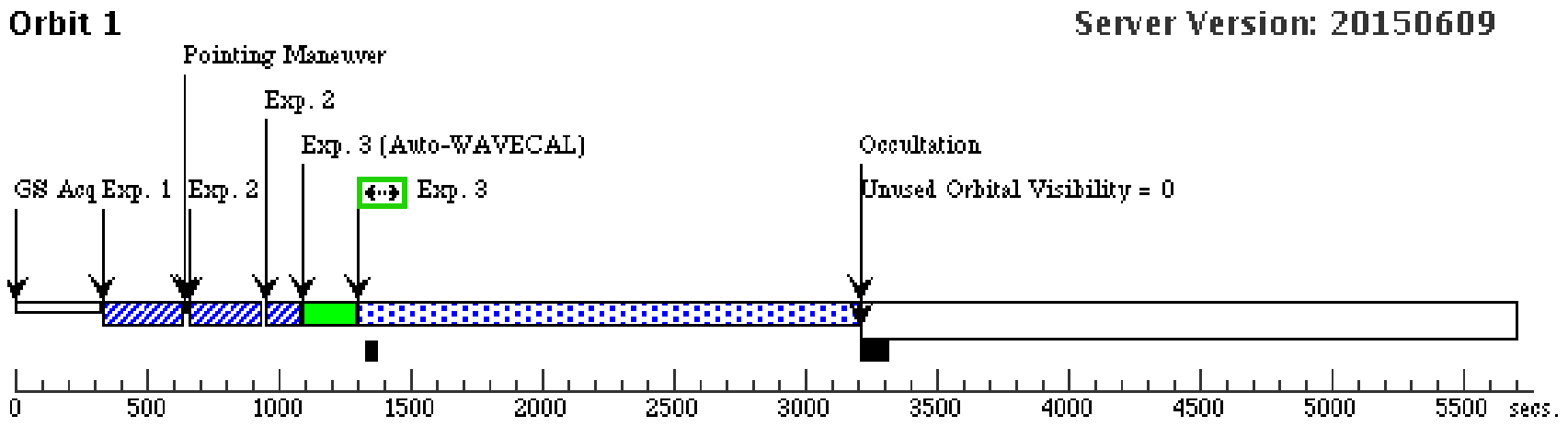
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

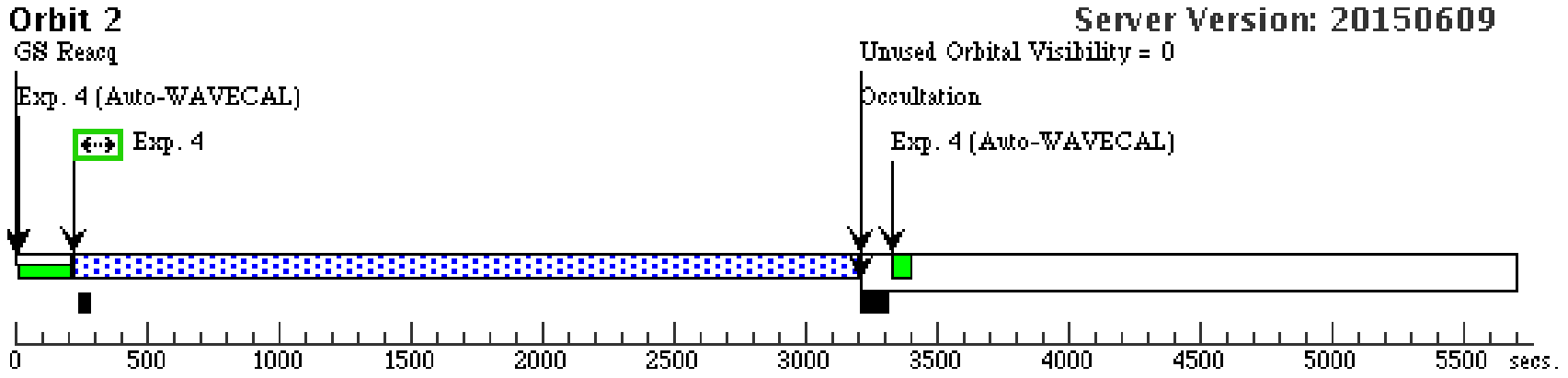
coordinates revised for epoch 2016.
Extended=NO

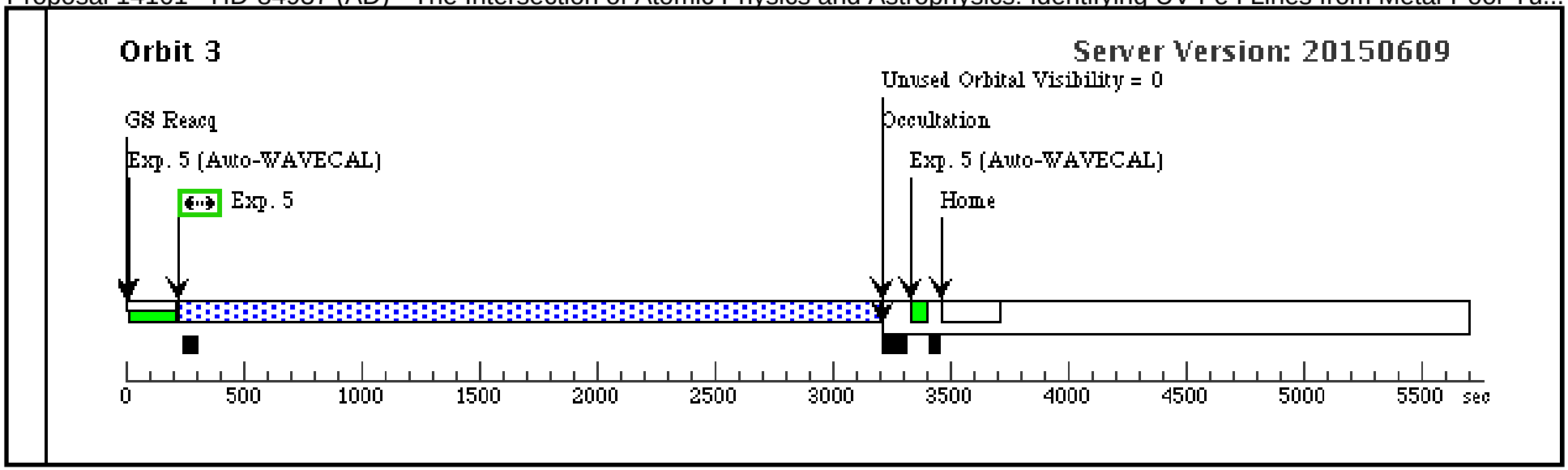
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715498)	(1) HD-84937	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715520)	(1) HD-84937	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715575)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715572)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715571)	(1) HD-84937	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2013 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 5 (Auto-WAVECAL)
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B0), implementation Sun Sep 27 01:09:20 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

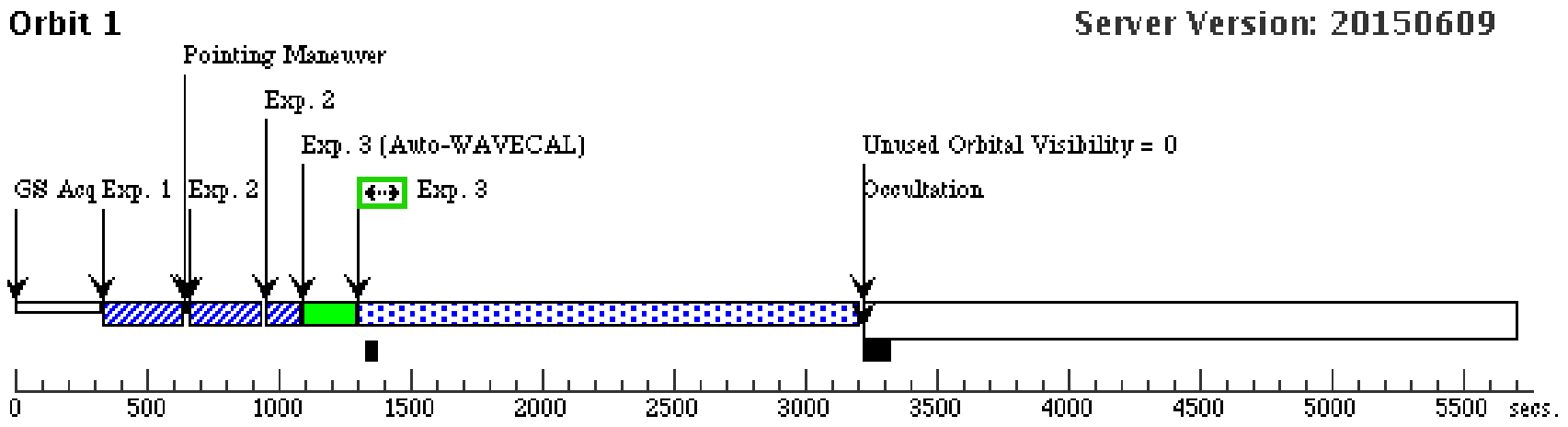
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

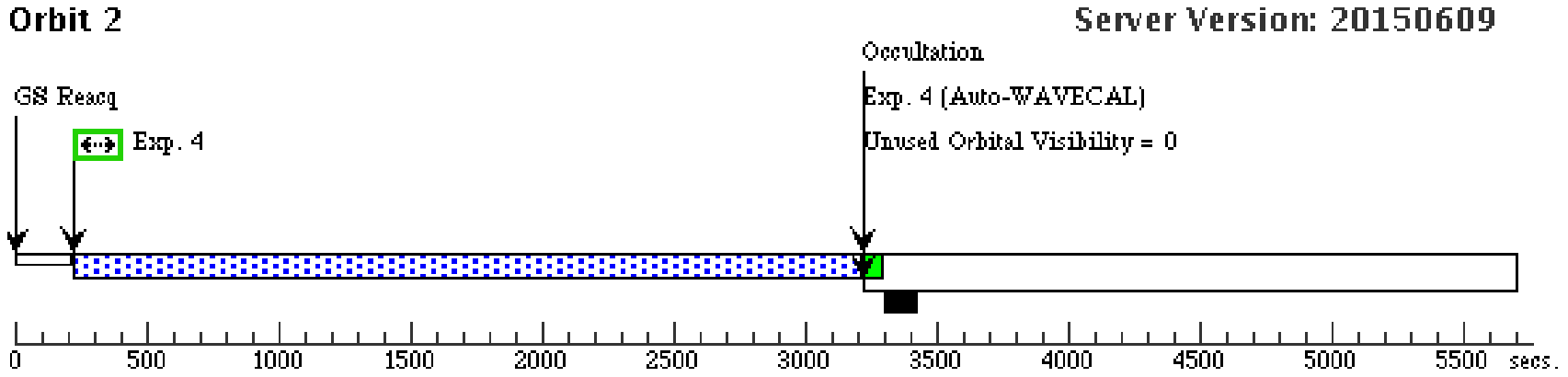
coordinates revised for epoch 2016.
Extended=NO

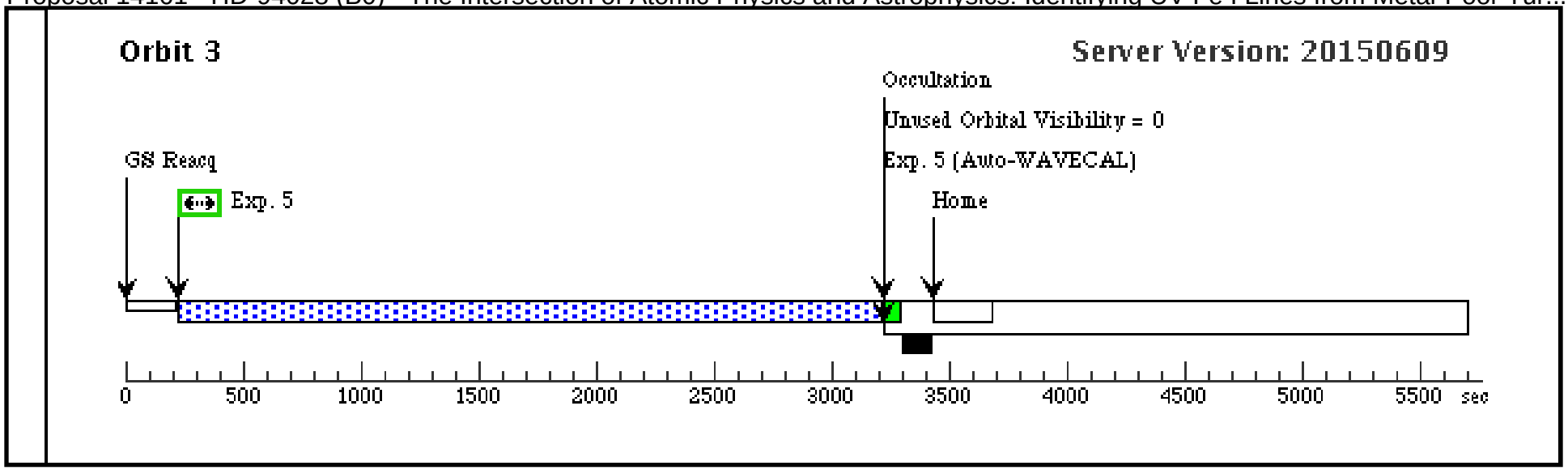
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B1) Sun Sep 27 01:09:20 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

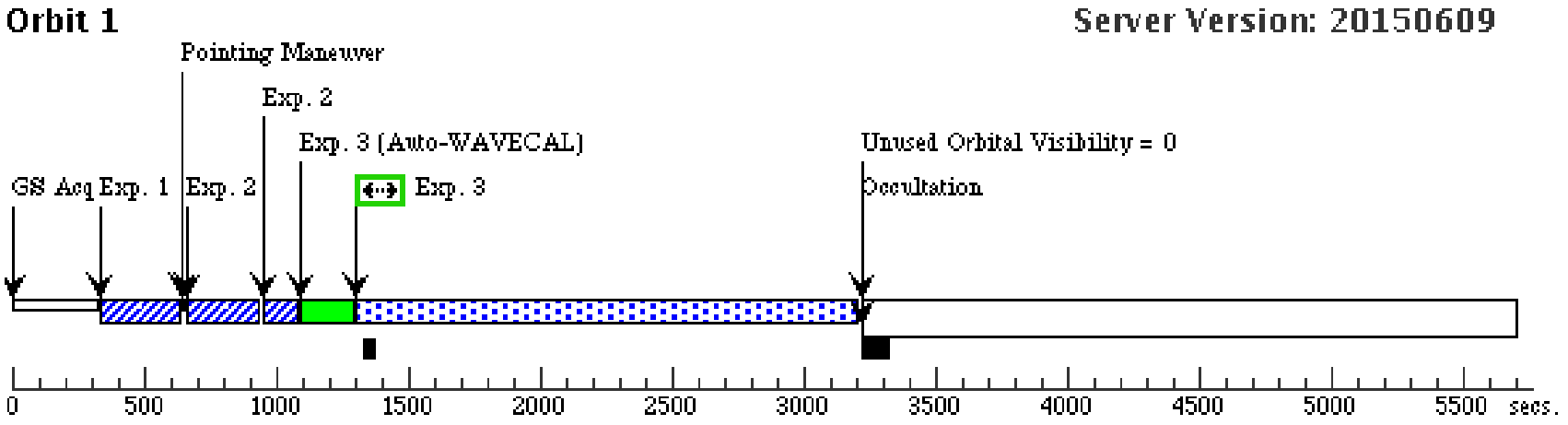
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

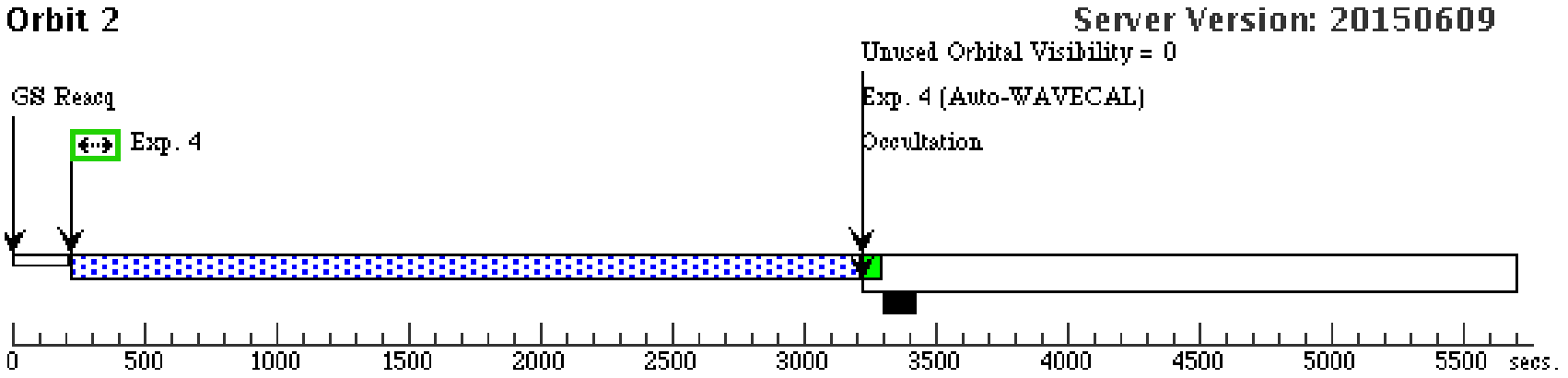
coordinates revised for epoch 2016.
Extended=NO

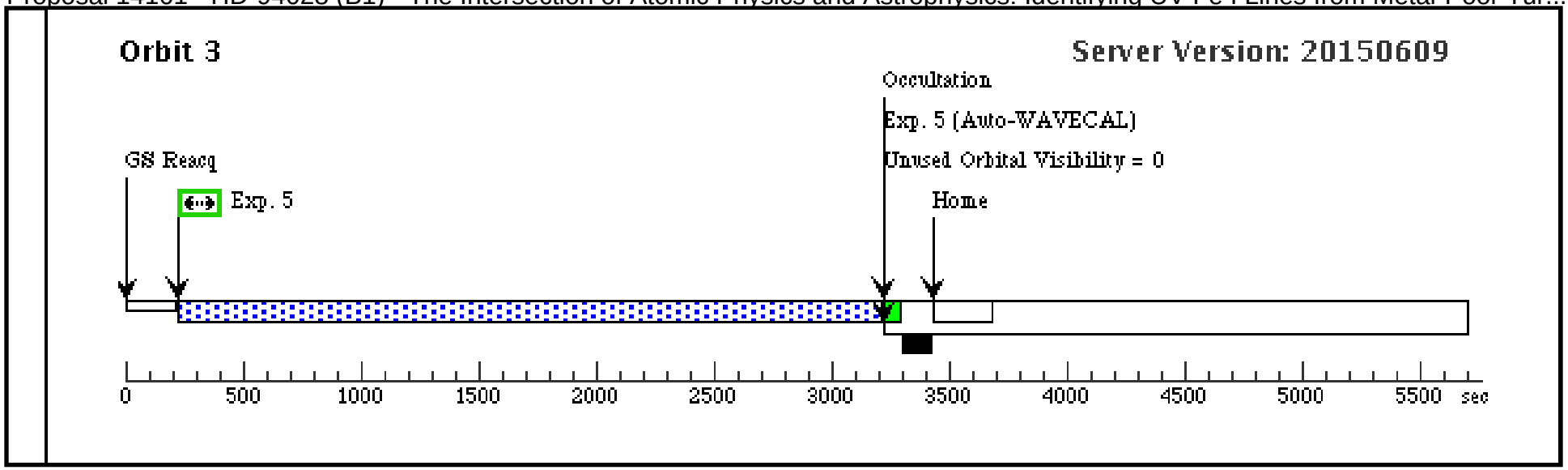
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
Exp. 5 (Auto-WAVECAL)
Unused Orbital Visibility = 0
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B2) Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

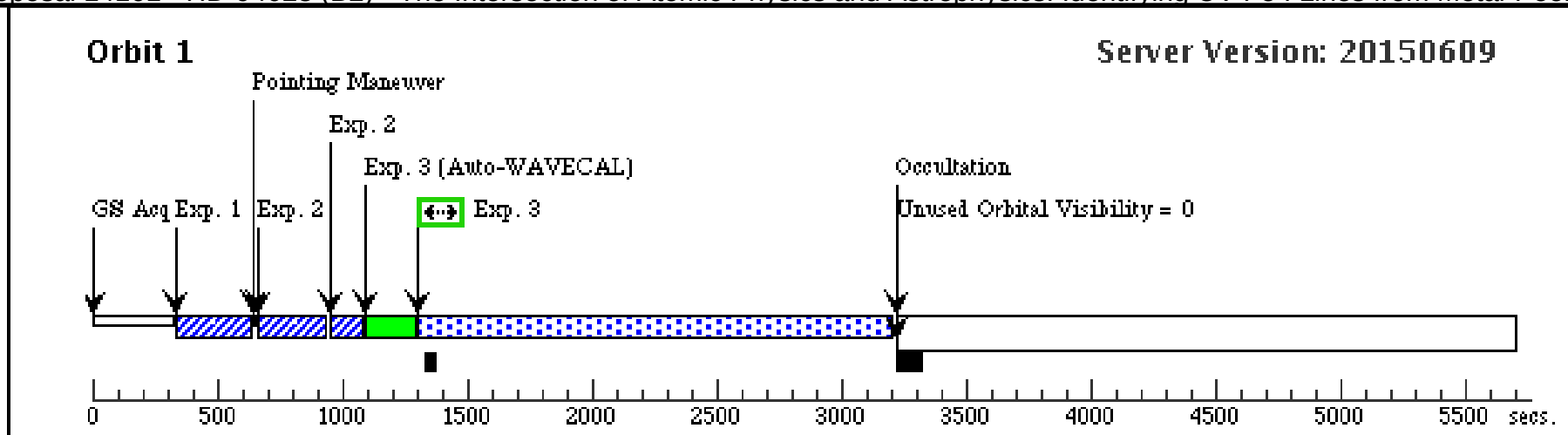
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

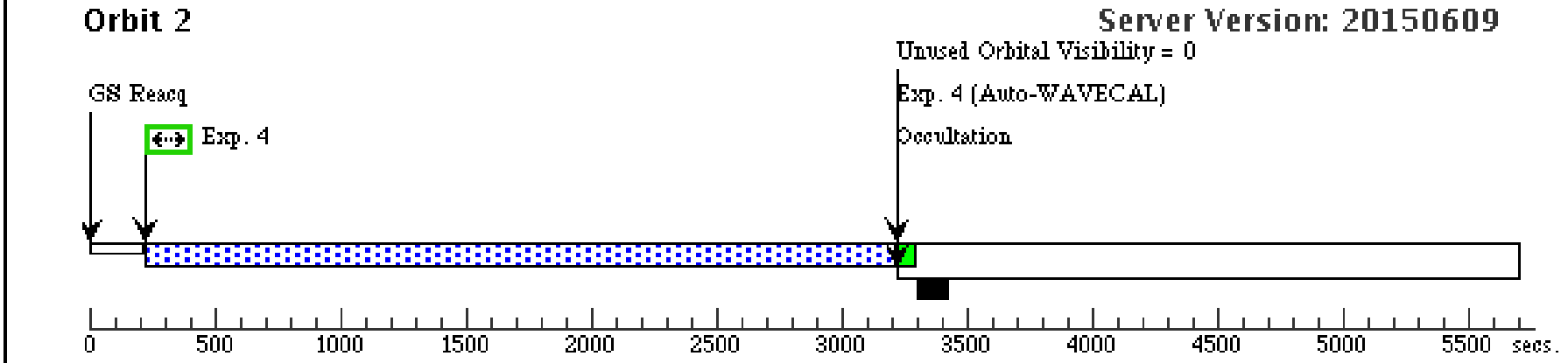
coordinates revised for epoch 2016.
Extended=NO

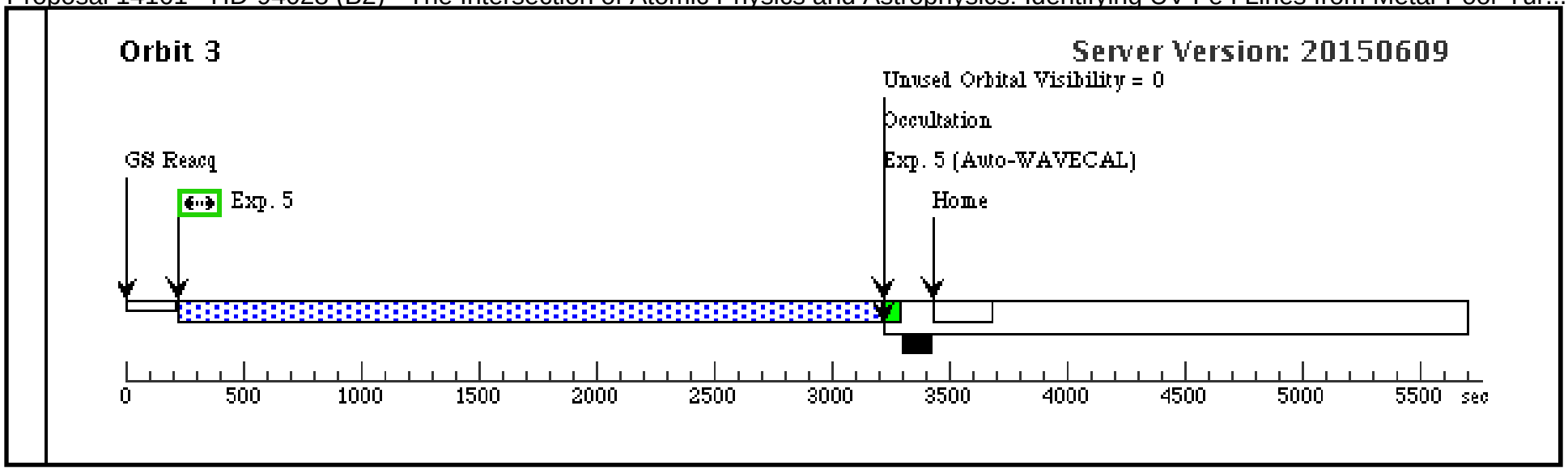
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B3) Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

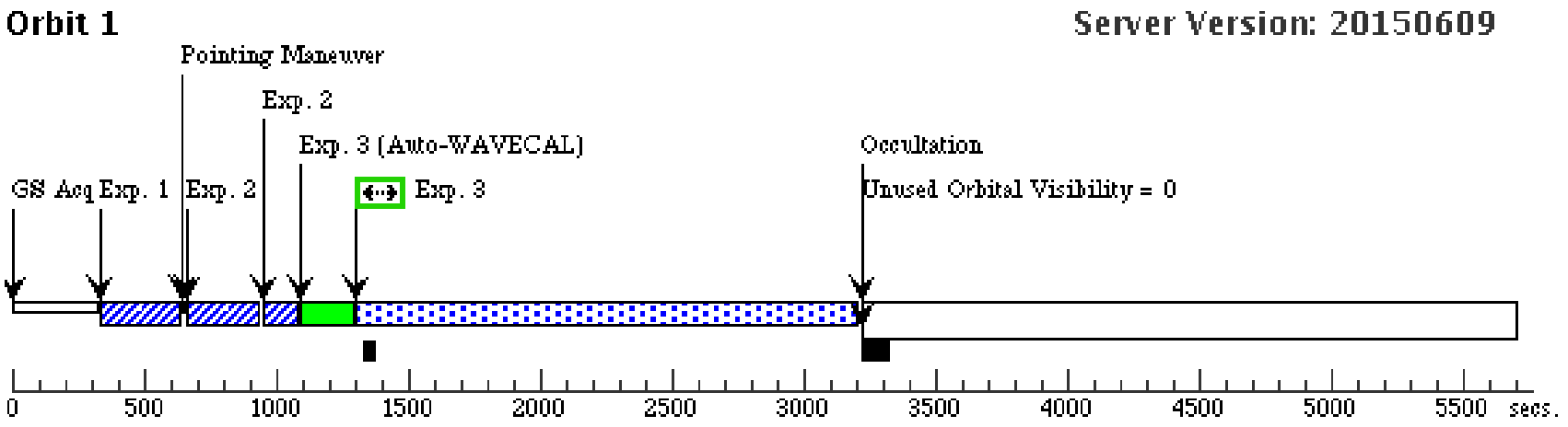
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

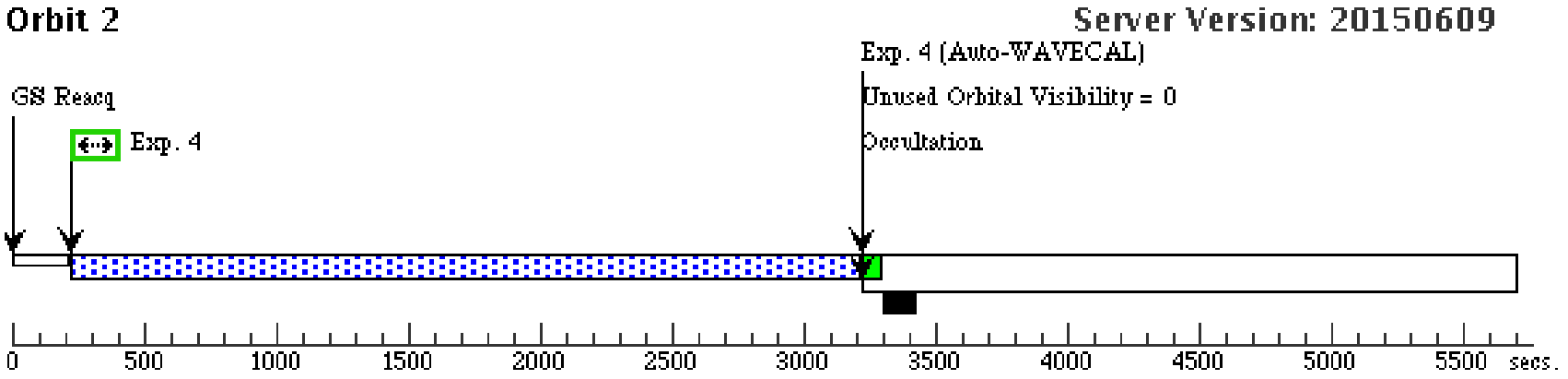
coordinates revised for epoch 2016.
Extended=NO

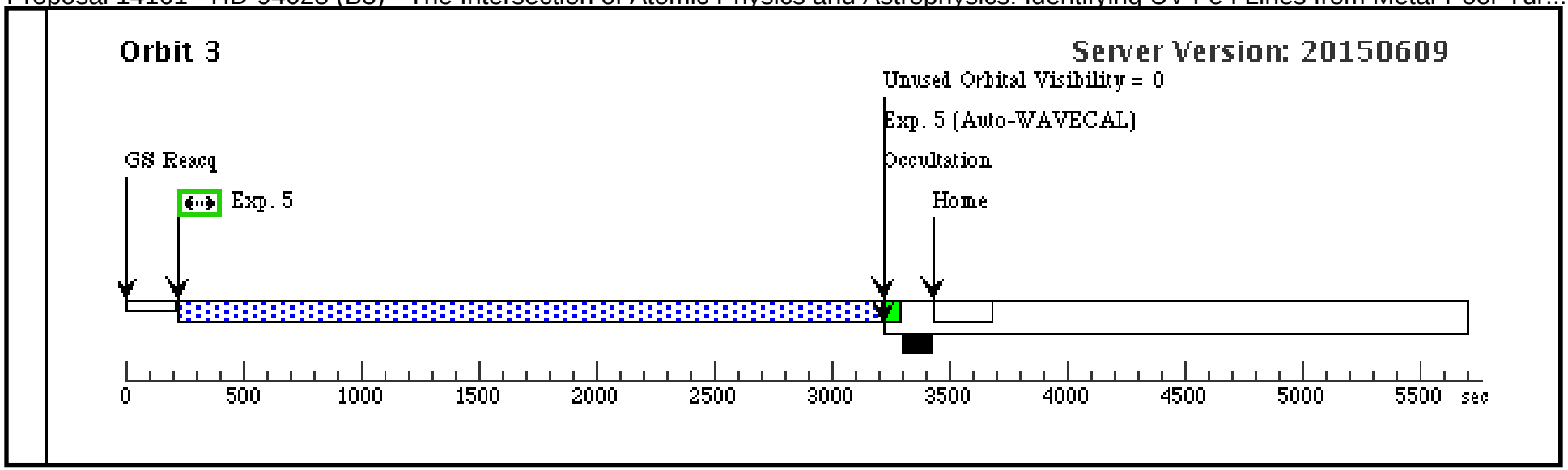
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
Occultation
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B4) Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

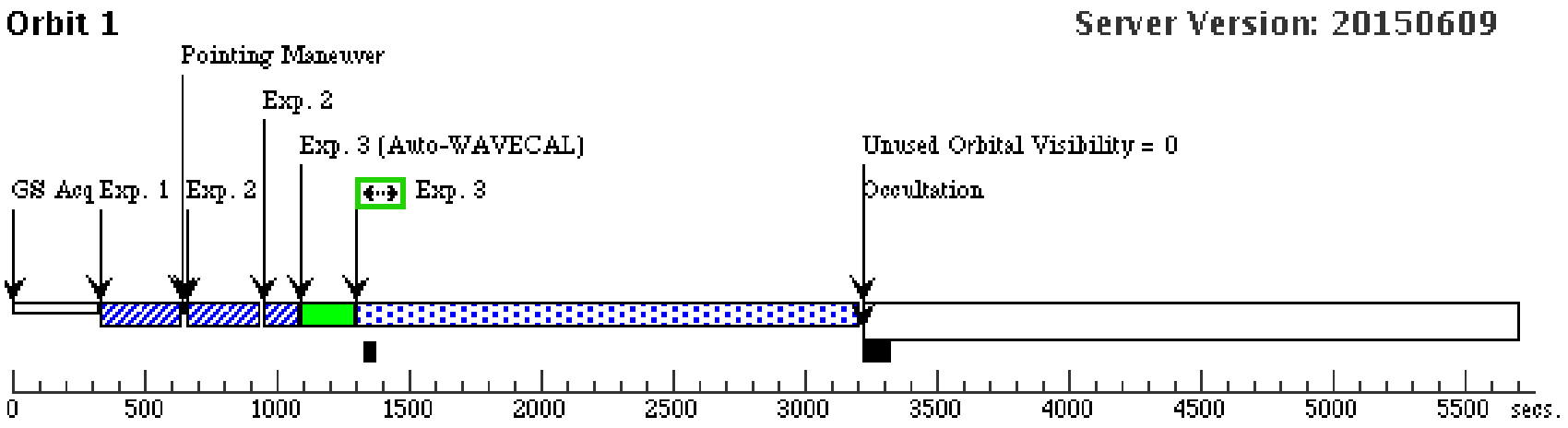
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

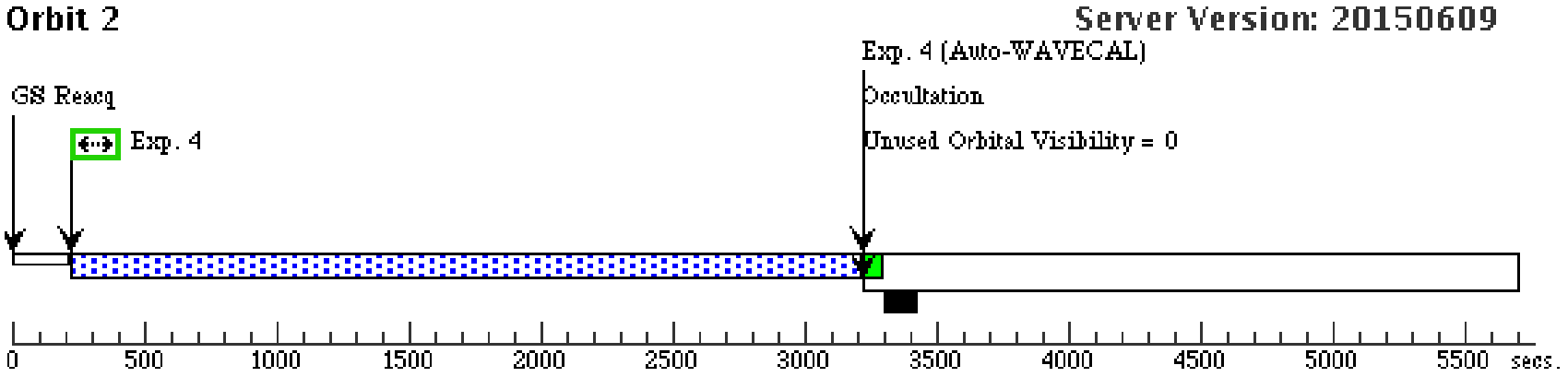
coordinates revised for epoch 2016.
Extended=NO

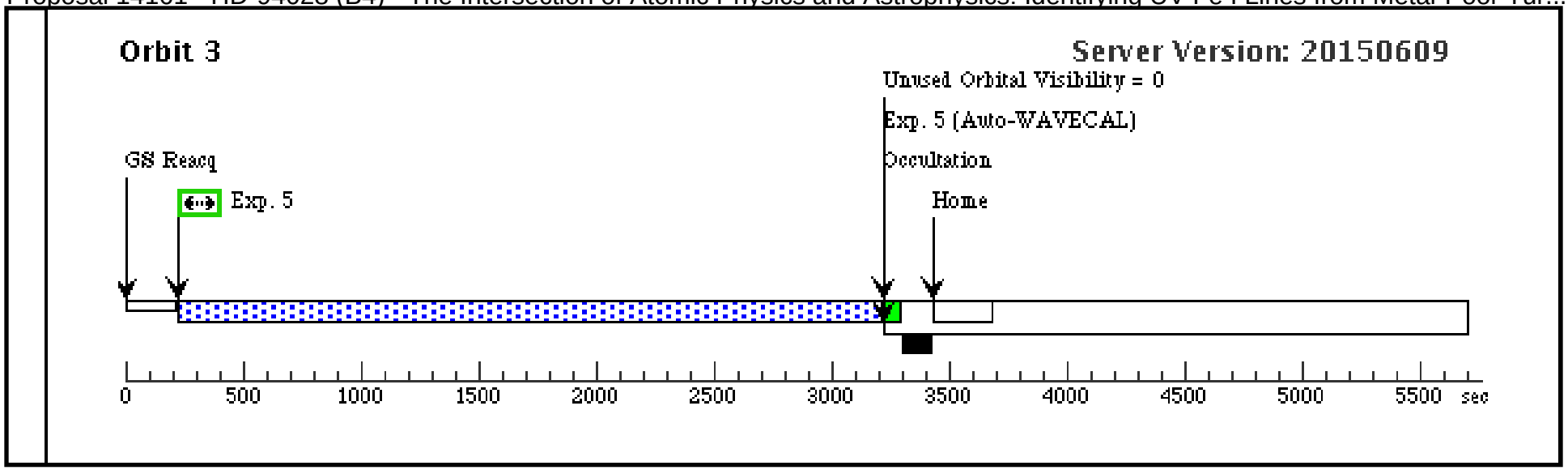
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
Occultation
GS Reacq
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B5) Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

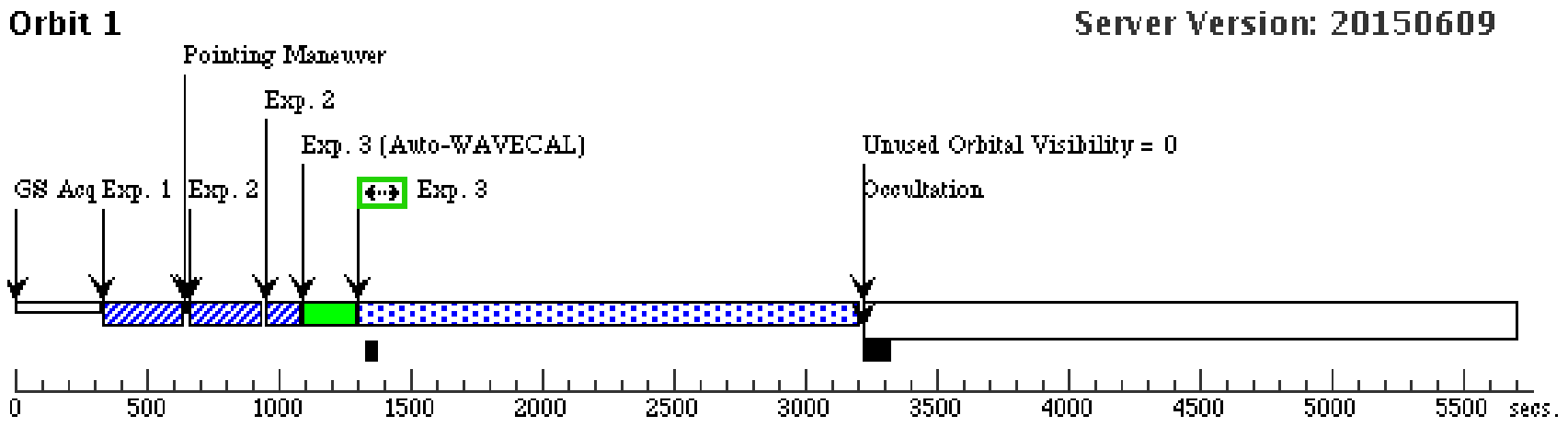
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

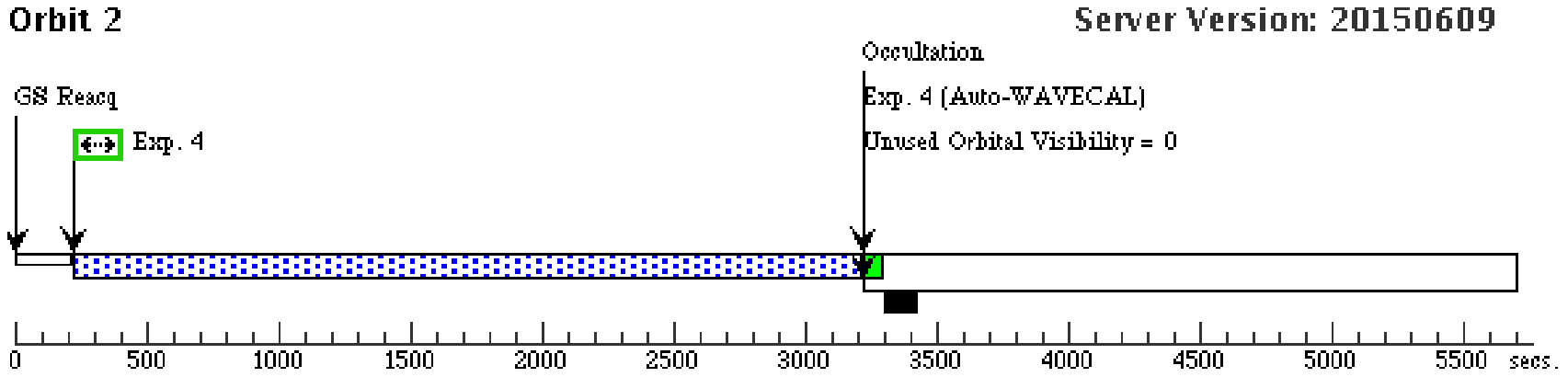
coordinates revised for epoch 2016.
Extended=NO

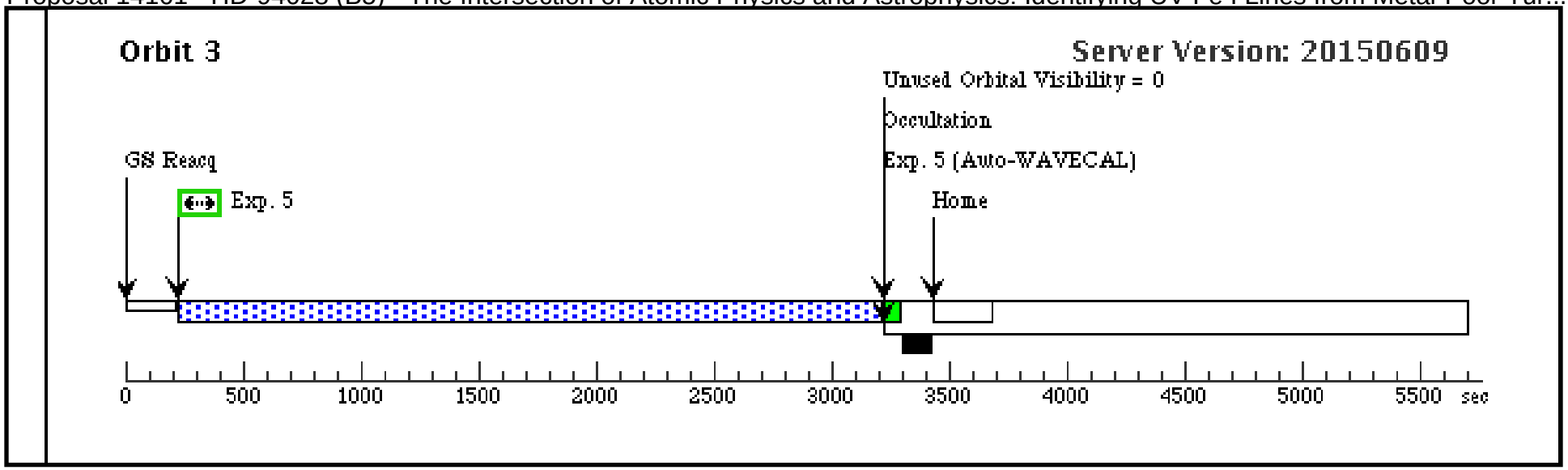
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-94028 (B6) Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-94028	RA: 10 51 27.8265 (162.8659437d) Dec: +20 16 31.65 (20.27546d) Equinox: J2000	Proper Motion RA: -262.1 mas/yr Proper Motion Dec: -456.8 mas/yr Parallax: 0.021" Epoch of Position: 2016 Radial Velocity: +65 km/sec	V=8.22+/-0.1	Reference Frame: ICRS

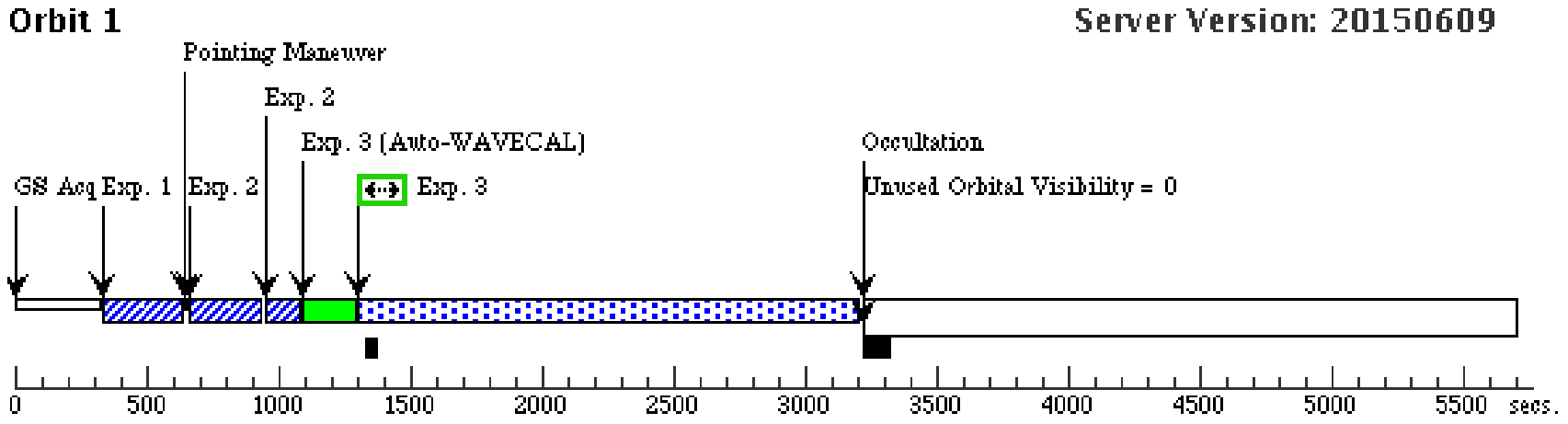
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

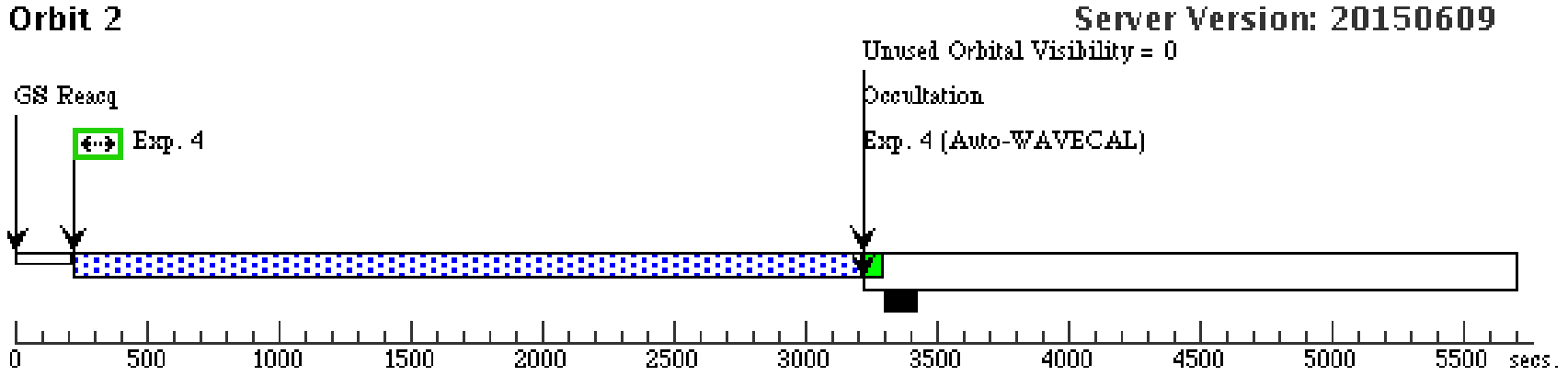
coordinates revised for epoch 2016.
Extended=NO

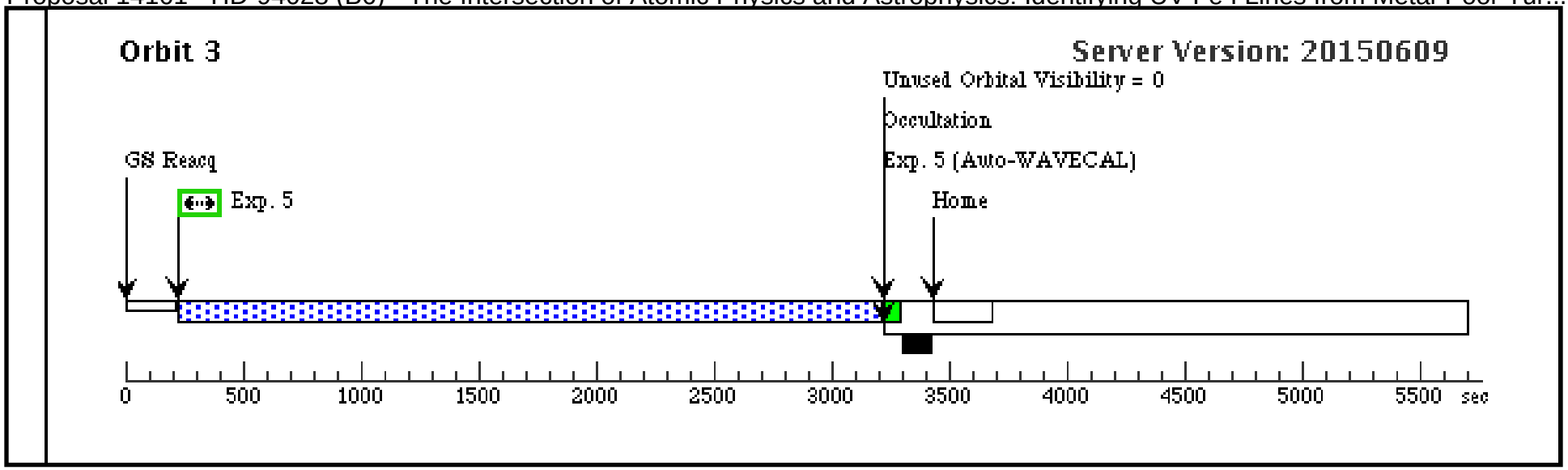
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715505)	(2) HD-94028	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.715521)	(2) HD-94028	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.715609)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				1884 Secs (1884 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.715608)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				2970 Secs (2970 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.715607)	(2) HD-94028	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 3012 A				2970 Secs (2970 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-140283 (C0), implementation Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	HD-140283	RA: 15 43 1.8857 (235.7578571d) Dec: -10 56 5.47 (-10.93485d) Equinox: J2000	Proper Motion RA: -1114.9 mas/yr Proper Motion Dec: -304.4 mas/yr Parallax: 0.017" Epoch of Position: 2016 Radial Velocity: -169 km/sec	V=7.212+/-0.1	Reference Frame: ICRS

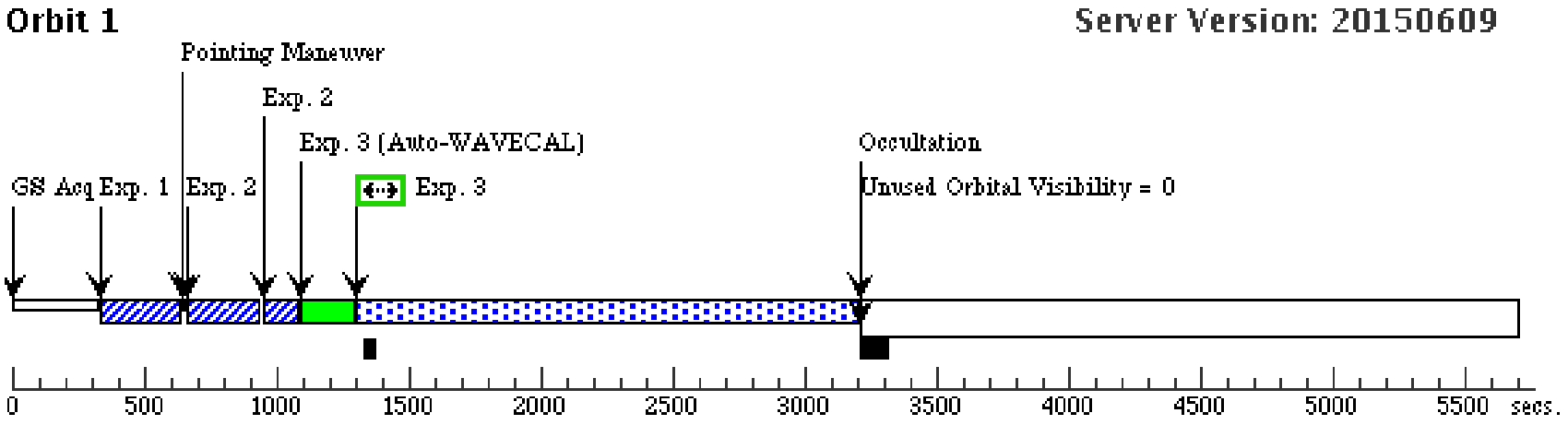
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

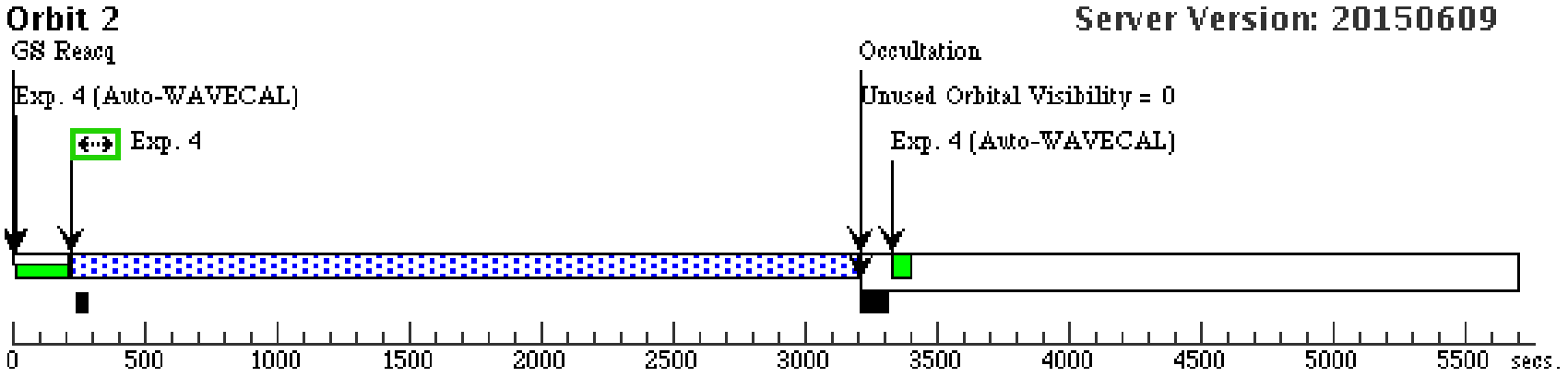
coordinates revised for epoch 2016.
Extended=NO

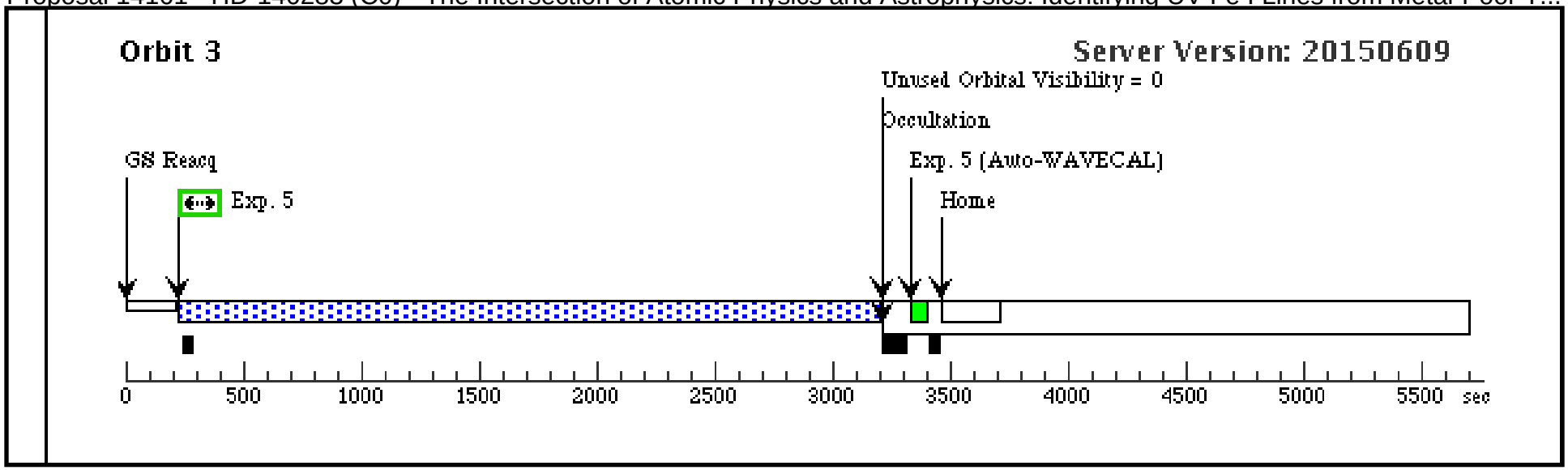
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 510)	(3) HD-140283	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5522)	(3) HD-140283	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5614)	(3) HD-140283	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5613)	(3) HD-140283	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5613)	(3) HD-140283	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
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

Visit

Proposal 14161, HD-140283 (C1), implementation Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	HD-140283	RA: 15 43 1.8857 (235.7578571d) Dec: -10 56 5.47 (-10.93485d) Equinox: J2000	Proper Motion RA: -1114.9 mas/yr Proper Motion Dec: -304.4 mas/yr Parallax: 0.017" Epoch of Position: 2016 Radial Velocity: -169 km/sec	V=7.212+/-0.1	Reference Frame: ICRS

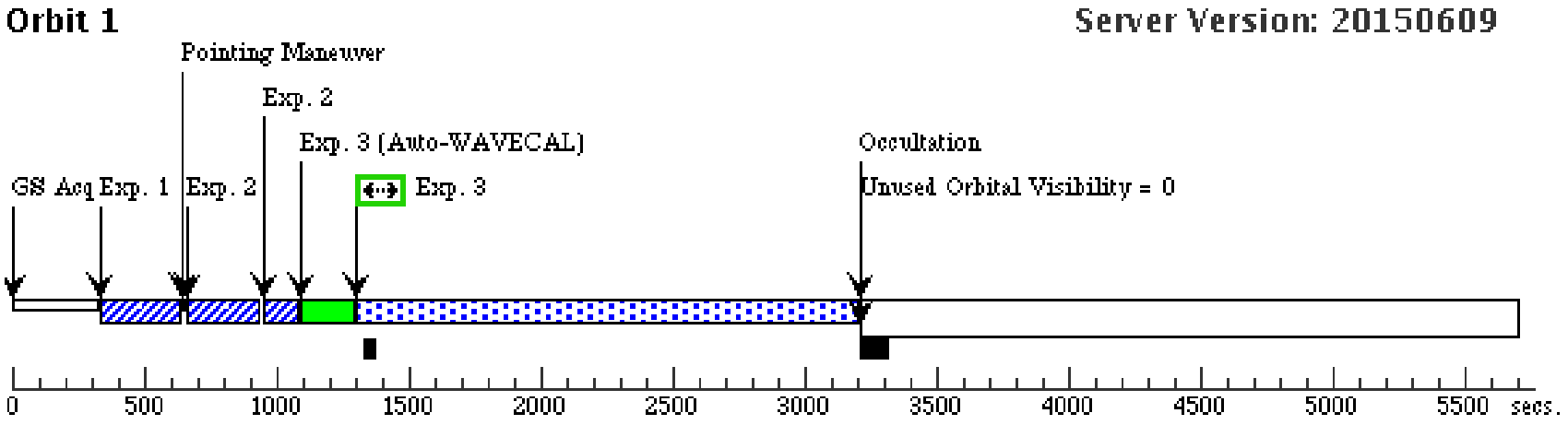
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

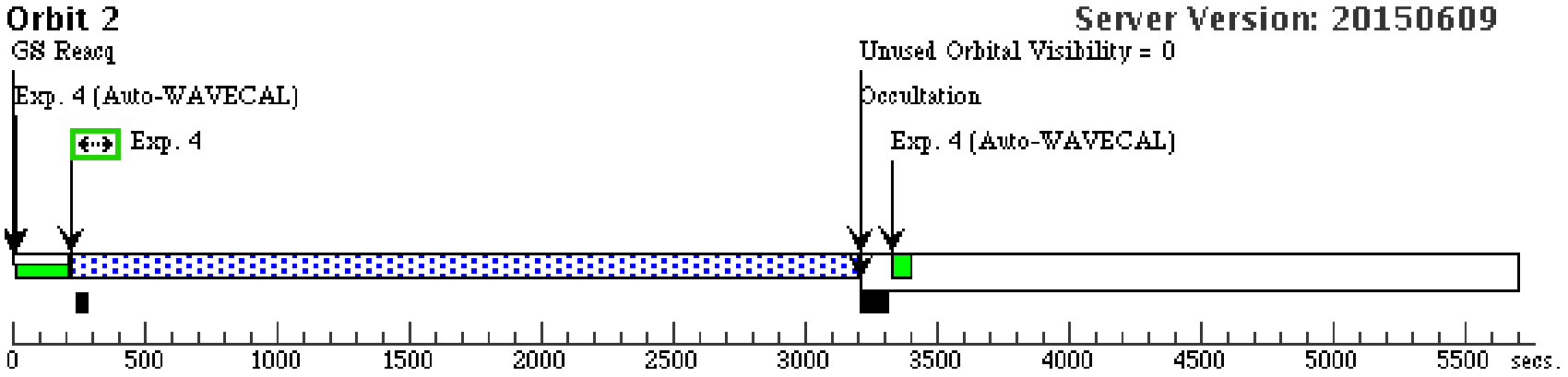
coordinates revised for epoch 2016.
Extended=NO

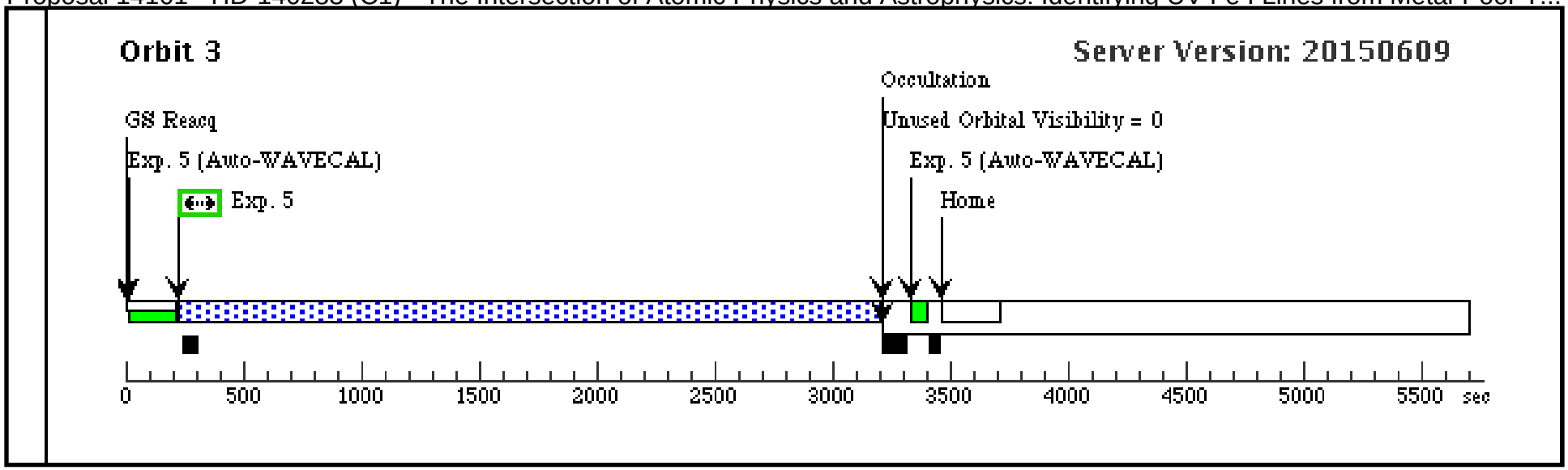
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 510)	(3) HD-140283	STIS/CCD, ACQ, F25ND3	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
2	(STIS.sp.71 5522)	(3) HD-140283	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L 4300 A				0.2 Secs (0.2 Secs) *[==>]*	 ***[1]***
3	(STIS.sp.71 5614)	(3) HD-140283	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2513 A				1880 Secs (1880 Secs) *[==>]*	 ***[1]***
4	(STIS.sp.71 5615)	(3) HD-140283	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2762 A				2966 Secs (2966 Secs) *[==>]*	 ***[2]***
5	(STIS.sp.71 5613)	(3) HD-140283	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2263 A				2966 Secs (2966 Secs) *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14161, HD-211998 (D0), implementation Sun Sep 27 01:09:21 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	HD-211998	RA: 22 24 41.4441 (336.1726838d)	Proper Motion RA: +1302.7 mas/yr	V=5.29+/-0.1	Reference Frame: ICRS
	Alt Name1: NU-IND	Dec: -72 15 30.27 (-72.25841d)	Proper Motion Dec: -674.4 mas/yr		
		Equinox: J2000	Parallax: 0.035"		
			Epoch of Position: 2016		
			Radial Velocity: +32 km/sec		

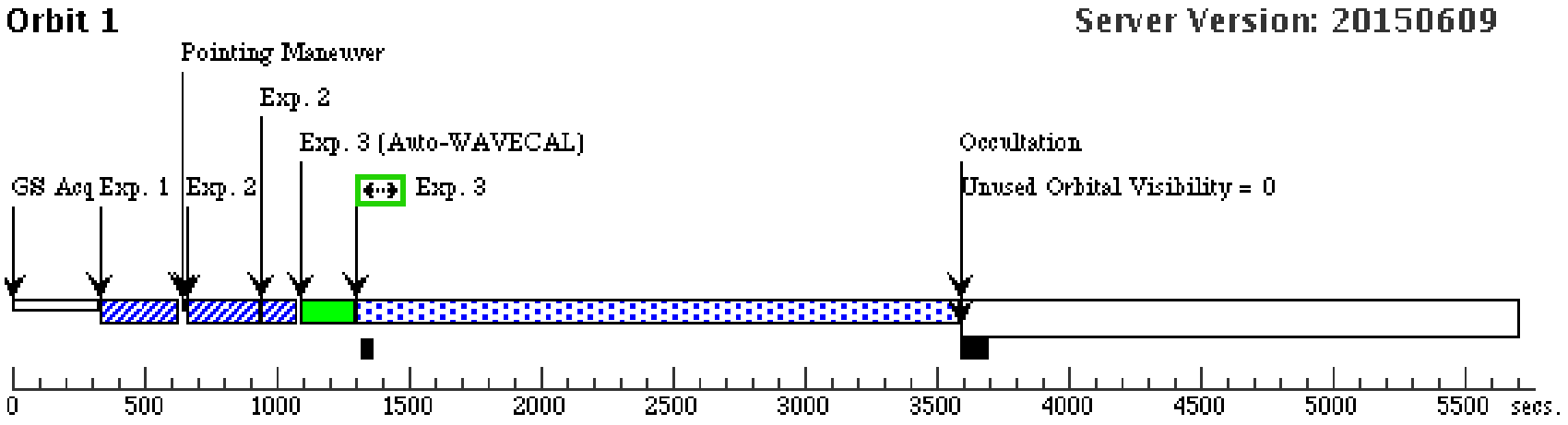
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

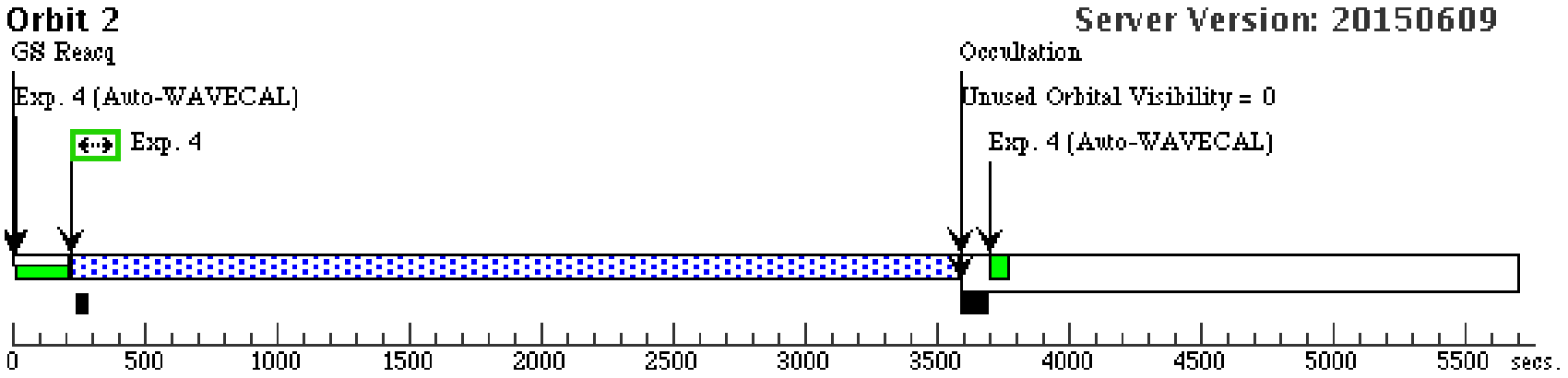
coordinates revised for epoch 2016.
Extended=NO

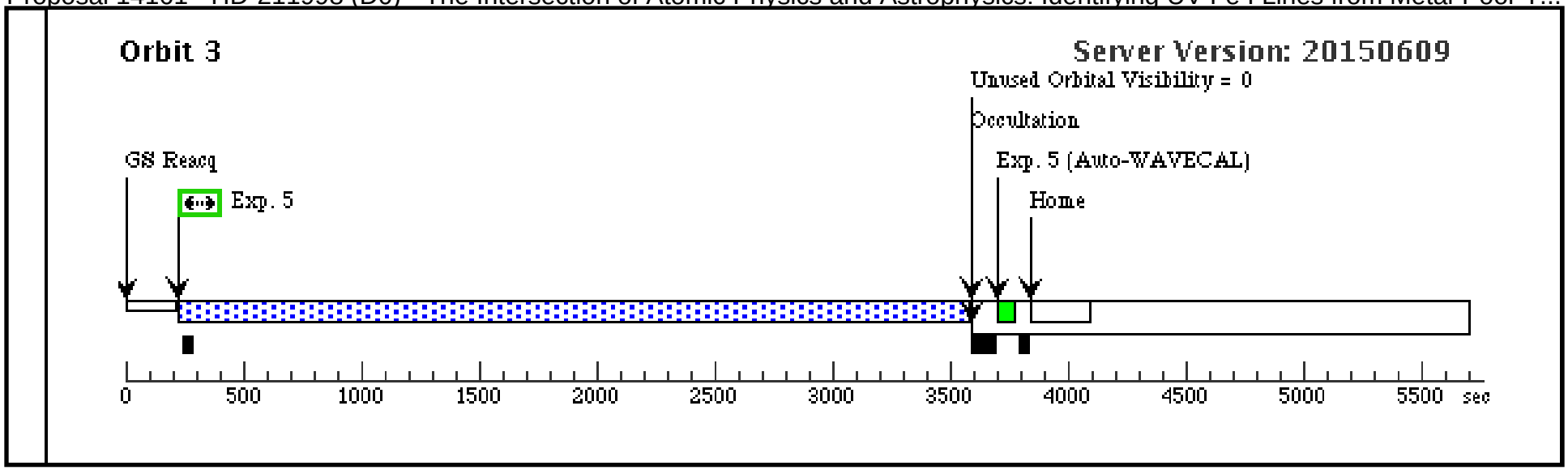
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715515)	(4) HD-211998	STIS/CCD, ACQ, F25ND3	MIRROR				0.2 Secs (0.2 Secs)	
								[==>]	***[1]***
2	(STIS.sp.715523)	(4) HD-211998	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L				0.2 Secs (0.2 Secs)	
				4300 A				*[==>]*	***[1]***
3	(STIS.sp.715627)	(4) HD-211998	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H				2262 Secs (2262 Secs)	
				3012 A				*[==>]*	***[1]***
4	(STIS.sp.715624)	(4) HD-211998	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H				3344 Secs (3344 Secs)	
				2263 A				*[==>]*	***[2]***
5	(STIS.sp.715624)	(4) HD-211998	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H				3344 Secs (3344 Secs)	
				2263 A				*[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
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

Visit

Proposal 14161, HD-211998 (D1), implementation Sun Sep 27 01:09:22 GMT 2015

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	HD-211998	RA: 22 24 41.4441 (336.1726838d)	Proper Motion RA: +1302.7 mas/yr	V=5.29+/-0.1	Reference Frame: ICRS
	Alt Name1: NU-IND	Dec: -72 15 30.27 (-72.25841d)	Proper Motion Dec: -674.4 mas/yr		
		Equinox: J2000	Parallax: 0.035"		
			Epoch of Position: 2016		
			Radial Velocity: +32 km/sec		

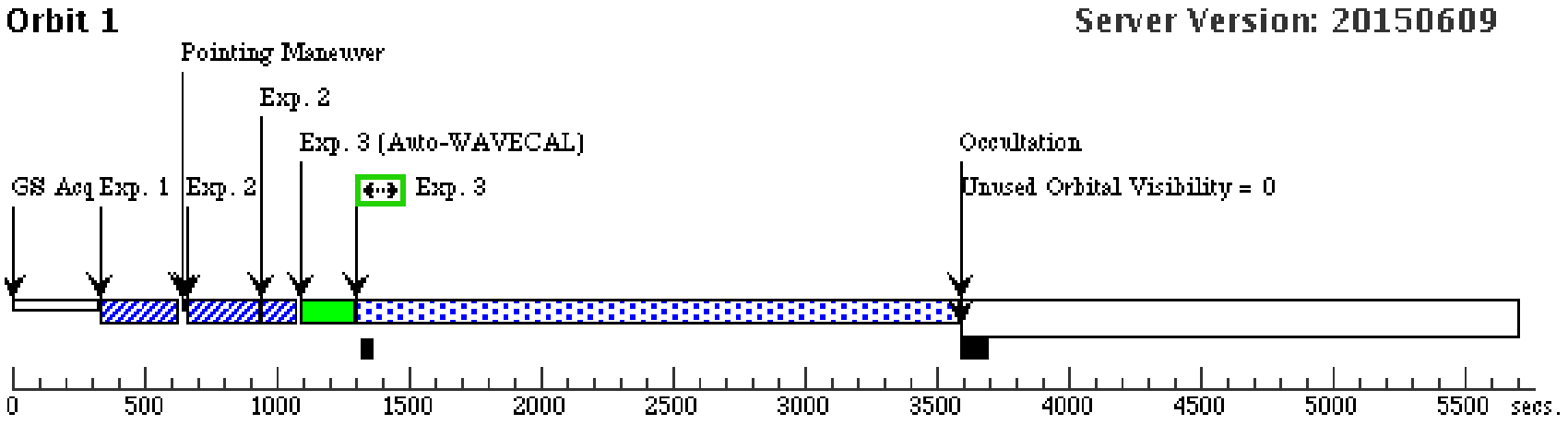
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

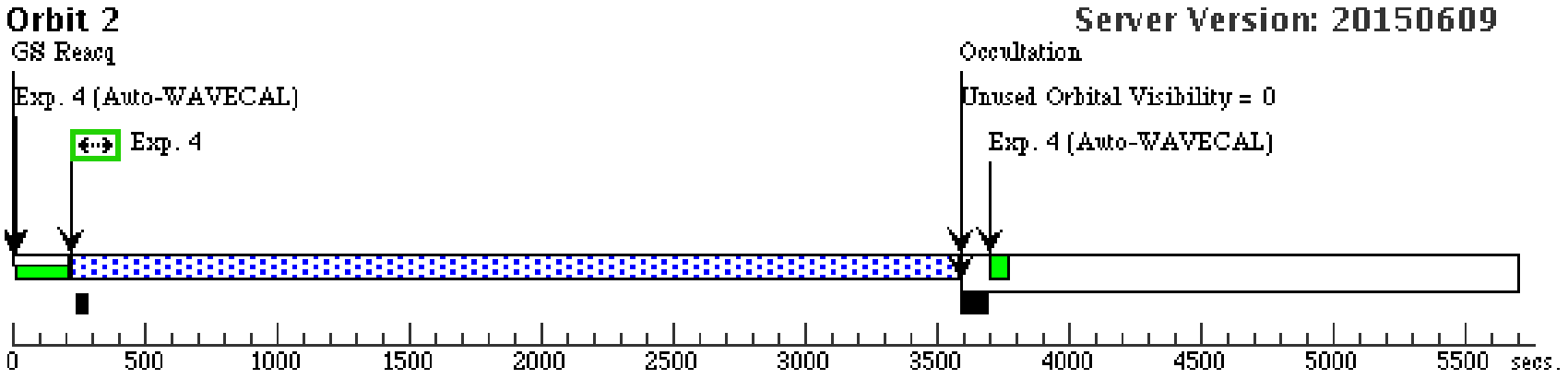
coordinates revised for epoch 2016.
Extended=NO

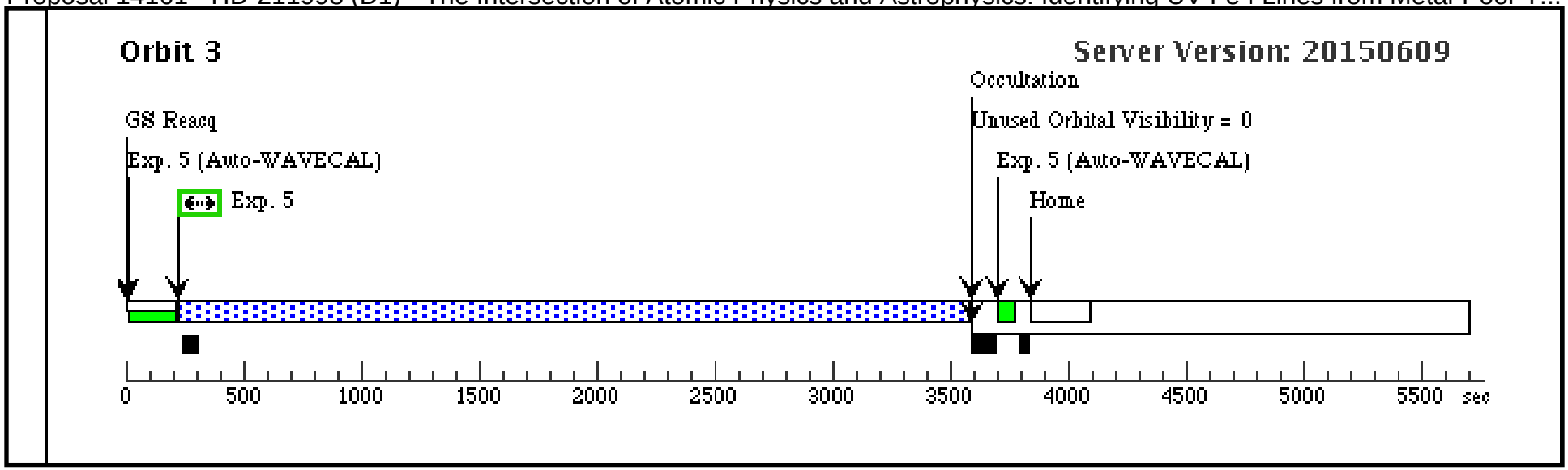
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(STIS.ta.715 515)	(4) HD-211998	STIS/CCD, ACQ, F25ND3	MIRROR				0.2 Secs (0.2 Secs)	
								[==>]	***[1]***
2	(STIS.sp.71 5523)	(4) HD-211998	STIS/CCD, ACQ/PEAK, 0.2X0.09	G430L				0.2 Secs (0.2 Secs)	
				4300 A				*[==>]*	***[1]***
3	(STIS.sp.71 5626)	(4) HD-211998	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H				2262 Secs (2262 Secs)	
				2762 A				*[==>]*	***[1]***
4	(STIS.sp.71 5625)	(4) HD-211998	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H				3344 Secs (3344 Secs)	
				2513 A				*[==>]*	***[2]***
5	(STIS.sp.71 5624)	(4) HD-211998	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H				3344 Secs (3344 Secs)	
				2263 A				*[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20150609
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 5 (Auto-WAVECAL)
Exp. 5 (Auto-WAVECAL)
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec