11737 - The Distance Dependence of the Interstellar N/O Abundance Ratio: A Gould Belt Influence?

Cycle: 17, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. David M. Meyer (PI)	**Northwestern University**	**davemeyer@northwestern.edu**
Dr. David C. Knauth (CoI)	The Johns Hopkins University	knauth_dc2@hotmail.com
Dr. James T. Lauroesch (CoI)	University of Louisville Research Foundation, Inc.	jtlaur01@louisville.edu
Dr. Stefan I. B. Cartledge (CoI)	None	scartled@gmail.com

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) HD108639	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:45:34.0	yes
02	(2) HD147888	STIS/CCD STIS/FUV-MAMA	2	28-Oct-2009 21:45:40.0	yes
03	(3) HD99872	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:45:44.0	yes
04	(4) HD24190	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:45:48.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
05	(5) HD37903	STIS/CCD STIS/FUV-MAMA	2	28-Oct-2009 21:45:52.0	yes
06	(6) HD37061	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:45:57.0	yes
07	(7) HD69106	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:03.0	yes
57	(7) HD69106	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:06.0	yes
08	(8) HD52266	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:09.0	yes
09	(9) HD185418	STIS/CCD STIS/FUV-MAMA	2	28-Oct-2009 21:46:14.0	yes
10	(10) HD165246	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:17.0	yes
11	(11) HD122879	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:20.0	yes
12	(12) HD91824	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:23.0	yes
13	(13) HD201345	STIS/CCD STIS/FUV-MAMA	1	28-Oct-2009 21:46:26.0	yes
14	(14) HD210809	STIS/CCD STIS/FUV-MAMA	2	28-Oct-2009 21:46:30.0	yes

19 Total Orbits Used

ABSTRACT

The degree of elemental abundance homogeneity in the interstellar medium is a function of the enrichment and mixing processes that govern Galactic chemical evolution. Observations of young stars and the interstellar gas within ~500 pc of the Sun have revealed a local ISM that is so well-mixed it is having an impact on ideas regarding the formation of extrasolar planets. However, the situation just beyond the local ISM is not so clear. Sensitive UV absorption line measurements have recently revealed a pattern of inhomogeneities in the interstellar O, N, and Kr gas-phase abundances at distances of ~500 pc and beyond that appear nucleosynthetic in origin rather than due to dust depletion. In particular, based on a sample of 13 sightlines, Knauth et al. (2006) have found that the nearby stars (d < 500 pc) exhibit a mean interstellar N/O abundance ratio that is significantly higher (0.18 dex) than that toward the more distant stars. Interestingly, all of their sightlines lie in the sky vicinity of the Gould Belt of OB associations, molecular clouds, and diffuse gas encircling the Sun at a distance of ~400 pc. Is it possible that mixing processes have not yet smoothed out the recent ISM enrichment by massive stars in the young Belt region? By measuring the interstellar N/O ratios in a strategic new sample of sightlines with STIS, we propose to test the apparent N/O homogeneity inside the Gould Belt and determine if the apparent decline in the N/O ratio with distance is robust and associated with the Belt region.

OBSERVING DESCRIPTION

We propose to obtain STIS high-resolution spectra of the interstellar N I 1160, 1161 A absorption toward 14 stars in an effort to test the apparent homogeneity in the local ISM N/O abundance ratio and determine if the apparent decline in this ratio with distance is robust and associated with the Gould Belt. These particular stars are being targeted because: (1) they are among the brightest UV background sources with appreciable, well-measured O I column densities from previous STIS observations of the interstellar O I 1356 A line, (2) they sample a wide range in pathlength distance and sky location, and (3) they are all rapidly-rotating early-type stars suitable for UV interstellar absorption line studies.

The target list includes the observational parameters for our N I targets including their UV fluxes at 1160 A based primarily upon low dispersion, large aperture IUE observations. The equivalent widths for the weaker line (1161 A) of the N I doublet have been estimated based on the O I column densities, the solar N/O ratio, and no line saturation. Since the interstellar gas-phase N/O values measured to date are either at or above the solar ratio, the measured N I 1161 A line strengths are likely to be comparable to or higher than these estimated equivalent widths. Although the presence

of line saturation could lower these values a bit, it should not be a significant issue given the expected weakness (W < 10 mA) of these lines. The high-resolution N I profiles provided by the E140H R ~ 110,000 observations plus the curve-of-growth lever arm associated with the factor of 3.6 difference in the 1160 and 1161 A oscillator strengths will allow for straightforward corrections of the effects of any such saturation in arriving at accurate N I column densities. In terms of measuring the line strengths, the estimated equivalent widths form the basis of our desired spectral sensitivities in making the proposed N I observations. Specifically, utilizing the E140H grating centered at 1234 A and the 0.2 x 0.09 arc sec aperture, our sensitivity objective is to achieve net spectra with S/N ratios of at least 20 and thereby measure the N I 1161 A line strengths to an accuracy of at least 5 sigma. The net exposure times needed to meet this objective for each target were calculated from their UV fluxes using the STIS Spectroscopic Exposure Time Calculator. The number of HST orbits required for each target is based on these exposure times, the appropriate HST acquisition and STIS exposure overheads, and the targets' orbital visibilities. Ten of the targets will require only one orbit each (one of these CVZ) and the other four targets will need two orbits each. The resulting spectra will lead to 14 new measurements of the interstellar N/O ratio at a sensitivity greater than or equal to that of the sightlines in the Knauth et al. (2006) study. The bottom line is that we can achieve the scientific goals of this project with a total allocation of 18 HST orbits.

Visit

Proposal 11737, Visit 01, scheduling Thu Oct 29 01:46:34 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: CVZ

Fixed Targets

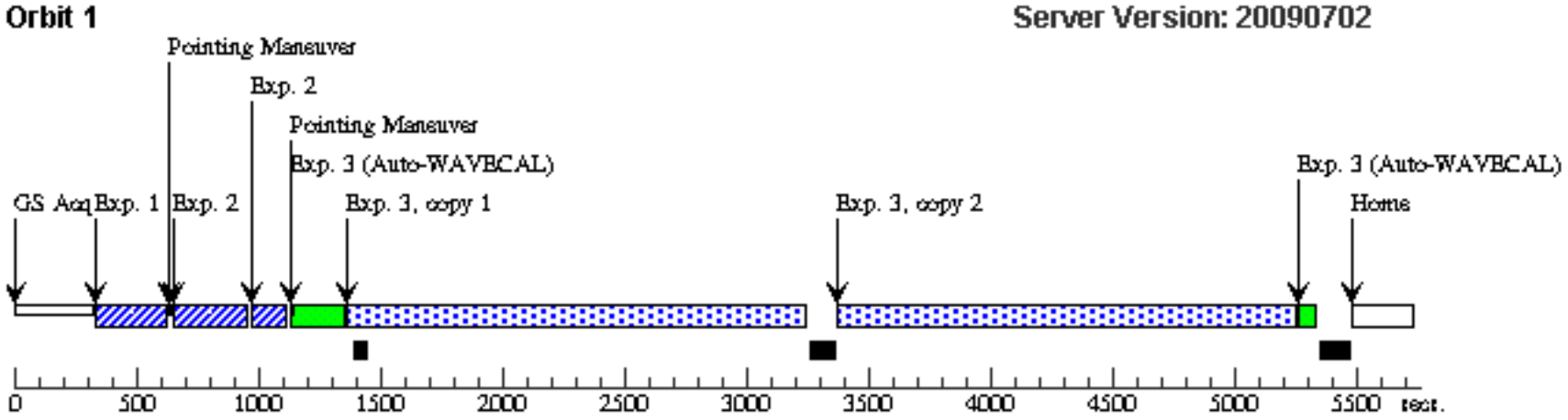
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD108639	RA: 12 29 9.5140 (187.2896417d) Dec: -60 48 17.55 (-60.80487d) Equinox: J2000		V=7.81+/-0.02 TYPE=B1III, E(B-V)=0.34, F(1160)=2.3E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) HD108639	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs *[==>]*	 ***[1]***
2		(1) HD108639	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.5 Secs *[==>]*	 ***[1]***
3		(1) HD108639	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1865.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	 ***[1]***

Orbit Structure



Visit

Proposal 11737, Visit 02, completed Thu Oct 29 01:46:35 GMT 2009

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 02) Warning (Orbit Planner): VISIBILITY OVERRUN

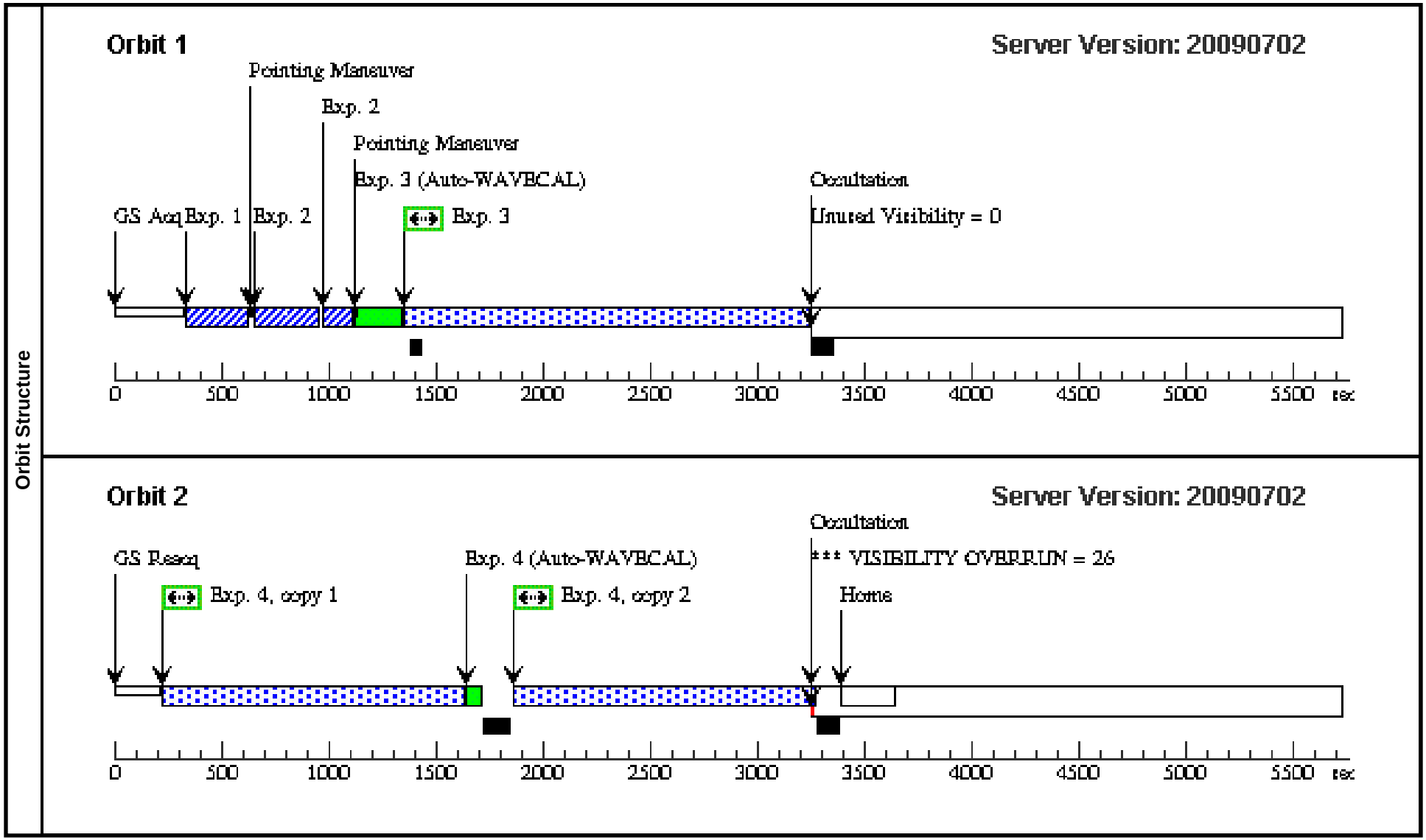
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD147888	RA: 16 25 24.2820 (246.3511750d) Dec: -23 27 36.79 (-23.46022d) Equinox: J2000	Proper Motion RA: -0.000625s/yr Proper Motion Dec: -0.0208"/yr Parallax: 0.00733" Epoch of Position: 1991.25	V=6.78+/-0.02 TYPE=B3V, E(B-V)=0.52, F(1160)=3.0E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) HD147888	STIS/CCD, ACQ, F25ND3	MIRROR				0.2 Secs	
								[==>]	***[1]***
2		(2) HD147888	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.2 Secs	
								[==>]	***[1]***
3		(2) HD147888	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1870.0 Secs	
								[==>]	***[1]***
4		(2) HD147888	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1391.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 3 (Auto-WAVECAL)
Occultation
GS Acq
Exp. 1
Exp. 2
Exp. 3
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Orbit 2
Server Version: 20090702
Occultation
GS Reacq
Exp. 4 (Auto-WAVECAL)
*** VISIBILITY OVERRUN = 26
Exp. 4, copy 1
Exp. 4, copy 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11737, Visit 03, scheduling Thu Oct 29 01:46:35 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

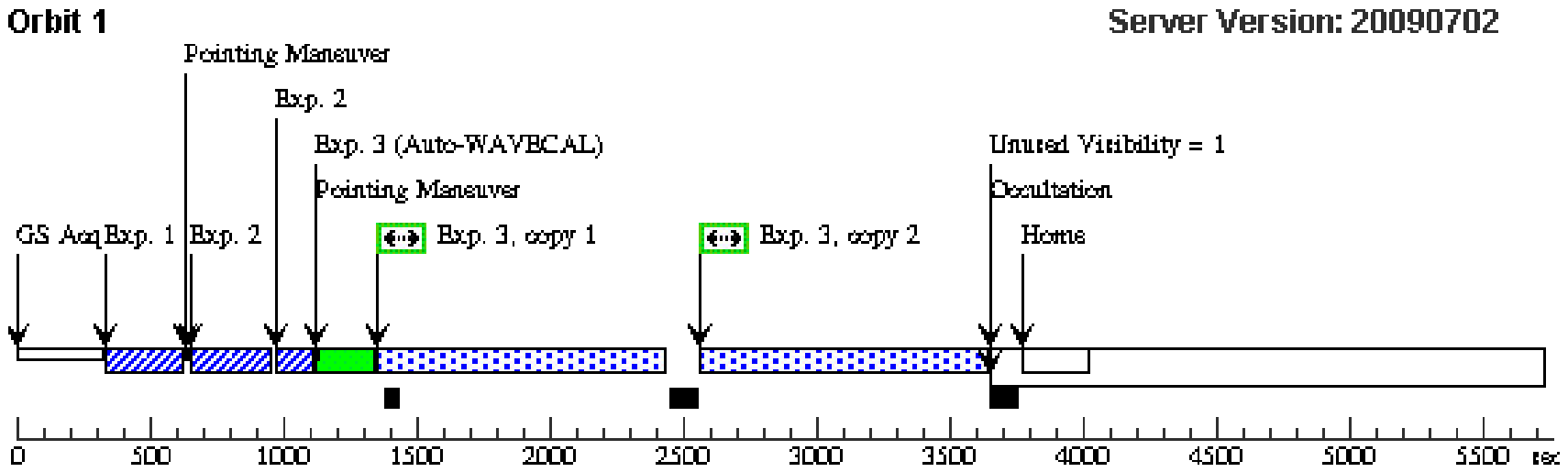
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	HD99872	RA: 11 28 18.4128 (172.0767200d) Dec: -72 28 26.32 (-72.47398d) Equinox: J2000	Proper Motion RA: -0.00572s/yr Proper Motion Dec: -0.00345"/yr Parallax: 0.00430" Epoch of Position: 1991.25	V=6.11+/-0.02 TYPE=B3V, E(B-V)=0.36, F(1160)=5.0E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) HD99872	STIS/CCD, ACQ, F25ND3	MIRROR				0.4 Secs *[==>]*	*[1]*
2		(3) HD99872	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.2 Secs *[==>]*	*[1]*
3		(3) HD99872	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1065.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 04, scheduling Thu Oct 29 01:46:35 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

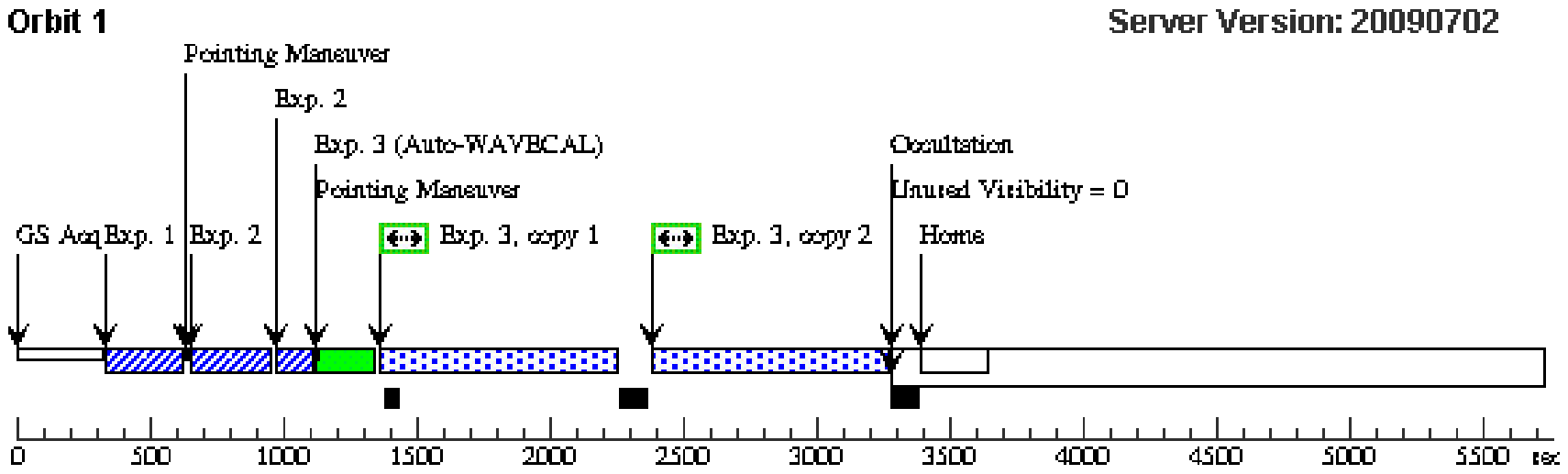
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	HD24190	RA: 03 52 18.9587 (58.0789946d) Dec: +34 13 19.60 (34.22211d) Equinox: J2000		V=7.45+/-0.02 TYPE=B2V, E(B-V)=0.28, F(1160)=4.5E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) HD24190	STIS/CCD, ACQ, F25ND3	MIRROR				0.4 Secs *[==>]*	*[1]*
2		(4) HD24190	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.4 Secs *[==>]*	*[1]*
3		(4) HD24190	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				875.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 05, scheduling Thu Oct 29 01:46:36 GMT 2009

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

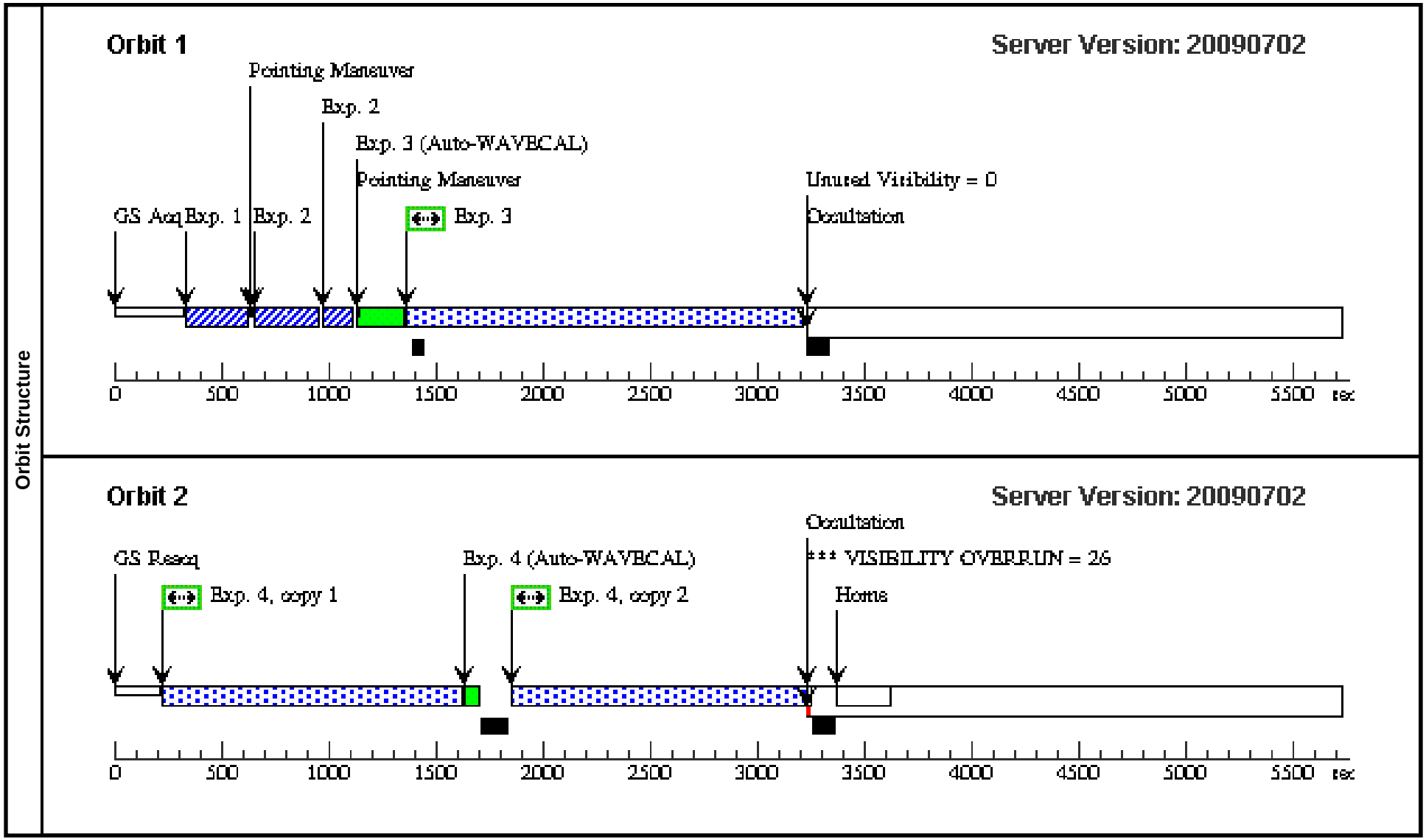
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HD37903	RA: 05 41 38.3881 (85.4099504d) Dec: -02 15 32.48 (-2.25902d) Equinox: J2000		V=7.84+/-0.02 TYPE=B1.5V, E(B-V)=0.35, F(1160)=2.5E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) HD37903	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs	
								[==>]	***[1]***
2		(5) HD37903	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.5 Secs	
								[==>]	***[1]***
3		(5) HD37903	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1838.0 Secs	
								[==>]	***[1]***
4		(5) HD37903	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1380.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Exp. 2
Exp. 3 (Auto-WAVECAL)
Pointing Maneuver
Unused Visibility = 0
GS Acq
Exp. 1
Exp. 2
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Orbit 2
Server Version: 20090702
Occultation
GS Reacq
Exp. 4 (Auto-WAVECAL)
*** VISIBILITY OVERRUN = 26
Exp. 4, copy 1
Exp. 4, copy 2
Horns
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11737, Visit 06, scheduling Thu Oct 29 01:46:36 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

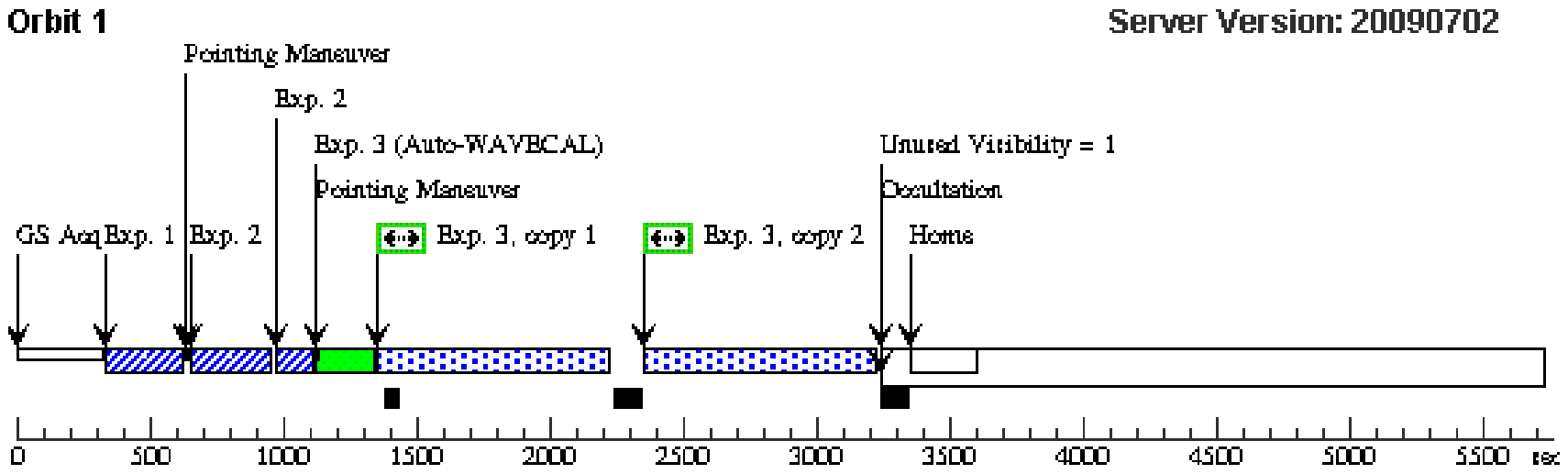
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	HD37061	RA: 05 35 31.3650 (83.8806875d) Dec: -05 16 2.58 (-5.26738d) Equinox: J2000		V=6.87+/-0.02 TYPE=B1V, E(B-V)=0.45, F(1160)=1.3E-10	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) HD37061	STIS/CCD, ACQ, F25ND3	MIRROR				0.2 Secs	
								[==>]	***[1]***
2		(6) HD37061	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.2 Secs	
								[==>]	***[1]***
3		(6) HD37061	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				857.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[1]***

Orbit Structure



Visit

Proposal 11737, Visit 07, failed Thu Oct 29 01:46:36 GMT 2009

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 07) Warning (Orbit Planner): VISIBILITY OVERRUN

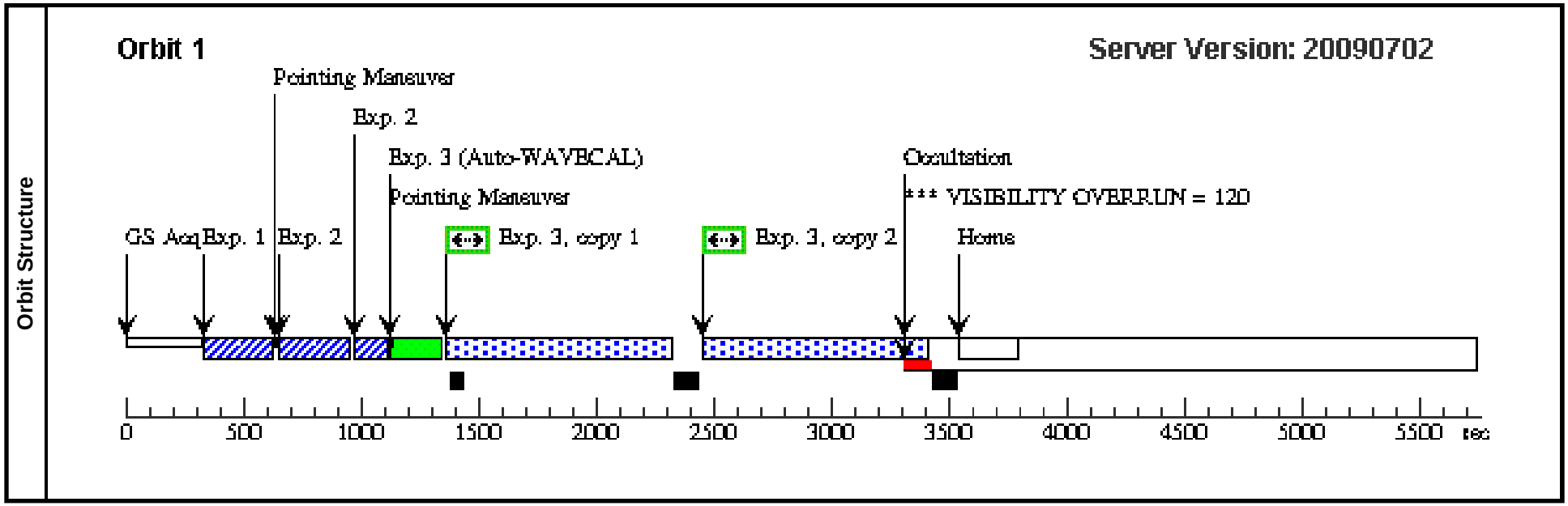
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	HD69106	RA: 08 14 3.7990 (123.5158292d) Dec: -36 57 7.94 (-36.95221d) Equinox: J2000		V=7.13+/-0.02 TYPE=B0.5II, E(B-V)=0.18, F(1160)=1.3E-10	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) HD69106	STIS/CCD, ACQ, F25ND3	MIRROR				0.3 Secs	
								[==>]	***[1]***
2		(7) HD69106	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.3 Secs	
								[==>]	***[1]***
3		(7) HD69106	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				947.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Exp. 2
Exp. 3 (Auto-WAVECAL)
Pointing Maneuver
Occultation
*** VISIBILITY OVERRUN = 120
GS Acq
Exp. 1
Exp. 2
Exp. 3, copy 1
Exp. 3, copy 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11737, Visit 57 Thu Oct 29 01:46:37 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: VISIBILITY INTERVAL 60 M

Comments: copy of visit 7 lost during a safing

Fixed Targets

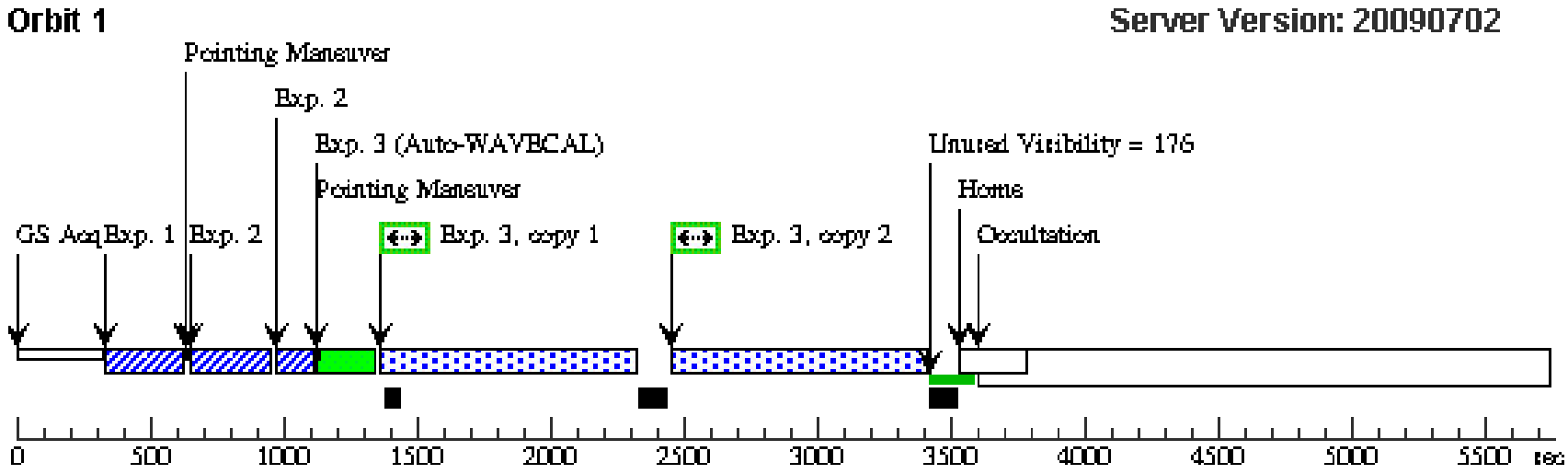
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	HD69106	RA: 08 14 3.7990 (123.5158292d) Dec: -36 57 7.94 (-36.95221d) Equinox: J2000		V=7.13+/-0.02 TYPE=B0.5II, E(B-V)=0.18, F(1160)=1.3E-10	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) HD69106	STIS/CCD, ACQ, F25ND3	MIRROR				0.3 Secs *[==>]*	*[1]*
2		(7) HD69106	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.3 Secs *[==>]*	*[1]*
3		(7) HD69106	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				947.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 08, completed Thu Oct 29 01:46:37 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

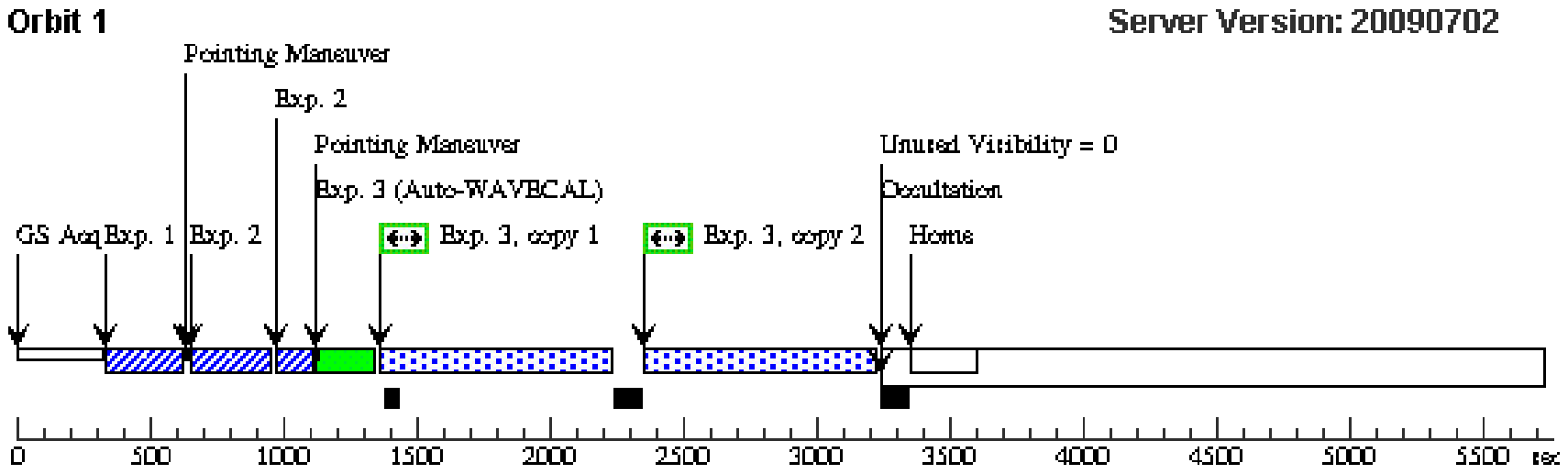
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	HD52266	RA: 07 00 21.0763 (105.0878179d) Dec: -05 49 35.96 (-5.82666d) Equinox: J2000		V=7.23+/-0.02 TYPE=O9V, E(B-V)=0.28, F(1160)=8.0E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) HD52266	STIS/CCD, ACQ, F25ND3	MIRROR				0.4 Secs	
								[==>]	***[1]***
2		(8) HD52266	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.3 Secs	
								[==>]	***[1]***
3		(8) HD52266	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				856.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[1]***

Orbit Structure



Visit

Proposal 11737, Visit 09, scheduling Thu Oct 29 01:46:37 GMT 2009

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

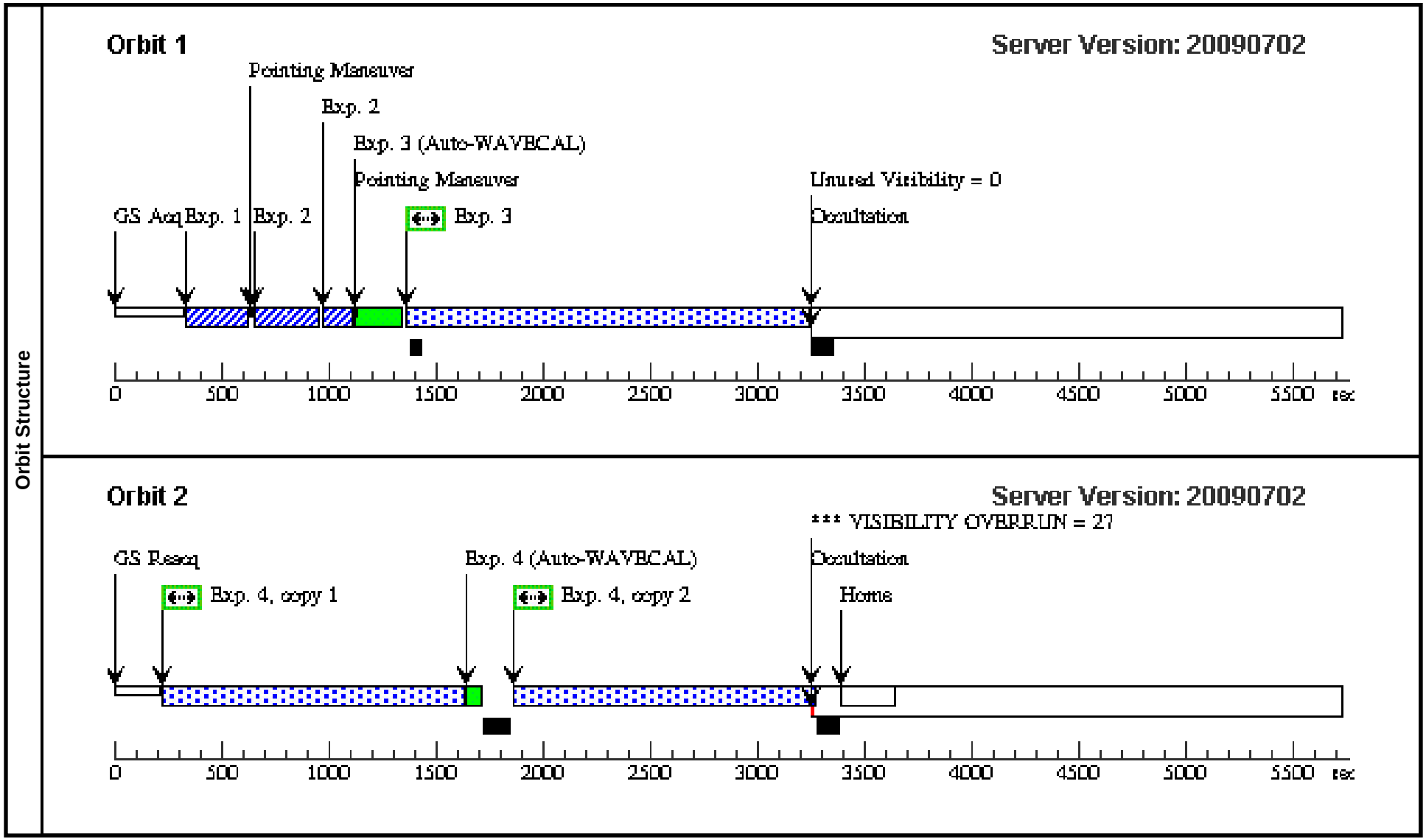
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	HD185418	RA: 19 38 27.4827 (294.6145112d) Dec: +17 15 26.05 (17.25724d) Equinox: J2000		V=7.52+/-0.02 TYPE=B0.5V, E(B-V)=0.50, F(1160)=2.4E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) HD185418	STIS/CCD, ACQ, F25ND3	MIRROR				0.4 Secs	
								[==>]	***[1]***
2		(9) HD185418	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.4 Secs	
								[==>]	***[1]***
3		(9) HD185418	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1863.0 Secs	
								[==>]	***[1]***
4		(9) HD185418	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1391.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Exp. 2
Exp. 3 (Auto-WAVECAL)
Pointing Maneuver
Unused Visibility = 0
GS Acq
Exp. 1
Exp. 2
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Orbit 2
Server Version: 20090702
*** VISIBILITY OVERRUN = 27
GS Reacq
Exp. 4, copy 1
Exp. 4 (Auto-WAVECAL)
Exp. 4, copy 2
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11737, Visit 10, scheduling Thu Oct 29 01:46:37 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

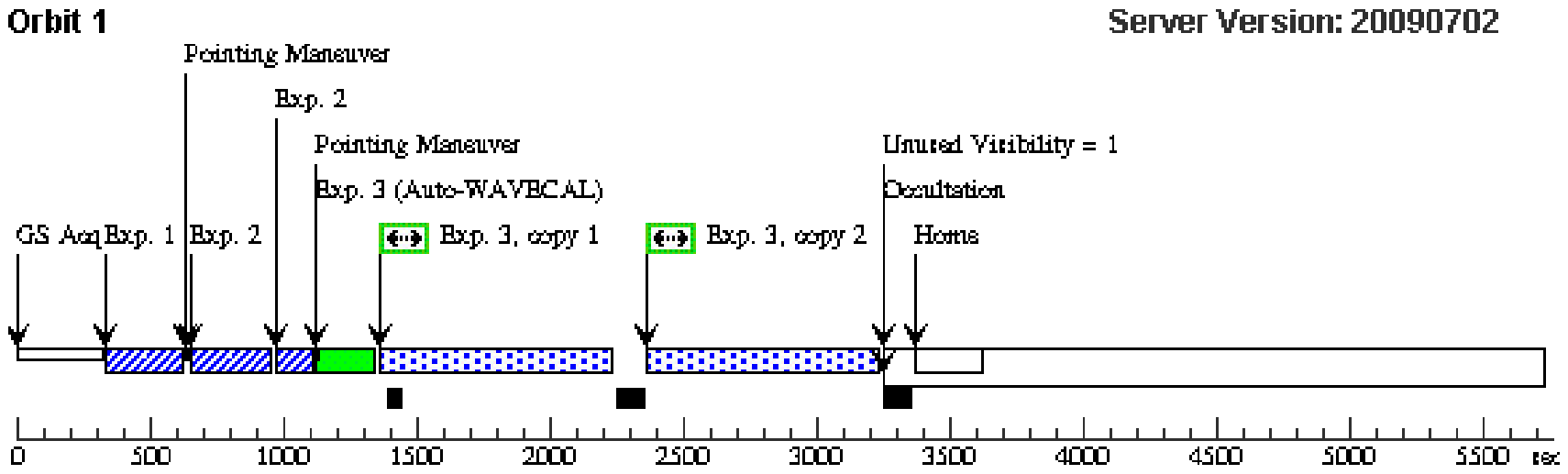
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	HD165246	RA: 18 06 4.6820 (271.5195083d) Dec: -24 11 43.89 (-24.19552d) Equinox: J2000		V=7.76+/-0.02 TYPE=O9III, E(B-V)=0.40, F(1160)=4.5E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) HD165246	STIS/CCD, ACQ, F25ND3	MIRROR				0.4 Secs *[==>]*	*[1]*
2		(10) HD165246	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.5 Secs *[==>]*	*[1]*
3		(10) HD165246	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				861.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 11, scheduling Thu Oct 29 01:46:38 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

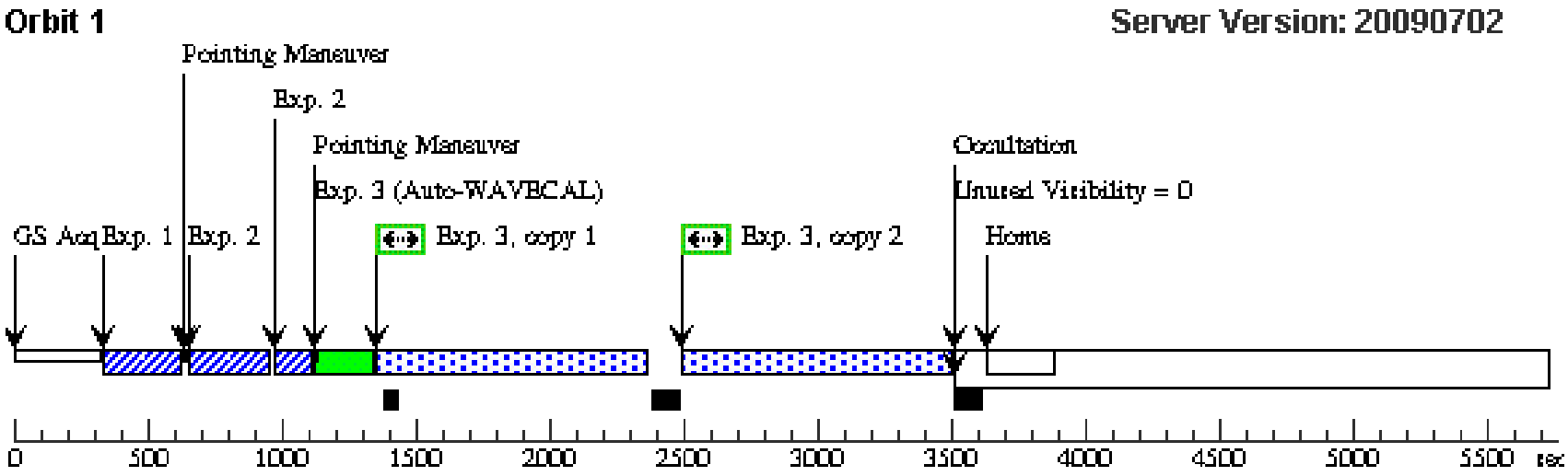
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	HD122879	RA: 14 06 25.1569 (211.6048204d) Dec: -59 42 57.26 (-59.71591d) Equinox: J2000		V=6.43+/-0.02 TYPE=B0IA, E(B-V)=0.36, F(1160)=7.0E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(11) HD122879	STIS/CCD, ACQ, F25ND3	MIRROR				0.2 Secs *[==>]*	*[1]*
2		(11) HD122879	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.2 Secs *[==>]*	*[1]*
3		(11) HD122879	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				995.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 12, scheduling Thu Oct 29 01:46:38 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

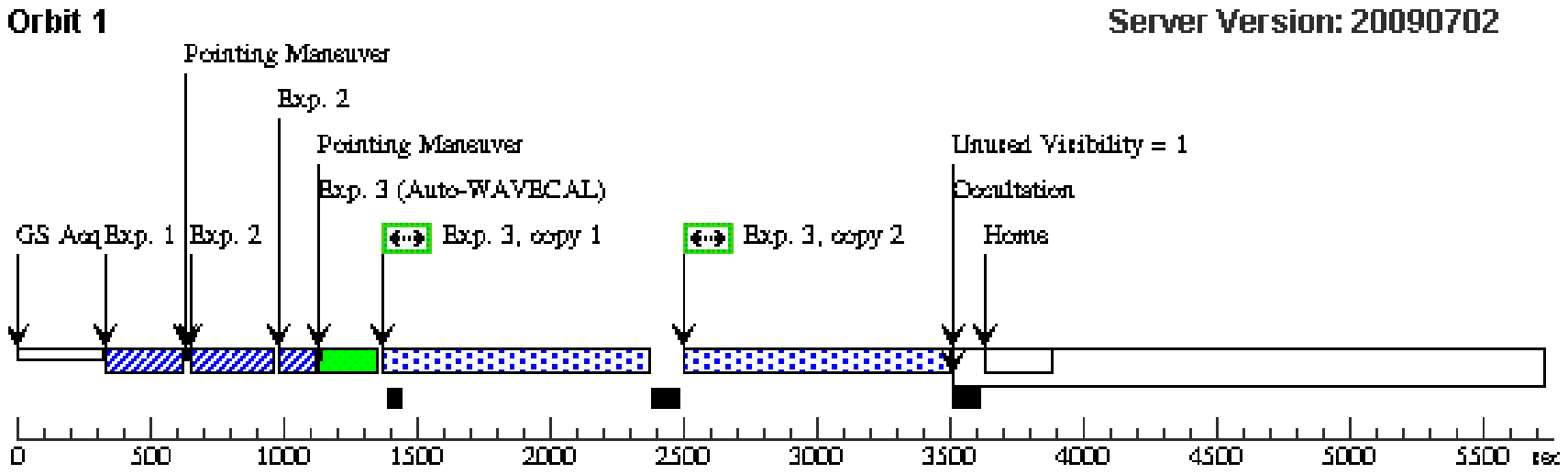
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	HD91824	RA: 10 34 46.6319 (158.6942996d) Dec: -58 09 22.04 (-58.15612d) Equinox: J2000		V=8.15+/-0.02 TYPE=O7V, E(B-V)=0.27, F(1160)=5.0E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(12) HD91824	STIS/CCD, ACQ, F25ND3	MIRROR				0.6 Secs *[==>]*	*[1]*
2		(12) HD91824	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.6 Secs *[==>]*	*[1]*
3		(12) HD91824	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				988.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 13, scheduling Thu Oct 29 01:46:38 GMT 2009

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

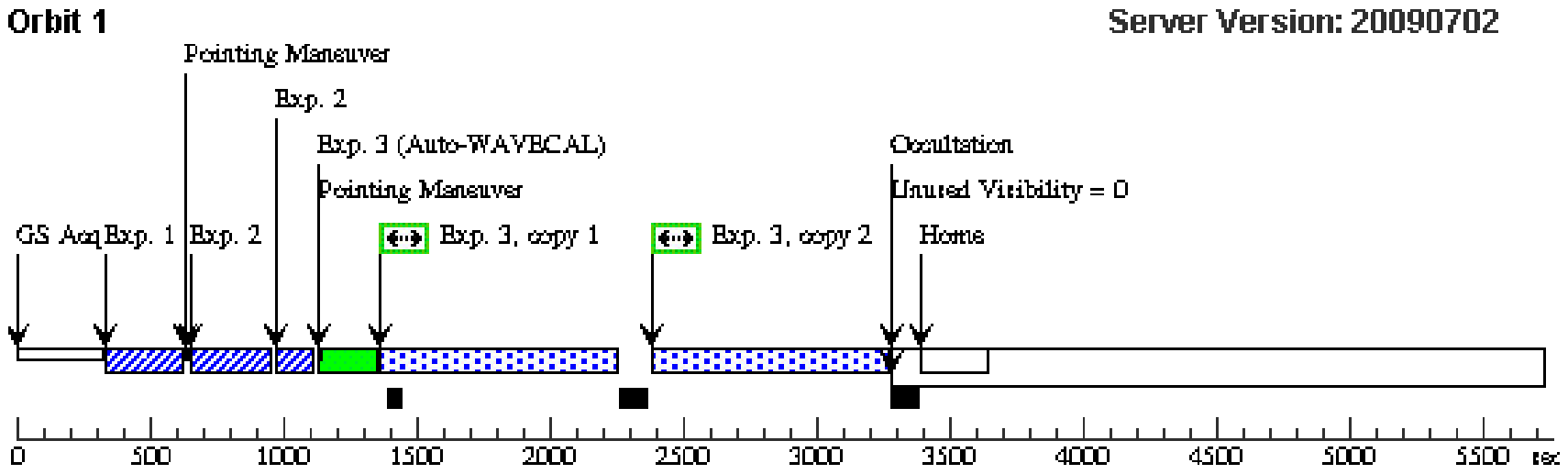
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	HD201345	RA: 21 07 55.4153 (316.9808971d) Dec: +33 23 49.24 (33.39701d) Equinox: J2000		V=7.75+/-0.02 TYPE=O9V, E(B-V)=0.32, F(1160)=8.0E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(13) HD201345	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs *[==>]*	*[1]*
2		(13) HD201345	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.5 Secs *[==>]*	*[1]*
3		(13) HD201345	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				873.0 Secs X 2 *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 11737, Visit 14, scheduling Thu Oct 29 01:46:39 GMT 2009

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 14) Warning (Orbit Planner): VISIBILITY OVERRUN

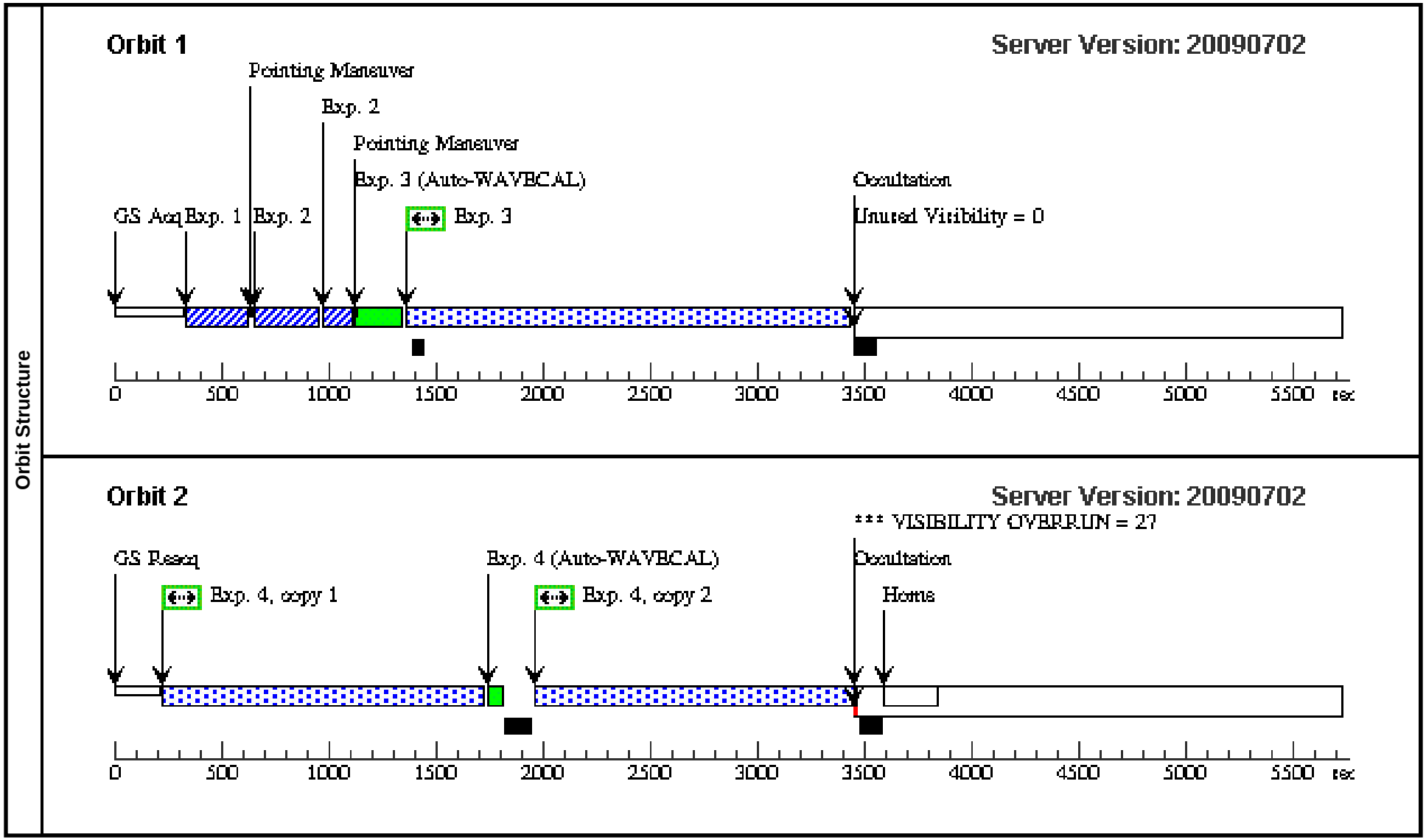
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	HD210809	RA: 22 11 38.6003 (332.9108346d) Dec: +52 25 47.95 (52.42999d) Equinox: J2000		V=7.56+/-0.02 TYPE=O9IB, E(B-V)=0.33, F(1160)=2.2E-11	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) HD210809	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs	
								[==>]	***[1]***
2		(14) HD210809	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				0.4 Secs	
								[==>]	***[1]***
3		(14) HD210809	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				2057.0 Secs	
								[==>]	***[1]***
4		(14) HD210809	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1234 A				1489.0 Secs X 2	
								[==>(Copy 1)] *[==>(Copy 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 3 (Auto-WAVECAL)
Occultation
GS Acq
Exp. 1
Exp. 2
Exp. 3
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Orbit 2
Server Version: 20090702
*** VISIBILITY OVERRUN = 27
GS Reacq
Exp. 4, copy 1
Exp. 4 (Auto-WAVECAL)
Exp. 4, copy 2
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec