12996 - Exploring the Role of Stellar Magnetic Fields in Accretion and Outflows from Young Stars using the Hot Emission Lines of Herbig Ae/Be Stars

Cycle: 20, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) XYPER	STIS/CCD STIS/FUV-MAMA	2	30-Aug-2012 21:36:58.0	yes
02	(5) HD169142	STIS/CCD STIS/FUV-MAMA	2	30-Aug-2012 21:37:13.0	yes
03	(6) HD142666	STIS/CCD STIS/FUV-MAMA	2	30-Aug-2012 21:37:25.0	yes
04	(7) HD141569	STIS/CCD STIS/FUV-MAMA	2	30-Aug-2012 21:37:40.0	yes
05	(9) HD139614	STIS/CCD STIS/FUV-MAMA	2	30-Aug-2012 21:37:54.0	yes
06	(2) HKORI	COS/FUV COS/NUV	2	30-Aug-2012 21:38:08.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(3) RRTAU	COS/FUV COS/NUV	2	30-Aug-2012 21:38:23.0	yes
08	(4) KKOPH	COS/FUV COS/NUV	2	30-Aug-2012 21:38:40.0	yes
09	(8) TORI	COS/FUV COS/NUV	2	30-Aug-2012 21:38:55.0	yes
10	(10) VVSER	COS/FUV COS/NUV	2	30-Aug-2012 21:39:11.0	yes

20 Total Orbits Used

ABSTRACT

Most stars form surrounded by a circumstellar accretion disk. It is in these disks that planetary systems form. The ultimate fate of the material in these disks is determined by the competition between matter accreting onto the stellar surface, matter being launched into an outflow away from the star, and the formation of solar system like bodies. For low mass stars, strong stellar magnetic fields play key roles in the accretion and possibly outflow processes. While it is often assumed that stellar magnetic fields play a similarly important role for intermediate mass stars, the observational evidence for this is far from complete. This is due in part to a lack of detected accretion or outflow diagnostics in optical line profile studies which trace these mass flows. The limited existing UV data suggests that this may simply be the result of different temperatures in the flows for these two mass regimes; however, there is not enough data to know for certain. Here, we propose a small survey of a carefully selected sample of intermediate mass Herbig Ae/Be stars to determine the incidence of accretion and outflow signatures in their high temperature line profiles in order to establish whether these stars interact with their surrounding accretion disks in the same manner as their younger cousins.

OBSERVING DESCRIPTION

Our primary observational goal is to search for high-temperature wind and accretion signatures in HAEBE stars, which can be found in the UV. The target sample is composed of objects that do not show optical wind signatures (i.e. red-shifted absorptions) but present optical indicators of accretion as well as infrared excesses suggesting circumstellar disks.

The spectral diagnostics that we will observe sample a variety of physical conditions. The main observational handles we use are the N V doublet

(1240 A), the O I line (1302 A), the Si IV (1400 A) and C IV (1550 A) doublets and the He II (1640 A) line. Broad and strong emissions in C IV and He II are typical indicators of magnetospheric accretion in CTTSs. As the spectra of DX Cha suggests, C IV may also be a primary (hot) outflow diagnostic for HAEBES. O I presents a traditional P Cygni profile in CTTSs indicative of a cool wind (Herczeg et al. 2005, AJ, 129,2777). N V is a broad emission doublet in CTTS, indicative of accretion, partially absorbed by a N I outflow line. Other well known wind indicators (S III at 1527 A, C II at 1336 A) are also present in the spectral ranges sampled in these observations.

In the FUV, COS is 10x faster than STIS. However, some targets are just above the safety limits for COS. Therefore, we design our observations as a mixture of COS-PSA and STIS-0.2x0.2. The exposure times are based on a visibility period (minus overhead) of 2200 sec.

For the COS targets, each target will be observed for a total of two orbits with the spectral elements G130M, G160M, and G230L. The FUV gratings provide R ~ 22000 spectroscopy, which is enough to resolve P Cygni profiles in CTTSs and in DX Cha. The NUV grating (R ~ 3000) provides a simultaneous measurement of the accretion rate (Calvet & Gullbring 1998).

The G130M observations at lambda_o=1291 A (exposure ~ 2200 sec) cover the spectral ranges 1132 -1274 A and 1291 -1433 A. For the faintest target in the sample, the expected continuum S/N ~ 12 at 1250 A. Analogously, the G160M observations at lambda_o=1577 A (exposure ~ 2000 sec) cover the spectral ranges 1382 - 1556 A and 1577 - 1752 A. For the faintest target in the sample, the expected continuum S/N ~ 13 at 1550 A.

The G230L are done at lambda_o=2950 A (exposure ~ 200 sec), measuring the spectral ranges from 1650-2050 A and 2750-3150 A. The continuum S/N ~ 30 at 2800 A.

For the STIS targets, each target will be observed with E140M (1144 -1729 A and R ~ 90000) for almost two orbits, reaching a S/N comparable to that of COS. Each target will also be observed with STIS G230L (0.2x0.2) for 200 sec to measure the accretion rate.

The total orbit request comes to 20 orbits.

Visit

Proposal 12996, XY Per (01), implementation Fri Aug 31 01:39:20 GMT 2012

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

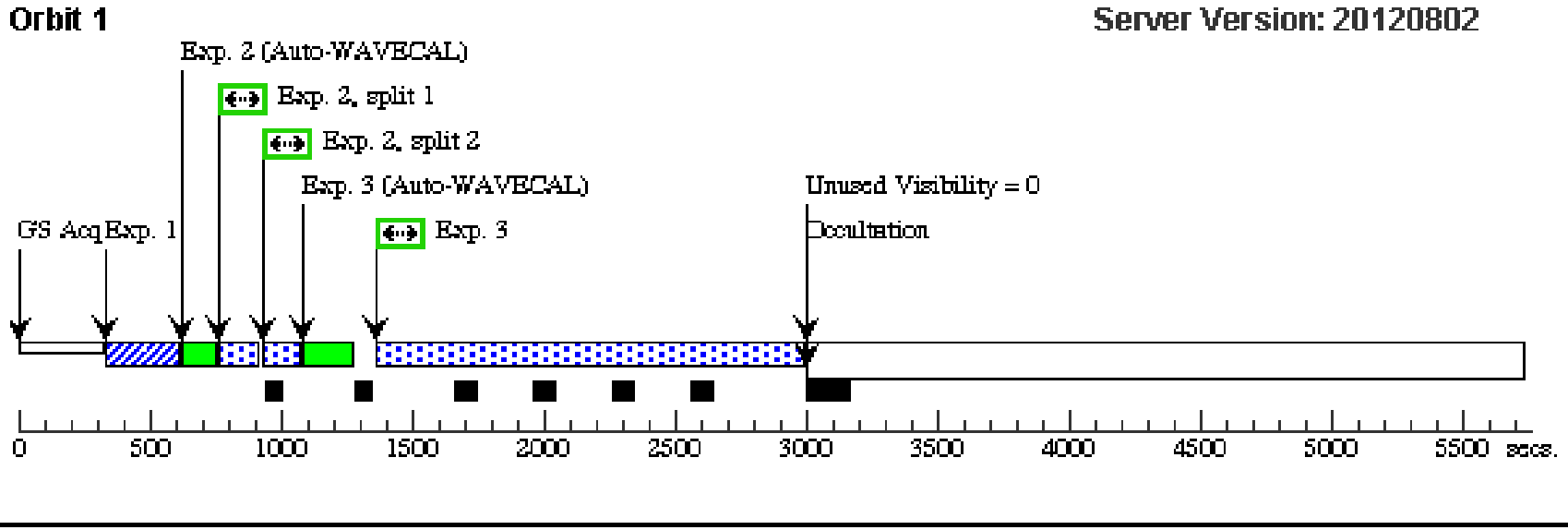
Fixed Targets

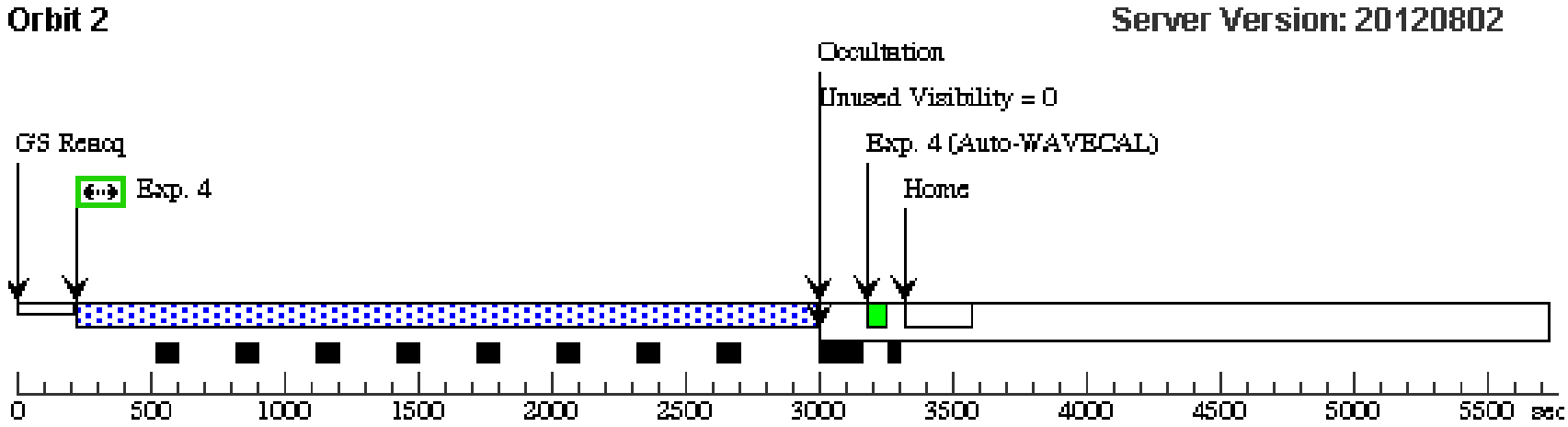
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	XYPER	RA: 03 49 36.3239 (57.4013496d) Dec: +38 58 55.60 (38.98211d) Equinox: J2000		V=9.44+/-0.10	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416212)	(1) XYPER	STIS/CCD, ACQ, F28X50OIII	MIRROR				1.0 Secs *[==>]*	 ***[1]***
2	STIS-NUV (414747)	(1) XYPER	STIS/CCD, ACCUM, 0.2X0.2	G230LB 2375 A				200 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3	STIS-FUV (414748)	(1) XYPER	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			1613 Secs *[==>]*	 ***[1]***
4	STIS-FUV2 (414749)	(1) XYPER	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			2752 Secs *[==>]*	 ***[2]***

Orbit Structure





Visit

Proposal 12996, HD169142 (02), implementation Fri Aug 31 01:39:23 GMT 2012

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

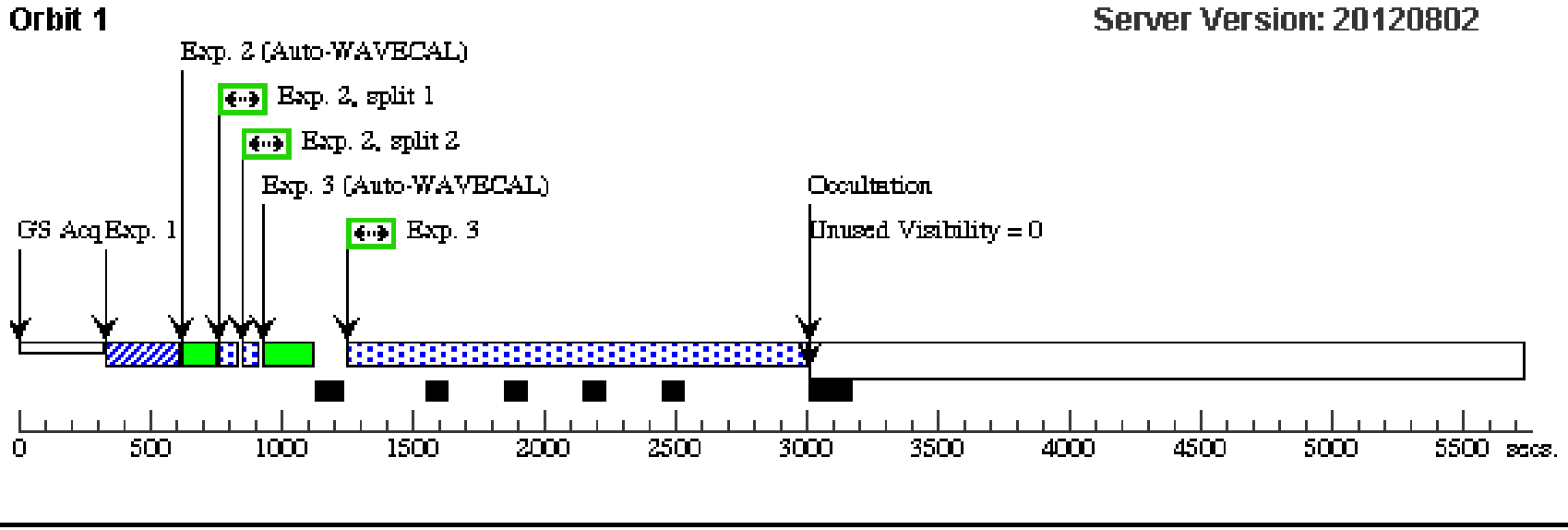
Fixed Targets

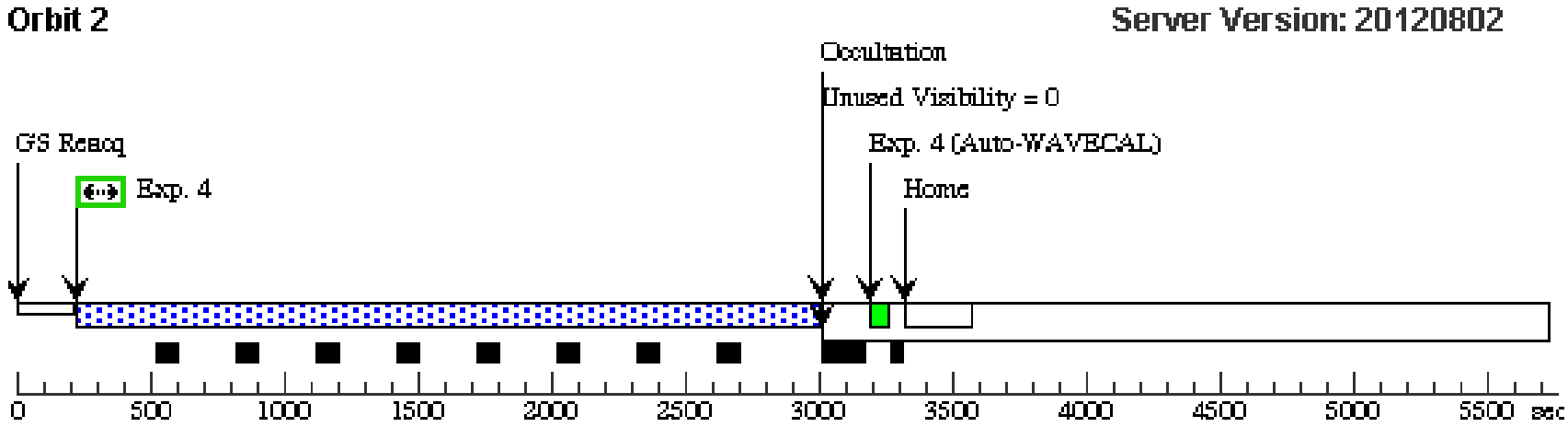
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HD169142	RA: 18 24 29.7787 (276.1240779d) Dec: -29 46 49.37 (-29.78038d) Equinox: J2000	Proper Motion RA: 0.0 mas/yr Proper Motion Dec: -40.2 mas/yr Epoch of Position: 2000.0	V=8.2+/-0.2	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416213)	(5) HD169142	STIS/CCD, ACQ, F28X50OIII	MIRROR				1.0 Secs *[==>]*	***[1]***
2	STIS-NUV (414752)	(5) HD169142	STIS/CCD, ACCUM, 0.2X0.2	G230LB 2375 A				50 Secs *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
3	STIS-FUV (414753)	(5) HD169142	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			1732 Secs *[==>]*	***[1]***
4	STIS-FUV2 (414754)	(5) HD169142	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			2761 Secs *[==>]*	***[2]***

Orbit Structure





Visit

Proposal 12996, HD142666 (03), implementation Fri Aug 31 01:39:25 GMT 2012

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

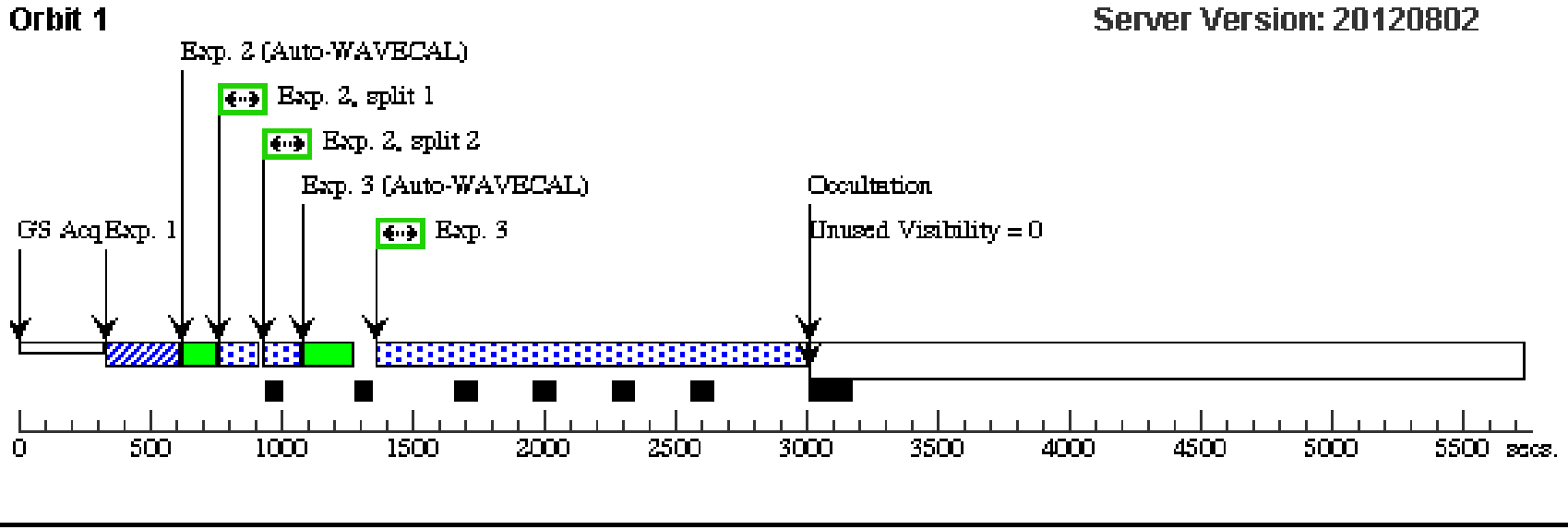
Fixed Targets

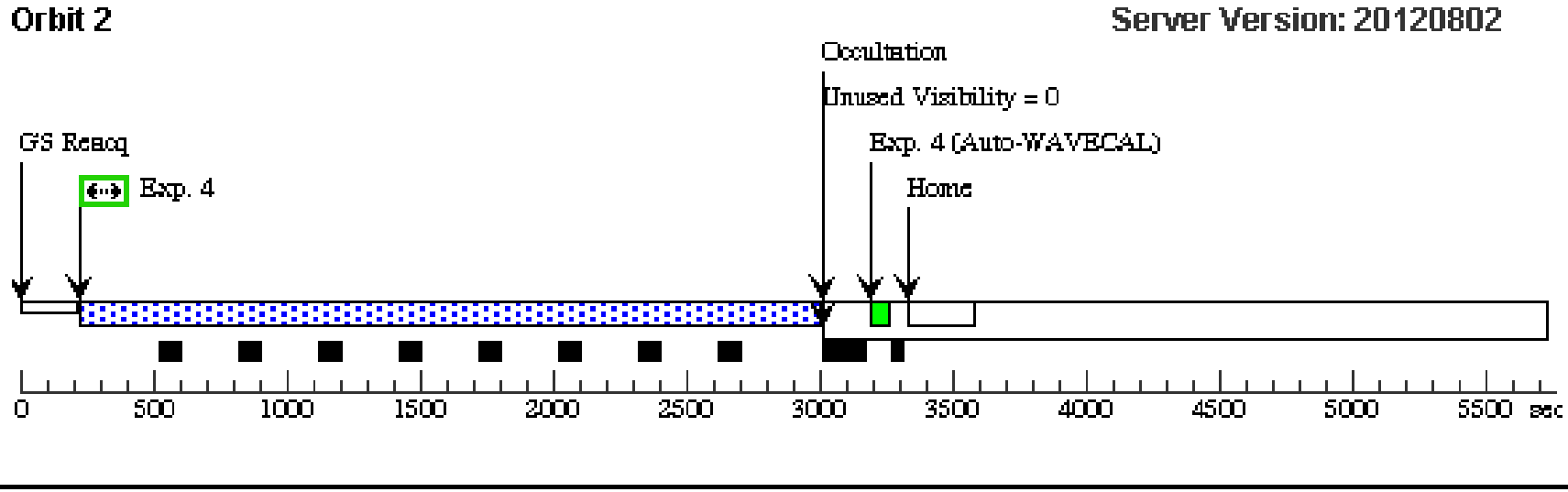
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	HD142666	RA: 15 56 40.0231 (239.1667629d) Dec: -22 01 40.01 (-22.02778d) Equinox: J2000	Proper Motion RA: -11.70 mas/yr Proper Motion Dec: -23.20 mas/yr Epoch of Position: 2000	V=9.0+/-0.2	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416214)	(6) HD142666	STIS/CCD, ACQ, F28X50OIII	MIRROR				1.0 Secs *[==>]*	***[1]***
2	STIS-NUV (414757)	(6) HD142666	STIS/CCD, ACCUM, 0.2X0.2	G230LB 2375 A				200 Secs *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
3	STIS-FUV (414758)	(6) HD142666	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			1624 Secs *[==>]*	***[1]***
4	STIS-FUV2 (414759)	(6) HD142666	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			2763 Secs *[==>]*	***[2]***

Orbit Structure





Visit

Proposal 12996, HD141569 (04), implementation Fri Aug 31 01:39:27 GMT 2012

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

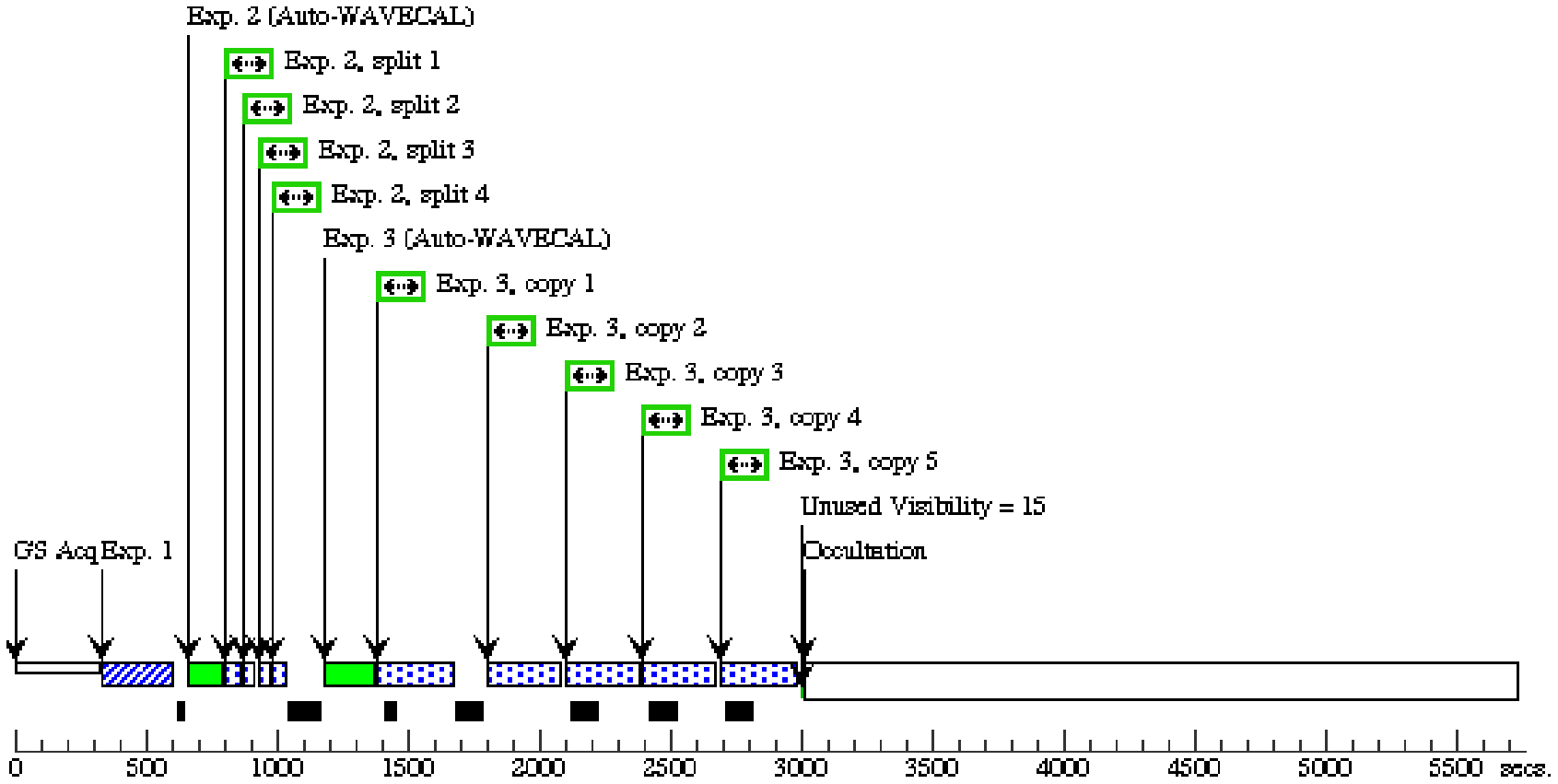
Fixed Targets

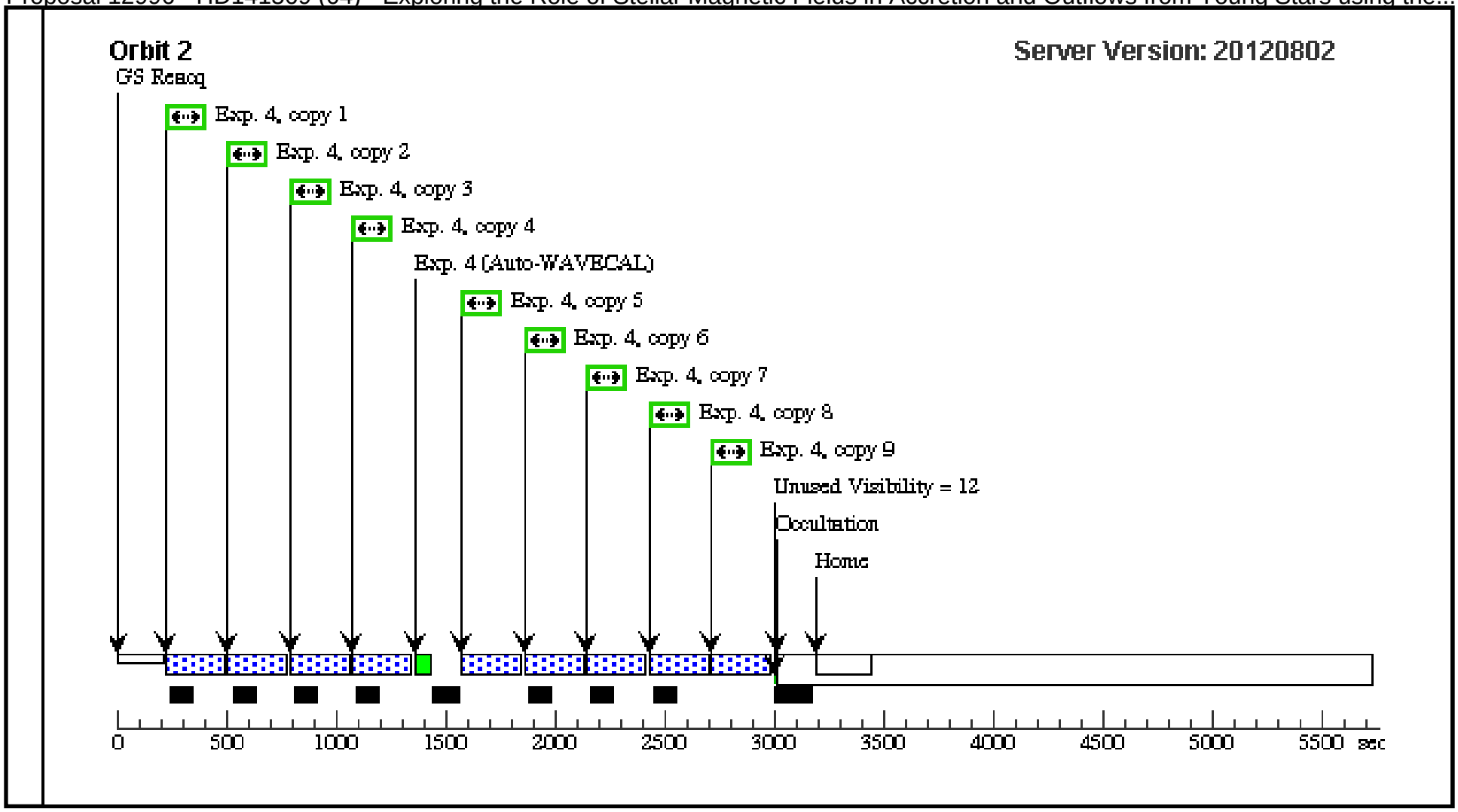
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	HD141569	RA: 15 49 57.7478 (237.4906158d) Dec: -03 55 16.34 (-3.92121d) Equinox: J2000	Proper Motion RA: -18.41 mas/yr Proper Motion Dec: -19.25 mas/yr Epoch of Position: 2000	V=7.0+/-0.1	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416216)	(7) HD141569	STIS/CCD, ACQ, F28X50OIII	MIRROR				0.5 Secs *[==>]*	***[1]***
2	STIS-NUV (414777)	(7) HD141569	STIS/CCD, ACCUM, 0.2X0.2	G230LB 2375 A	CR-SPLIT=4			40 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
3	STIS-FUV (414780)	(7) HD141569	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				275 Secs X 5 *[==>(Copy 1)]* *[==>(Copy 2)]* *[==>(Copy 3)]* *[==>(Copy 4)]* *[==>(Copy 5)]*	***[1]***
4	STIS-FUV2 (414782)	(7) HD141569	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				260 Secs X 9 *[==>(Copy 1)]* *[==>(Copy 2)]* *[==>(Copy 3)]* *[==>(Copy 4)]* *[==>(Copy 5)]* *[==>(Copy 6)]* *[==>(Copy 7)]* *[==>(Copy 8)]* *[==>(Copy 9)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20120802
GS Reacq
Exp. 4, copy 1
Exp. 4, copy 2
Exp. 4, copy 3
Exp. 4, copy 4
Exp. 4 (Auto-WAVECAL)
Exp. 4, copy 5
Exp. 4, copy 6
Exp. 4, copy 7
Exp. 4, copy 8
Exp. 4, copy 9
Unused Visibility = 12
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12996, HD139614 (05), implementation Fri Aug 31 01:39:29 GMT 2012

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

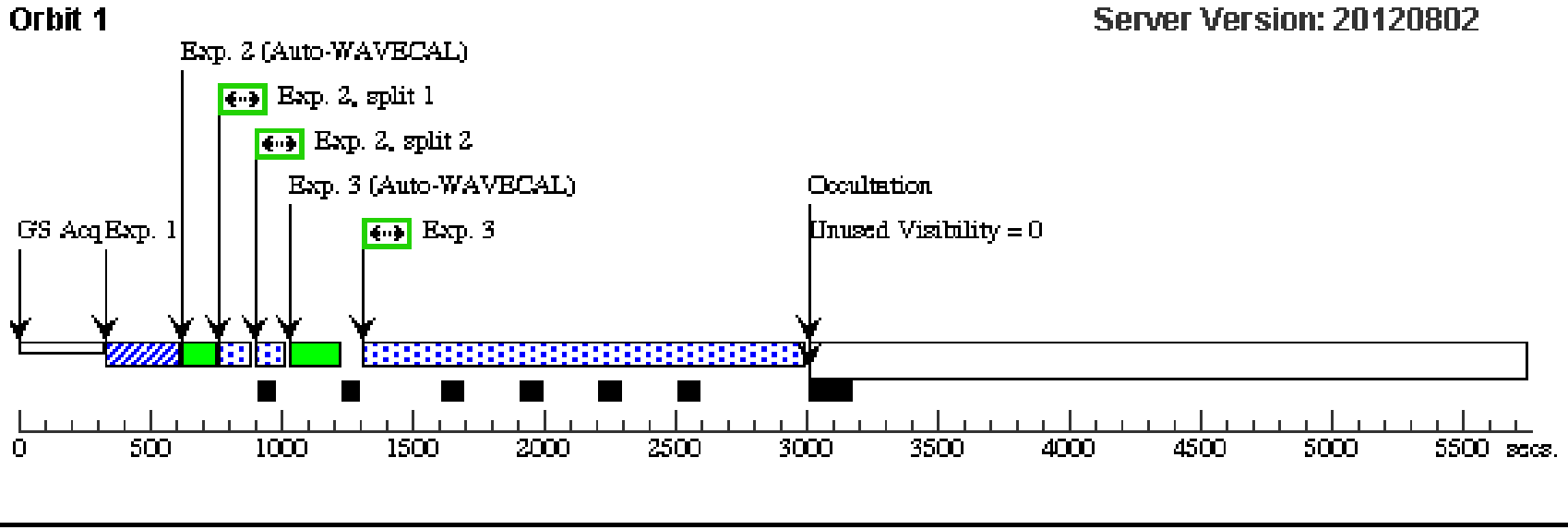
Fixed Targets

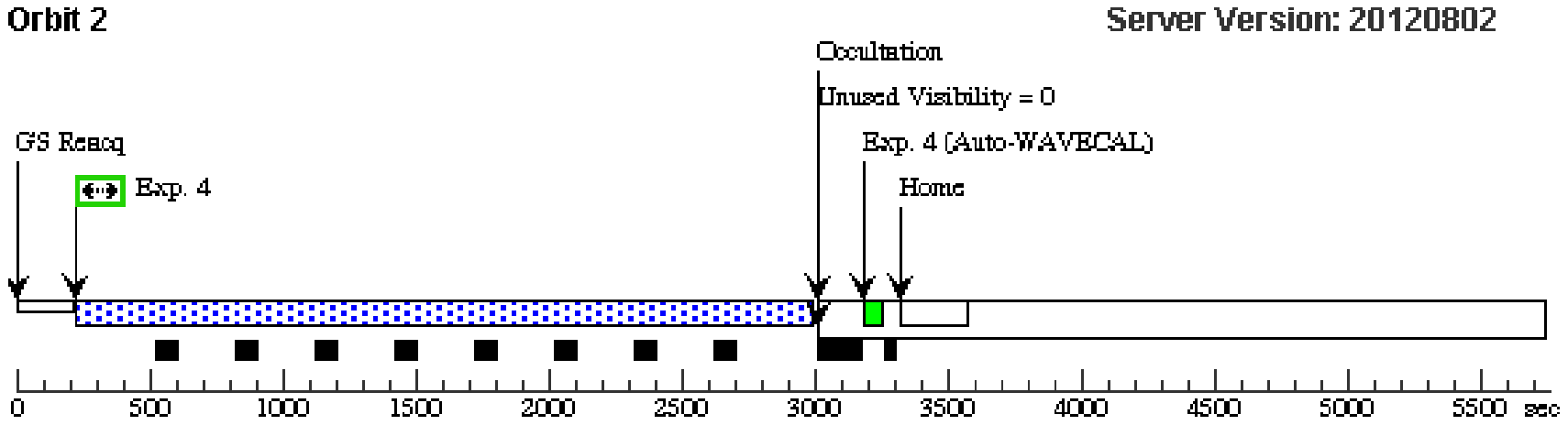
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	HD139614	RA: 15 40 46.3816 (235.1932567d) Dec: -42 29 53.55 (-42.49821d) Equinox: J2000	Proper Motion RA: -18.2 mas/yr Proper Motion Dec: -25.5 mas/yr Epoch of Position: 2000	V=8.3+/-0.1	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416217)	(9) HD139614	STIS/CCD, ACQ, F28X50OIII	MIRROR				1.0 Secs *[==>]*	***[1]***
2	STIS-NUV (414788)	(9) HD139614	STIS/CCD, ACCUM, 0.2X0.2	G230LB 2375 A				150 Secs *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
3	STIS-FUV (414792)	(9) HD139614	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			1669 Secs *[==>]*	***[1]***
4	STIS-FUV2 (414793)	(9) HD139614	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			2758 Secs *[==>]*	***[2]***

Orbit Structure





Visit

Proposal 12996, HK Ori (06), implementation Fri Aug 31 01:39:31 GMT 2012

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: SCHED 100%

Diagnostics

(HK Ori (06)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

(HK Ori (06)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

(HK Ori (06)) Warning (Orbit Planner): VISIBILITY OVERRUN

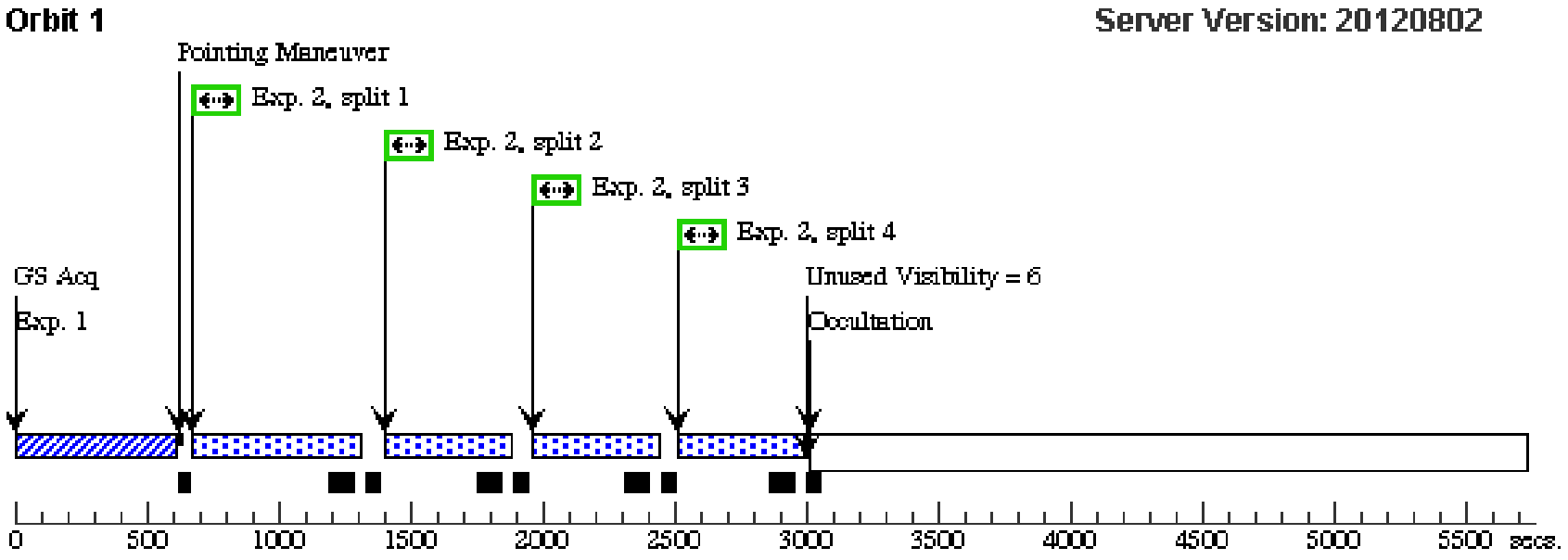
Fixed Targets

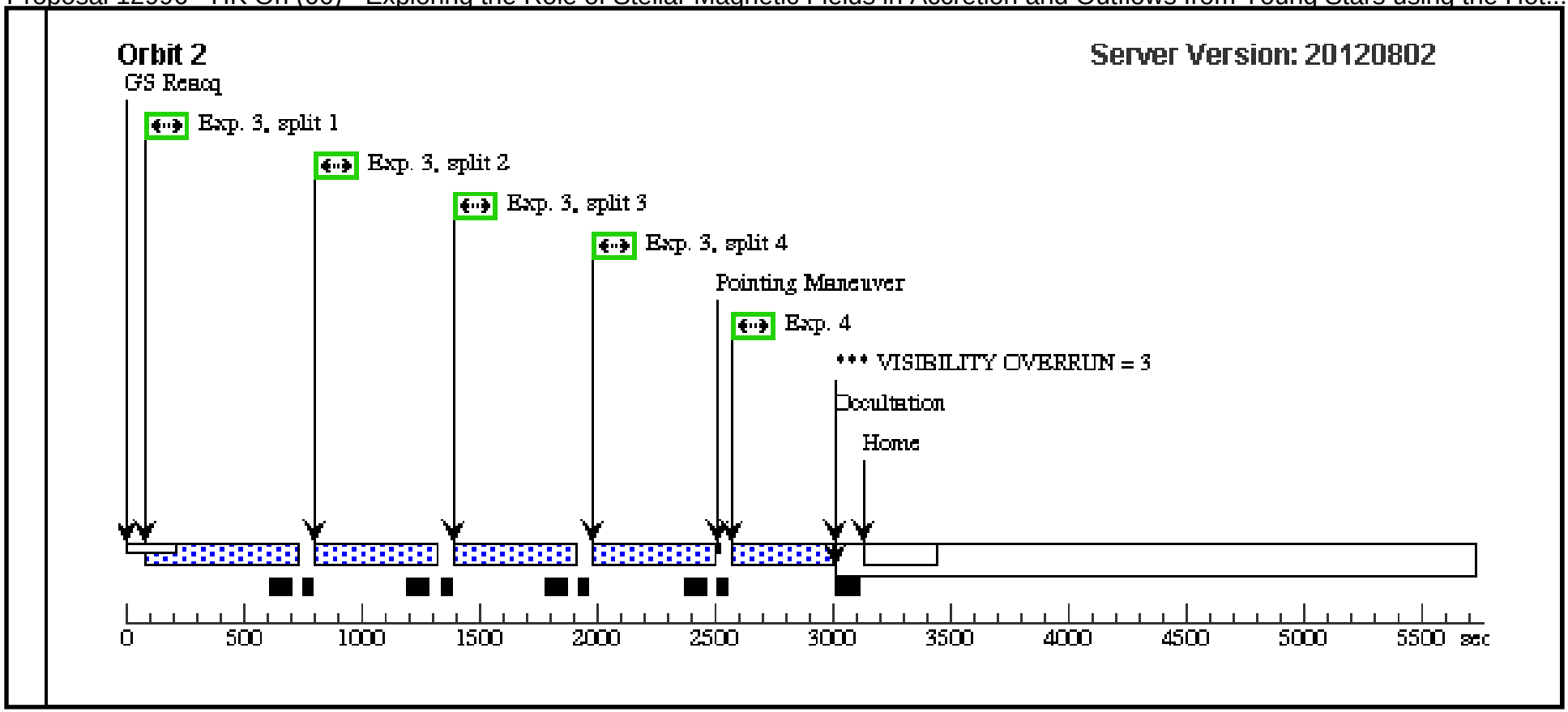
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HKORI	RA: 05 31 28.0520 (82.8668833d) Dec: +12 09 10.25 (12.15285d) Equinox: J2000		V=11.5+/-0.2	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416113)	(2) HKORI	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				100.0 Secs *[==>]*	*[1]*
2	COS-G160M (416118)	(2) HKORI	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=314; FLASH=YES; FP-POS=ALL; SEGMENT=BOTH			424 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
3	COS-G130M (416119)	(2) HKORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=354; FLASH=YES; SEGMENT=BOTH; FP-POS=ALL			464 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[2]*
4	COS-G230L (416120)	(2) HKORI	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; BUFFER-TIME=180; FP-POS=3			180 Secs *[==>]*	*[2]*

Orbit Structure




Orbit 2
Server Version: 20120802
GS Reacq
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Pointing Maneuver
Exp. 4
*** VISIBILITY OVERRUN = 3
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12996, RR Tau (07), implementation Fri Aug 31 01:39:33 GMT 2012

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: SCHED 100%

Diagnostics

(RR Tau (07)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

(RR Tau (07)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

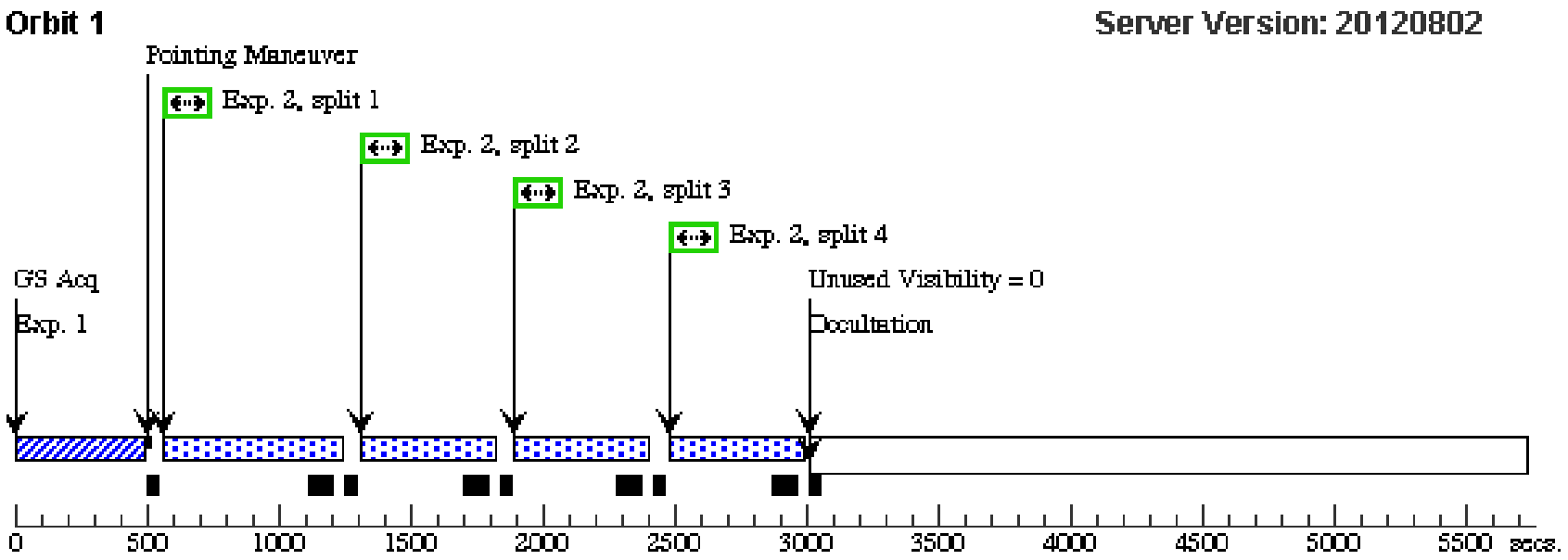
Fixed Targets

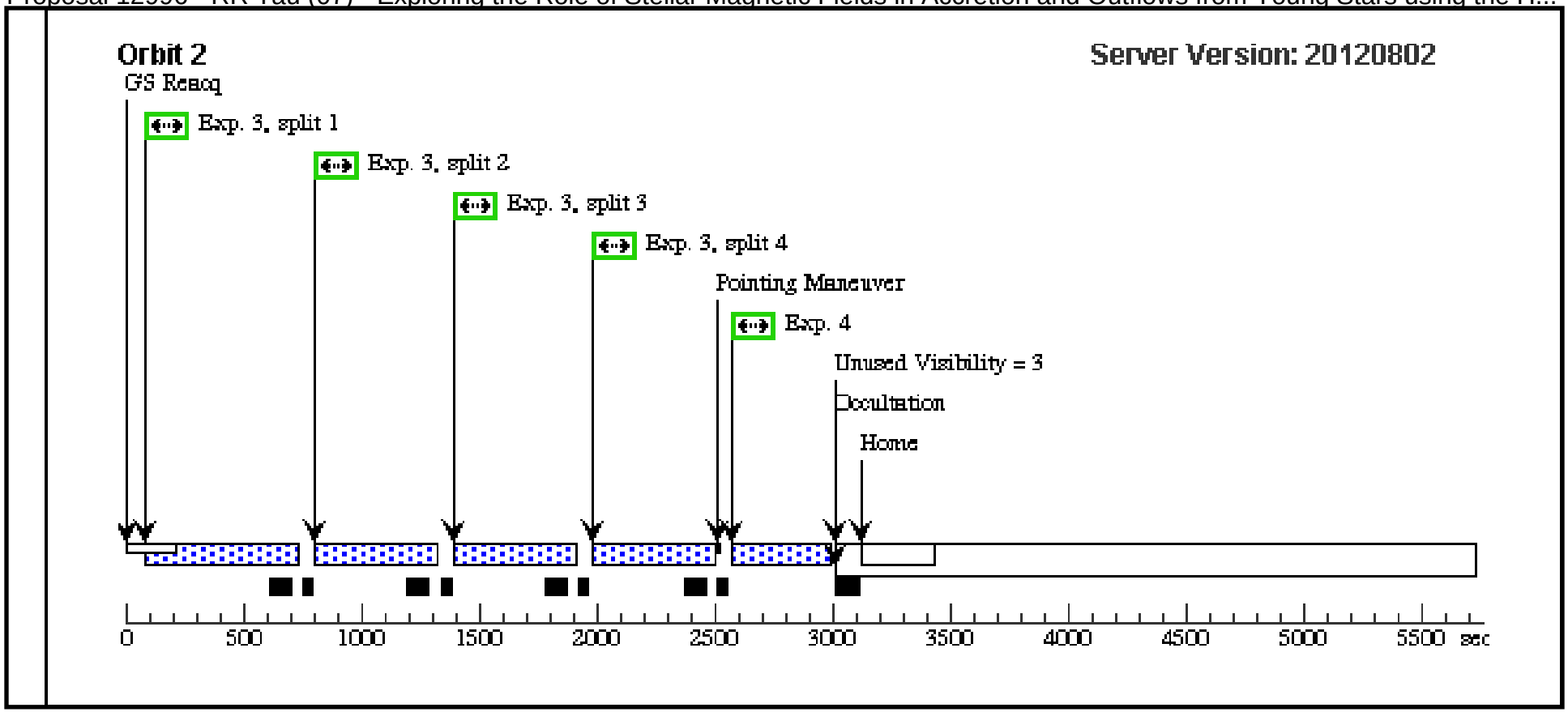
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	RRTAU	RA: 05 39 30.5110 (84.8771292d) Dec: +26 22 27.04 (26.37418d) Equinox: J2000		V=11.3+/-0.1	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416161)	(3) RRTAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30.0 Secs *[==>]*	*[1]*
2	COS-G160M (416184)	(3) RRTAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=352; FLASH=YES; FP-POS=ALL; SEGMENT=BOTH			462 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
3	COS-G130M (416145)	(3) RRTAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=354; FLASH=YES; SEGMENT=BOTH; FP-POS=ALL			464 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[2]*
4	COS-G230L (415882)	(3) RRTAU	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; BUFFER-TIME=178; FP-POS=3			178 Secs *[==>]*	*[2]*

Orbit Structure




Orbit 2
Server Version: 20120802
GS Reacq
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Pointing Maneuver
Exp. 4
Unused Visibility = 3
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12996, KK Oph (08), implementation Fri Aug 31 01:39:35 GMT 2012

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: SCHED 100%

Diagnostics

(KK Oph (08)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

(KK Oph (08)) Warning (Orbit Planner): VISIBILITY OVERRUN

(KK Oph (08)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

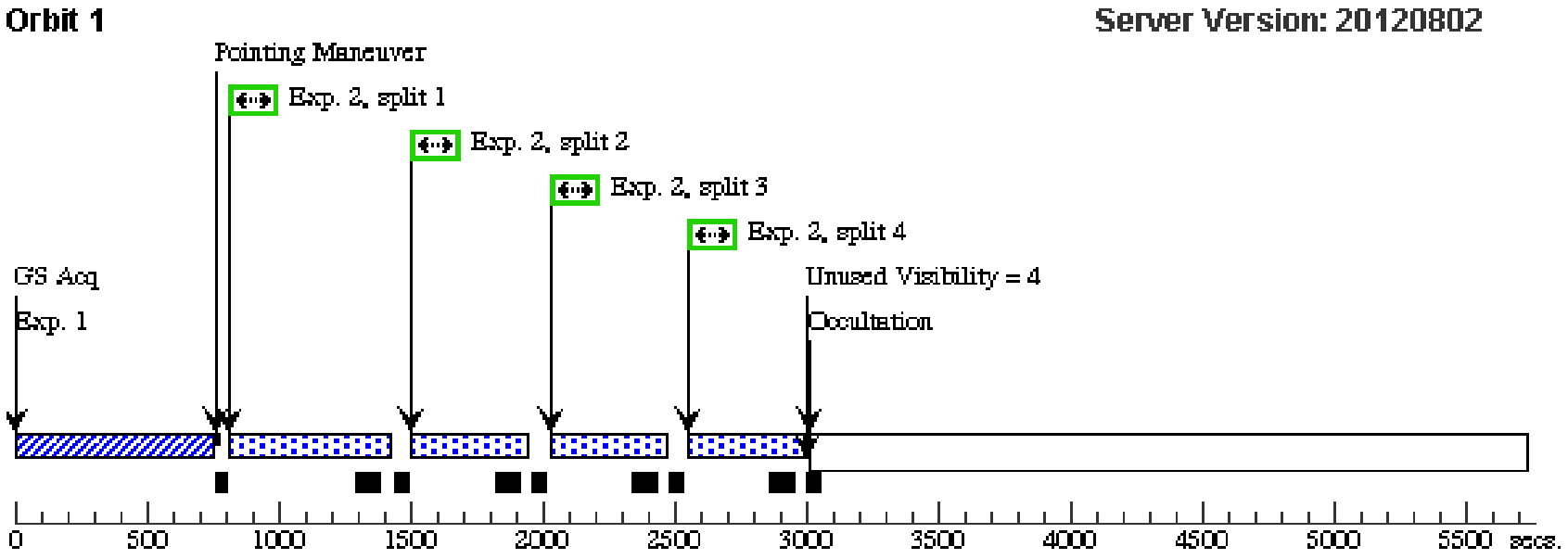
Fixed Targets

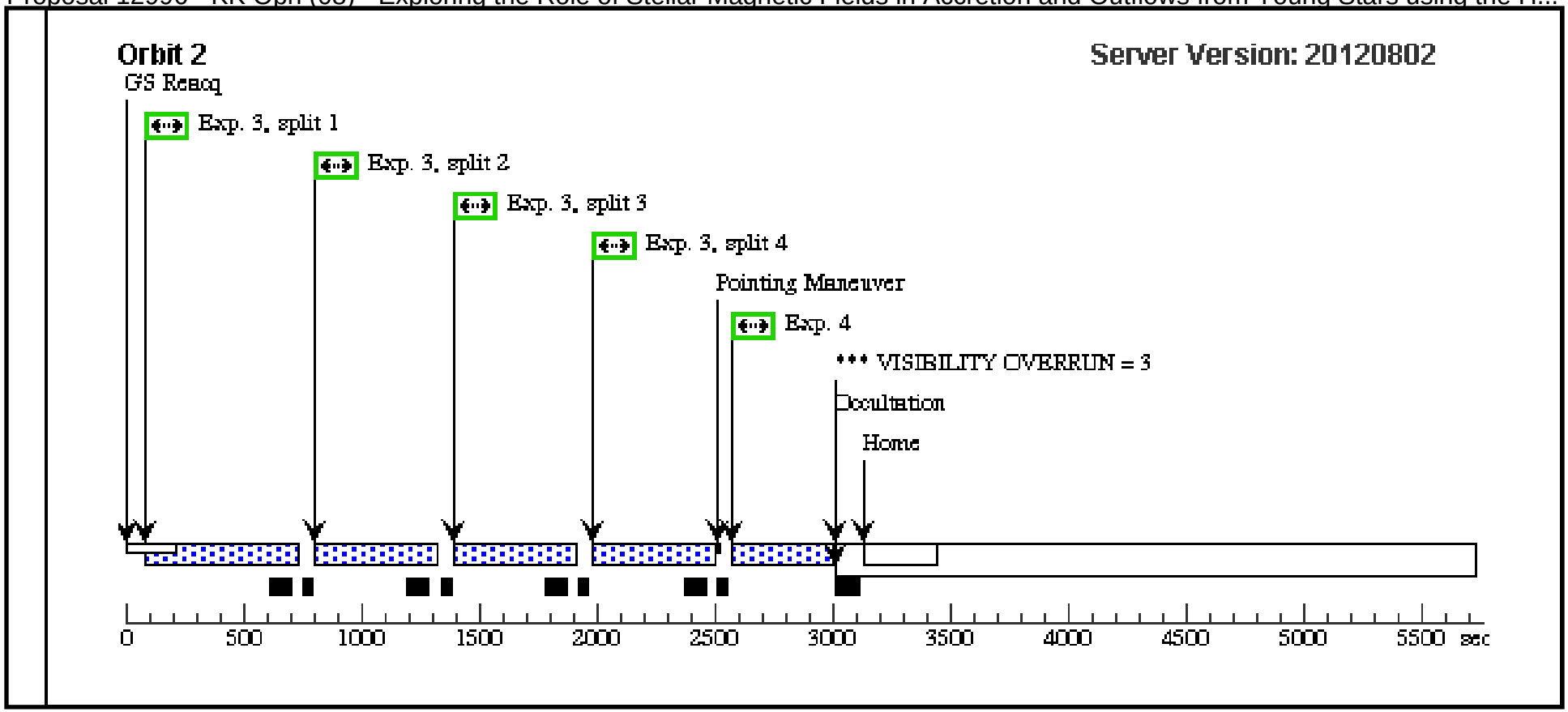
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	KKOPH	RA: 17 10 8.1310 (257.5338792d) Dec: -27 15 18.80 (-27.25522d) Equinox: J2000	Proper Motion RA: 0.0 mas/yr Proper Motion Dec: -16.4 mas/yr Epoch of Position: 2000.0	V=11.3+/-0.2	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416413)	(4) KKOPH	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				170 Secs *[==>]*	*[1]*
2	COS-G160M (416183)	(4) KKOPH	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=279; FLASH=YES; FP-POS=ALL; SEGMENT=BOTH			389 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
3	COS-G130M (416172)	(4) KKOPH	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=354; FLASH=YES; SEGMENT=BOTH; FP-POS=ALL			464 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[2]*
4	COS-G230L (416173)	(4) KKOPH	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; BUFFER-TIME=178; FP-POS=3			178 Secs *[==>]*	*[2]*

Orbit Structure




Orbit 2
Server Version: 20120802
GS Reacq
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Pointing Maneuver
Exp. 4
*** VISIBILITY OVERRUN = 3
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12996, T Ori (09), implementation Fri Aug 31 01:39:37 GMT 2012

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: SCHED 100%

Diagnostics

(T Ori (09)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

(T Ori (09)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

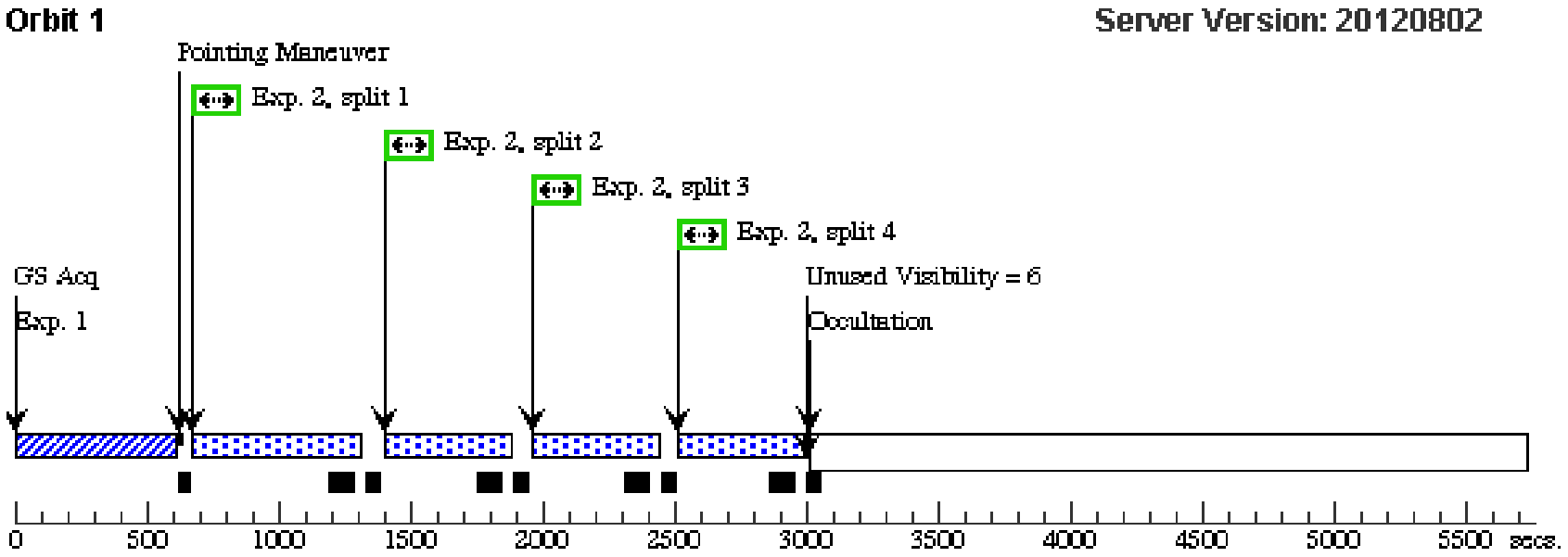
Fixed Targets

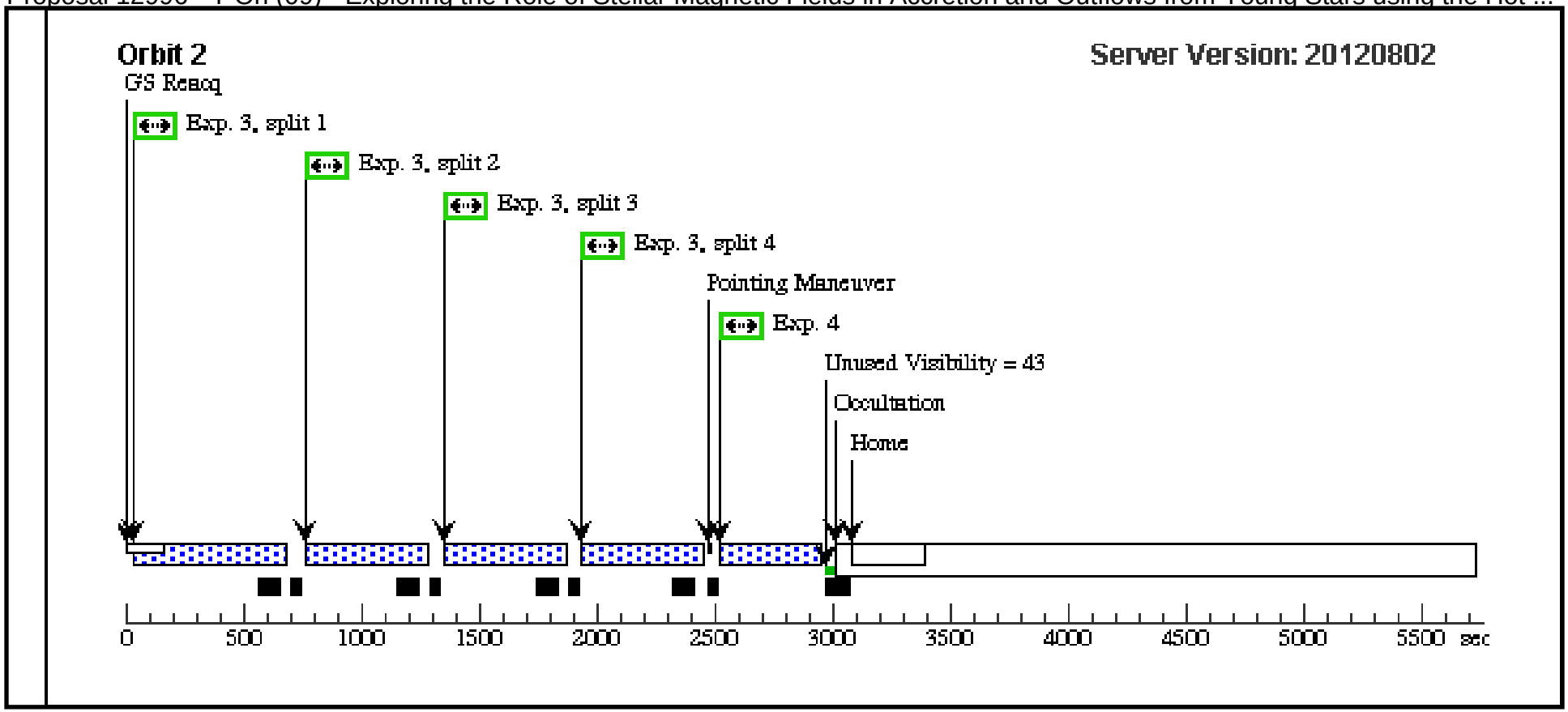
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	TORI	RA: 05 35 50.4440 (83.9601833d) Dec: -05 28 34.83 (-5.47634d) Equinox: J2000	Proper Motion RA: 4.5 mas/yr Proper Motion Dec: 0.0 mas/yr Epoch of Position: 2000	V=11.2+/-0.1	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416188)	(8) TORI	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		GS ACQ SCENARIO ONEB1B		100.0 Secs *[==>]*	***[1]***
2	COS-G160M (416189)	(8) TORI	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=314; FLASH=YES; FP-POS=ALL; SEGMENT=BOTH			424 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
3	COS-G130M (416190)	(8) TORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=354; FLASH=YES; SEGMENT=BOTH; FP-POS=ALL			464 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[2]***
4	COS-G230L (416191)	(8) TORI	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; BUFFER-TIME=180; FP-POS=3			180 Secs *[==>]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20120802
GS Reacq
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Pointing Maneuver
Exp. 4
Unused Visibility = 43
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12996, VV Ser (10), implementation Fri Aug 31 01:39:39 GMT 2012

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: SCHED 100%

Diagnostics

(VV Ser (10)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

(VV Ser (10)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.

(VV Ser (10)) Warning (Orbit Planner): VISIBILITY OVERRUN

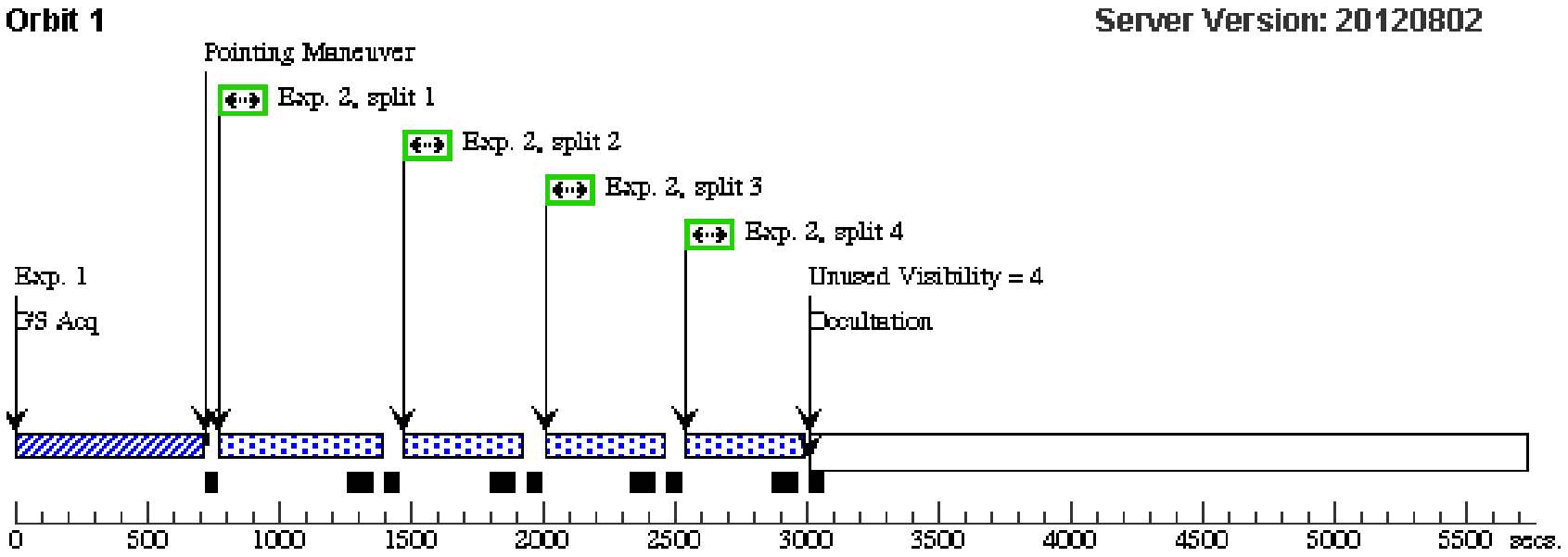
Fixed Targets

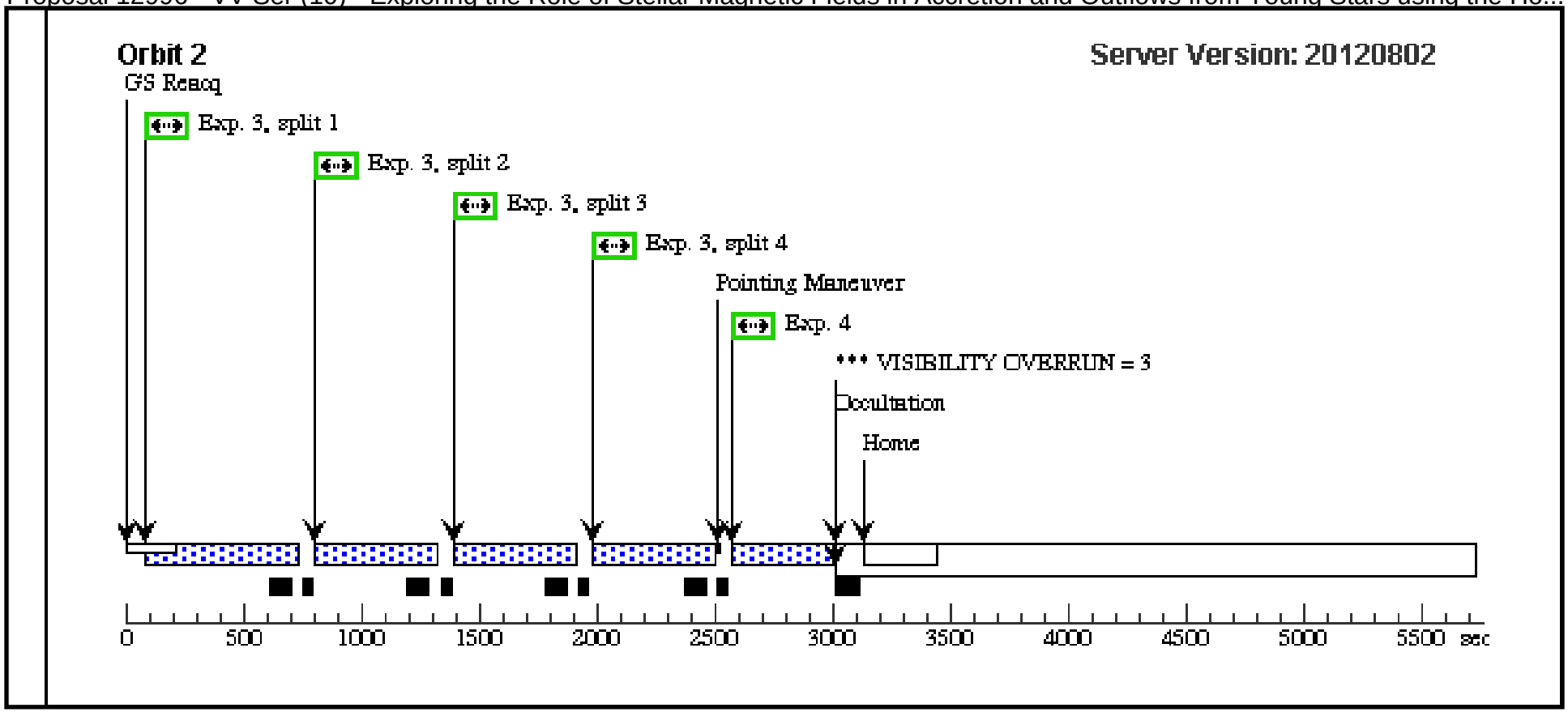
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	VVSER	RA: 18 28 47.8580 (277.1994083d) Dec: +00 08 40.00 (.14444d) Equinox: J2000		V=12.5+/-0.2	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ (416200)	(10) VVSER	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				149.0 Secs *[==>]*	*[1]*
2	COS-G160M (416201)	(10) VVSER	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=290; FLASH=YES; FP-POS=ALL; SEGMENT=BOTH			400 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
3	COS-G130M (416205)	(10) VVSER	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=354; FLASH=YES; SEGMENT=BOTH; FP-POS=ALL			464 Secs *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[2]*
4	COS-G230L (416207)	(10) VVSER	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FLASH=YES; BUFFER-TIME=180; FP-POS=3			180 Secs *[==>]*	*[2]*

Orbit Structure




Orbit 2
Server Version: 20120802
GS Reacq
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Pointing Maneuver
Exp. 4
*** VISIBILITY OVERRUN = 3
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec