11616 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Cycle: 17, Proposal Category: GO

(Large Program)

(Availability Mode: AVAILABLE)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-GM-AUR WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:04:18.0	yes
02	(2) V-DM-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	4	29-Aug-2011 21:04:50.0	yes
03	(3) EM-LKCA-15 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:05:24.0	yes
04	(4) V-DN-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	4	29-Aug-2011 21:05:47.0	yes
05	(5) V-IP-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	4	29-Aug-2011 21:06:13.0	yes
06	(6) V-V836-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	5	29-Aug-2011 21:06:43.0	yes
07	(7) V-AA-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	5	29-Aug-2011 21:07:12.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
08	(9) V-DE-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:07:40.0	yes
09	(10) V-HN-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	5	29-Aug-2011 21:08:01.0	yes
10	(11) V-FM-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	5	29-Aug-2011 21:08:29.0	yes
11	(12) V-SU-AUR WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:08:51.0	yes
12	(13) V-DK-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:09:15.0	yes
13	(14) NAME-UX-TAU-A	COS/FUV COS/NUV	2	29-Aug-2011 21:09:33.0	yes
14	(15) V-DR-TAU WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:09:54.0	yes
15	(16) NAME-RW-AUR-A WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:10:22.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
16	(17) V-CS-CHA WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:10:44.0	yes
17	(25) RECX-15 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	4	29-Aug-2011 21:11:07.0	yes
18	(18) V-CV-CHA WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	29-Aug-2011 21:11:26.0	yes
19	(19) SZ-102 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:11:48.0	yes
21	(22) V-AK-SCO WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	29-Aug-2011 21:12:00.0	yes
22	(23) TWA-3A WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	4	29-Aug-2011 21:12:15.0	yes
23	(24) PDS-66 WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	29-Aug-2011 21:12:30.0	yes
20	(35) V2129-OPH WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	29-Aug-2011 21:12:43.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
24	(26) RECX-11 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	4	29-Aug-2011 21:13:04.0	yes
25	(27) HD-104237 WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	29-Aug-2011 21:13:19.0	yes
26	(29) HBC-427 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:13:41.0	yes
27	(30) EM-LKCA-4 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:13:59.0	yes
28	(31) EM-LKCA-19 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:14:20.0	yes
29	(32) TWA-2 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:14:38.0	yes
30	(33) TWA-7 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:15:02.0	yes
31	(8) SCHJ0439016+2336030	COS/FUV COS/NUV	4	29-Aug-2011 21:15:18.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
32	(34) RECX-1 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:15:38.0	yes
33	(8) SCHJ0439016+2336030 WAVE	STIS/CCD STIS/NUV-MAMA	2	29-Aug-2011 21:15:50.0	yes
34	(14) NAME-UX-TAU-A WAVE	STIS/CCD STIS/NUV-MAMA	1	29-Aug-2011 21:15:59.0	yes
53	(14) NAME-UX-TAU-A	COS/FUV COS/NUV	2	29-Aug-2011 21:16:10.0	yes
54	(14) NAME-UX-TAU-A WAVE	STIS/CCD STIS/NUV-MAMA	1	29-Aug-2011 21:16:19.0	yes
59	(19) SZ-102 WAVE	COS/FUV COS/NUV STIS/CCD STIS/NUV-MAMA	3	29-Aug-2011 21:16:34.0	yes

117 Total Orbits Used

ABSTRACT

Classical T Tauri stars undergo magnetospheric accretion, power outflows, and possess the physical and chemical conditions in their disks to give rise to planet formation. Existing high resolution FUV spectra verify that this spectral region offers unique diagnostics of these processes, which have the potential to significantly advance our understanding of the interaction of a star and its accretion disk. To date the limited results are intriguing, with dramatic differences in kinematic structure in lines ranging from C IV to H2 among the few stars that have been observed. We propose to use HST/COS to survey the disks, outflows, and accretion (the DAO) of 26 CTTS and 6 WTTS in the FUV at high spectral resolution. A survey of this size is essential to establish how properties of accretion shocks, winds and disk irradiation depend on disk accretion rate. Specifically, our goals are to (1) measure the radiation from and understand the physical properties of the gas very near the accretion shock as a function of accretion rate using emission line profiles of hot lines (C IV, Si IV, N V, and He II); (2) measure the opacity, velocity, and temperature at the base of the outflow to constrain outflow models using wind absorption features; and (3) characterize the radiation incident on disks and protoplanetary

atmospheres using H2 line and continuum emission and reconstructed bright Ly-alpha line emission.

OBSERVING DESCRIPTION

Most targets:

Orbit 1:
COS acquisition
G130M (2 wavelength settings, 2 FP POS each)

Orbit 2:
G160M (3 wavelength settings, 1 FP POS each)

Orbit 3:
STIS acquisition
Short G430L
Short G230L
Remainder: E230M

The COS acquisition is typically with MIRROR B/PSA. Several brighter targets use MIRROR A+BOA, and two faint targets use MIRROR A/PSA.

The STIS acquisition is usually performed with the long-pass filter, but in the brighter cases we use the O II or O III filter.

A few sources are STIS-only due to concern with the COS safety limits. We went with STIS for anything that was close. We also use STIS with TWA 3A so that the secondary is out of the slit.

We are not obtaining arcs for our low-resolution STIS spectra. Wavelength calibration to a similar accuracy can be performed on the stellar spectrum, and we will provide the wavelength 0-point to the archive before the data is released to the public. We are obtaining arcs for all high-resolution STIS spectra. These arcs are typically 25s integrations at the end of the orbit, based on estimates from other phase II programs. However,

this integration time should be adjusted according to the recommendation from STScI.

REAL TIME JUSTIFICATION

EXPOSURE TIME CALCULATIONS:

COS BUFFER TIMES: The buffer time is much larger than the exposure times, based on IUE spectra and the COS ETC. However, Ly-alpha fluxes from IUE are somewhat unreliable.

When an orbit is split into two exposures, the first exposure has a buffer time equal to of the exposure time -110s. Our G130M spectra typically have buffer times of order 500-800s as insurance against a wildly mistaken Ly-alpha flux.

We made these tables for our exposure time calculations:

COS ACQUISITION

Star	F(2500)	MIRROR	t(S/N=40)	Brt Pix (ct/s)	Source:
GM Aur	6d-15	B	19	11.9	STIS G230L
DM Tau	4d-15	B	28	7.9	STIS G230L
LkCa 15	1d-15	B	82	2.7	STIS G230L
DN Tau	1.5d-15	B	76	2.9	IUE
IP Tau	5d-16	B	160	1.4	FUV/check
V836 Tau	3d-16	A	27	8.2	Optical/poor
AA Tau	2d-15	B	47	4.8	IUE
DE Tau	5d-15	B	23	9.9	IUE
HN Tau	5d-15	B	19	12	Optical/poor
FM Tau	2d-15	B	47	4.7	IUE
SU Aur	1.5d-14	A/BOA	75	2.9	IUE

DK Tau	1.5d-15	B	62	3.6	IUE
UX Tau A	1.d-15	B	50	4.5	IUE
DR Tau	2d-14	A/BOA	81	2.7	IUE
RW Aur	3.5d-14	A/BOA	34	6.6	IUE
CS Cha	2d-15	B	35	6.3	IUE
RECX 15	....	B	29	7.8	IUE
Sz 102	4d-16?	B	200	1.2	Optical/very poor
RECX 11	....	B	29	7.8	Optical/poor
HBC 427	5d-16	A	10	21	Optical/poor
LkCa 4	5d-16	A	10	21	Optical/poor
LkCa 19	3d-15	B	29	7.8	IUE
TWA 2	2d-15	B	20	5.2	IUE
TWA 7	3d-15	B	29	7.8	IUE
SCH J0439	6d-17	A	145	1.5	Optical/poor
RECX 1	....	B	29	7.8	Optical/poor

STIS ACQUISITION

Target	Filter	Flux	t_exp (S/N=40)	Source
Hen 3-600A:	O II 3700	1e-14	19.5	Optical spectrum
HN Tau	F28X50LP	V=13.1	0.03	Optical spectrum
Gm Aur	F28X50LP	V=12.2	0.017	Optical spectrum
DM Tau	F28X50LP	V=13.8	0.053	Optical spectrum
LkCa 15	F28X50LP	V=12.1	0.011	Optical spectrum
DN Tau	F28X50LP	V=12.5	0.023	Photometry
IP Tau	F28X50LP	V=13.0	0.037	Photometry
V836 Tau	F28X50LP	V=13.2	0.037	Photometry

AA Tau F28X50LP V=12.8 0.027 Photometry
DE Tau F28X50LP V=13.1 0.015 Optical Spectrum
FM Tau F28X50LP V=13.6 0.06 Optical Spectrum
SU Aur O III 5000 V=9.4 0.59 Photometry
DK Tau F28X50LP V=12.6 0.027 Photometry
DR Tau O II 3700 5d-14 3.6 Photometry
UX Tau A O III 5000 V=10.7 1.9 Photometry
RW Aur O II 3700 V=10.3 1.4 Photometry
CS Cha F28X50LP V=11.6 0.006 Photometry
RECX 15 F28X50LP V=14.0 Photometry
CV Cha O II 3700 B=12.0 Photometry
PDS 66 O II 3700 B=11.3 2.0 Photometry
Sz 102 F28X50LP B=15, V=17. 1.3s Optical Spectrum
RECX 11: O III 5000 V=11.2 2.0 Photometry
HBC 427: F28X50LP V=11.6 0.006 Photometry
LkCa 4 F28X50LP V=12.4 0.013 Photometry
LkCa 19 F28X50LP V=11.3 0.0046 Photometry
TWA 2 O III 5000 V=11.0 1.6 Photometry
TWA 7 O III 5000 V=11.0 1.6 Photometry
AK Sco O II 3700 B=9.9 0.47 Photometry
HD104237 O II 3700 B=6.8 0.027 Photometry

CALIBRATION JUSTIFICATION

Most positions, PM are from Ducourant et al. (2005), most of which seem to be from UCAC2. Annoyingly, a few targets have RA and DEC measured from slightly different epochs (typically within 2 years).

KNOWN BINARIES:

TWA 3: 1.46 arcsec binary. TWA 3A is about 3 times brighter than TWA 3B at 3700 A (but similar fluxes at longer wavelengths), which is why we choose that filter for target acquisition.

HN Tau: 3.11 arcsec binary, with the primary 15 times brighter than the secondary in the optical and UV.

**********DK Tau: 2.30 arsec binary. A is brighter in the optical by 0.4 mag, they are about the same in the UV. Given the separation, I think the target acquisition procedure should work, but feedback would be helpful here.**********

UX Tau: UX Tau B is 5.9 arcsec away and much fainter (3 magnitudes in the B-band).

RW Aur: RW Aur BC (a 0.09 arcsec close binary) is 1.42 arcsec away from RW Aur A. RW Aur A is our primary target. RW Aur A is 3 times brighter than BC at red wavelengths and 10 times brighter shortward of 6000 A.

CS Cha, AK Sco: spectroscopic binaries, unresolvable

HD104237: much brighter than nearby companions

TWA 2A: 5 arcsec companion, 2.5 mag. fainter in V.

ADDITIONAL COMMENTS

After submitting the proposal, we obtained near-IR observations of FK Ser that reveal the target to be a 0.75 arcsec binary system. This complicates our COS observations. We prefer to keep the target, changed to STIS long-slit orbits. We will use a wide slit to include both targets. We would like to place very mild orientation constraints so that the PA of the slit is at least 20 degrees from the PA of the system.

IF POSSIBLE, FOR DK TAU, TWA 3A, FK SER, UX Tau, TWA 2A, and HN Tau, we would like to be able to adjust the slit width depending on the date of observation. At certain orientations, we could get the secondary star on the slit and get serendipitous science in our STIS orbits. We do not request specific orientations because the science is secondary. However, if it's possible to change the slit width to account for the orientation, that would be quite useful.

Visit

Proposal 11616, Visit 01, completed Tue Aug 30 01:16:52 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 01) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-GM-AUR	RA: 04 55 10.9770 (73.7957375d)	Proper Motion RA: 0.0002 sec of time/yr	V=12.19	Reference Frame: ICRS
		Dec: +30 21 59.38 (30.36649d)	Proper Motion Dec: -0.026 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2000.572		

Comments: Position from Ducourant et al. 2005
UPDATED: 23/12/09

FUV data measured from STIS G140L spectrum

COS ACQ:

B/PSA: 7.1 cts/s

COS G130M:

C II 1335 flux: 3.6e-14 erg/cm2/s s => 0.015 cts/
Ly-alpha: 4.3e-14 => 0.007 cts/s

Variability:
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96 observations: U=13.60 +/- 0.29; full range: U=12.99 -14.26 (Grankin et al. 2007)

COS G160M:

C IV flux: 1.7e-13 => 0.03 cts/s

STIS ACQ:

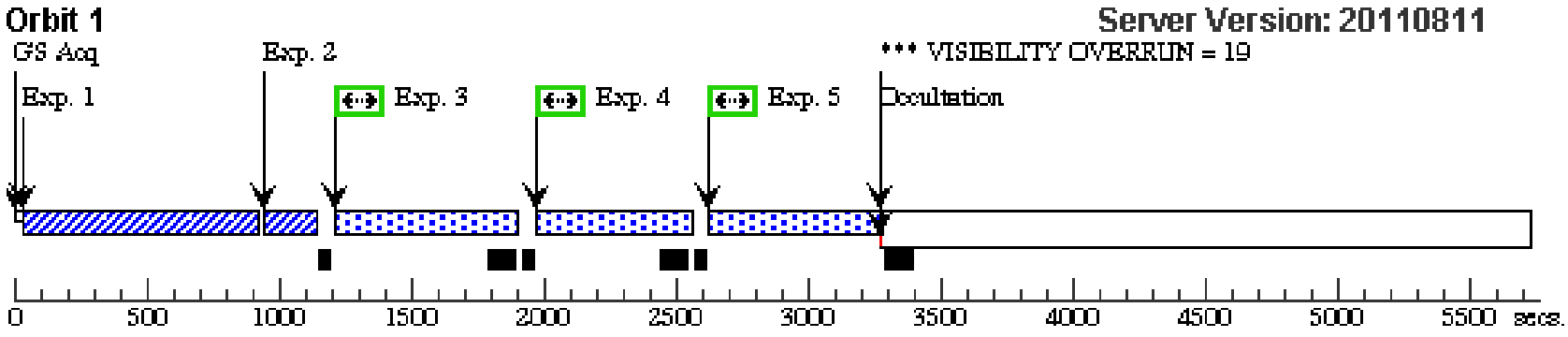
B=13.4, V=12.2
F28x50LP: saturation in 2.5-7s

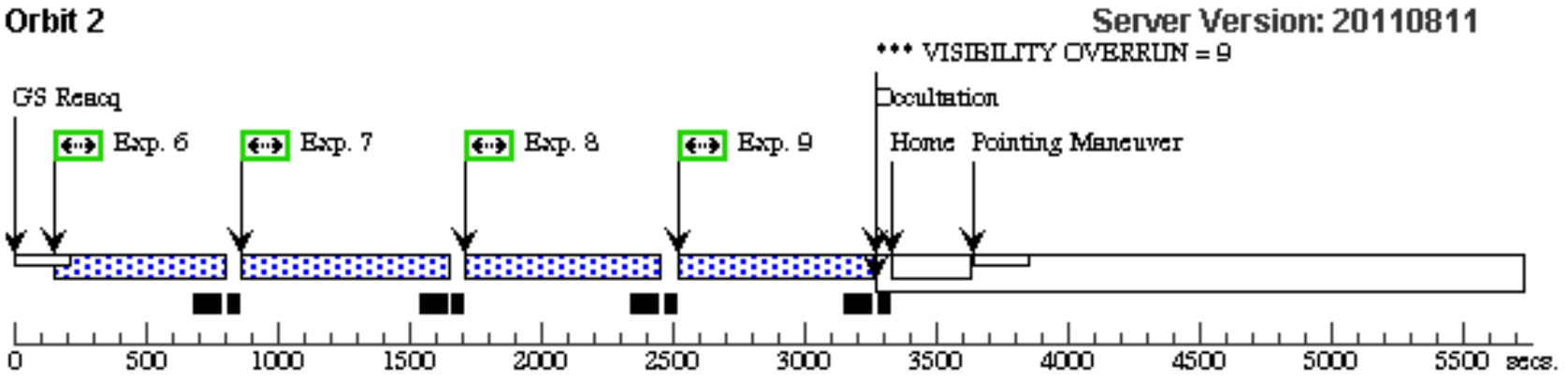
Exposures

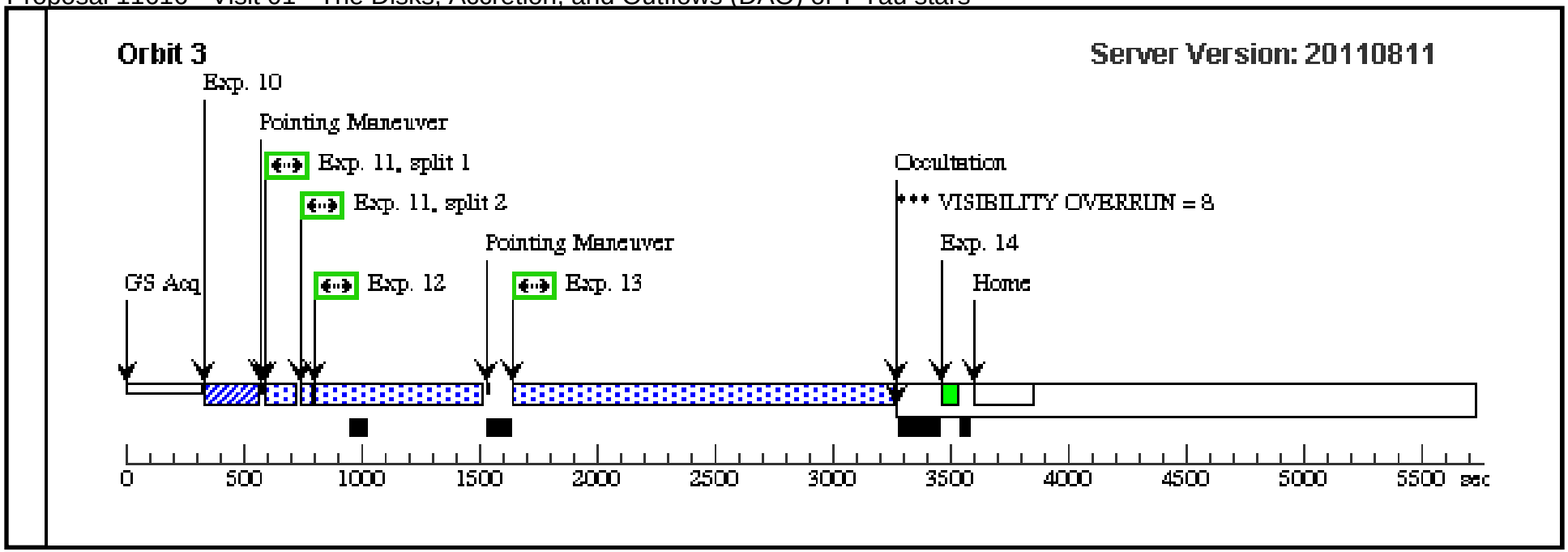
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) V-GM-AUR	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		35 Secs *[==>]*	 ***[1]***
Comments: B/PSA: 7.1 cts/s									
2		(1) V-GM-AUR	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs *[==>]*	 ***[1]***
Comments: B/PSA: 7.1 cts/s									
3		(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=437; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			532 Secs *[==>]*	 ***[1]***
Comments: COS G130M: --------- *C II 1335 flux: 3.6e-14 erg/cm2/s s => 0.015 cts/* *Ly-alpha: 4.3e-14 => 0.007 cts/s*									
4		(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=437; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			532 Secs *[==>]*	 ***[1]***
Comments: COS G130M: --------- *C II 1335 flux: 3.6e-14 erg/cm2/s s => 0.015 cts/* *Ly-alpha: 4.3e-14 => 0.007 cts/s*									
5		(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=538; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			532 Secs *[==>]*	 ***[1]***
Comments: COS G130M: --------- *C II 1335 flux: 3.6e-14 erg/cm2/s s => 0.015 cts/* *Ly-alpha: 4.3e-14 => 0.007 cts/s*									
6		(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=437; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			532 Secs *[==>]*	 ***[2]***
Comments: COS G130M: --------- *C II 1335 flux: 3.6e-14 erg/cm2/s s => 0.015 cts/* *Ly-alpha: 4.3e-14 => 0.007 cts/s*									

7	(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=527; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		620 Secs *[==>]*	 ***[2]***
Comments: COS G160M: --- *C IV flux: 1.7e-13 => 0.03 cts/s*								
8	(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=527; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		620 Secs *[==>]*	 ***[2]***
Comments: COS G160M: --- *C IV flux: 1.7e-13 => 0.03 cts/s*								
9	(1) V-GM-AUR	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=527; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		620 Secs *[==>]*	 ***[2]***
Comments: COS G160M: --- *C IV flux: 1.7e-13 => 0.03 cts/s*								
10	(1) V-GM-AUR	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.3 Secs *[==>]*	 ***[3]***
Comments: STIS ACQ: --- *B=13.4, V=12.2* *F28x50LP: saturation in 2.5-7s*								
11	(1) V-GM-AUR	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		40 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
12	(1) V-GM-AUR	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			571 Secs *[==>]*	 ***[3]***
13	(1) V-GM-AUR	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1440 Secs *[==>]*	 ***[3]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Occultation
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Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 02, completed Tue Aug 30 01:16:57 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

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

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

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

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	V-DM-TAU	RA: 04 33 48.7270 (68.4530292d)	Proper Motion RA: 0.00077 sec of time/yr	V=13.78	Reference Frame: ICRS
		Dec: +18 10 9.96 (18.16943d)	Proper Motion Dec: -0.019 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1996.651		

Comments: Position from Ducourant et al. 2005
UPDATED: 23/12/09

SPECTRA: dmtau_g140l.dat; dmtau_g230l.dat

COS ACQ:

B/PSA, 7.9 cts/s in brightest pix

G130M:

C II flux: 2.5e-14 erg/cm2/s
brightest pix: 0.01 cts/s
Ly-alpha flux: <2d-14 erg/cm2/s (measured from STIS G140L)

G160M:

C IV flux: 6.2e-14 erg/cm2/s
brightest pix: 0.01 cts/s

STIS ACQ:

B=14.6, V=13.8
F28x50LP: saturation in 5-10s

Variability:

Grankin et al. (2007): 8 U-band measurements:
14.8 +/- 0.4 (2-sigma); full range: 14.2-15.6

STIS ACQ: F28x50LP, saturation in 8s

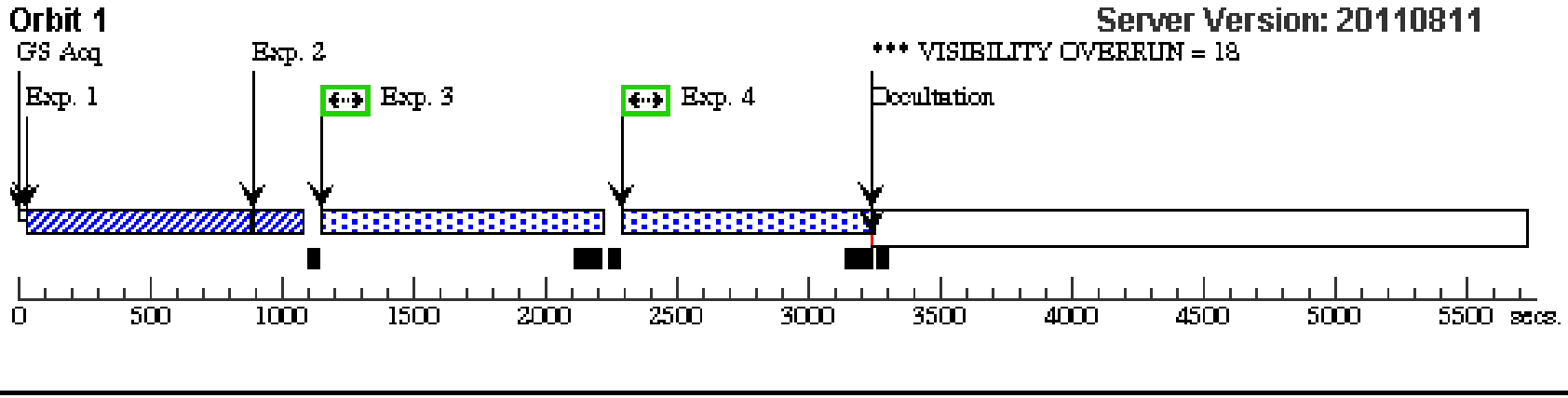
Exposures

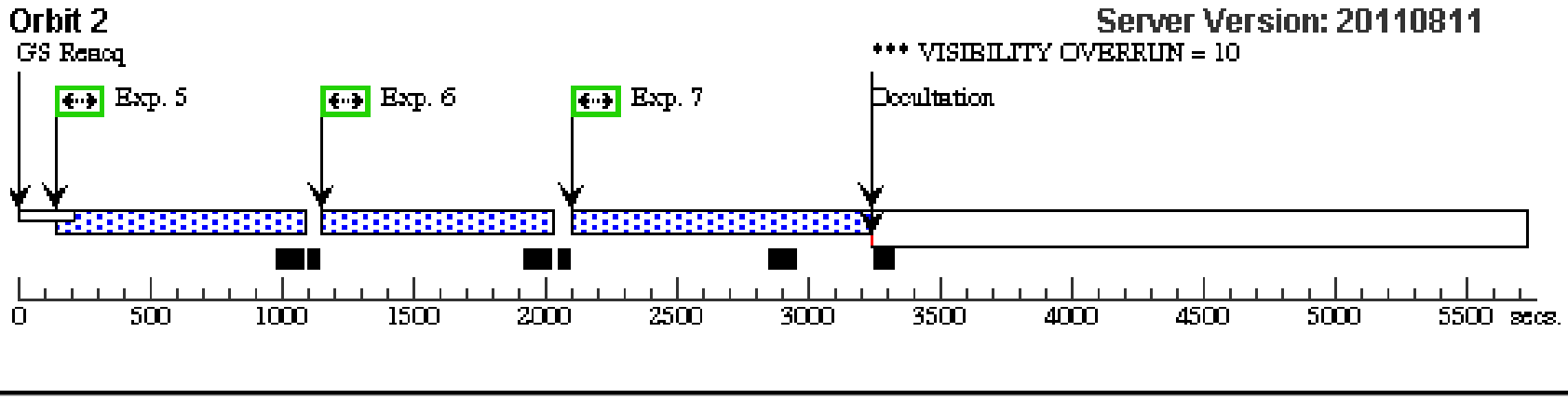
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) V-DM-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		30 Secs *[==>]*	***[1]***
	Comments: COS ACQ: -------- *B/PSA, 7.9 cts/s in brightest pix*								
2		(2) V-DM-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs *[==>]*	***[1]***
	Comments: COS ACQ: -------- *B/PSA, 7.9 cts/s in brightest pix*								
3		(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=815; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			906 Secs *[==>]*	***[1]***
	Comments: G130M: -------- *C II flux: 2.5e-14 erg/cm2/s* *brightest pix: 0.01 cts/s* *Ly-alpha flux: <2d-14 erg/cm2/s (measured from STIS G140L)*								
4		(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=815; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			906 Secs *[==>]*	***[1]***
	Comments: G130M: -------- *C II flux: 2.5e-14 erg/cm2/s* *brightest pix: 0.01 cts/s* *Ly-alpha flux: <2d-14 erg/cm2/s (measured from STIS G140L)*								
5		(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=728; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			823 Secs *[==>]*	***[2]***
	Comments: G130M: -------- *C II flux: 2.5e-14 erg/cm2/s* *brightest pix: 0.01 cts/s* *Ly-alpha flux: <2d-14 erg/cm2/s (measured from STIS G140L)*								

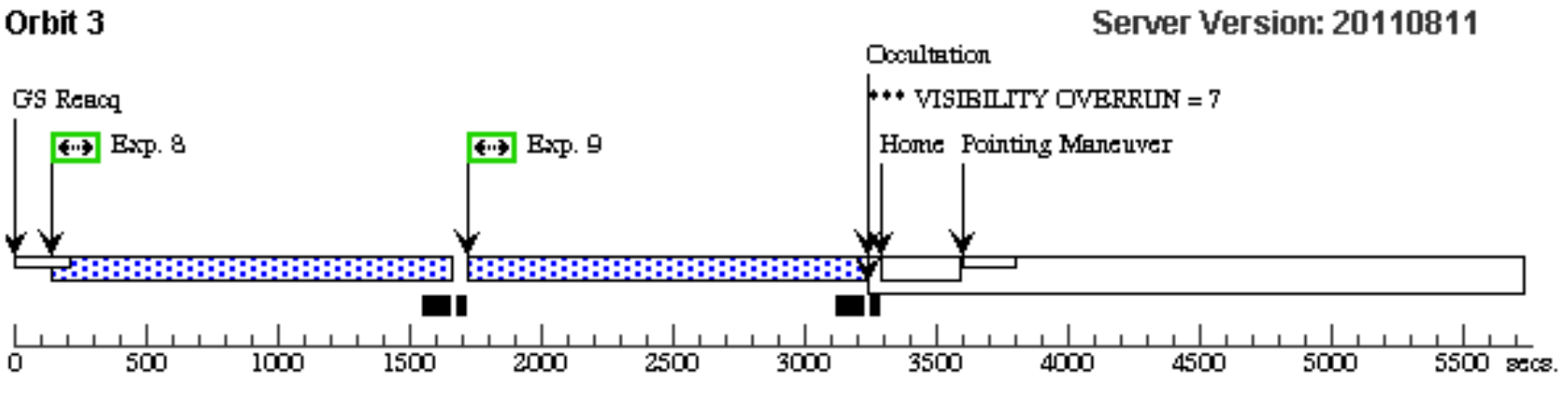
6	(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=728; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		823 Secs *[==>]*	 ***[2]***
Comments: G130M: --- *C II flux: 2.5e-14 erg/cm2/s* *brightest pix: 0.01 cts/s* *Ly-alpha flux: <2d-14 erg/cm2/s (measured from STIS G140L)*							
7	(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=610; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		978 Secs *[==>]*	 ***[2]***
Comments: G160M: --- *C IV flux: 6.2e-14 erg/cm2/s* *brightest pix: 0.01 cts/s*							
8	(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=1303; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		1396 Secs *[==>]*	 ***[3]***
Comments: G160M: --- *C IV flux: 6.2e-14 erg/cm2/s* *brightest pix: 0.01 cts/s*							
9	(2) V-DM-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1303; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		1396 Secs *[==>]*	 ***[3]***
Comments: G160M: --- *C IV flux: 6.2e-14 erg/cm2/s* *brightest pix: 0.01 cts/s*							
10	(2) V-DM-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.6 Secs *[==>]*	 ***[4]***
11	(2) V-DM-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		60 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[4]***
12	(2) V-DM-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			545 Secs *[==>]*	 ***[4]***
13	(2) V-DM-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1418 Secs *[==>]*	 ***[4]***

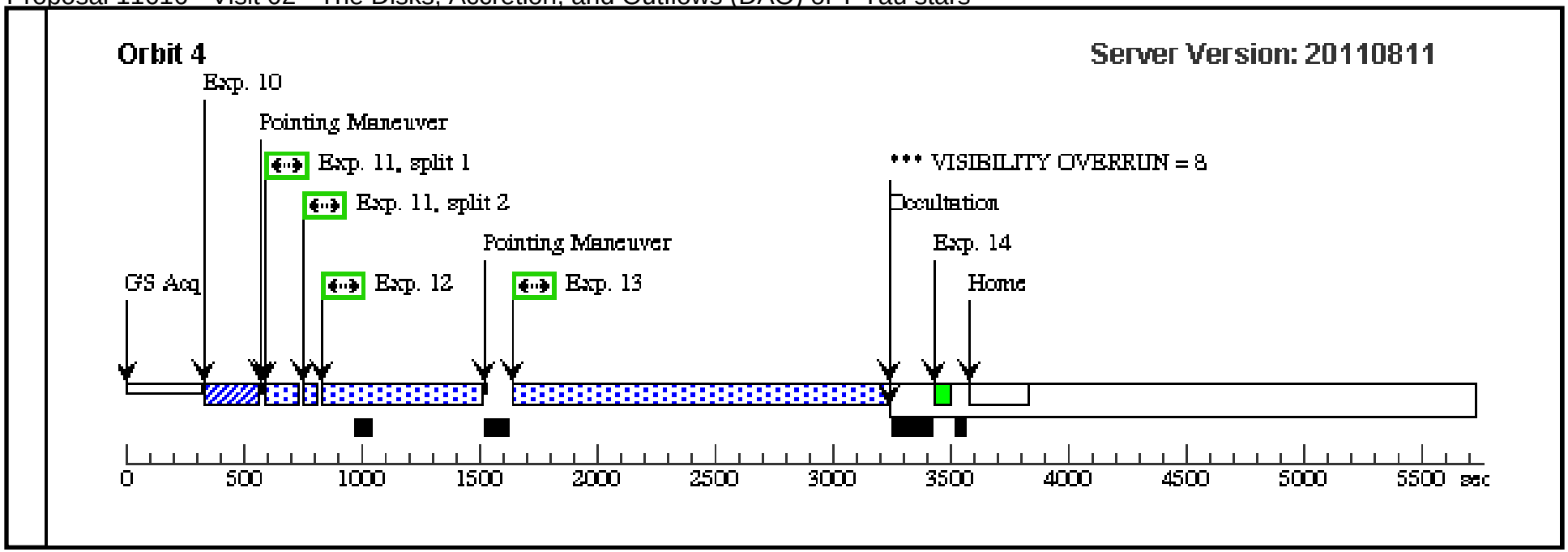
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A	25 Secs *[==>]*	 ***[4]***

Orbit Structure








Orbit 4
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
*** VISIBILITY OVERRUN = 8
Occultation
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 03 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 03, completed Tue Aug 30 01:17:01 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 03) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 03) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 03) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	EM-LKCA-15	RA: 04 39 17.7790 (69.8240792d) Dec: +22 21 3.52 (22.35098d) Equinox: J2000	Proper Motion RA: 0.00058 sec of time/yr Proper Motion Dec: -0.015 arcsec/yr Epoch of Position: 1984.491	V=12.09	Reference Frame: ICRS

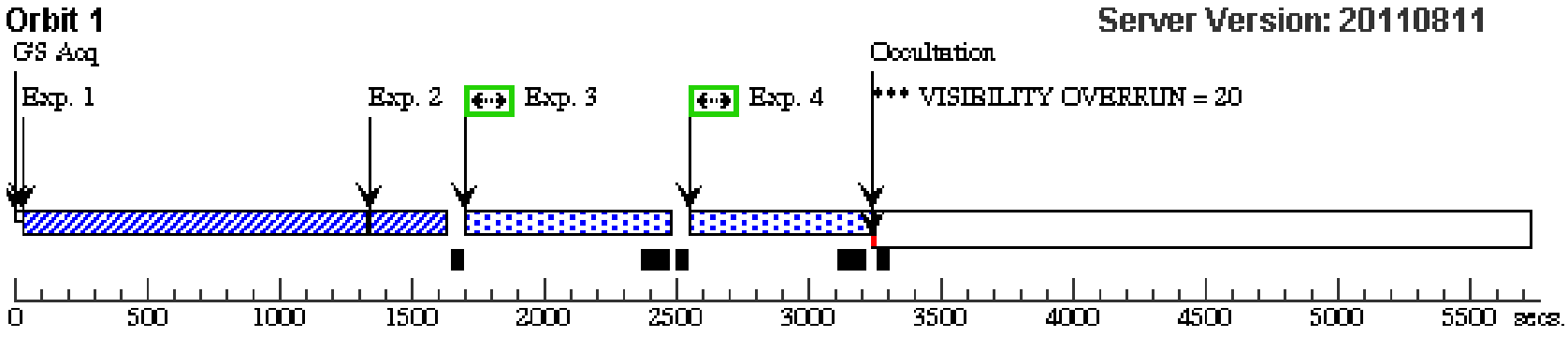
Comments: Position from Ducourant et al. 2005
UPDATED: 23/12/09

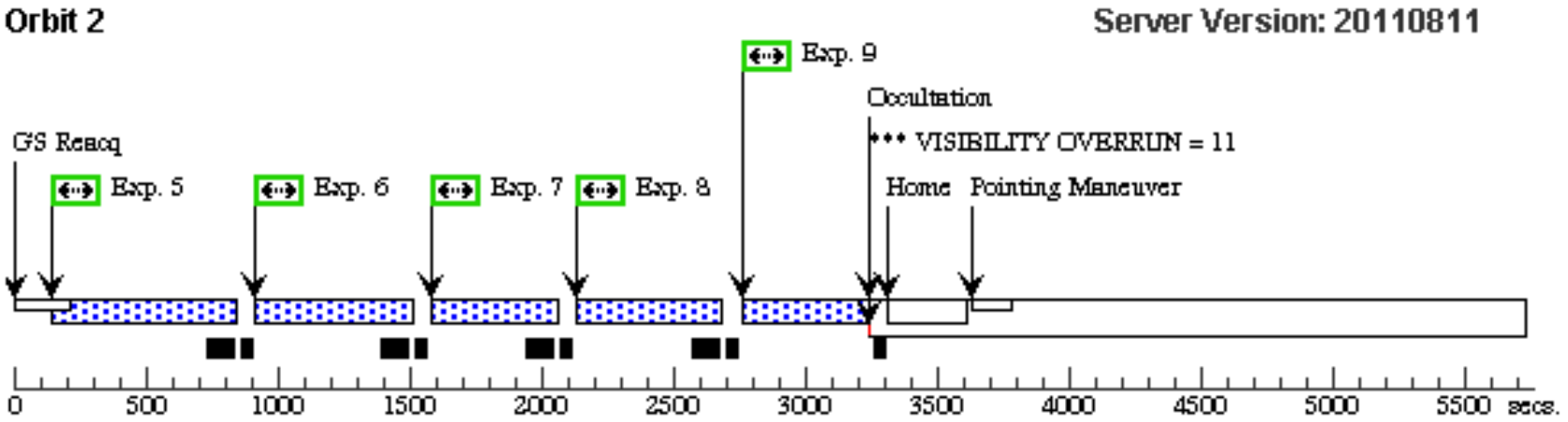
Exposures

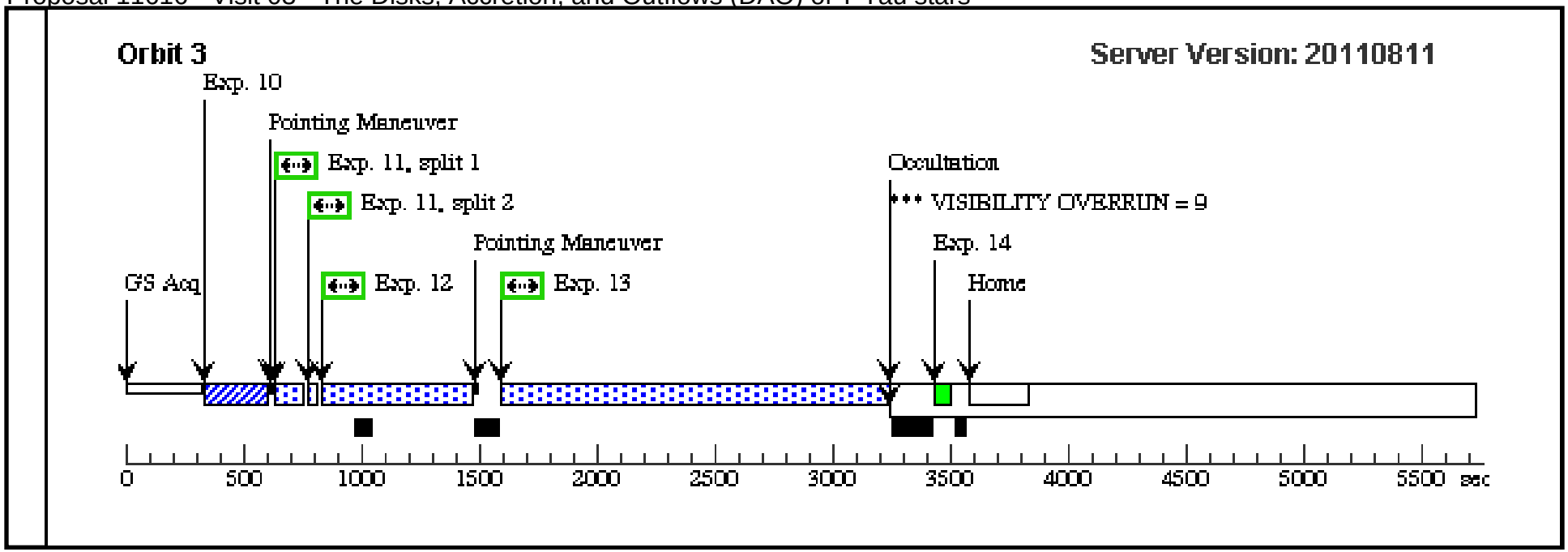
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) EM-LKCA-15	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		80 Secs *[==>]*	 ***[1]***
2		(3) EM-LKCA-15	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				80 Secs *[==>]*	 ***[1]***
3		(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=480; EXTENDED=NO; FLASH=YES; FP-POS=2; SEGMENT=BOTH			575 Secs *[==>]*	 ***[1]***
4		(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=450; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			575 Secs *[==>]*	 ***[1]***
5		(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=480; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			575 Secs *[==>]*	 ***[2]***
6		(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=329; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			428 Secs *[==>]*	 ***[2]***
7		(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=329; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			428 Secs *[==>]*	 ***[2]***
8		(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=329; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			428 Secs *[==>]*	 ***[2]***

	9	(3) EM-LKCA-15	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1500; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		428 Secs *[==>]*	 ***[2]***
	10	(3) EM-LKCA-15	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3	0.2 Secs *[==>]*	 ***[3]***
	11	(3) EM-LKCA-15	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		15 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(3) EM-LKCA-15	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			500 Secs *[==>]*	 ***[3]***
	13	(3) EM-LKCA-15	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1465 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Occultation
*** VISIBILITY OVERRUN = 9
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 04 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit	**Proposal 11616, Visit 04, scheduled** Tue Aug 30 01:17:04 GMT 2011 **Diagnostic Status: Warning** Scientific Instruments: STIS/CCD, COS/NUV, COS/FUV, STIS/NUV-MAMA Special Requirements: (none)
Diagnostics	(Visit 04) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	V-DN-TAU	RA: 04 35 27.4400 (68.8643333d)	Proper Motion RA: 5 mas/yr	V=12.53	Reference Frame: ICRS
		Dec: +24 14 59.19 (24.24978d)	Proper Motion Dec: -21 mas/yr		
		Equinox: J2000	Epoch of Position: 2007.62		

Comments: Position from Ducourant et al. 2005
UPDATED: 23/12/09

Position updated: 28/09/2010, obtained from ACS/SBC FUV image

FUV lines measured from ACS SBC PR130L
NUV observations taken from Valenti's IUE PMS archive:

datasets at http://www.astro.caltech.edu/~gregoryh/11616/safety
dntau_pr130l.dat
dntau_iue.dat (NUV only)

Variability:
45 U-band observations by Grankin et al. (2007):
U=14.02 +/- 0.34 (1 sigma error)
Umax=13.26, Umin=14.79

Assume everything is a factor of 4 higher than listed below => in worst-case scenario, still 10 times below sensitivity limit for grating, 4 times below COS ACQ limits

DN Tau:

G160M:
C IV 1549 A flux: 4.2e-14 erg/cm2/s
C IV count rate: 0.008 cts/s

G130M:

C II 1335 A flux: 4.2e-14 erg/cm2/s
C II count rate: 0.018 cts/s

Ly-alpha estimate: 4.3e-14 erg/cm2/s (based on H-alpha flux of 4.3e-13 erg/cm2/s).
Ly-alpha count rate: 0.006 cts/s

Alternate method: use H-alpha flux directly with Av=0.25 and N(H I) => Lya-alpha flux of 7.2e-14 erg/cm2/s. With the COS ETC, I calculate 0.009 cts/s.

COS ACQUISITION:

MIRRORB: 2.3 cts/s in brightest pixel, S/N=40 requires 98s

STIS ACQ:

V=12.3, F28x50LP: 0.0089s => S/N=40; saturation in 1.85s-3s

STIS G230L, brightest pixel of 0.82 cts/s @2797 A (Mg II), less than limit of 75

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) V-DN-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		85 Secs *[==>]*	***[1]***

Comments: COS ACQ:

B/PSA: 2.9 cts/s

Variability:
45 U-band observations by Grankin et al. (2007):
U=14.02 +/- 0.34 (1 sigma error)
Umax=13.26, Umin=14.79

Assume everything is a factor of 4 higher than listed below => in worst-case scenario, still 10 times below sensitivity limit for grating, 4 times below COS ACQ limits

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(4) V-DN-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				50 Secs *[==>]*	***[1]***

Comments: COS ACQ:

B/PSA: 2.9 cts/s

Variability:
45 U-band observations by Grankin et al. (2007):
U=14.02 +/- 0.34 (1 sigma error)
Umax=13.26, Umin=14.79

Assume everything is a factor of 4 higher than listed below => in worst-case scenario, still 10 times below sensitivity limit for grating, 4 times below COS ACQ limits

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=529; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			626 Secs *[==>]*	***[1]***

Comments: COS G130M:

C II: 4.2e-14 erg/cm2/s
brightest pixel: 0.018 cts/s

ESTIMATED Ly-alpha flux: 4.3e-14 erg/cm2/s, method (1)
Brightest pix: 0.006 cts/s
ESTIMATED Ly-alpha flux: 7.2e-14 erg/cm2/s, method (2)
Brightest pix: 0.009 cts/s

method (1): divide H-alpha flux by 10
method (2): use H-alpha flux, Av, and N(H I) to estimate Ly-alpha flux

4	(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1200; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	626 Secs *[==>]*	***[1]***

Comments: COS G130M:

C II: 4.2e-14 erg/cm2/s
brightest pixel: 0.018 cts/s

ESTIMATED Ly-alpha flux: 4.3e-14 erg/cm2/s, method (1)
Brightest pix: 0.006 cts/s
ESTIMATED Ly-alpha flux: 7.2e-14 erg/cm2/s, method (2)
Brightest pix: 0.009 cts/s

method (1): divide H-alpha flux by 10
method (2): use H-alpha flux, Av, and N(H I) to estimate Ly-alpha flux

5	(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=729; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	825 Secs *[==>]*	***[2]***

Comments: COS G130M:

C II: 4.2e-14 erg/cm2/s
brightest pixel: 0.018 cts/s

ESTIMATED Ly-alpha flux: 4.3e-14 erg/cm2/s, method (1)
Brightest pix: 0.006 cts/s
ESTIMATED Ly-alpha flux: 7.2e-14 erg/cm2/s, method (2)
Brightest pix: 0.009 cts/s

method (1): divide H-alpha flux by 10
method (2): use H-alpha flux, Av, and N(H I) to estimate Ly-alpha flux

6	(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=729; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	826 Secs *[==>]*	***[2]***

Comments: COS G130M:

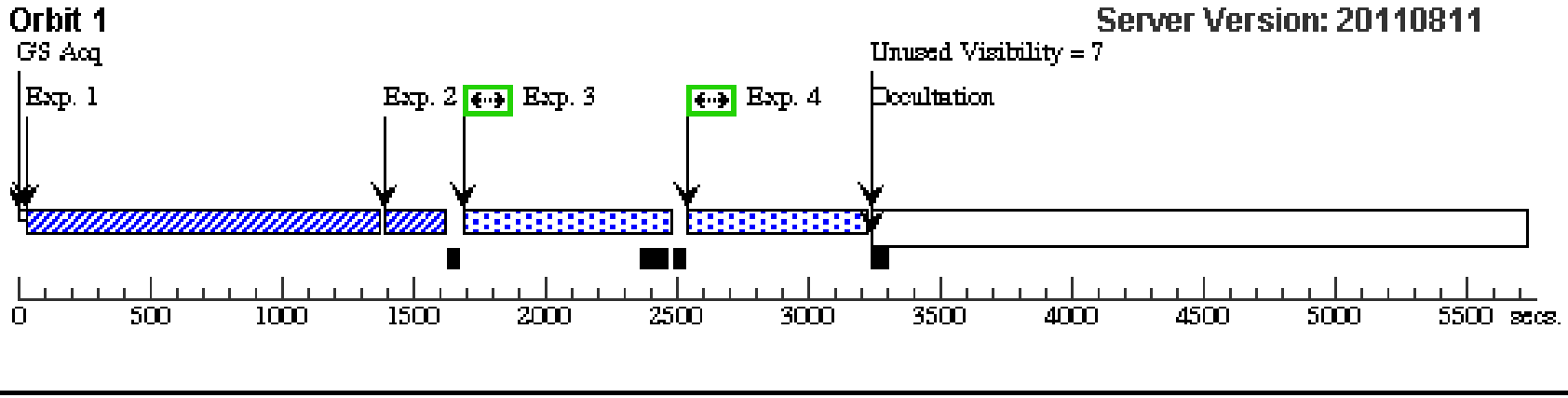
C II: 4.2e-14 erg/cm2/s
brightest pixel: 0.018 cts/s

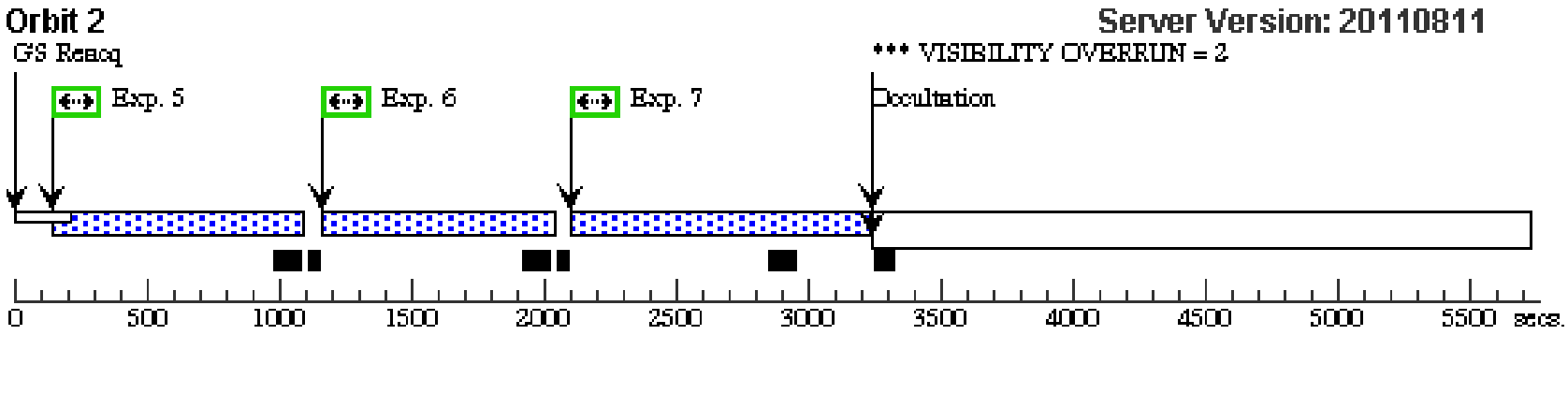
ESTIMATED Ly-alpha flux: 4.3e-14 erg/cm2/s, method (1)
Brightest pix: 0.006 cts/s
ESTIMATED Ly-alpha flux: 7.2e-14 erg/cm2/s, method (2)
Brightest pix: 0.009 cts/s

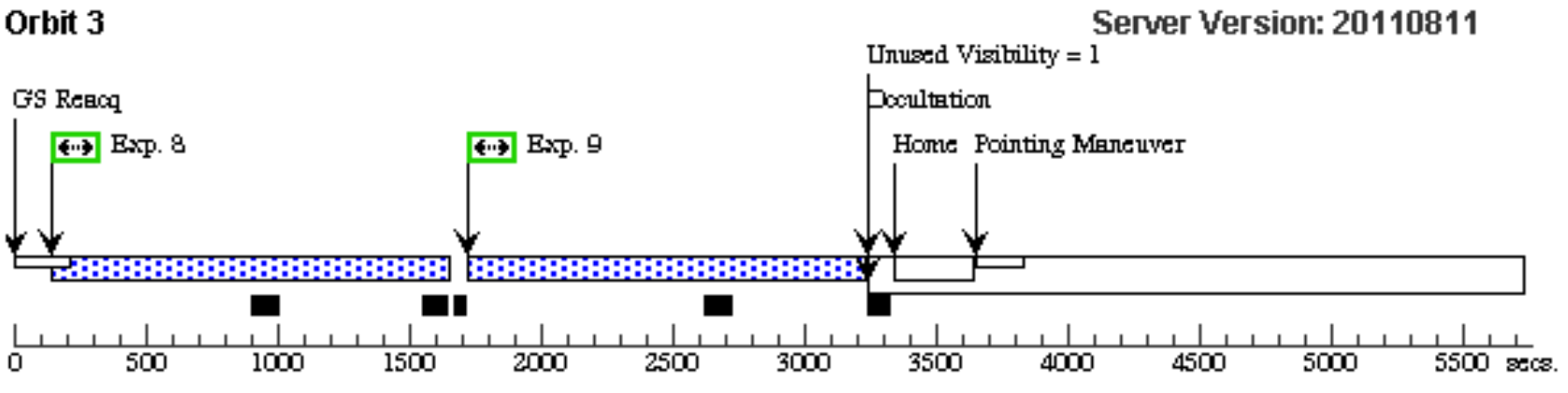
method (1): divide H-alpha flux by 10
method (2): use H-alpha flux, Av, and N(H I) to estimate Ly-alpha flux

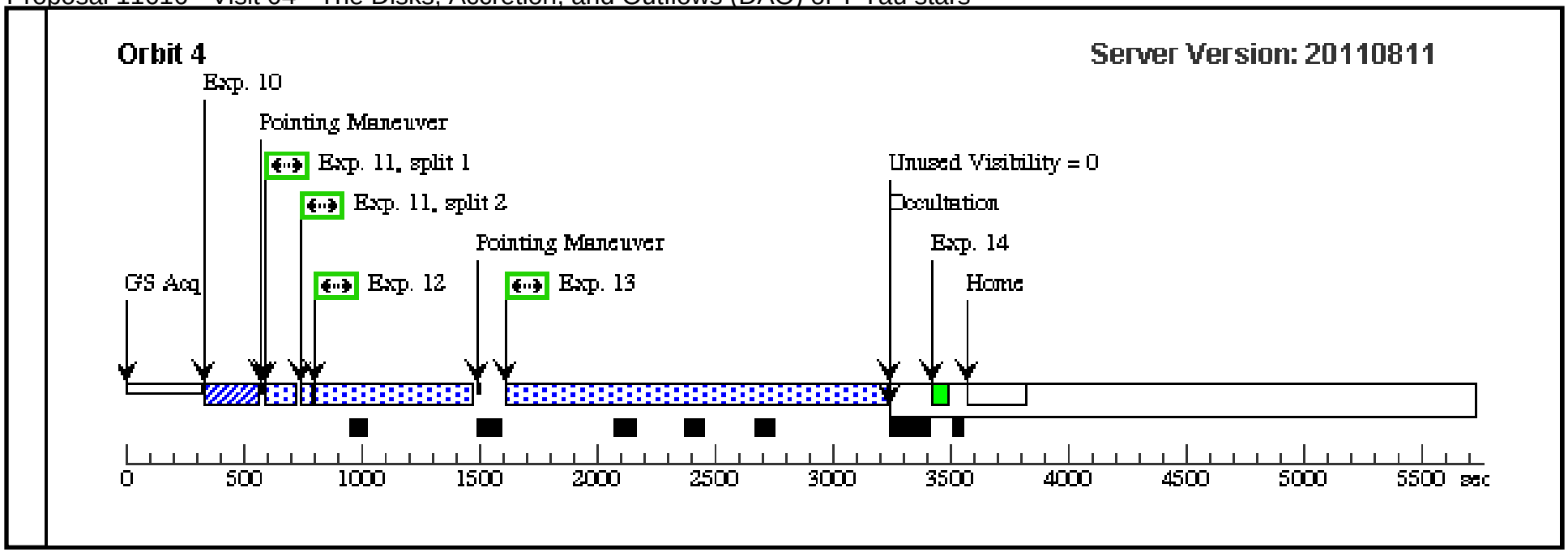
7	(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=600; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		965 Secs *[==>]*	 ***[2]***
Comments: COS G160M: --- *C IV Flux: 4.2e-14 erg/cm2/2* *Brightest pix: 0.008 cts/s*							
8	(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=648; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		1387 Secs *[==>]*	 ***[3]***
Comments: COS G160M: --- *C IV Flux: 4.2e-14 erg/cm2/s* *Brightest pix: 0.008 cts/s*							
9	(4) V-DN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		1387 Secs *[==>]*	 ***[3]***
Comments: COS G160M: --- *C IV Flux: 4.2e-14 erg/cm2/s* *Brightest pix: 0.008 cts/s*							
10	(4) V-DN-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.4 Secs *[==>]*	 ***[4]***
Comments: STIS ACQ: --- *V=12.5* *F28x50LP: saturation in 3s*							
11	(4) V-DN-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		40 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[4]***
12	(4) V-DN-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			536 Secs *[==>]*	 ***[4]***
Comments: brightest pixel: 0.82 ct/s @2797 A (Mg II), less than limit of 75							
13	(4) V-DN-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1441 Secs *[==>]*	 ***[4]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[4]***

Orbit Structure








Orbit 4
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Unused Visibility = 0
Occultation
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 05 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit	**Proposal 11616, Visit 05, completed** Tue Aug 30 01:17:05 GMT 2011 **Diagnostic Status: Warning** Scientific Instruments: STIS/CCD, COS/NUV, COS/FUV, STIS/NUV-MAMA Special Requirements: (none)
Diagnostics	(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous

(5)	V-IP-TAU	RA: 04 24 57.1400 (66.2380833d)	Proper Motion RA: 8 mas/yr	V=13.04	Reference Frame: ICRS
		Dec: +27 11 56.62 (27.19906d)	Proper Motion Dec: -26 mas/yr		
		Equinox: J2000	Epoch of Position: 2004.0		

Comments: Position from Ducourant et al. 2005
UPDATED: 23/12/09

Position updated: 28/09/2010: taken from NUV ACS image, Hartigan et al.

****

IP Tau

Variability: 21 U-band observations (Bouvier et al. 1993)
U=15.18 +/- 0.28
Umax=14.67, Umin=15.89

Multiply all estimates below by 3 for worst-case scenario.

spectra:
---
iptau_pr130m.dat
iptaublue.dat
gmaur_g230l.dat (divided by 3.5)
plot: iptau_template.ps

IP Tau has no IUE or STIS near-UV spectrum (it does have an ACS PR200L spectrum, which is somewhat difficult to reduce). I have used GM Aur as a template. The plot, iptau_template.ps, compares the GM Aur blue Palomar+NUV STIS spectra, divided by a factor of 3.5, with the optical spectrum from IP Tau. The template GM Aur should be quite reliable. You can see that the two stars look quite similar.*

**the NUV and blue spectra of GM Aur were obtained non-simultaneously, but had very similar flux levels.*

COS ACQ

MIRRORB: 2.3 cts/s; S/N=40 requires 125 s

COS G130M:

C II 1335 flux: 2.2e-15 erg/cm2/s
C II count rate: 0.0001 cts/s in brightest pixel

H-alpha flux: 3.9e-13 erg/cm2/s
Estimated Ly-alpha flux: 3.9e-14 erg/cm2/s (multiply H-alpha by 0.1)
Alternate Ly-alpha flux: 6.5e-14 erg/cm2/s (from Av, N(H I))
Ly-alpha count rate: 0.0088 cts/s (based on higher Ly-alpha flux).

The estimated Ly-alpha flux, though uncertain, is far below the brightness limit.

COS G160M:

C IV 1549 flux: 2.8e-14 erg/cm2/s
C IV count rate: 0.0019 cts/s

STIS ACQ:

F28x50LP
V=13.0; saturation in 4.9s

STIS G230L: brightest pixel 1.2 cts/s @ 2796 A (Mg II)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) V-IP-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		100 Secs *[==>]*	 ***[1]***

Comments: COS ACQ

MIRRORB: 2.3 cts/s; S/N=40 requires 100 s
Variability: 21 U-band observations (Bouvier et al. 1993)
U=15.18 +/- 0.28
Umax=14.67, Umin=15.89

Multiply all estimates below by 3 for worst-case scenario.

spectra:
---
iptau_pr130m.dat
iptaublue.dat
gmaur_g230l.dat (divided by 3.5)
plot: iptau_template.ps

IP Tau has no IUE or STIS near-UV spectrum (it does have an ACS PR200L spectrum, which is somewhat difficult to reduce). I have used GM Aur as a template. The plot, iptau_template.ps, compares the GM Aur blue Palomar+NUV STIS spectra, divided by a factor of 3.5, with the optical spectrum from IP Tau. The template GM Aur should be quite reliable. You can see that the two stars look quite similar.*

**the NUV and blue spectra of GM Aur were obtained non-simultaneously, but had very similar flux levels.*

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(5) V-IP-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				60 Secs *[==>]*	 ***[1]***

Comments: COS ACQ

MIRRORB: 2.3 cts/s; S/N=40 requires 100 s
Variability: 21 U-band observations (Bouvier et al. 1993)
U=15.18 +/- 0.28
Umax=14.67, Umin=15.89

Multiply all estimates below by 3 for worst-case scenario.

spectra:
---
iptau_pr130m.dat
iptaublue.dat
gmaur_g230l.dat (divided by 3.5)
plot: iptau_template.ps

IP Tau has no IUE or STIS near-UV spectrum (it does have an ACS PR200L spectrum, which is somewhat difficult to reduce). I have used GM Aur as a template. The plot, iptau_template.ps, compares the GM Aur blue Palomar+NUV STIS spectra, divided by a factor of 3.5, with the optical spectrum from IP Tau. The template GM Aur should be quite reliable. You can see that the two stars look quite similar.*

**the NUV and blue spectra of GM Aur were obtained non-simultaneously, but had very similar flux levels.*

3	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=600; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	1179 Secs *[==>]*	***[1]***

Comments: COS G160M:

COS G160M:

C IV 1549 flux: 2.8e-14 erg/cm2/s
C IV count rate: 0.0019 cts/s

4	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=875; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	972 Secs *[==>]*	***[2]***

Comments: COS G160M:

C IV 1549 flux: 2.8e-14 erg/cm2/s
C IV count rate: 0.0019 cts/s

5	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=875; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	972 Secs *[==>]*	***[2]***

Comments: COS G160M:

C IV 1549 flux: 2.8e-14 erg/cm2/s
C IV count rate: 0.0019 cts/s

6	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	627 Secs *[==>]*	***[2]***

Comments: COS G130M:

C II 1335 flux: 2.2e-15 erg/cm2/s
C II count rate: 0.0001 cts/s in brightest pixel

H-alpha flux: 3.9e-13 erg/cm2/s
Estimated Ly-alpha flux: 3.9e-14 erg/cm2/s (multiply H-alpha by 0.1)
Alternate Ly-alpha flux: 6.5e-14 erg/cm2/s (from Av, N(H I))
Ly-alpha count rate: 0.0088 cts/s (based on higher Ly-alpha flux).

The estimated Ly-alpha flux, though uncertain, is far below the brightness limit.

7	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=716; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		812 Secs *[==>]*	 ***[3]***

Comments: COS G130M:

C II 1335 flux: 2.2e-15 erg/cm2/s
C II count rate: 0.0001 cts/s in brightest pixel

H-alpha flux: 3.9e-13 erg/cm2/s
Estimated Ly-alpha flux: 3.9e-14 erg/cm2/s (multiply H-alpha by 0.1)
Alternate Ly-alpha flux: 6.5e-14 erg/cm2/s (from Av, N(H I))
Ly-alpha count rate: 0.0088 cts/s (based on higher Ly-alpha flux).

The estimated Ly-alpha flux, though uncertain, is far below the brightness limit.

8	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=830; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		926 Secs *[==>]*	 ***[3]***

Comments: COS G130M:

C II 1335 flux: 2.2e-15 erg/cm2/s
C II count rate: 0.0001 cts/s in brightest pixel

H-alpha flux: 3.9e-13 erg/cm2/s
Estimated Ly-alpha flux: 3.9e-14 erg/cm2/s (multiply H-alpha by 0.1)
Alternate Ly-alpha flux: 6.5e-14 erg/cm2/s (from Av, N(H I))
Ly-alpha count rate: 0.0088 cts/s (based on higher Ly-alpha flux).

The estimated Ly-alpha flux, though uncertain, is far below the brightness limit.

9	(5) V-IP-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=500; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		926 Secs *[==>]*	 ***[3]***

Comments: COS G130M:

C II 1335 flux: 2.2e-15 erg/cm2/s
C II count rate: 0.0001 cts/s in brightest pixel

H-alpha flux: 3.9e-13 erg/cm2/s
Estimated Ly-alpha flux: 3.9e-14 erg/cm2/s (multiply H-alpha by 0.1)
Alternate Ly-alpha flux: 6.5e-14 erg/cm2/s (from Av, N(H I))
Ly-alpha count rate: 0.0088 cts/s (based on higher Ly-alpha flux).

The estimated Ly-alpha flux, though uncertain, is far below the brightness limit.

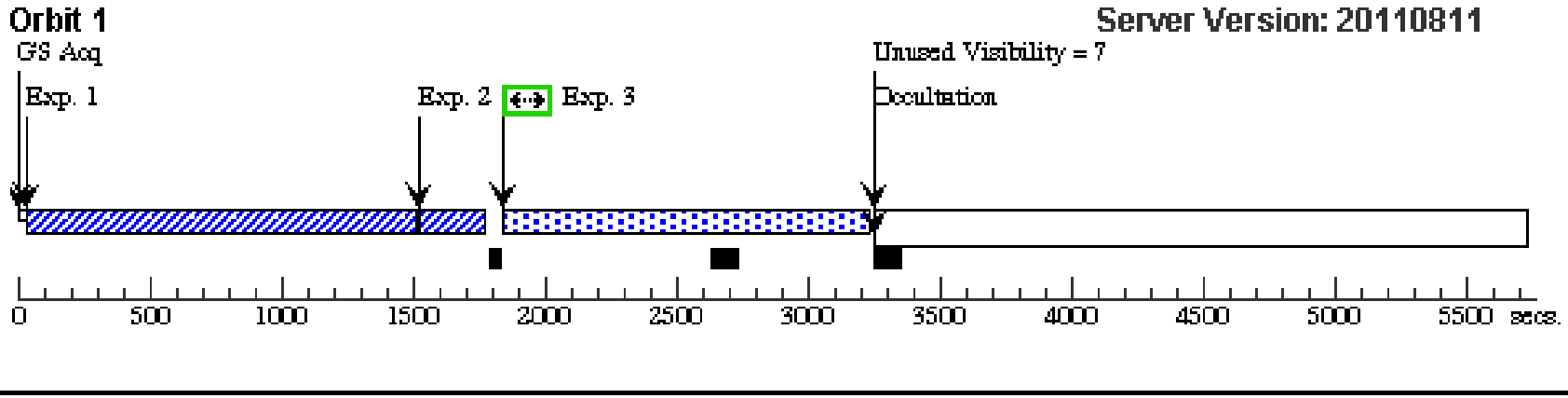
10	(5) V-IP-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.4 Secs *[==>]*	 ***[4]***

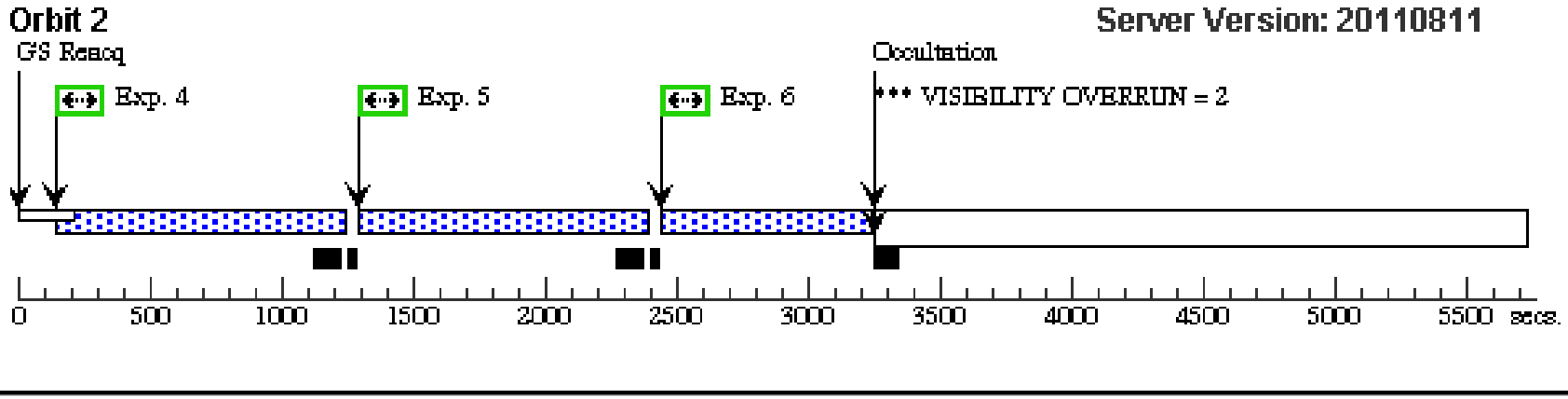
Comments: STIS ACQ:

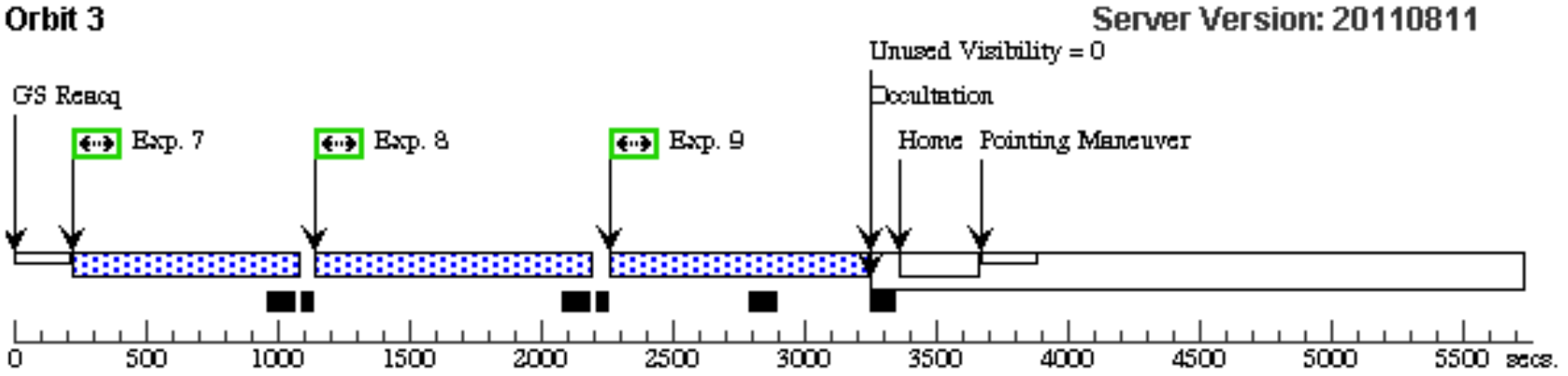
F28x50LP
V=13.0; saturation in 4.9s

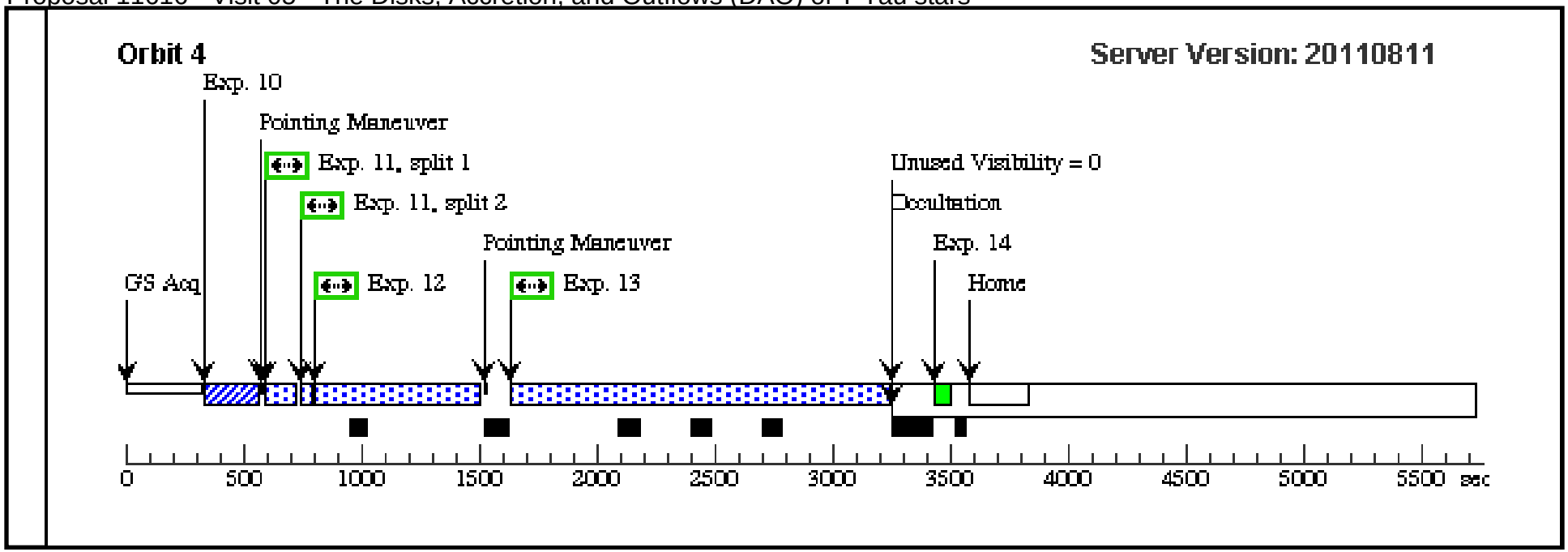
	11	(5) V-IP-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO	40 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[4]***
	12	(5) V-IP-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A		560 Secs *[==>]*	 ***[4]***
	Comments: STIS G230L: brightest pixel 1.2 cts/s@2797						
	13	(5) V-IP-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300	1425 Secs *[==>]*	 ***[4]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A		25 Secs *[==>]*	 ***[4]***

Orbit Structure





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Exp. 14
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Exp. 12
Exp. 13
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4500
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5500
sec

Visit

Proposal 11616, Visit 06, completed Tue Aug 30 01:17:07 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	V-V836-TAU	RA: 05 03 6.6100 (75.7775417d)	Proper Motion RA: 0.000811 sec of time/yr	V=13.13	Reference Frame: ICRS
		Dec: +25 23 19.70 (25.38881d)	Proper Motion Dec: -0.010 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1999.086		

Comments: Ducourant et al. 2005
UPDATED: 23/12/09

V836 TAU: this object is the 2nd faintest in our sample, and it should be the easiest to evaluate for potential violations of the COS brightness limits. V836 Tau was barely detected in a STIS E140M spectrum, and is obviously safe for the FUV gratings. No Ly-alpha emission was detected.

For the COS NUV acquisitions, V836 Tau has few U-band observations. However, the accretion is weak enough that the U-band emission is dominated by the photosphere, to the point that several studies, including Valenti et al. 1993, used it as a spectral template for a non-accretor. In three U-band observations, Grankin et al. (2008) measured U=16.0 +/- 0.2, consistent with a STIS G430L observation an unpublished ground-based U-band observation. In 171 B-band observations, Grankin et al. measured B=14.9 +/- 0.25 (1 standard deviation), with a full range from 14.43-15.62.

Spectra: V836tau_e140m.dat, v836_g430l.dat

COS Acquisition:

PSA, MIRRORA: 3.3 cts/s in brightest pixel

G130M:

Ly-alpha flux: not detected (STIS)
C II: not detected (STIS)

G160M:

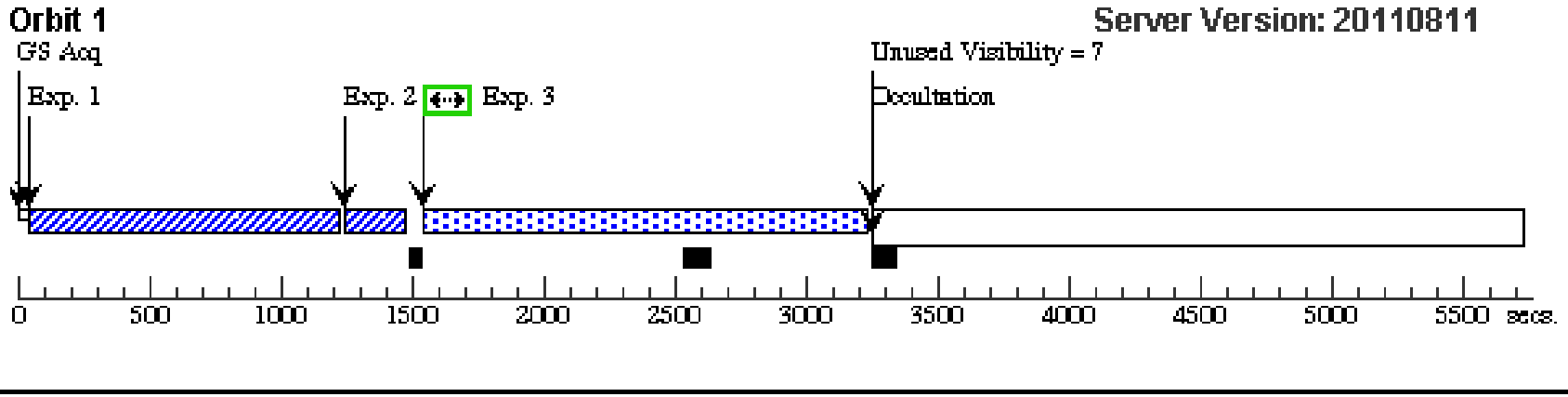
C IV flux: 1.1e-14 (STIS) => 0.002 cts/s in brightest pixel

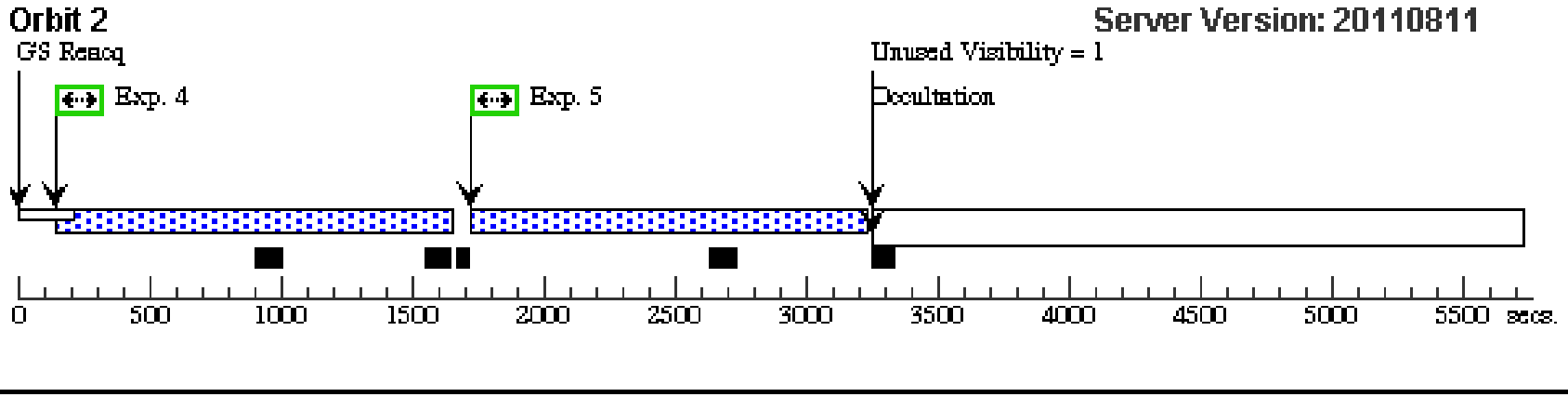
Exposures

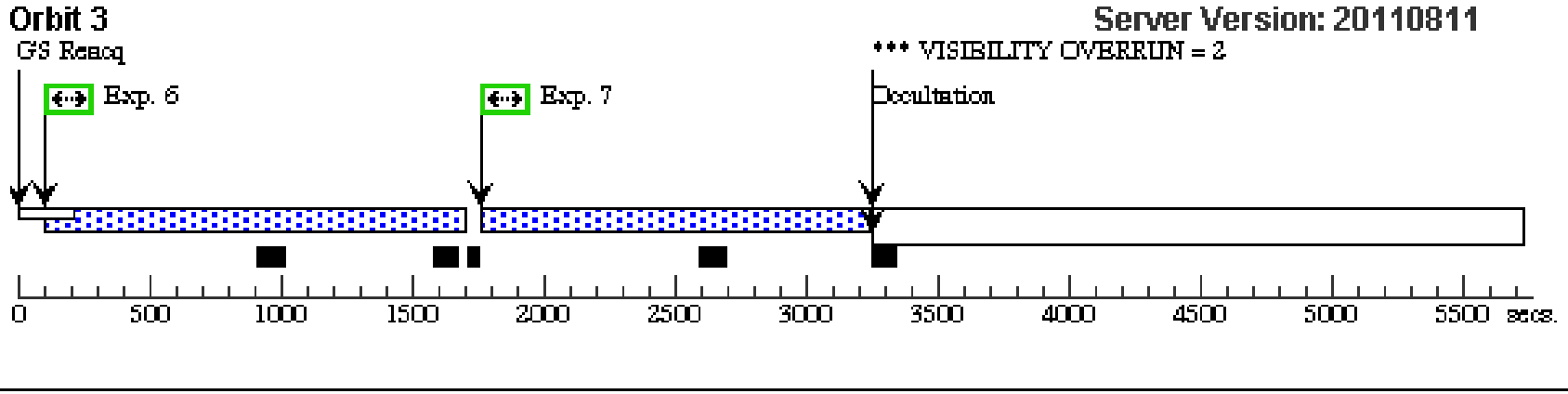
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) V-V836-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		68 Secs *[==>]*	***[1]***
			Comments: COS Acquisition: --- *PSA, MIRRORA: 3.3 cts/s in brightest pixel*						
2		(6) V-V836-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				65 Secs *[==>]*	***[1]***
			Comments: COS Acquisition: --- *PSA, MIRRORA: 3.3 cts/s in brightest pixel*						
3		(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1480 Secs *[==>]*	***[1]***
			Comments: G160M: --- *C IV flux: 1.1e-14 (STIS) => 0.002 cts/s in brightest pixel*						
4		(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=648; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1391 Secs *[==>]*	***[2]***
			Comments: G160M: --- *C IV flux: 1.1e-14 (STIS) => 0.002 cts/s in brightest pixel*						
5		(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1391 Secs *[==>]*	***[2]***
			Comments: G160M: --- *C IV flux: 1.1e-14 (STIS) => 0.002 cts/s in brightest pixel*						
6		(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=664; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1426 Secs *[==>]*	***[3]***
			Comments: G130M: --- *Ly-alpha flux: not detected (STIS)* *C II: not detected (STIS)*						

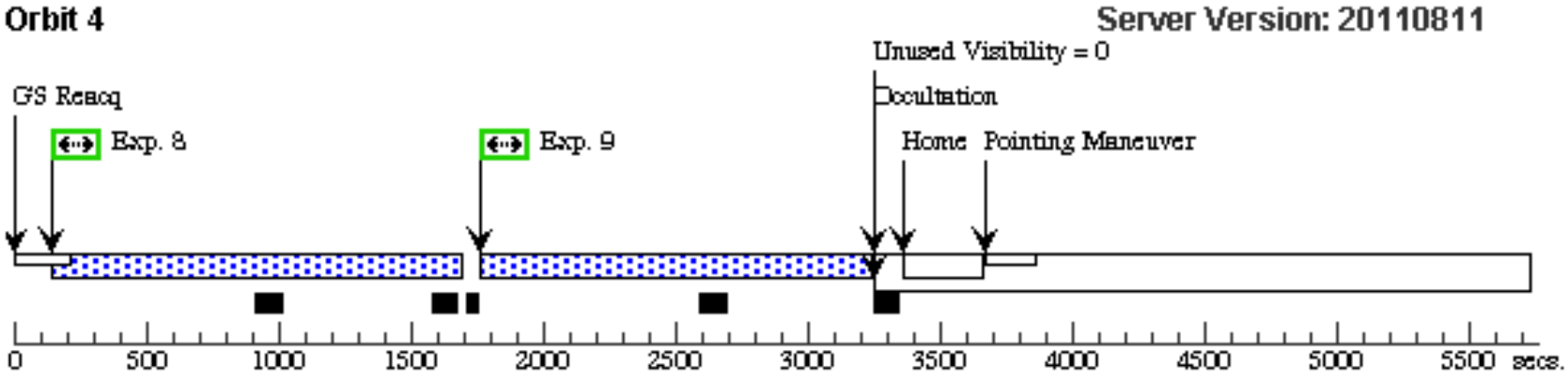
7	(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1426 Secs *[==>]*	 ***[3]***
Comments: G130M: -------- *Ly-alpha flux: not detected (STIS)* *C II: not detected (STIS)*								
8	(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=664; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		1426 Secs *[==>]*	 ***[4]***
Comments: G130M: -------- *Ly-alpha flux: not detected (STIS)* *C II: not detected (STIS)*								
9	(6) V-V836-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1426 Secs *[==>]*	 ***[4]***
Comments: G130M: -------- *Ly-alpha flux: not detected (STIS)* *C II: not detected (STIS)*								
10	(6) V-V836-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.6 Secs *[==>]*	 ***[5]***
Comments: V=13, K7V Kurucz model, F28x50LP: Saturation in 4.8s								
11	(6) V-V836-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		60 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[5]***
12	(6) V-V836-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			567 Secs *[==>]*	 ***[5]***
13	(6) V-V836-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1396 Secs *[==>]*	 ***[5]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[5]***

Orbit Structure





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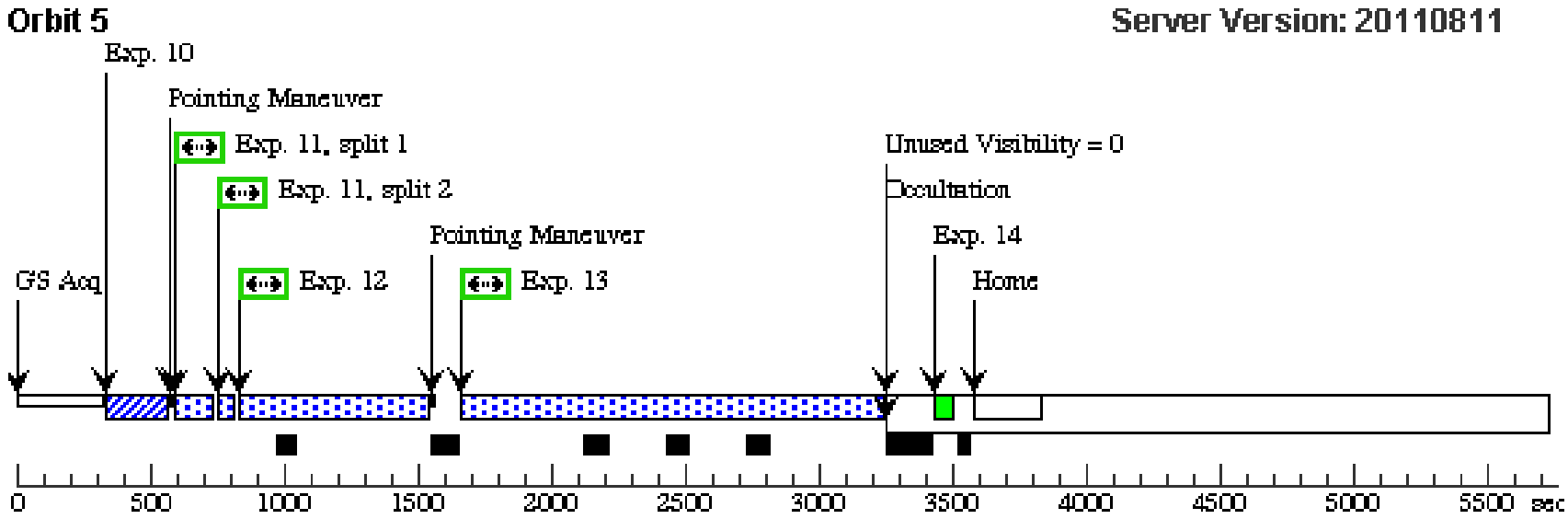
secs.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Exp. 11, split 2
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Occultation
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 07, completed Tue Aug 30 01:17:09 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	V-AA-TAU	RA: 04 34 55.4240 (68.7309333d)	Proper Motion RA: -0.00007 sec of time/yr	V=12.82	Reference Frame: ICRS
		Dec: +24 28 53.29 (24.48147d)	Proper Motion Dec: -0.024 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1990.926		

Comments: Position from Ducourant et al. 2005
UPDATED: 23/12/09

SPECTRA: aatau_iue.dat

COS ACQ:

B/PSA: 3.4 cts/s

COS G130M:

Maximum Ly-alpha flux: 7.3e-13 erg/cm2/s => 0.099 cts/s in brightest pixel. Given the Av, likely to be much less.

C II flux: 4.8e-14 erg/cm2/s => 0.02 cts/s in brightest pixel

COS G160M:

C IV flux: 8.7e-14 erg/cm2/s => 0.015 cts/s

STIS ACQ: 4s to saturation (V=12.8)

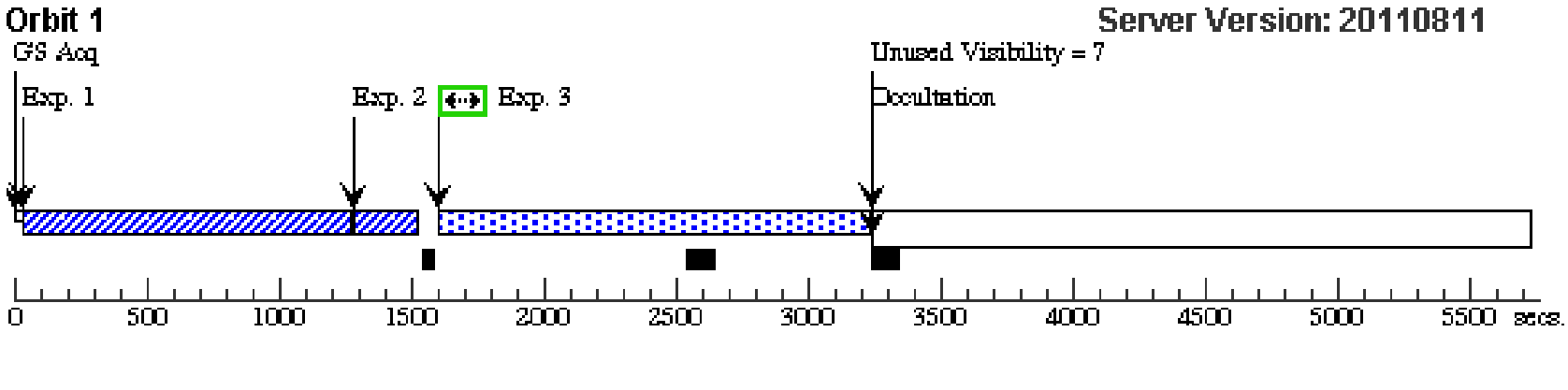
Variability: 128 U-band observations from Grankin et al. (2007)
U=14.7 +/- 0.5; full range: 13.7-16.1

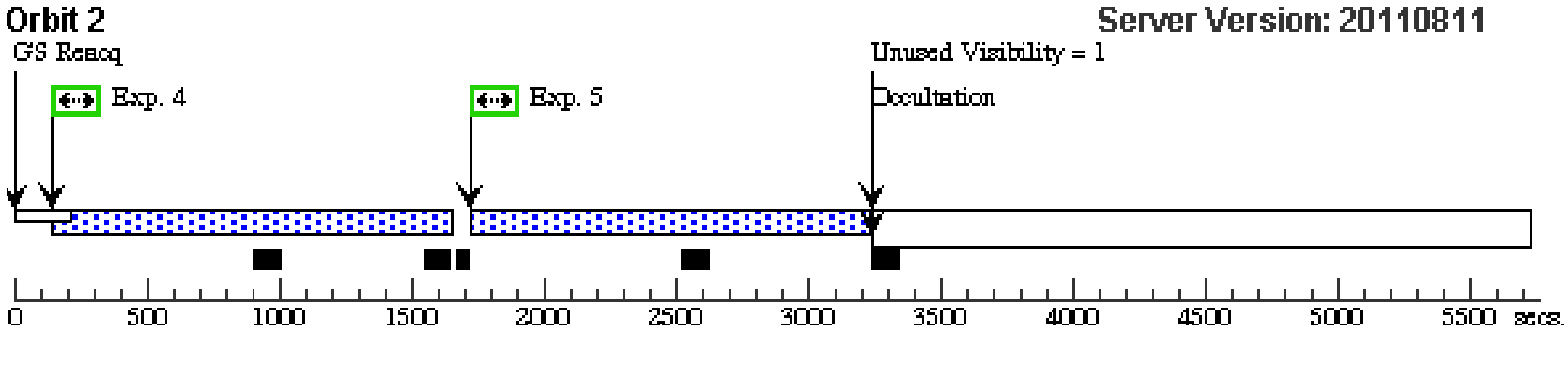
Exposures

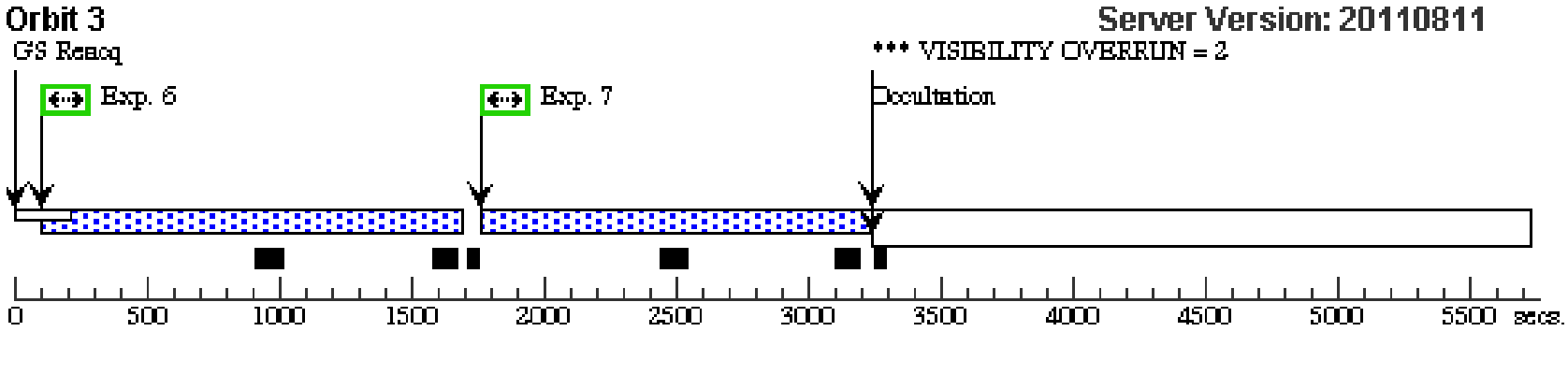
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) V-AA-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		73 Secs *[==>]*	***[1]***
	Comments: B/PSA: 4.8 cts/s								
2		(7) V-AA-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				58 Secs *[==>]*	***[1]***
	Comments: B/PSA: 4.8 cts/s								
3		(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=750; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1418 Secs *[==>]*	***[1]***
	Comments: COS G160M: --- *C IV flux: 8.7e-14 erg/cm2/s => 0.015 cts/s*								
4		(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=648; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1387 Secs *[==>]*	***[2]***
	Comments: COS G160M: --- *C IV flux: 8.7e-14 erg/cm2/s => 0.015 cts/s*								
5		(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=700; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1387 Secs *[==>]*	***[2]***
	Comments: COS G160M: --- *C IV flux: 8.7e-14 erg/cm2/s => 0.015 cts/s*								
6		(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=662; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1422 Secs *[==>]*	***[3]***
	Comments: COS G130M: --- *Maximum Ly-alpha flux: 7.3e-13 erg/cm2/s => 0.099 cts/s in brightest pixel. Given the Av, likely to be much less.* *C II flux: 4.8e-14 erg/cm2/s => 0.02 cts/s in brightest pixel*								

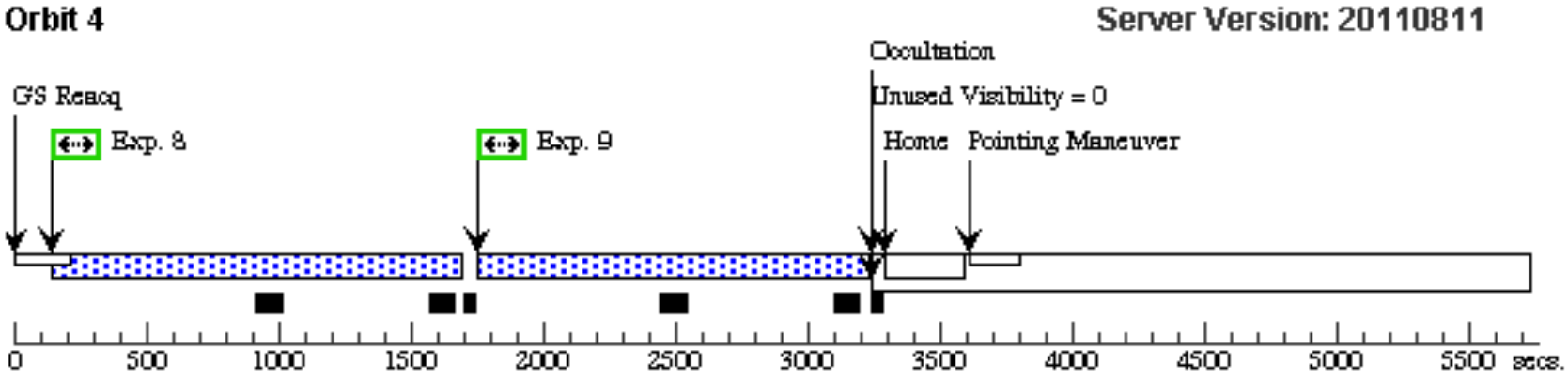
7	(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=653; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1422 Secs *[==>]*	 ***[3]***
Comments: COS G130M: --------- *Maximum Ly-alpha flux: 7.3e-13 erg/cm2/s => 0.099 cts/s in brightest pixel. Given the Av, likely to be much less.* *C II flux: 4.8e-14 erg/cm2/s => 0.02 cts/s in brightest pixel*							
8	(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=662; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		1422 Secs *[==>]*	 ***[4]***
Comments: COS G130M: --------- *Maximum Ly-alpha flux: 7.3e-13 erg/cm2/s => 0.099 cts/s in brightest pixel. Given the Av, likely to be much less.* *C II flux: 4.8e-14 erg/cm2/s => 0.02 cts/s in brightest pixel*							
9	(7) V-AA-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=653; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1422 Secs *[==>]*	 ***[4]***
Comments: COS G130M: --------- *Maximum Ly-alpha flux: 7.3e-13 erg/cm2/s => 0.099 cts/s in brightest pixel. Given the Av, likely to be much less.* *C II flux: 4.8e-14 erg/cm2/s => 0.02 cts/s in brightest pixel*							
10	(7) V-AA-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.4 Secs *[==>]*	 ***[5]***
Comments: STIS ACQ: 4s to saturation (V=12.8)							
11	(7) V-AA-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		50 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[5]***
12	(7) V-AA-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			505 Secs *[==>]*	 ***[5]***
13	(7) V-AA-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1462 Secs *[==>]*	 ***[5]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[5]***

Orbit Structure








Orbit 4
Server Version: 20110811
Occultation
GS Reacq
Unused Visibility = 0
Exp. 8
Exp. 9
Home
Pointing Maneuver
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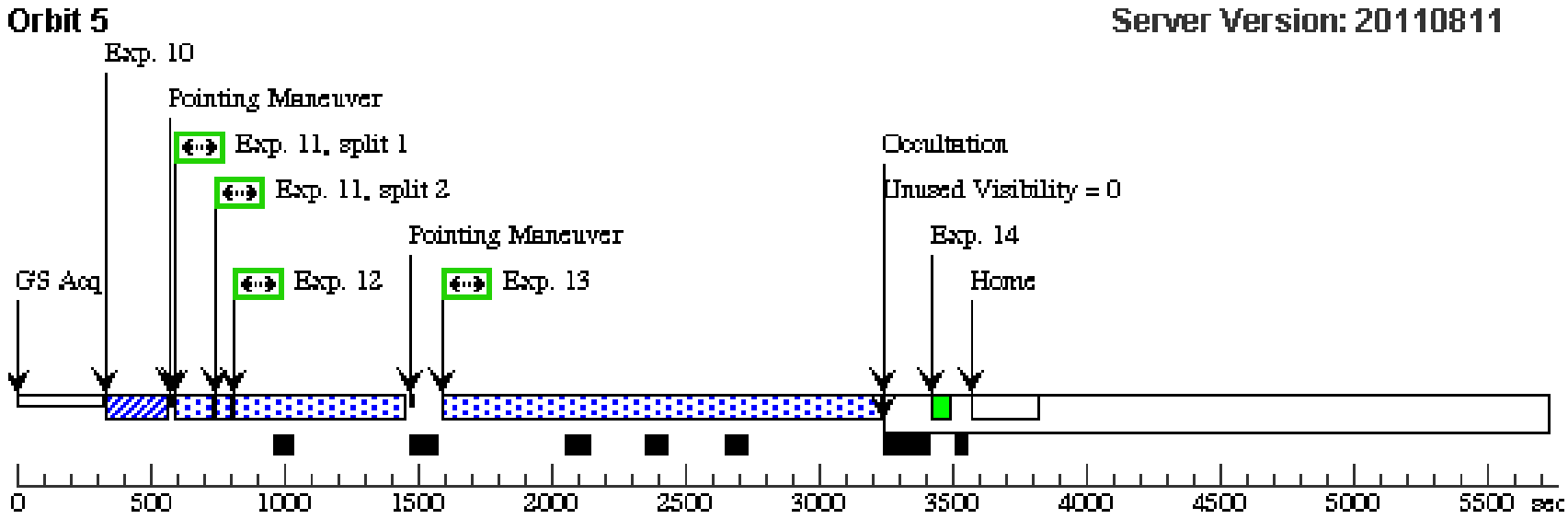
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.


Orbit 5
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Occultation
Exp. 11, split 2
Unused Visibility = 0
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 08, completed Tue Aug 30 01:17:10 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	V-DE-TAU	RA: 04 21 55.6690 (65.4819542d)	Proper Motion RA: 0.00166 sec of time/yr	V=13.07	Reference Frame: ICRS
		Dec: +27 55 6.23 (27.91840d)	Proper Motion Dec: -0.012 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2000.330		

Comments: Variability:
---
26 observations: U=13.76 +/- 0.19; full range: 13.5 - 14.1 (Bouvier et al. 1993)

Parallax from Ducourant et al. 2005
UPDATED: 23/12/09

COS ACQ

Aperture: B/PSA
Brightest pixel: 9.9

COS G130M

O I 1305 triplet flux: 5.5e-14 erg/cm2/s
brightest pixel: 0.01 cts/s/pix
ESTIMATED Ly-alpha flux: 3.1e-13 erg/cm2/s
brightest pixel: 0.042 cts/s/pix

COS G160M:

C IV flux: 7.1e-14 erg/cm2/s
brightest pixel: 0.012 cts/s

STIS ACQ: F28x50LP

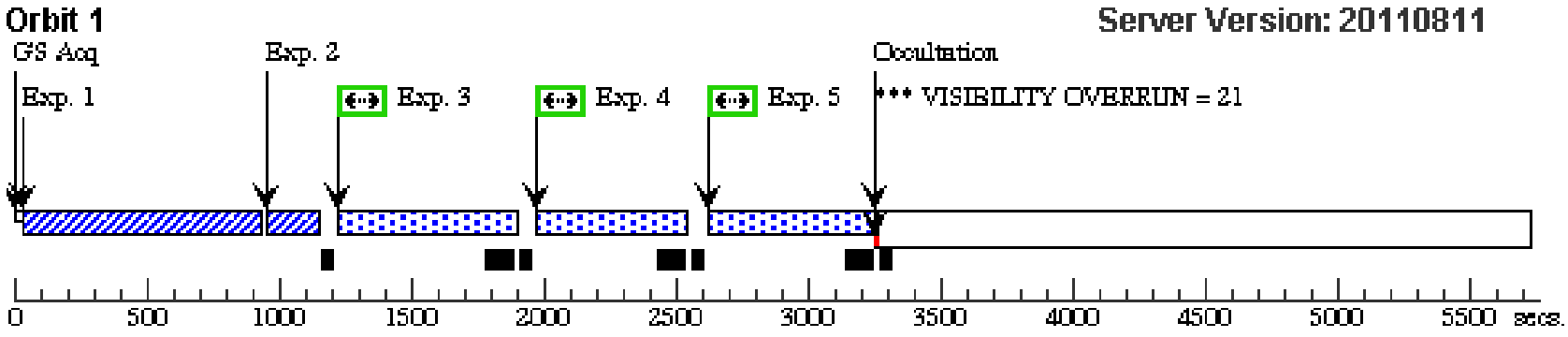
R=11.4, V=13.1, B=14.4
saturation: between 3-5s
S/N=230

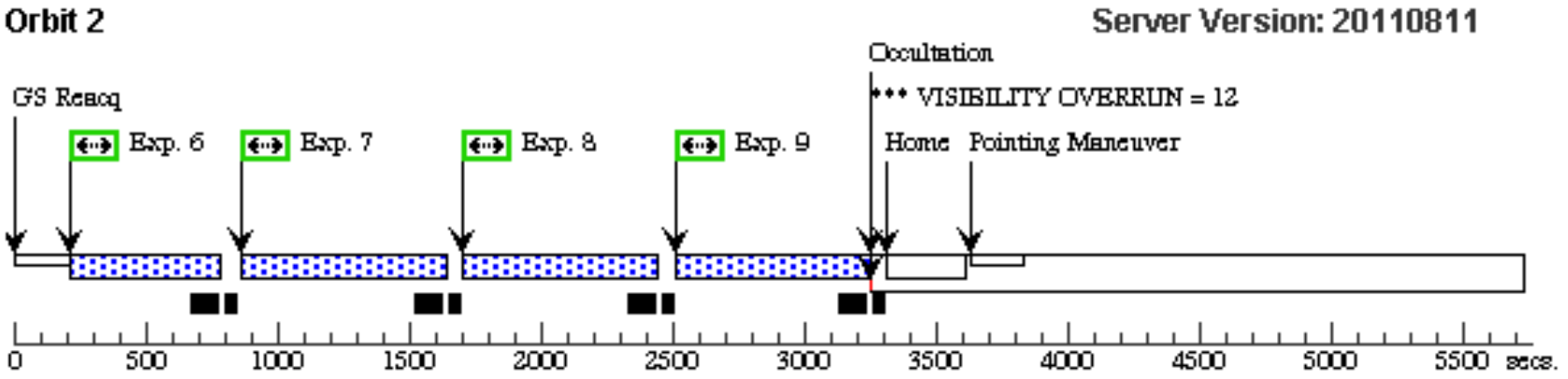
Exposures

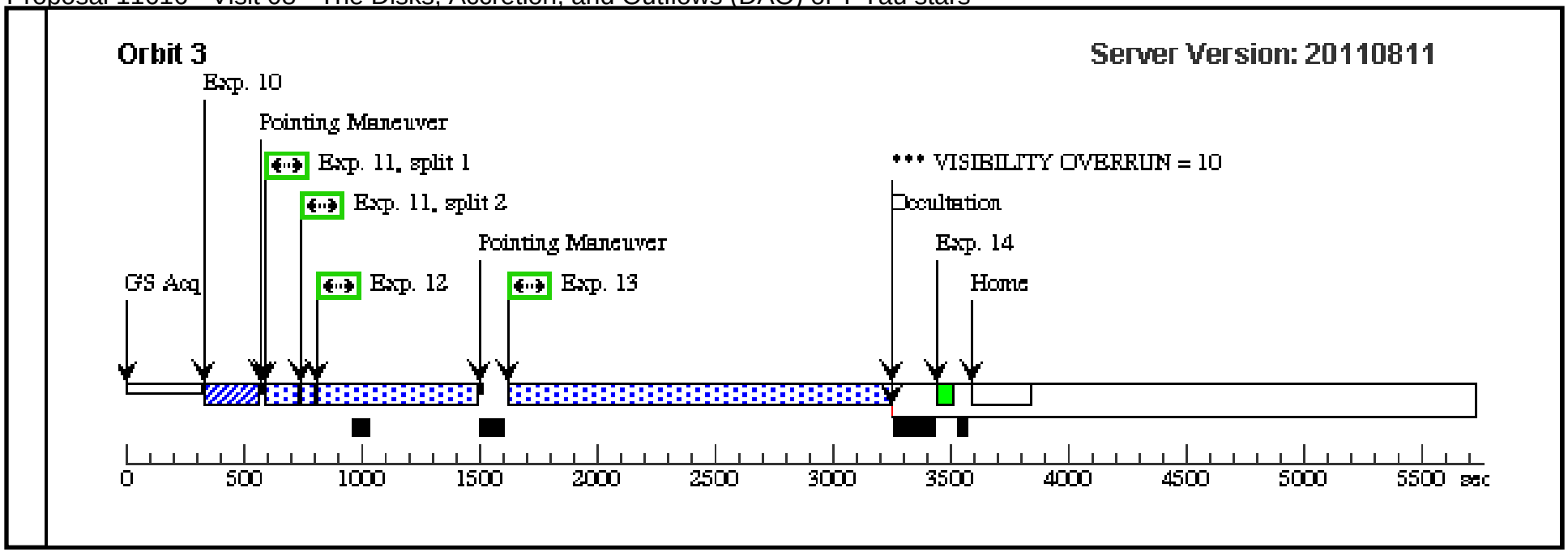
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) V-DE-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; STEP-SIZE=1.767; SCAN-SIZE=3	GS ACQ SCENARIO BASE1B3		36 Secs *[==>]*	 ***[1]***
		Comments: Aperture: B/PSA *Brightest pixel: 9.9*							
2		(9) V-DE-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				36 Secs *[==>]*	 ***[1]***
		Comments: Aperture: B/PSA *Brightest pixel: 9.9*							
3		(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=421; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			517 Secs *[==>]*	 ***[1]***
		Comments: O I 1305 triplet flux: 5.5e-14 erg/cm2/s *brightest pixel: 0.01 cts/s/pix* *Ly-alpha flux: 3.1e-13 erg/cm2/s* *brightest pixel: 0.042 cts/s/pix*							
4		(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=421; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			517 Secs *[==>]*	 ***[1]***
		Comments: O I 1305 triplet flux: 5.5e-14 erg/cm2/s *brightest pixel: 0.01 cts/s/pix* *Ly-alpha flux: 3.1e-13 erg/cm2/s* *brightest pixel: 0.042 cts/s/pix*							
5		(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=421; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			517 Secs *[==>]*	 ***[1]***
		Comments: O I 1305 triplet flux: 5.5e-14 erg/cm2/s *brightest pixel: 0.01 cts/s/pix* *Ly-alpha flux: 3.1e-13 erg/cm2/s* *brightest pixel: 0.042 cts/s/pix*							

6	(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=421; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		517 Secs *[==>]*	 ***[2]***
Comments: O I 1305 triplet flux: 5.5e-14 erg/cm2/s *brightest pixel: 0.01 cts/s/pix* *Ly-alpha flux: 3.1e-13 erg/cm2/s* *brightest pixel: 0.042 cts/s/pix*							
7	(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=521; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		617 Secs *[==>]*	 ***[2]***
Comments: C IV flux: 7.1e-14 erg/cm2/s *brightest pixel: 0.012 cts/s*							
8	(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=521; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		617 Secs *[==>]*	 ***[2]***
Comments: C IV flux: 7.1e-14 erg/cm2/s *brightest pixel: 0.012 cts/s*							
9	(9) V-DE-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=521; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		617 Secs *[==>]*	 ***[2]***
Comments: C IV flux: 7.1e-14 erg/cm2/s *brightest pixel: 0.012 cts/s*							
10	(9) V-DE-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.3 Secs *[==>]*	 ***[3]***
Comments: R=11.4, V=13.1, B=14.4 *saturation: from 2-5s*							
11	(9) V-DE-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		45 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
12	(9) V-DE-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			539 Secs *[==>]*	 ***[3]***
13	(9) V-DE-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1450 Secs *[==>]*	 ***[3]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
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Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
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Occultation
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 09 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 09, completed Tue Aug 30 01:17:12 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

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

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

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

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

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	V-HN-TAU	RA: 04 33 39.3610 (68.4140042d)	Proper Motion RA: 0.00105 sec of time/yr	V=13.7	Reference Frame: ICRS
		Dec: +17 51 52.29 (17.86452d)	Proper Motion Dec: -0.014 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1996.975		

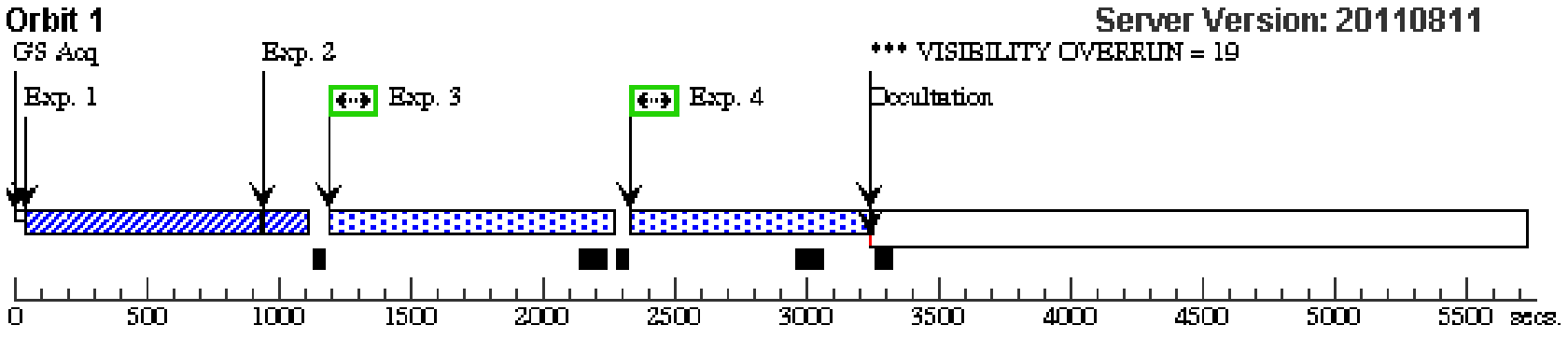
Comments: Ducourant et al. 2005
UPDATED: 23/12/09

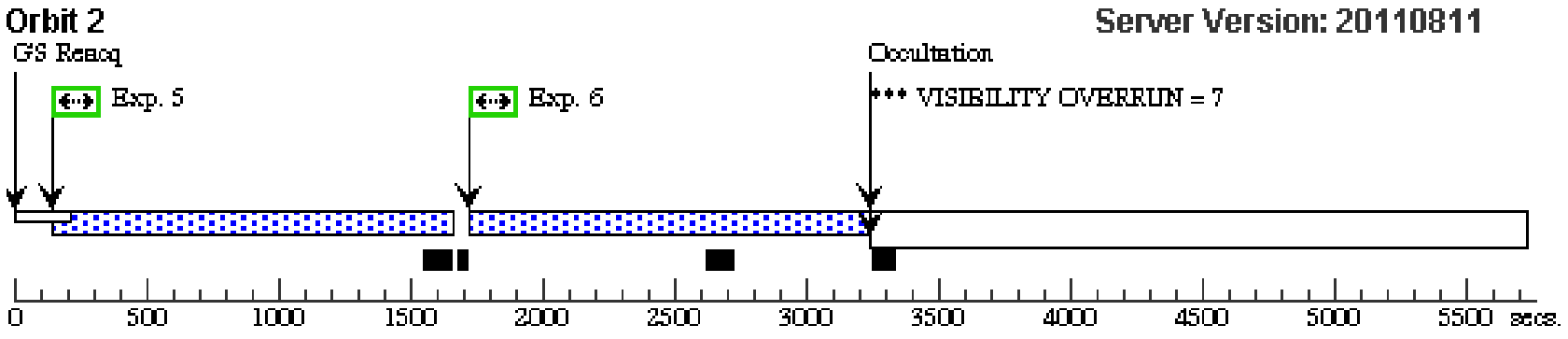
Exposures

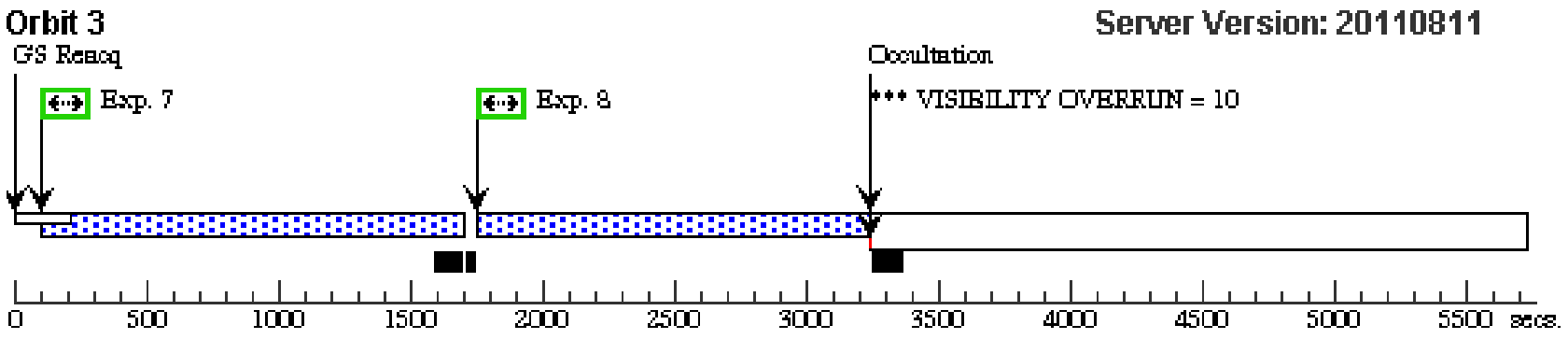
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) V-HN-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		35 Secs *[==>]*	***[1]***
2		(10) V-HN-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				35 Secs *[==>]*	***[1]***
3		(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=769; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			868 Secs *[==>]*	***[1]***
4		(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=600; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			868 Secs *[==>]*	***[1]***
5		(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=1300; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1396 Secs *[==>]*	***[2]***
6		(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1396 Secs *[==>]*	***[2]***
7		(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1336; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1431 Secs *[==>]*	***[3]***
8		(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1350; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			1431 Secs *[==>]*	***[3]***

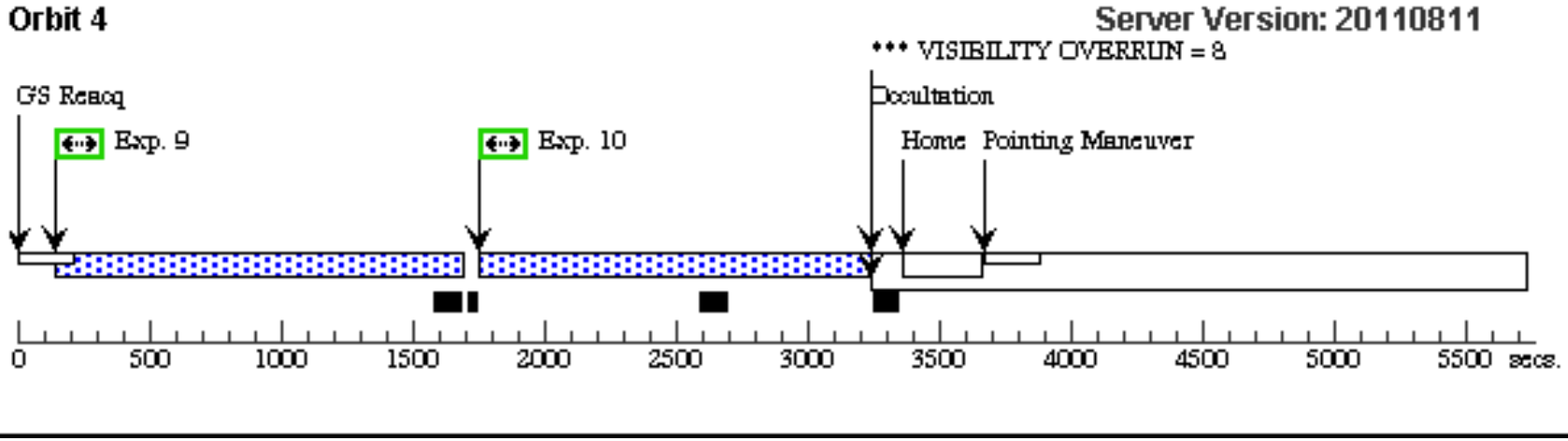
	9	(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1336; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		1431 Secs *[==>]*	 ***[4]***
	10	(10) V-HN-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1431 Secs *[==>]*	 ***[4]***
	11	(10) V-HN-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.2 Secs *[==>]*	 ***[5]***
	12	(10) V-HN-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		30 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[5]***
	13	(10) V-HN-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			530 Secs *[==>]*	 ***[5]***
	14	(10) V-HN-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1800		1465 Secs *[==>]*	 ***[5]***
	15	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[5]***

Orbit Structure





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GS Reacq
Exp. 9
Exp. 10
Occultation
Home
Pointing Maneuver
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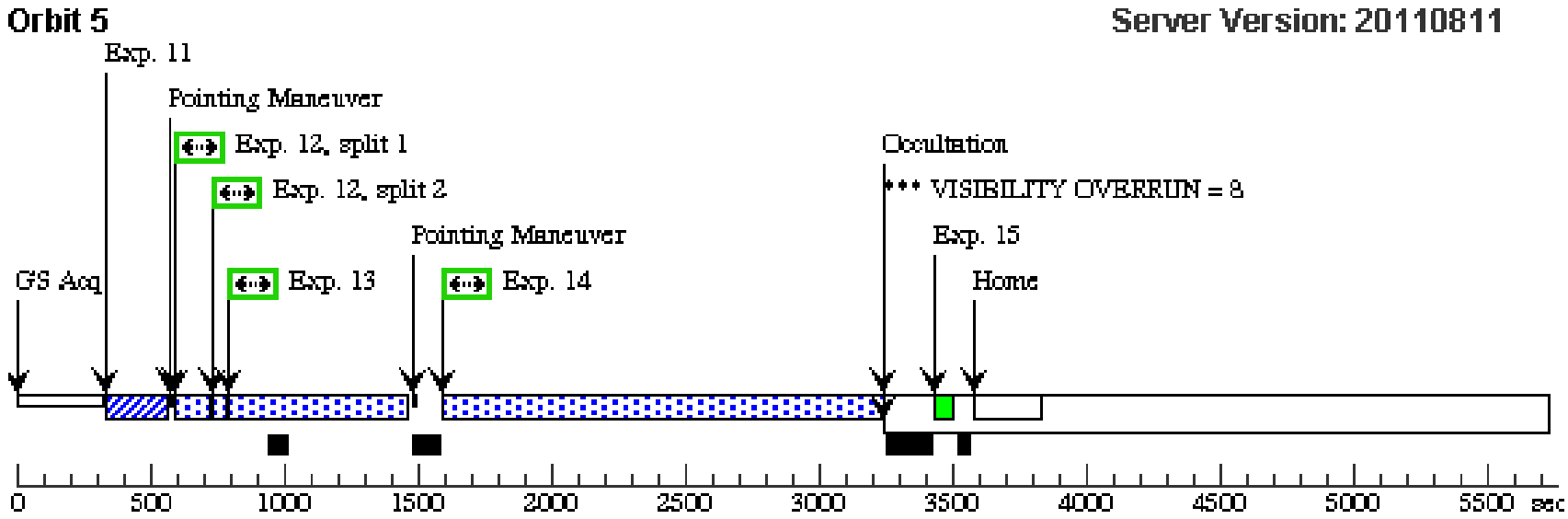
3000
3500
4000
4500
5000
5500
secs.


Orbit 5
Server Version: 20110811
Exp. 11
Pointing Maneuver
Exp. 12, split 1
Exp. 12, split 2
Pointing Maneuver
GS Acq
Exp. 13
Exp. 14
Occultation
*** VISIBILITY OVERRUN = 8
Exp. 15
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 10, scheduling Tue Aug 30 01:17:16 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 10) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	V-FM-TAU	RA: 04 14 13.5600 (63.5565000d)	Proper Motion RA: 5 mas/yr	V=13.8	Reference Frame: ICRS
		Dec: +28 12 49.12 (28.21364d)	Proper Motion Dec: -36 mas/yr		
		Equinox: J2000	Epoch of Position: 2004.0		

Comments: Ducourant et al. 2005
UPDATED: 23/12/09

Position updated: 28/09/2009: obtained from NUV image (Hartigan PI)

Herbst et al. (1994): 9 U-band observations: U_avg=14.6, range=13.8-15.6. IUE observation obtained when U was about 15.1.

fmtau_iue.dat: MIRRORB => 3.9 cts/s. If 2 mags higher, 24 cts/s is still below the 50 cts/s limit. (using TW Hya/10 as a template, 5 cts/s)

G130M: O I, C II emission not detected in an ACS/SBC PR130L spectrum.
Ly-alpha emission: based on H-alpha flux/10, we estimate 6.6e-14 erg/cm2/s, which would correspond to 0.089 cts/s. Given the non-detection of O I emission with ACS, it is unlikely that any Ly-alpha emission will be detected

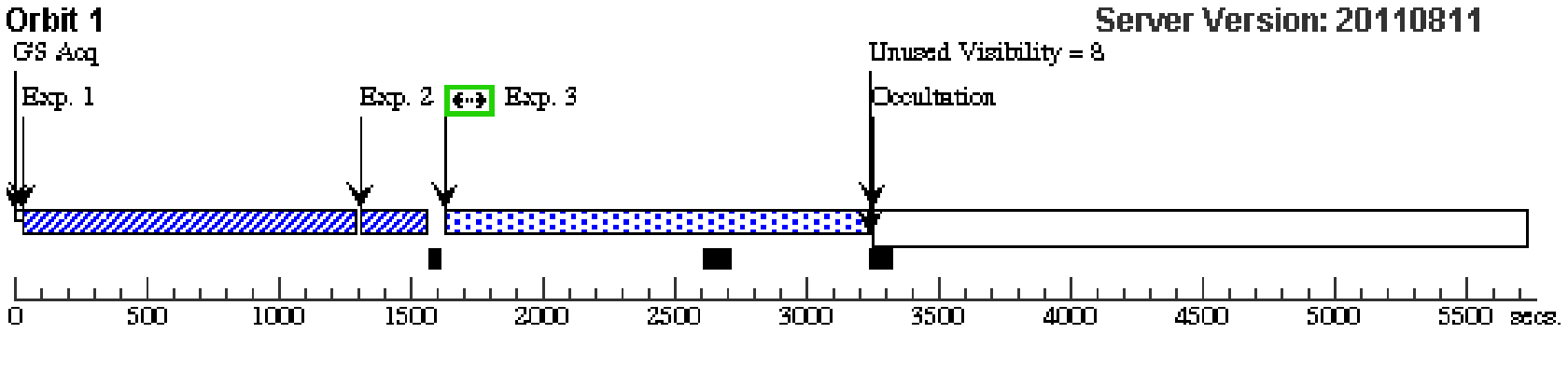
G160M: C IV flux of 1.6e-14 from ACS/SBC PR130L spectrum. Using TW Hya as a spectral template, we estimate 0.003 cts/s in the brightest pixel.

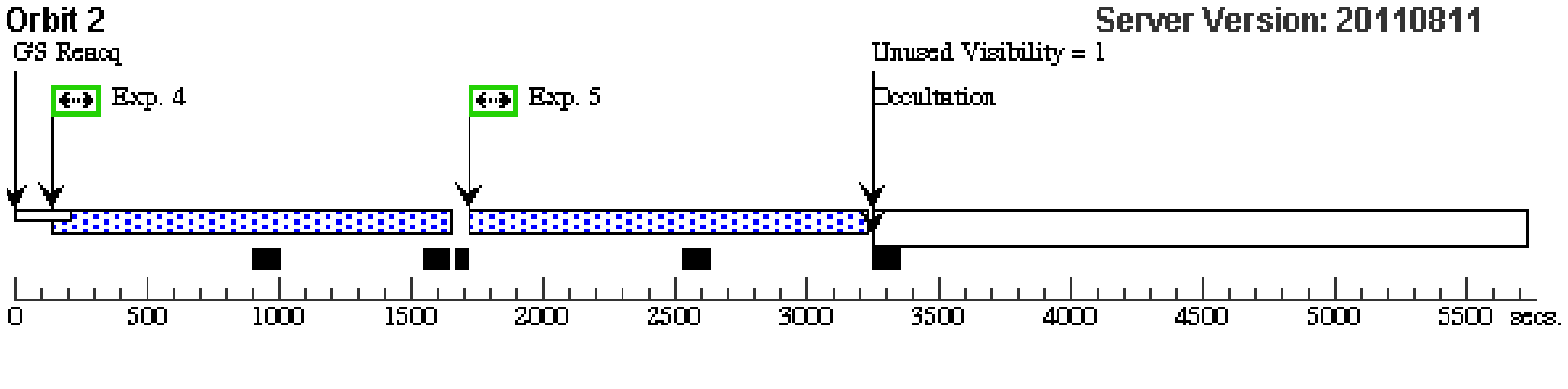
Exposures

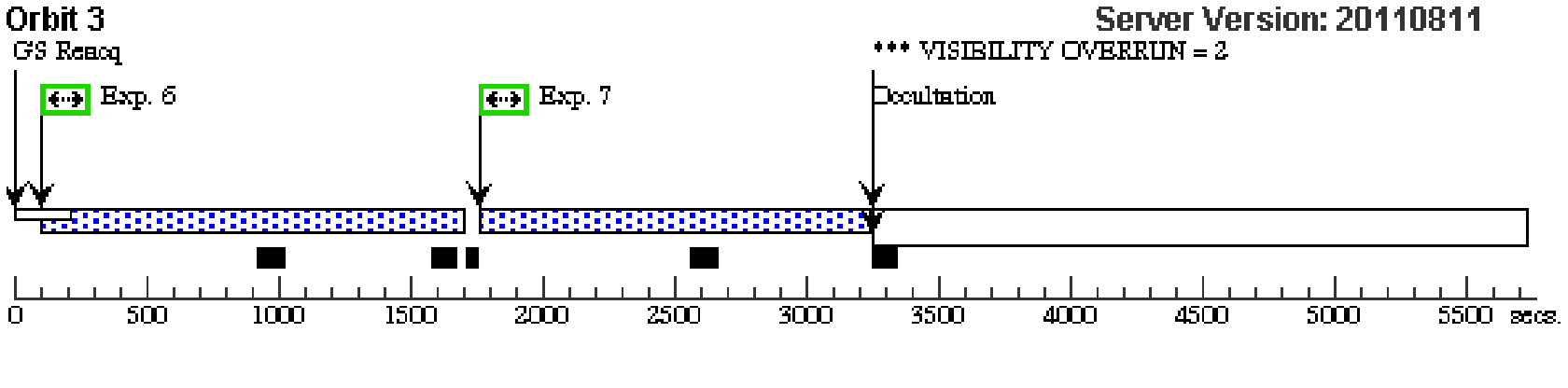
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(11) V-FM-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		76 Secs *[==>]*	 ***[1]***
			Comments: Herbst et al. (1994): 9 U-band observations: U_avg=14.6, range=13.8-15.6. IUE observation obtained when U was about 15.1. *fmtau_iue.dat: MIRRORB => 3.9 cts/s. If 2 mags higher, 24 cts/s is still below the 50 cts/s limit. (using TW Hya/10 as a template, 5 cts/s)*						
2		(11) V-FM-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				59 Secs *[==>]*	 ***[1]***
			Comments: Herbst et al. (1994): 9 U-band observations: U_avg=14.6, range=13.8-15.6. IUE observation obtained when U was about 15.1. *fmtau_iue.dat: MIRRORB => 3.9 cts/s. If 2 mags higher, 24 cts/s is still below the 50 cts/s limit. (using TW Hya/10 as a template, 5 cts/s)*						
3		(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1396 Secs *[==>]*	 ***[1]***
			Comments: G160M: C IV flux of 1.6e-14 from ACS/SBC PR130L spectrum. Using TW Hya as a spectral template, we estimate 0.003 cts/s in the brightest pixel.						
4		(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=650; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1391 Secs *[==>]*	 ***[2]***
			Comments: G160M: C IV flux of 1.6e-14 from ACS/SBC PR130L spectrum. Using TW Hya as a spectral template, we estimate 0.003 cts/s in the brightest pixel.						
5		(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=700; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1391 Secs *[==>]*	 ***[2]***
			Comments: G160M: C IV flux of 1.6e-14 from ACS/SBC PR130L spectrum. Using TW Hya as a spectral template, we estimate 0.003 cts/s in the brightest pixel.						
6		(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=666; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1426 Secs *[==>]*	 ***[3]***
			Comments: G130M: O I, C II emission not detected in an ACS/SBC PR130L spectrum. *Ly-alpha emission: based on H-alpha flux/10, we estimate 6.6e-14 erg/cm2/s, which would correspond to 0.089 cts/s. Given the non-detection of O I emission with ACS, it is unlikely that any Ly-alpha emission will be detected*						

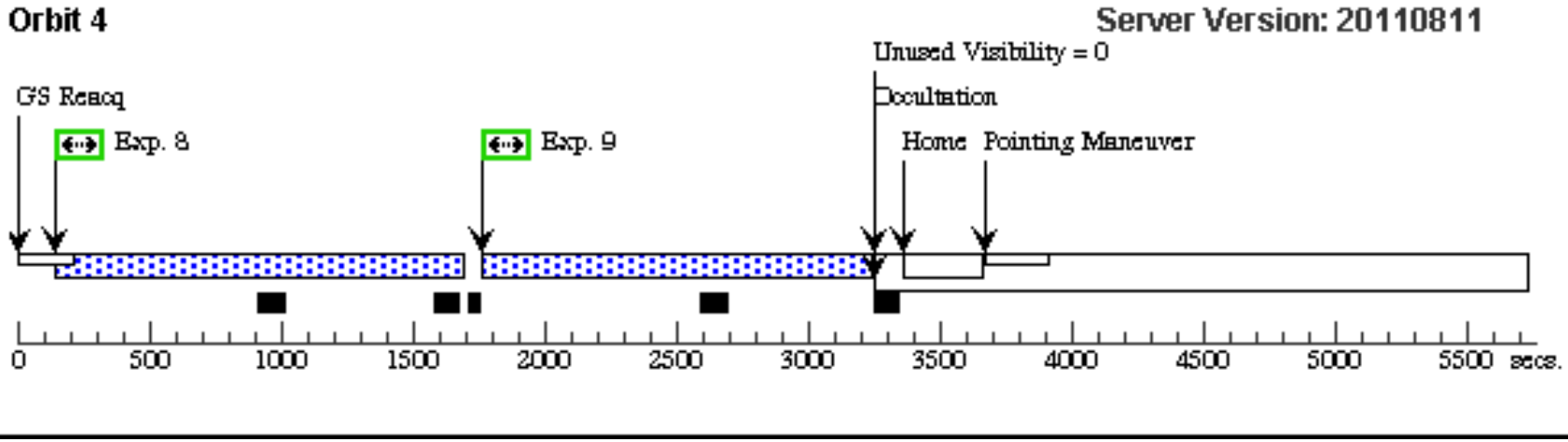
7	(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=770; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1426 Secs *[==>]*	***[3]***
Comments: G130M: O I, C II emission not detected in an ACS/SBC PR130L spectrum. *Ly-alpha emission: based on H-alpha flux/10, we estimate 6.6e-14 erg/cm2/s, which would correspond to 0.089 cts/s. Given the non-detection of O I emission with ACS, it is unlikely that any Ly-alpha emission will be detected*							
8	(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=666; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		1426 Secs *[==>]*	***[4]***
Comments: G130M: O I, C II emission not detected in an ACS/SBC PR130L spectrum. *Ly-alpha emission: based on H-alpha flux/10, we estimate 6.6e-14 erg/cm2/s, which would correspond to 0.089 cts/s. Given the non-detection of O I emission with ACS, it is unlikely that any Ly-alpha emission will be detected*							
9	(11) V-FM-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		1426 Secs *[==>]*	***[4]***
Comments: G130M: O I, C II emission not detected in an ACS/SBC PR130L spectrum. *Ly-alpha emission: based on H-alpha flux/10, we estimate 6.6e-14 erg/cm2/s, which would correspond to 0.089 cts/s. Given the non-detection of O I emission with ACS, it is unlikely that any Ly-alpha emission will be detected*							
10	(11) V-FM-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO SINGLE	1.5 Secs *[==>]*	***[5]***
Comments: V ranges from 13.7-14.7. 11s to saturation							
11	(11) V-FM-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		80 Secs *[==>(Split 1)]* *[==>(Split 2)]*	***[5]***
12	(11) V-FM-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			630 Secs *[==>]*	***[5]***
13	(11) V-FM-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1401 Secs *[==>]*	***[5]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	***[5]***

Orbit Structure








Orbit 4
Server Version: 20110811
Unused Visibility = 0
GS Reacq
Occultation
Exp. 8
Exp. 9
Home
Pointing Maneuver
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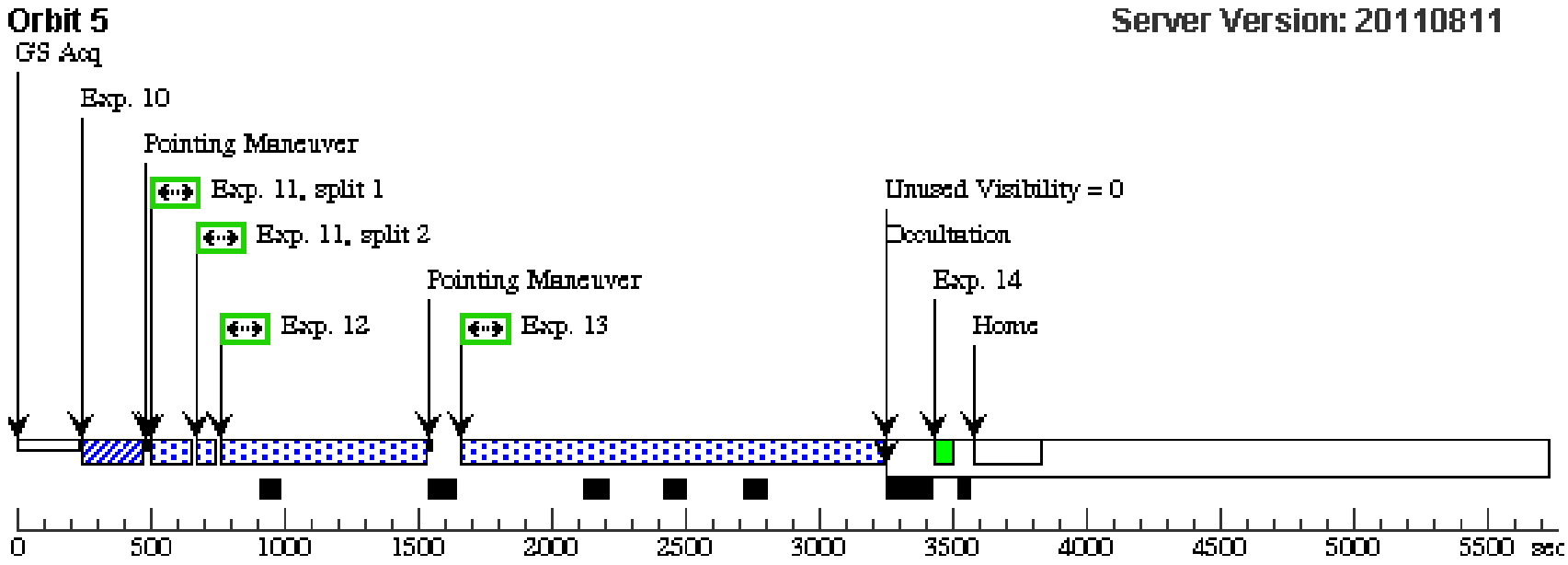
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.


Orbit 5
Server Version: 20110811
GS Acq
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
Exp. 12
Exp. 13
Unused Visibility = 0
Occultation
Exp. 14
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 11, completed Tue Aug 30 01:17:18 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	V-SU-AUR	RA: 04 55 59.3845 (73.9974354d)	Proper Motion RA: 0.00015 sec of time/yr	V=9.42	Reference Frame: ICRS
		Dec: +30 34 1.72 (30.56714d)	Proper Motion Dec: -0.025 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1991.251		

Comments: Ducourant et al. 2005
UPDATED: 23/12/09

Variability:
572 observations U=10.47 +/-0.25; full range: 10.13 -11.72 (Grankin et al. 2007)

COS ACQ:

A/BOA : 3.0 cts/s in brightest pixel

COS G130M:

No Ly-alpha detected (STIS G140L)
O I flux: 1.4e-13
0.026 cts/s in brightest pixel

COS G160M:

C IV flux: 2.4e-13 erg/cm2/s
0.04 cts/s in brightest pixel

STIS ACQ:
---
filter: O III 5007
B=10.2 => saturation in 90s

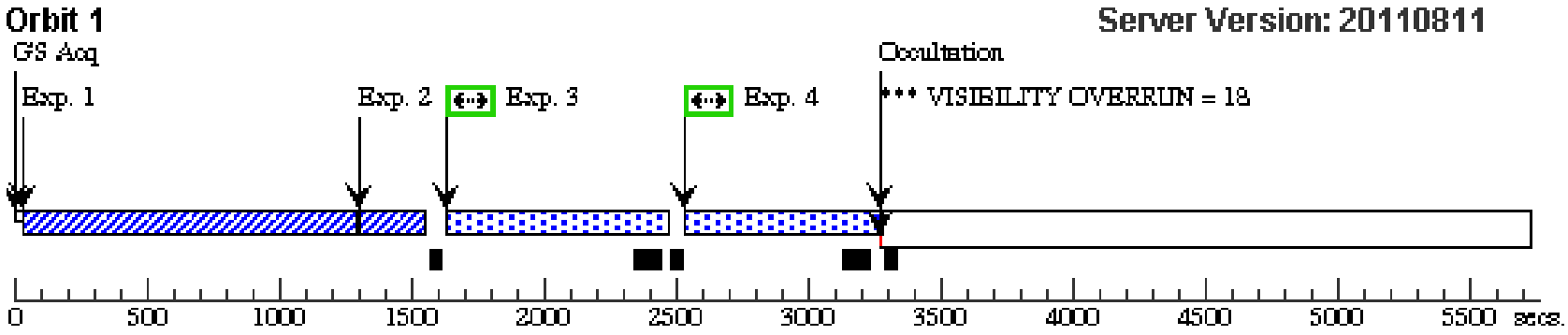
Exposures

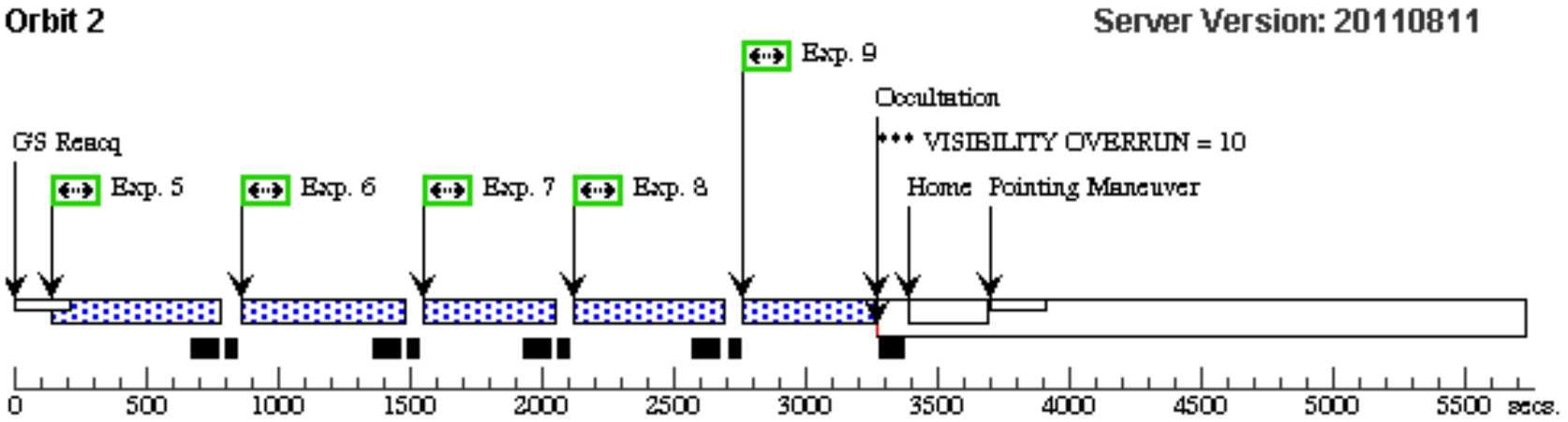
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(12) V-SU-AUR	COS/NUV, ACQ/SEARCH, BOA	MIRRORA	SCAN-SIZE=3; CENTER=FLUX-WT; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		75 Secs *[==>]*	 ***[1]***
	Comments: COS ACQ: ---------- *A/BOA : 3.0 cts/s in brightest pixel*								
2		(12) V-SU-AUR	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				75 Secs *[==>]*	 ***[1]***
	Comments: COS ACQ: ---------- *A/BOA : 3.0 cts/s in brightest pixel*								
3		(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=520; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			622 Secs *[==>]*	 ***[1]***
	Comments: COS G160M: --------- *C IV flux: 2.4e-13 erg/cm2/s* *0.04 cts/s in brightest pixel*								
4		(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=500; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			622 Secs *[==>]*	 ***[1]***
	Comments: COS G160M: --------- *C IV flux: 2.4e-13 erg/cm2/s* *0.04 cts/s in brightest pixel*								
5		(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=420; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			515 Secs *[==>]*	 ***[2]***
	Comments: COS G160M: --------- *C IV flux: 2.4e-13 erg/cm2/s* *0.04 cts/s in brightest pixel*								

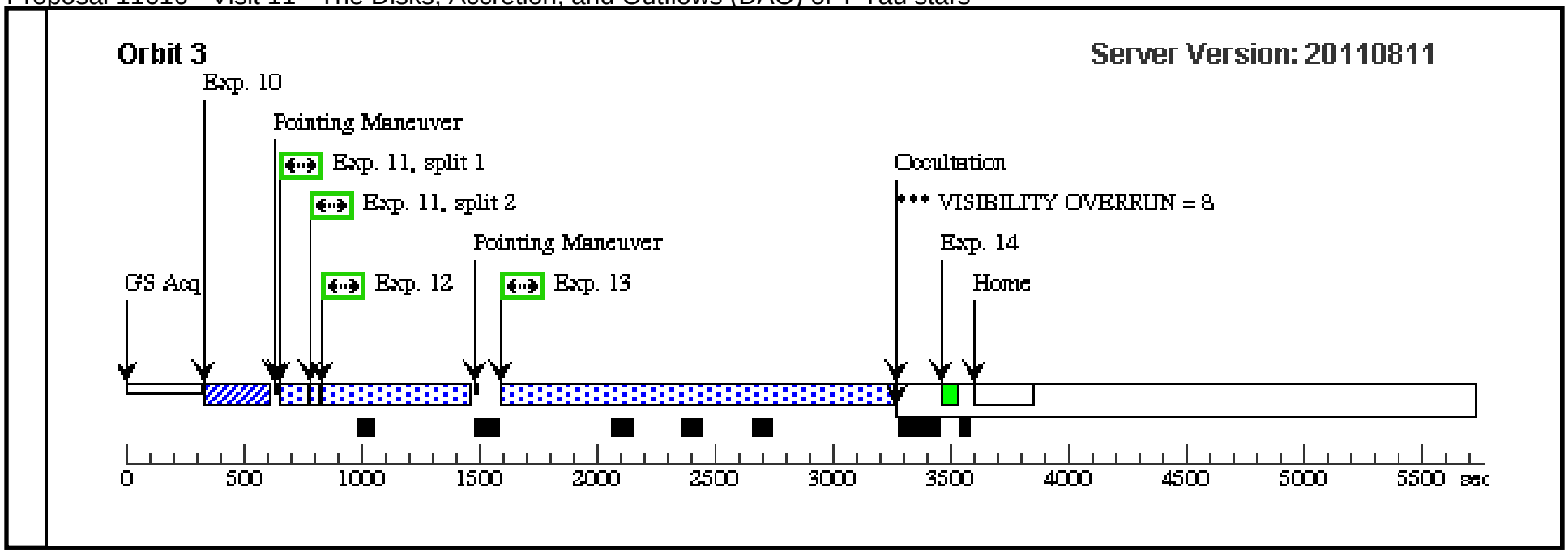
6	(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		447 Secs *[==>]*	 ***[2]***
Comments: COS G130M: --------- *No Ly-alpha detected (STIS G140L)* *O I flux: 1.4e-13* *0.026 cts/s in brightest pixel*							
7	(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		447 Secs *[==>]*	 ***[2]***
Comments: COS G130M: --------- *No Ly-alpha detected (STIS G140L)* *O I flux: 1.4e-13* *0.026 cts/s in brightest pixel*							
8	(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		447 Secs *[==>]*	 ***[2]***
Comments: COS G130M: --------- *No Ly-alpha detected (STIS G140L)* *O I flux: 1.4e-13* *0.026 cts/s in brightest pixel*							
9	(12) V-SU-AUR	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=550; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		447 Secs *[==>]*	 ***[2]***
Comments: COS G130M: --------- *No Ly-alpha detected (STIS G140L)* *O I flux: 1.4e-13* *0.026 cts/s in brightest pixel*							
10	(12) V-SU-AUR	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3	3 Secs *[==>]*	 ***[3]***
Comments: STIS ACQ: ------ *filter: O III 5007* *flux: 7e-13 erg/cm2/s/A at 5100 A => saturation in 90s*							

	11	(12) V-SU-AUR	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO	10 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(12) V-SU-AUR	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A		495 Secs *[==>]*	 ***[3]***
	13	(12) V-SU-AUR	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300	1489 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A		25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Occultation
*** VISIBILITY OVERRUN = 8
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 12 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 12, completed Tue Aug 30 01:17:20 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 12) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 12) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 12) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(Visit 12) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	V-DK-TAU	RA: 04 30 44.2480 (67.6843667d)	Proper Motion RA: 0.000445 sec of time/yr	V=12.6	Reference Frame: ICRS
		Dec: +26 01 24.58 (26.02349d)	Proper Motion Dec: -0.016 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2004.0		

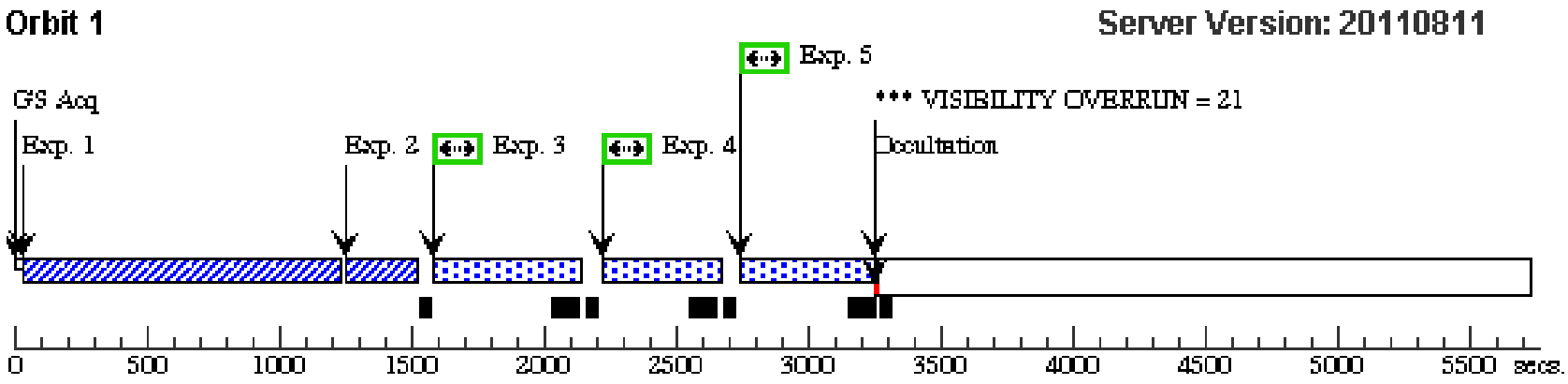
Comments: Ducourant et al. 2005
Position: F330W, J8MS07IAQ
UPDATED: 23/12/09

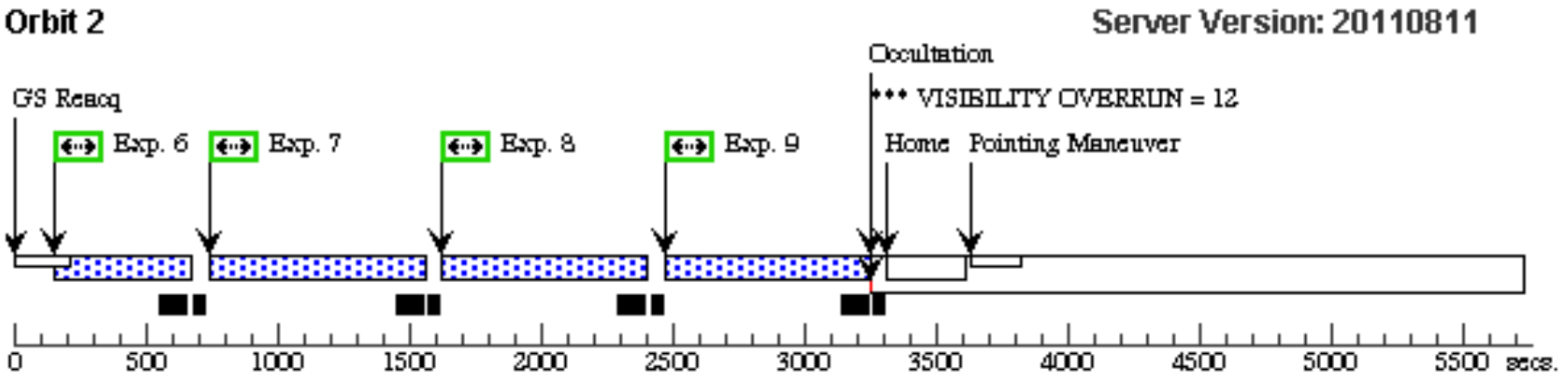
Exposures

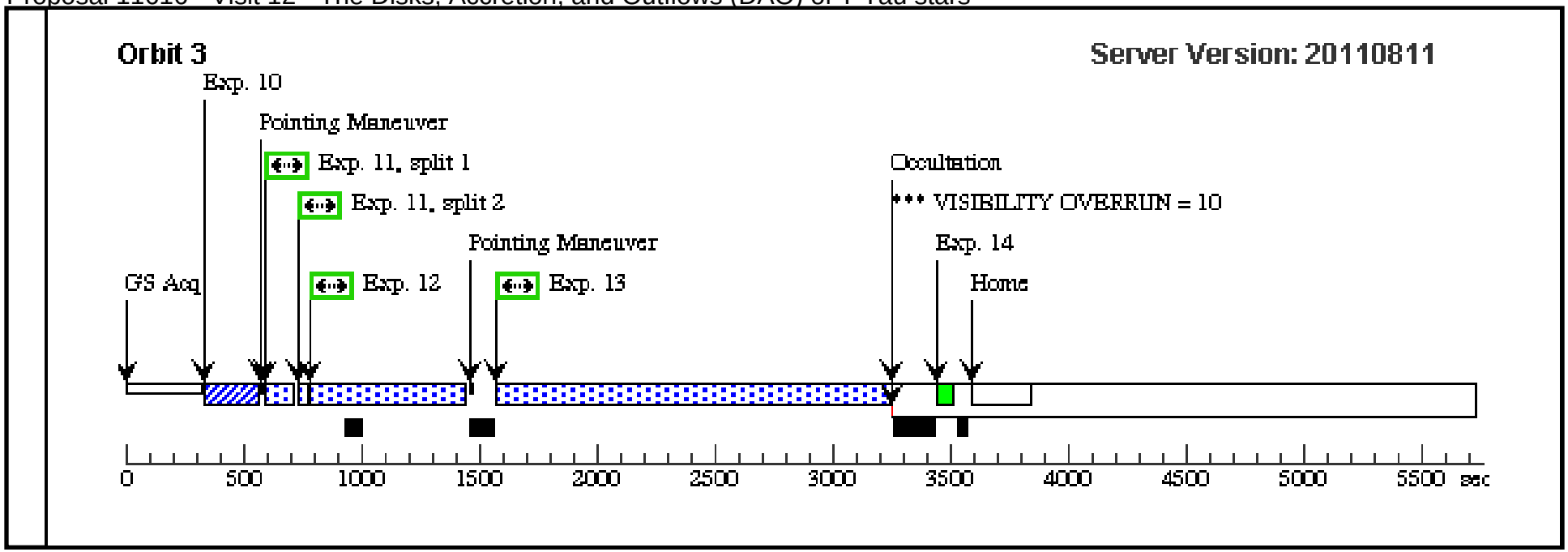
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(13) V-DK-TAU	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		69 Secs *[==>]*	 ***[1]***
2		(13) V-DK-TAU	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				69 Secs *[==>]*	 ***[1]***
3		(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=302; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			396 Secs *[==>]*	 ***[1]***
4		(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=302; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			396 Secs *[==>]*	 ***[1]***
5		(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=302; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			396 Secs *[==>]*	 ***[1]***
6		(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=302; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			397 Secs *[==>]*	 ***[2]***
7		(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=563; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			657 Secs *[==>]*	 ***[2]***
8		(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=563; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			657 Secs *[==>]*	 ***[2]***

	9	(13) V-DK-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=563; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		657 Secs *[==>]*	 ***[2]***
	10	(13) V-DK-TAU	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.4 Secs *[==>]*	 ***[3]***
	11	(13) V-DK-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		20 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(13) V-DK-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			520 Secs *[==>]*	 ***[3]***
	13	(13) V-DK-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1495 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Occultation
*** VISIBILITY OVERRUN = 10
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 13, failed Tue Aug 30 01:17:23 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	NAME-UX-TAU-A	RA: 04 30 3.9250 (67.5163542d) Dec: +18 13 49.19 (18.23033d) Equinox: J2000	Proper Motion RA: 0.000603 sec of time/yr Proper Motion Dec: -0.02742 arcsec/yr Parallax: 0.0067" Epoch of Position: 1998.9	V=10.7	Reference Frame: ICRS

Comments: Hipparcos position/proper motion
RA/DEC from WFPC2/F606W image, U44M3101R
UPDATED: 23/12/09

UX Tau is a K5+M2 binary, so all photometry and IUE observations include both stars. However, almost all of the U-band and UV flux is produced by the primary, so we can ignore the secondary.

Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat
FUV spectrum: uxtau_iue.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) NAME-UX-TAU-A	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		70 Secs *[==>]*	 ***[1]***

Comments: Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(14) NAME-UX-TAU-A	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs *[==>]*	 ***[1]***

Comments: Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			407 Secs *[==>]*	 ***[1]***

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
4		(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			407 Secs *[==>]*	 ***[1]***

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

5	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	407 Secs *[==>]*	***[1]***

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

6	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	407 Secs *[==>]*	***[2]***

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

7	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=555; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	647 Secs *[==>]*	***[2]***

Comments: FUV spectrum: uxtau_iue.dat

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

8	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=555; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	647 Secs *[==>]*	***[2]***

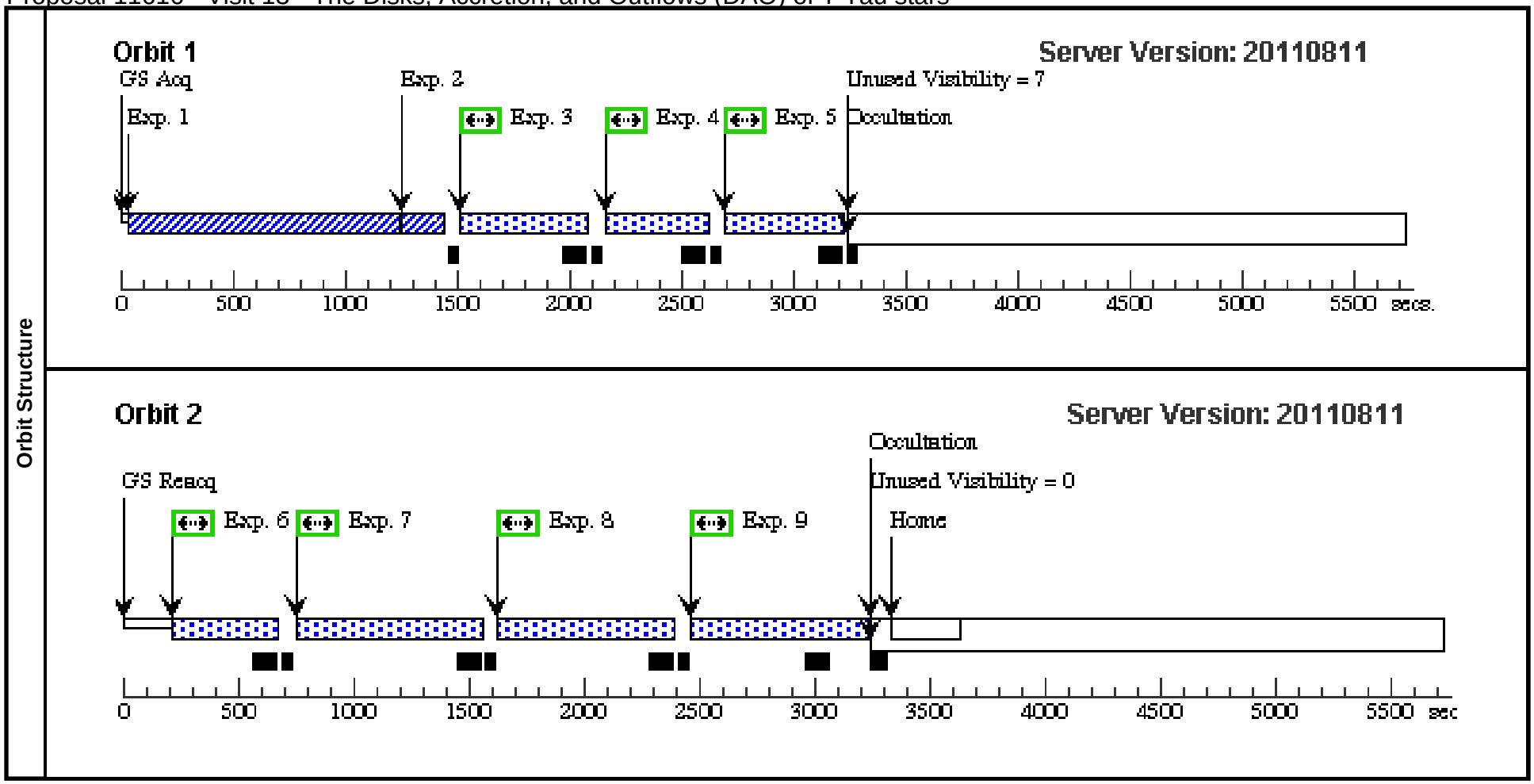
Comments: FUV spectrum: uxtau_iue.dat

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

9	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=400; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	647 Secs *[==>]*	***[2]***

Comments: FUV spectrum: uxtau_iue.dat

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s


Orbit Structure
Orbit 1
Server Version: 20110811
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Unused Visibility = 7
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20110811
GS Reacq
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Occultation
Unused Visibility = 0
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 14 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 14, completed Tue Aug 30 01:17:24 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

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

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

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	V-DR-TAU	RA: 04 47 6.2190 (71.7759125d)	Proper Motion RA: 0.000348 sec of time/yr	V=13.6	Reference Frame: ICRS
		Dec: +16 58 42.87 (16.97858d)	Proper Motion Dec: -0.017 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1994.305		

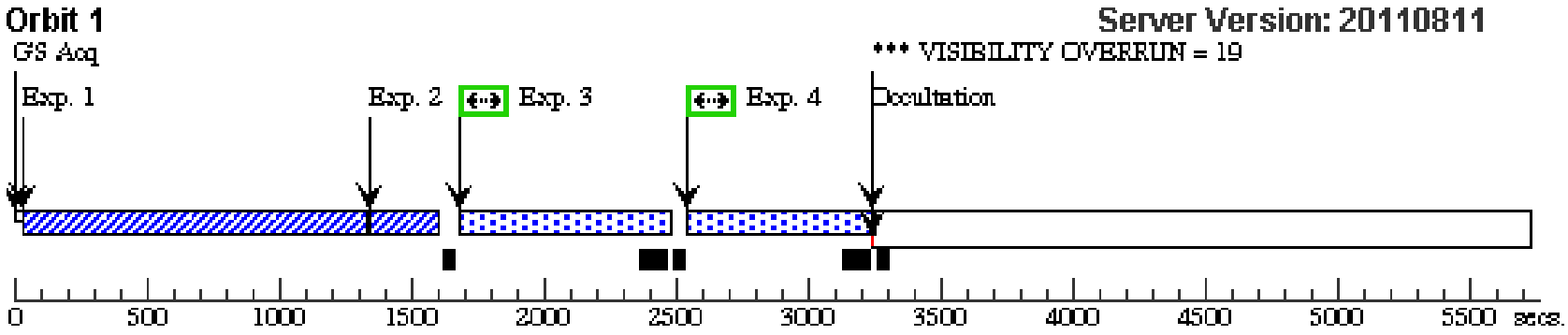
Comments: Ducourant et al. 2005
UPDATED: 23/12/09

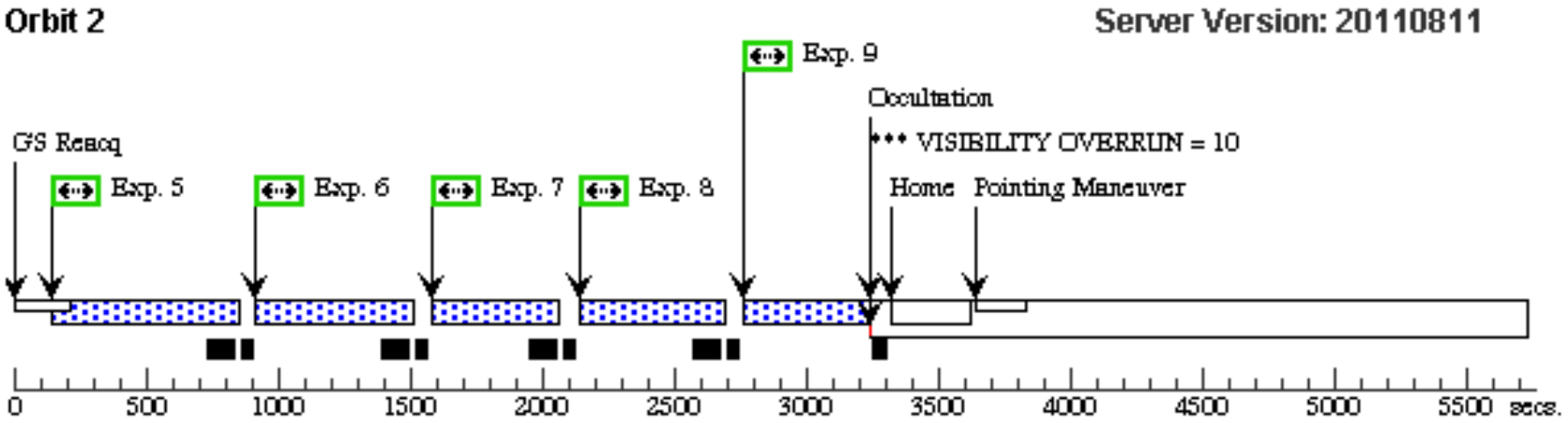
Exposures

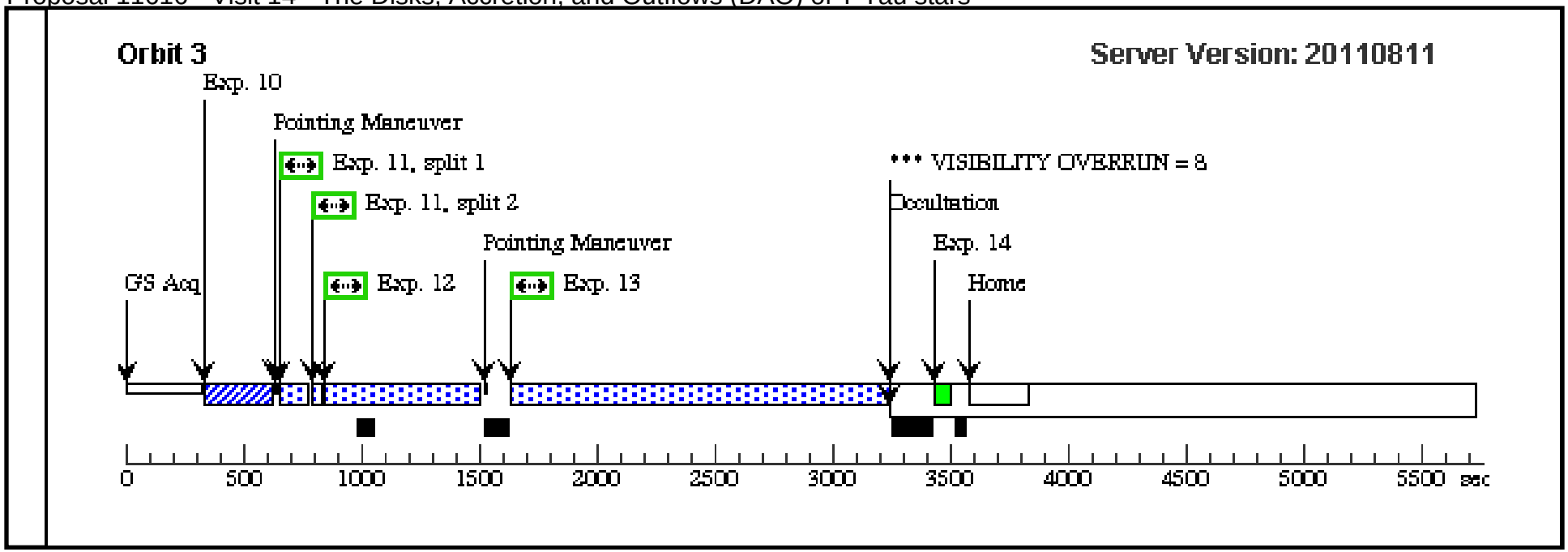
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(15) V-DR-TAU	COS/NUV, ACQ/SEARCH, BOA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		80 Secs *[==>]*	 ***[1]***
2		(15) V-DR-TAU	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				80 Secs *[==>]*	 ***[1]***
3		(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=480; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			582 Secs *[==>]*	 ***[1]***
4		(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=480; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			582 Secs *[==>]*	 ***[1]***
5		(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=483; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			582 Secs *[==>]*	 ***[2]***
6		(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=330; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			426 Secs *[==>]*	 ***[2]***
7		(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=330; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			426 Secs *[==>]*	 ***[2]***
8		(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=330; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			426 Secs *[==>]*	 ***[2]***

	9	(15) V-DR-TAU	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1000; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		426 Secs *[==>]*	 ***[2]***
	10	(15) V-DR-TAU	STIS/CCD, ACQ, F28X50OII	MIRROR		GS ACQ SCENARIO BASE1B3	8 Secs *[==>]*	 ***[3]***
	11	(15) V-DR-TAU	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		10 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(15) V-DR-TAU	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			526 Secs *[==>]*	 ***[3]***
	13	(15) V-DR-TAU	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1426 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
*** VISIBILITY OVERRUN = 8
Occultation
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 15 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 15, completed Tue Aug 30 01:17:26 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 15) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT

(Visit 15) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(16)	NAME-RW-AUR-A	RA: 05 07 49.5060 (76.9562750d)	Proper Motion RA: 4 mas/yr	V=10.32	Reference Frame: ICRS
		Dec: +30 24 5.00 (30.40139d)	Proper Motion Dec: -23 mas/yr		
		Equinox: J2000	Epoch of Position: 2004.0		

Comments: Position measured from J8MSA9QKQ, ACS F330W
Proper motion from Ducourant et al. (2005)
UPDATED: 24/12/09

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(16) NAME-RW-AUR-A	COS/NUV, ACQ/SEARCH, PSA	G230L 3360 A	SCAN-SIZE=3; STEP-SIZE=1.767; CENTER=FLUX-WT-FLR	GS ACQ SCENARIO BASE1B3		7 Secs *[==>]*	 ***[1]***

Comments: G230L, 3360 chosen to avoid Mg II line on detector

Brightest pixel: 0.7 cts/s
Count rate in Stripes A,B: 744, 821 respectively
S/N=40 in 1.1s.

Both far below the brightness limits of 50 cts/pix/s, 30000 cts/stripe/s

Variability:

If 1 mag fainter, S/N=40 in 4s.
If 2.5 mag brighter, 8000 cts/s/stripe and 7 cts/s in brightest pixel

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(16) NAME-RW-AUR-A	COS/NUV, ACQ/PEAKXD, PSA	G285M 2850 A	STRIPE=MEDIUM	GS ACQ SCENARIO BASE1B3		40 Secs *[==>]*	 ***[1]***

Comments: Grating/wavelength setting selected to avoid Mg II; G230L/3360 A setting not available.

80 cts/stripe, brightest pixel=0.055 cts/s, S/N=40 in 20s

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(16) NAME-RW-AUR-A	COS/NUV, ACQ/PEAKD, PSA	G285M 2850 A	CENTER=FLUX-WT-FLR; NUM-POS=7; STEP-SIZE=0.6	GS ACQ SCENARIO BASE1B3		18 Secs *[==>]*	 ***[1]***

Comments: Grating/wavelength setting selected to avoid Mg II, minimize switches between exposure 2 and 3

80 cts/stripe, brightest pixel=0.055 cts/s, S/N=40 in 9s

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
4		(16) NAME-RW-AUR-A	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				50 Secs *[==>]*	 ***[1]***

Comments: Brightest pixel from rwaur_uvopt.dat: 5.0 cts/s

Variability (Grankin et al. 2007) U=10.9 +/- 0.5 (1-sigma), full range of 9.5-12.6 in 254 observations

input observation: U=12.1
NUV acquisition from IUE spectrum: 5.0 cts/s
If U=10 => 34 cts/s (97% confidence)
If U=9.5 => 50 cts/s (99% confidence that the count rate will be below this rate)

****In the event that U<9.5, the brightness violation would be minor. If this image is not obtained, the observations will still be usable because the acquisition was done with a dispersed light acquisition to prevent an extremely rare even from causing an orbit loss. The object would likely be too faint for a BOA/MIRRORB image****

OTHER OBJECTS IN PSA FIELD:

An ACS HRC F330W image, J8MSA9QKQ, shows only RW Aur A and B. The next brightest object in the field is 1000 times fainted than RW Aur A and about 5000 times fainter than RW Aur A, which is saturated. Two ACS PR200L images of RW Aur were obtained in 2004: j8msa9011 and j8msa9021 (first short, second longer). The faint third object has an approximate NUV continuum flux of 1e-16 erg/cm2/s/A, about 3500 times fainter than RW Aur A. From this image, I estimate about 3 cts/s if this object falls onto the PSA/MIRRORA during the BOA/MIRRORA acquisition, within the brightness limits of COS.

5	(16) NAME-RW-AU R-A COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=445; EXTENDED=NO; FLASH=YES; FP-POS=2; SEGMENT=BOTH	539 Secs *[==>]*	***[1]***

Comments: scaling twhya_e140m.dat

C IV flux from IUE PMS archive: 2.3e-13 erg/cm2/s
By comparison with TW Hya, this line will yield 0.04 cts/s, much less than the 0.7 cts/s limit

VARIABILITY:
---
7 FUV spectra of C IV from RW Aur (6 IUE+1 GHRS): average flux of 2.0e-13 erg/cm2/s, max=3.7e-13 erg/cm2/s (=> 0.1 cts/s, safe).

If U=11.8 (about the level for the IUE observation), then U=9.8 => 0.7 cts/s, at the limit. From the Grankin et al. variability measurements, 3 of 254 U-band measurements were brighter than 9.9. This observation h as a 99% chance of being below the brightness limit.

6	(16) NAME-RW-AU R-A COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=2; SEGMENT=BOTH	539 Secs *[==>]*	***[1]***

Comments: scaling twhya_e140m.dat

C IV flux from IUE PMS archive: 2.3e-13 erg/cm2/s
By comparison with TW Hya, this line will yield 0.04 cts/s, much less than the 0.7 cts/s limit

VARIABILITY:
---
7 FUV spectra of C IV from RW Aur (6 IUE+1 GHRS): average flux of 2.0e-13 erg/cm2/s, max=3.7e-13 erg/cm2/s (=> 0.1 cts/s for the max, safe).

If U=11.8 (about the level for the IUE observation), then U=9.8 => 0.7 cts/s, at the limit. From the Grankin et al. variability measurements, 3 of 254 U-band measurements were brighter than 9.9. This observation h as a 99% chance of being below the brightness limit.

7	(16) NAME-RW-AU R-A COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=445; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	539 Secs *[==>]*	***[2]***

Comments: scaling twhya_e140m.dat

C IV flux fom IUE PMS archive: 2.3e-13 erg/cm2/s
By comparison with TW Hya, this line will yield 0.04 cts/s, much less than the 0.7 cts/s limit

VARIABILITY:
---
7 FUV spectra of C IV from RW Aur (6 IUE+1 GHRS): average flux of 2.0e-13 erg/cm2/s, max=3.7e-13 erg/cm2/s (=> 0.1 cts/s, safe).

If U=11.8 (about the level for the IUE observation), then U=9.8 => 0.7 cts/s, at the limit. From the Grankin et al. variability measurements, 3 of 254 U-band measurements were brighter than 9.9. This observation h as a 99% chance of being below the brightness limit.

8	(16) NAME-RW-AU R-A	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	441 Secs *[==>]*	 ***[2]***

Comments: scaling twhya_e140m.dat

O I flux from IUE PMS archive spectrum: 2.5e-13 erg/cm2/s
By comparison with TW Hya, this triplet will yield 0.05 cts/s, much less than the 0.7 cts/s limit

Ly-alpha: No Taurus star has come close to violating the brightness limit at Ly-alpha because the N(H I) column attenuates most of the Ly-alpha emission. White & Ghez estimate A_v=0.4 to RW Aur A. The H-alpha emission of 1e-11 erg/cm2/s would lead to a maximum Ly-alpha flux of 1.0e-12 ergs/cm2/s, or 0.14 cts/s in the brightest pixel. Given N(H I), it's highly likely that the count rate at Ly-alpha will be much lower than this .

VARIABILITY:
---
5 FUV spectra of O I from RW Aur (all IUE): average flux of 2.8e-13 erg/cm2/s, max=4.9e-13 erg/cm2/s (=> 0.1 cts/s, safe).

U-band/FUV variability analysis similar to that for C IV

9	(16) NAME-RW-AU R-A	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	441 Secs *[==>]*	 ***[2]***

Comments: scaling twhya_e140m.dat

O I flux from IUE PMS archive spectrum: 2.5e-13 erg/cm2/s
By comparison with TW Hya, this triplet will yield 0.05 cts/s, much less than the 0.7 cts/s limit

Ly-alpha: No Taurus star has come close to violating the brightness limit at Ly-alpha because the N(H I) column attenuates most of the Ly-alpha emission. White & Ghez estimate A_v=0.4 to RW Aur A. The H-alpha emission of 1e-11 erg/cm2/s would lead to a maximum Ly-alpha flux of 1.0e-12 ergs/cm2/s, or 0.14 cts/s in the brightest pixel. Given N(H I), it's highly likely that the count rate at Ly-alpha will be much lower than this .

VARIABILITY:
---
5 FUV spectra of O I from RW Aur (all IUE): average flux of 2.8e-13 erg/cm2/s, max=4.9e-13 erg/cm2/s (=> 0.1 cts/s, safe).

U-band/FUV variability analysis similar to that for C IV

10	(16) NAME-RW-AU R-A	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	441 Secs *[==>]*	***[2]***

Comments: scaling twhya_e140m.dat

O I flux from IUE PMS archive spectrum: 2.5e-13 erg/cm2/s
By comparison with TW Hya, this triplet will yield 0.05 cts/s, much less than the 0.7 cts/s limit

Ly-alpha: No Taurus star has come close to violating the brightness limit at Ly-alpha because the N(H I) column attenuates most of the Ly-alpha emission. White & Ghez estimate A_v=0.4 to RW Aur A. The H-alpha emission of 1e-11 erg/cm2/s would lead to a maximum Ly-alpha flux of 1.0e-12 ergs/cm2/s, or 0.14 cts/s in the brightest pixel. Given N(H I), it's highly likely that the count rate at Ly-alpha will be much lower than this .

VARIABILITY:
---
5 FUV spectra of O I from RW Aur (all IUE): average flux of 2.8e-13 erg/cm2/s, max=4.9e-13 erg/cm2/s (=> 0.1 cts/s, safe).

U-band/FUV variability analysis similar to that for C IV

11	(16) NAME-RW-AU R-A	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=350; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	441 Secs *[==>]*	***[2]***

Comments: scaling twhya_e140m.dat

O I flux from IUE PMS archive spectrum: 2.5e-13 erg/cm2/s
By comparison with TW Hya, this triplet will yield 0.05 cts/s, much less than the 0.7 cts/s limit

Ly-alpha: No Taurus star has come close to violating the brightness limit at Ly-alpha because the N(H I) column attenuates most of the Ly-alpha emission. White & Ghez estimate A_v=0.4 to RW Aur A. The H-alpha emission of 1e-11 erg/cm2/s would lead to a maximum Ly-alpha flux of 1.0e-12 ergs/cm2/s, or 0.14 cts/s in the brightest pixel. Given N(H I), it's highly likely that the count rate at Ly-alpha will be much lower than this .

VARIABILITY:
---
5 FUV spectra of O I from RW Aur (all IUE): average flux of 2.8e-13 erg/cm2/s, max=4.9e-13 erg/cm2/s (=> 0.1 cts/s, safe).

U-band/FUV variability analysis similar to that for C IV

12	(16) NAME-RW-AU R-A	STIS/CCD, ACQ, F28X50OII	MIRROR	GS ACQ SCENARIO BASE1B3	14 Secs *[==>]*	***[3]***

Comments: from rwaur_nuvopt.dat:

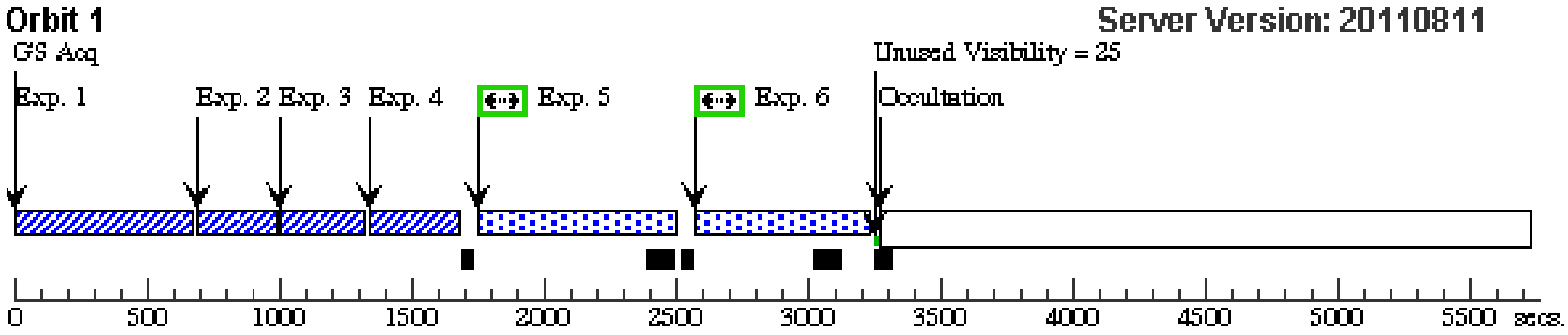
Time to S/N=40: 3.5s
Time to saturation: 56s

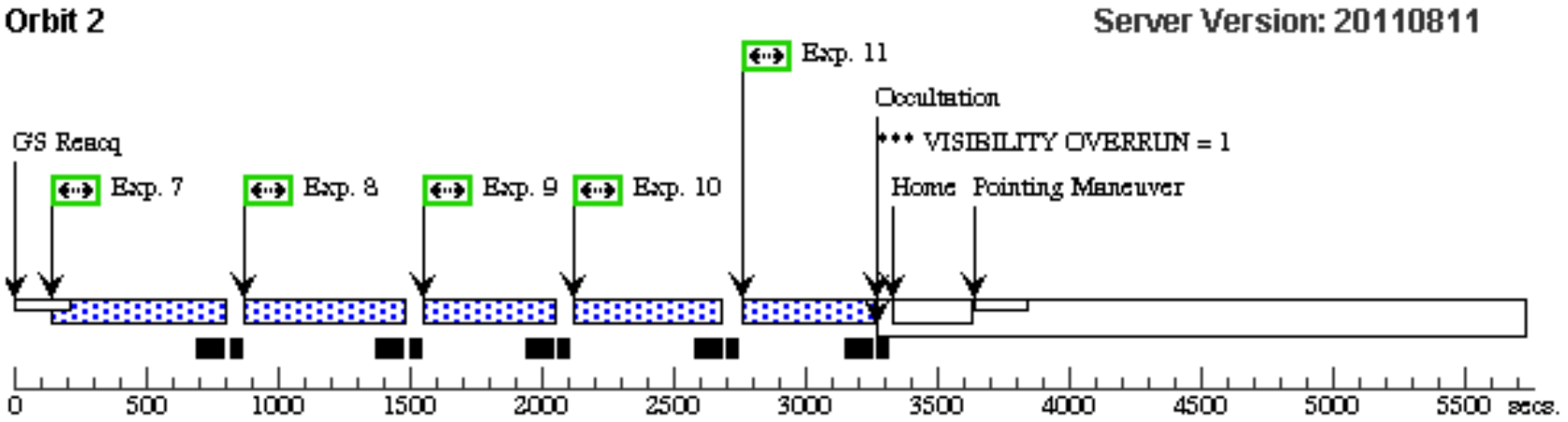
13	(16) NAME-RW-AU R-A	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO	15 Secs *[==>(Split 1)]* *[==>(Split 2)]*	***[3]***

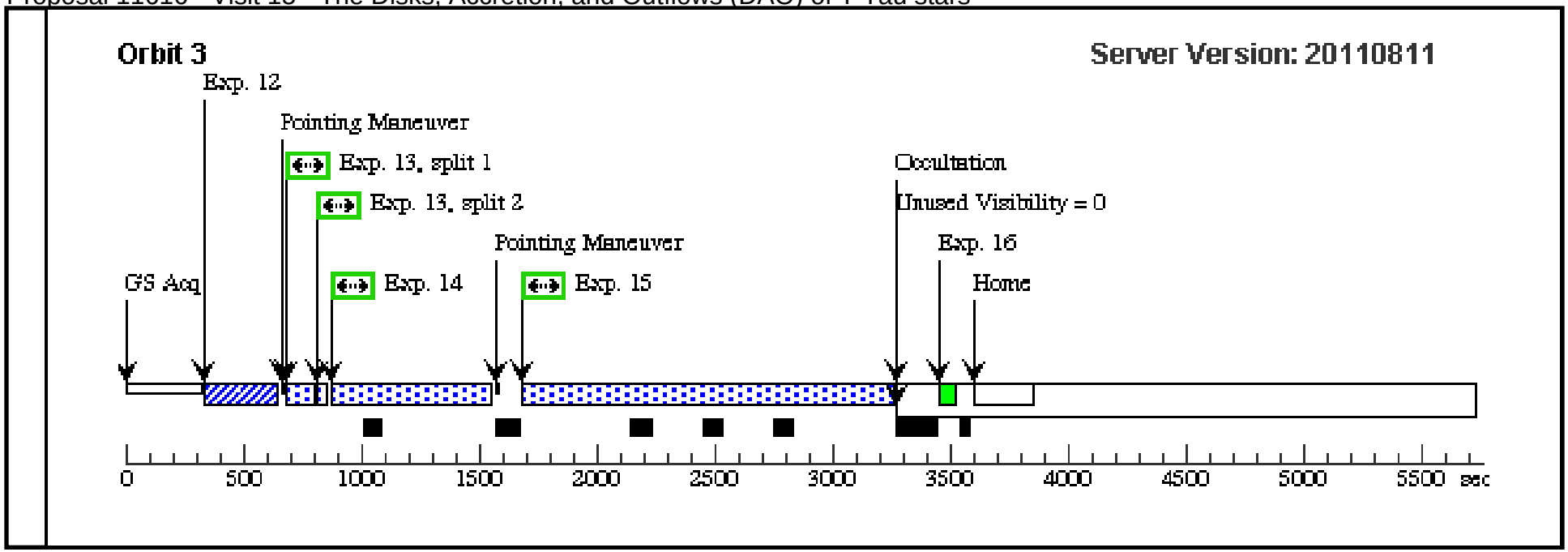
Comments: at 3200 A: S/N=24/resel
brightest pixel (4860): 243 cts/s
saturation in 135s

	14	(16) NAME-RW-AUR-A	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A		545 Secs *[==>]*	 ***[3]***
	Comments: S/N=15 at 1800 A *Brightest pixel: 25 cts/s at 2800 A*						
	15	(16) NAME-RW-AUR-A	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300	1395 Secs *[==>]*	 ***[3]***
	Comments: Brightest pixel: 1.35 cts/s						
	16	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A		25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Pointing Maneuver
Exp. 13, split 1
Exp. 13, split 2
Occultation
Unused Visibility = 0
Pointing Maneuver
Exp. 16
GS Acq
Exp. 14
Exp. 15
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 16, completed Tue Aug 30 01:17:29 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 16) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(Visit 16) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(17)	V-CS-CHA	RA: 11 02 25.2200 (165.6050833d)	Proper Motion RA: -20 mas/yr	V=11.69	Reference Frame: ICRS
		Dec: -77 33 36.36 (-77.56010d)	Proper Motion Dec: 9 mas/yr		
		Equinox: J2000	Epoch of Position: 2008.0		

Comments: Ducourant et al. 2005
UPADATED: 23/12/09

Position updated: 28/9/2010, from ACS/SBC image

Spectra: cscha_iue.dat

VARIABILITY:

CS Cha is a CTTS with U-band emission dominated by accretion. The U-band variability should be similar to NUV and FUV variability.

Covino et al. (1992) present UBVRI photometry. In 11 epochs, U=13.34 +/- 0.16, with a full range from 13.06 - 13.60 mag. Guenther & Emerson (1997) present a few H-alpha measurements showing a flux that changes by from min to max. by 1.6 over a short period (days). Similar variability was seen in Mg II emission in three IUE NUV spectra.

To be conservative, I will multiply estimates by a factor of 4 rather than1.6.

COS ACQ:

B/PSA: 4.4 cts/s in brightest pixel (accounting for variability, mulitply by 4 => 18 cts/pix, below the brightness limit). 51s => S/N=40

G160M:

C IV 1549 A flux: 1.0e-13 erg/cm2/s. Using TW Hya as a spectral template yields 0.017 cts/s, well below the threshold.

G130M:

Neither C II nor O I was detected with IUE, with an upper limit of about 5e-14 erg/cm2/s. This upper limit translates to about 0.02 cts/s in the brightest pixel.

The measured H-alpha flux by Guenther & Emerson (1997) is 1.2e-12 erg/cm2/s. Since CS Cha is associated with a molecular cloud, I multiply the H-alpha flux by 0.1 to estimate a Ly-alpha flux of 1.2e-13 erg/cm2/s. This yields 0.016 cts/s in the brightest pixel.

Alternately, the extinction is Av=0.8 mag (Espaillat et al. 2007). If I conservatively use Av=0.5, apply log N(H I)=20.9, and scale the Ly-alpha flux from TW Hya by the ratio of H-alpha line fluxes, I get 0.009 cts/s in the brightest pixel.

With either option, there's plenty of room below the brightness limit.

STIS G230L: Mg II: 4.2 cts/s from IUE flux of 2.8e-13 erg/cm2/s and scaling STIS E230M spectrum of TW Hya (Mg II from TW Hya: 3.2e-12 erg/cm2/s).

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(17) V-CS-CHA	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		53 Secs *[==>]*	 ***[1]***

Comments: Spectra: cscha_iue.dat

VARIABILITY:

CS Cha is a CTTS with U-band emission dominated by accretion. The U-band variability should be similar to NUV and FUV variability.

Covino et al. (1992) present UBVRI photometry. In 11 epochs, U=13.34 +/- 0.16, with a full range from 13.06 - 13.60 mag. Guenther & Emerson (1997) present a few H-alpha measurements showing a flux that changes by from min to max. by 1.6 over a short period (days). Similar variability was seen in Mg II emission in three IUE NUV spectra.

To be conservative, I will multiply estimates by a factor of 4 rather than1.6.

COS ACQ:

B/PSA: 4.4 cts/s in brightest pixel (accounting for variability, mulitply by 4 => 18 cts/pix, below the brightness limit). 51s => S/N=40

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(17) V-CS-CHA	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				34 Secs *[==>]*	 ***[1]***

Comments: Spectra: cscha_iue.dat

VARIABILITY:

CS Cha is a CTTS with U-band emission dominated by accretion. The U-band variability should be similar to NUV and FUV variability.

Covino et al. (1992) present UBVRI photometry. In 11 epochs, U=13.34 +/- 0.16, with a full range from 13.06 - 13.60 mag. Guenther & Emerson (1997) present a few H-alpha measurements showing a flux that changes by from min to max. by 1.6 over a short period (days). Similar variability was seen in Mg II emission in three IUE NUV spectra.

To be conservative, I will multiply estimates by a factor of 4 rather than1.6.

COS ACQ:

B/PSA: 4.4 cts/s in brightest pixel (accounting for variability, mulitply by 4 => 18 cts/pix, below the brightness limit). 51s => S/N=40

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=4900; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			589 Secs *[==>]*	 ***[1]***

Comments: G130M:

Neither C II nor O I was detected with IUE, with an upper limit of about 5e-14 erg/cm2/s. This upper limit translates to about 0.02 cts/s in the brightest pixel.

The measured H-alpha flux by Guenther & Emerson (1997) is 1.2e-12 erg/cm2/s. Since CS Cha is associated with a molecular cloud, I multiply the H-alpha flux by 0.1 to estimate a Ly-alpha flux of 1.2e-13 erg/cm2/s. This yields 0.016 cts/s in the brightest pixel.

Alternately, the extinction is Av=0.8 mag (Espaillat et al. 2007). If I conservatively use Av=0.5, apply log N(H I)=20.9, and scale the Ly-alpha flux from TW Hya by the ratio of H-alpha line fluxes, I get 0.009 cts/s in the brightest pixel.

With either option, there's plenty of room below the brightness limit.

4	(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=490; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	589 Secs *[==>]*	***[1]***

Comments: G130M:

Neither C II nor O I was detected with IUE, with an upper limit of about 5e-14 erg/cm2/s. This upper limit translates to about 0.02 cts/s in the brightest pixel.

The measured H-alpha flux by Guenther & Emerson (1997) is 1.2e-12 erg/cm2/s. Since CS Cha is associated with a molecular cloud, I multiply the H-alpha flux by 0.1 to estimate a Ly-alpha flux of 1.2e-13 erg/cm2/s. This yields 0.016 cts/s in the brightest pixel.

Alternately, the extinction is Av=0.8 mag (Espaillat et al. 2007). If I conservatively use Av=0.5, apply log N(H I)=20.9, and scale the Ly-alpha flux from TW Hya by the ratio of H-alpha line fluxes, I get 0.009 cts/s in t he brightest pixel.

With either option, there's plenty of room below the brightness limit.

5	(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=490; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	589 Secs *[==>]*	***[1]***

Comments: G130M:

Neither C II nor O I was detected with IUE, with an upper limit of about 5e-14 erg/cm2/s. This upper limit translates to about 0.02 cts/s in the brightest pixel.

The measured H-alpha flux by Guenther & Emerson (1997) is 1.2e-12 erg/cm2/s. Since CS Cha is associated with a molecular cloud, I multiply the H-alpha flux by 0.1 to estimate a Ly-alpha flux of 1.2e-13 erg/cm2/s. This yields 0.016 cts/s in the brightest pixel.

Alternately, the extinction is Av=0.8 mag (Espaillat et al. 2007). If I conservatively use Av=0.5, apply log N(H I)=20.9, and scale the Ly-alpha flux from TW Hya by the ratio of H-alpha line fluxes, I get 0.009 cts/s in t he brightest pixel.

With either option, there's plenty of room below the brightness limit.

6	(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=495; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	589 Secs *[==>]*	***[2]***

Comments: G130M:

Neither C II nor O I was detected with IUE, with an upper limit of about 5e-14 erg/cm2/s. This upper limit translates to about 0.02 cts/s in the brightest pixel.

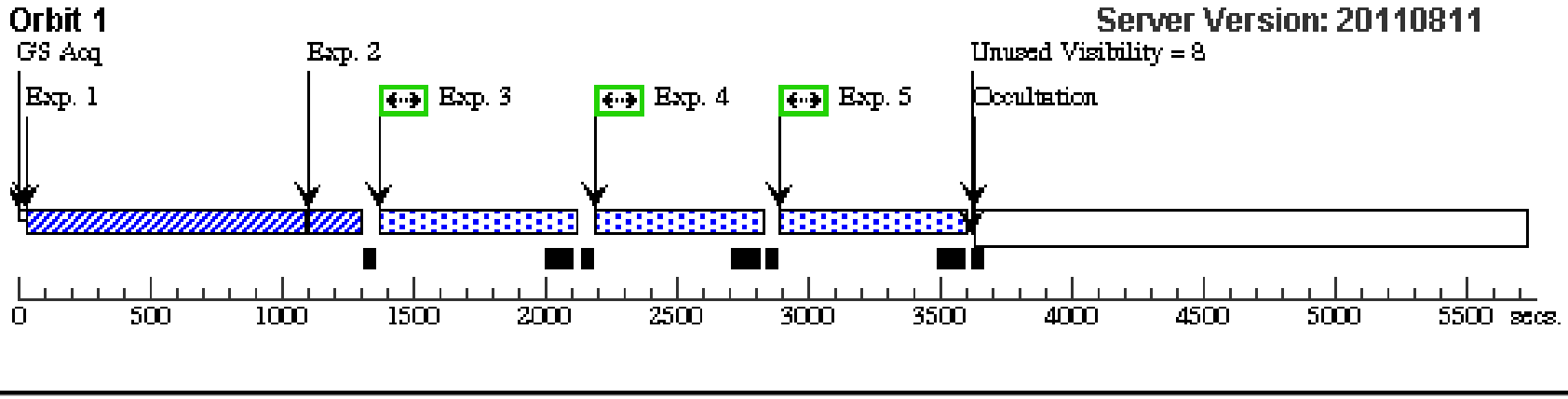
The measured H-alpha flux by Guenther & Emerson (1997) is 1.2e-12 erg/cm2/s. Since CS Cha is associated with a molecular cloud, I multiply the H-alpha flux by 0.1 to estimate a Ly-alpha flux of 1.2e-13 erg/cm2/s. This yields 0.016 cts/s in the brightest pixel.

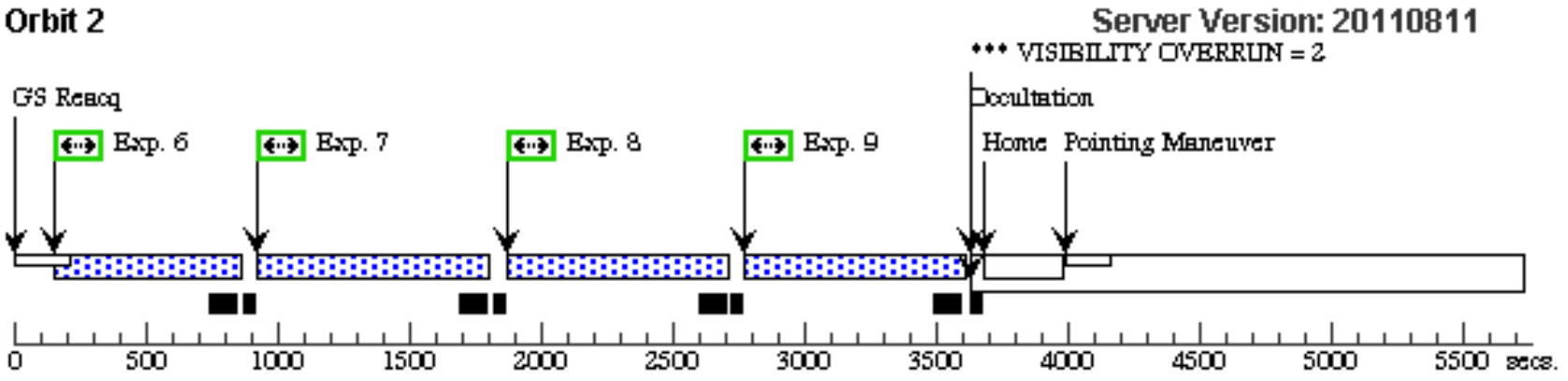
Alternately, the extinction is Av=0.8 mag (Espaillat et al. 2007). If I conservatively use Av=0.5, apply log N(H I)=20.9, and scale the Ly-alpha flux from TW Hya by the ratio of H-alpha line fluxes, I get 0.009 cts/s in t he brightest pixel.

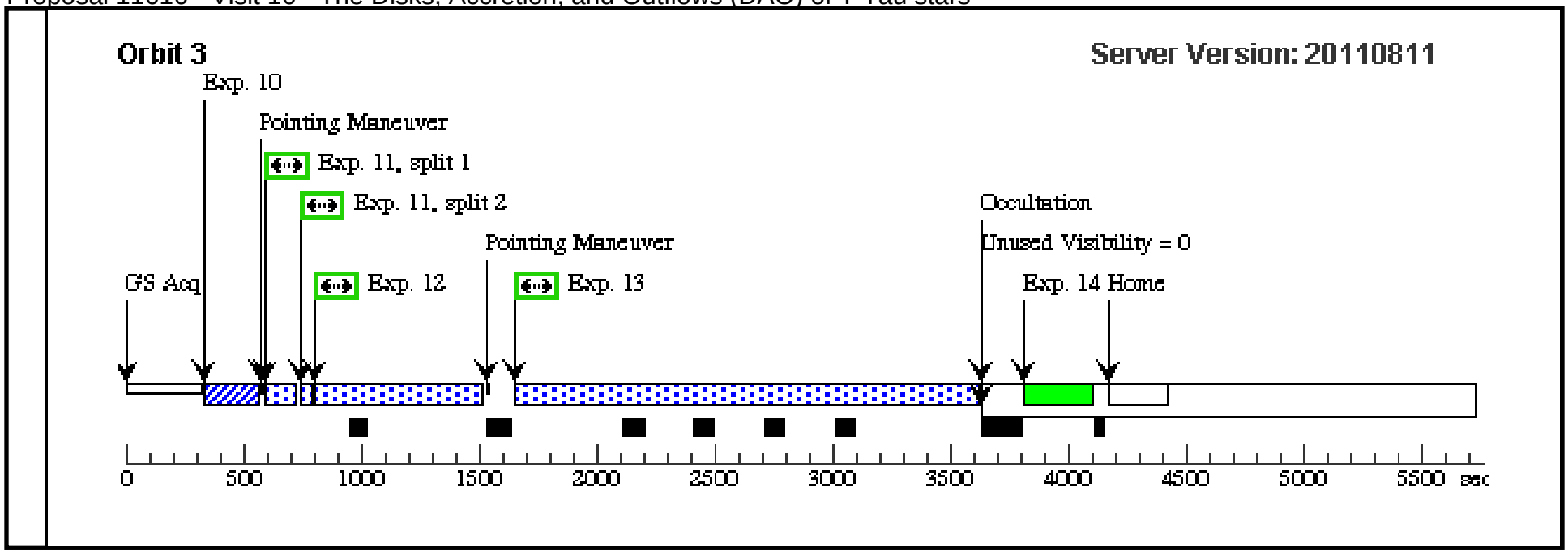
With either option, there's plenty of room below the brightness limit.

7	(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=625; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		718 Secs *[==>]*	 ***[2]***
Comments: G160M: --- *C IV 1549 A flux: 1.0e-13 erg/cm2/s. Using TW Hya as a spectral template yields 0.017 cts/s, well below the threshold.*							
8	(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=625; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		718 Secs *[==>]*	 ***[2]***
Comments: G160M: --- *C IV 1549 A flux: 1.0e-13 erg/cm2/s. Using TW Hya as a spectral template yields 0.017 cts/s, well below the threshold.*							
9	(17) V-CS-CHA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=614; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		718 Secs *[==>]*	 ***[2]***
Comments: G160M: --- *C IV 1549 A flux: 1.0e-13 erg/cm2/s. Using TW Hya as a spectral template yields 0.017 cts/s, well below the threshold.*							
10	(17) V-CS-CHA	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.2 Secs *[==>]*	 ***[3]***
Comments: saturation in 1.5s							
11	(17) V-CS-CHA	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		40 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
12	(17) V-CS-CHA	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			576 Secs *[==>]*	 ***[3]***
Comments: STIS G230L: Mg II: 4.2 cts/s from IUE flux of 2.8e-13 erg/cm2/s and scaling STIS E230M spectrum of TW Hya (Mg II from TW Hya: 3.2e-12 erg/cm2/s).							
13	(17) V-CS-CHA	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1785 Secs *[==>]*	 ***[3]***
14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			240 Secs *[==>]*	 ***[3]***

Orbit Structure



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Exp. 11, split 1
Exp. 11, split 2
Occultation
Unused Visibility = 0
Pointing Maneuver
GS Acq
Exp. 12
Exp. 13
Exp. 14 Home
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1000
1500
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2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 17, completed Tue Aug 30 01:17:31 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 17) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 17) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 17) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 17) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(25)	RECX-15	RA: 08 43 18.5700 (130.8273750d)	Proper Motion RA: -0.00957 sec of time/yr	V=13.97	Reference Frame: ICRS
		Dec: -79 05 18.10 (-79.08836d)	Proper Motion Dec: 0.028 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1995		

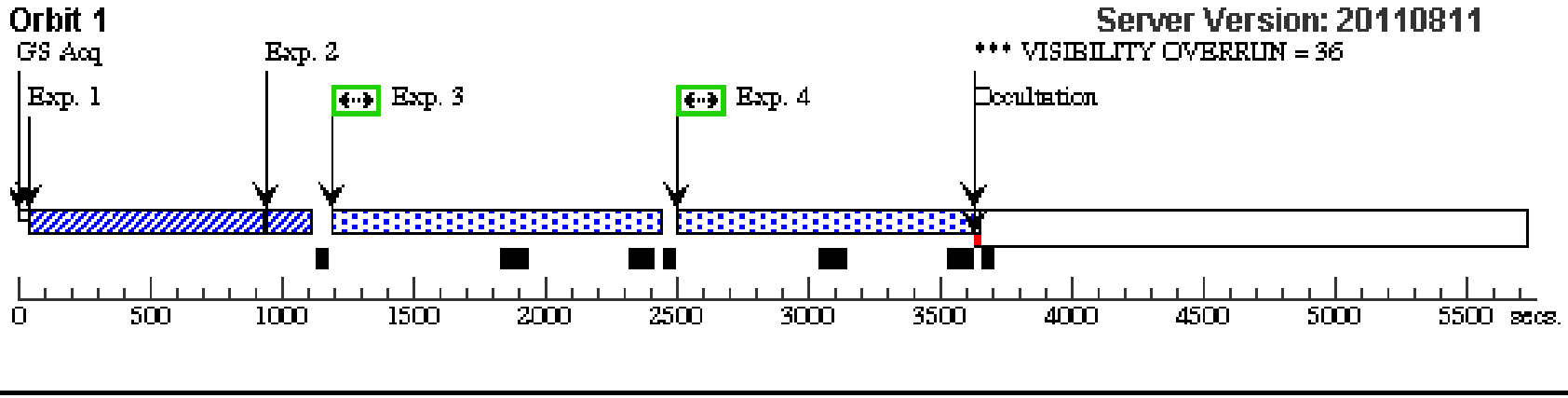
Comments: PM based on other cluster members, should lead to errors in the position of <1 arcsec

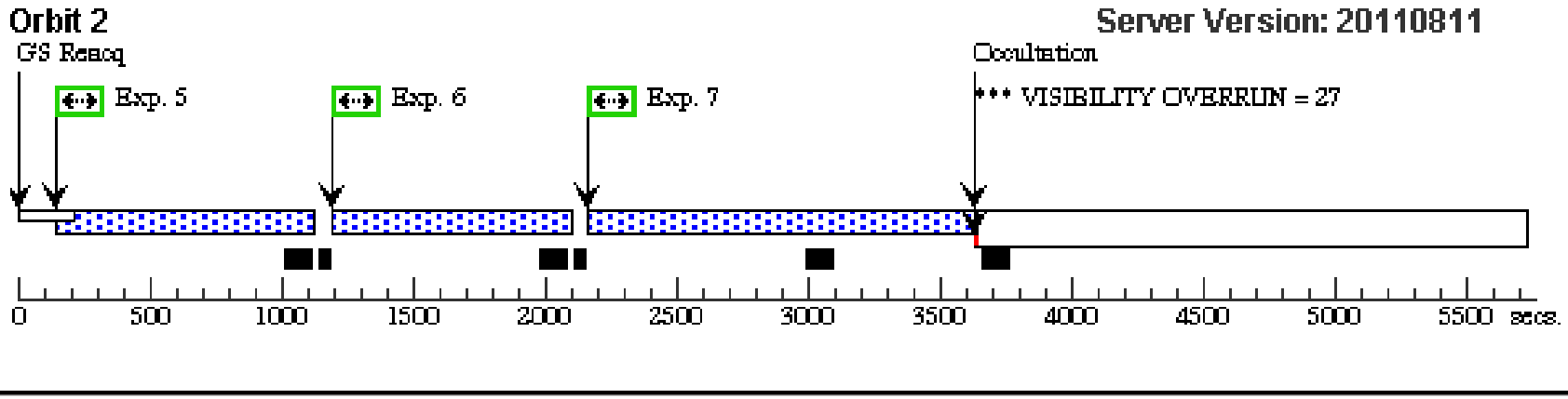
Exposures

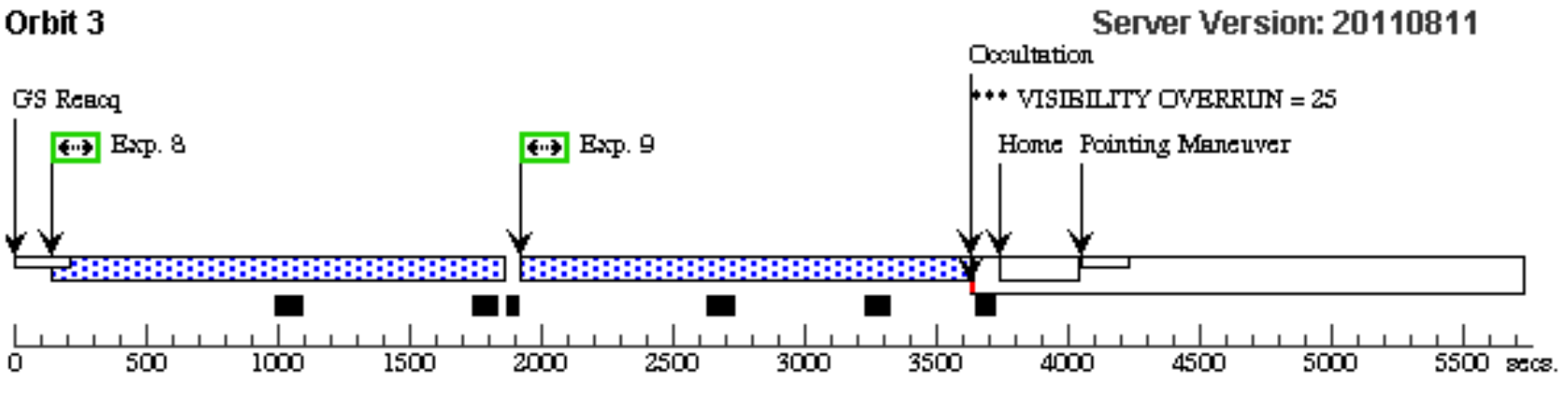
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(25) RECX-15	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		35 Secs *[==>]*	 ***[1]***
2		(25) RECX-15	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				35 Secs *[==>]*	 ***[1]***
3		(25) RECX-15	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=496; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1091 Secs *[==>]*	 ***[1]***
4		(25) RECX-15	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=496; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			1091 Secs *[==>]*	 ***[1]***
5		(25) RECX-15	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=760; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			854 Secs *[==>]*	 ***[2]***
6		(25) RECX-15	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=760; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			854 Secs *[==>]*	 ***[2]***
7		(25) RECX-15	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=685; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1317 Secs *[==>]*	 ***[2]***
8		(25) RECX-15	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=746; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1592 Secs *[==>]*	 ***[3]***

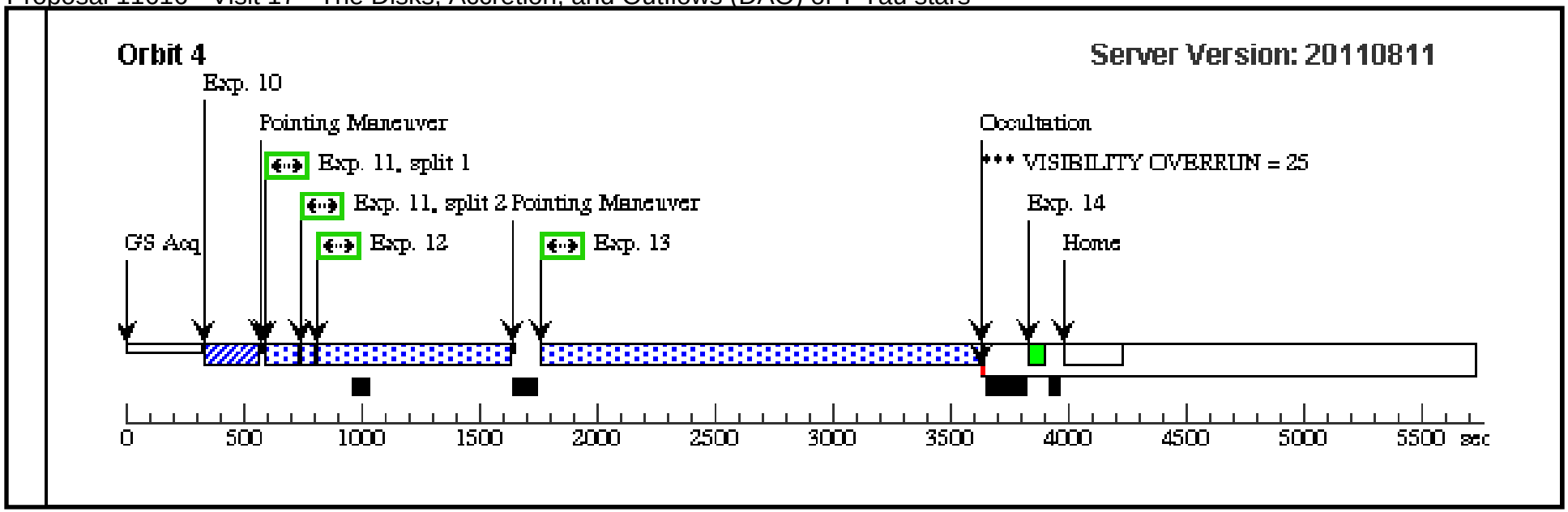
	9	(25) RECX-15	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=600; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		1592 Secs *[==>]*	 ***[3]***
	10	(25) RECX-15	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.4 Secs *[==>]*	 ***[4]***
	11	(25) RECX-15	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		45 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[4]***
	12	(25) RECX-15	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			680 Secs *[==>]*	 ***[4]***
	13	(25) RECX-15	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=2000		1700 Secs *[==>]*	 ***[4]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[4]***

Orbit Structure





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Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
Exp. 12
Exp. 13
GS Acq
Occultation
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Exp. 14
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1500
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2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 18, completed Tue Aug 30 01:17:34 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 18) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 18) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 18) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(18)	V-CV-CHA	RA: 11 12 27.7590 (168.1156625d)	Proper Motion RA: -0.00523 sec of time/yr	V=10.98	Reference Frame: ICRS
		Dec: -76 44 22.27 (-76.73952d)	Proper Motion Dec: 0.006 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1991.250		

Comments: Ducourant et al. 2005
Proper motion UPDATED: 23/12/09

C IV 1549 about 3 times weaker than TW Hya, other FUV lines are weaker than that. NUV flux is similar to TW Hya.

E140M: 0.15 cts/s at 1217 A, by scaling TW Hya E140M spectrum.

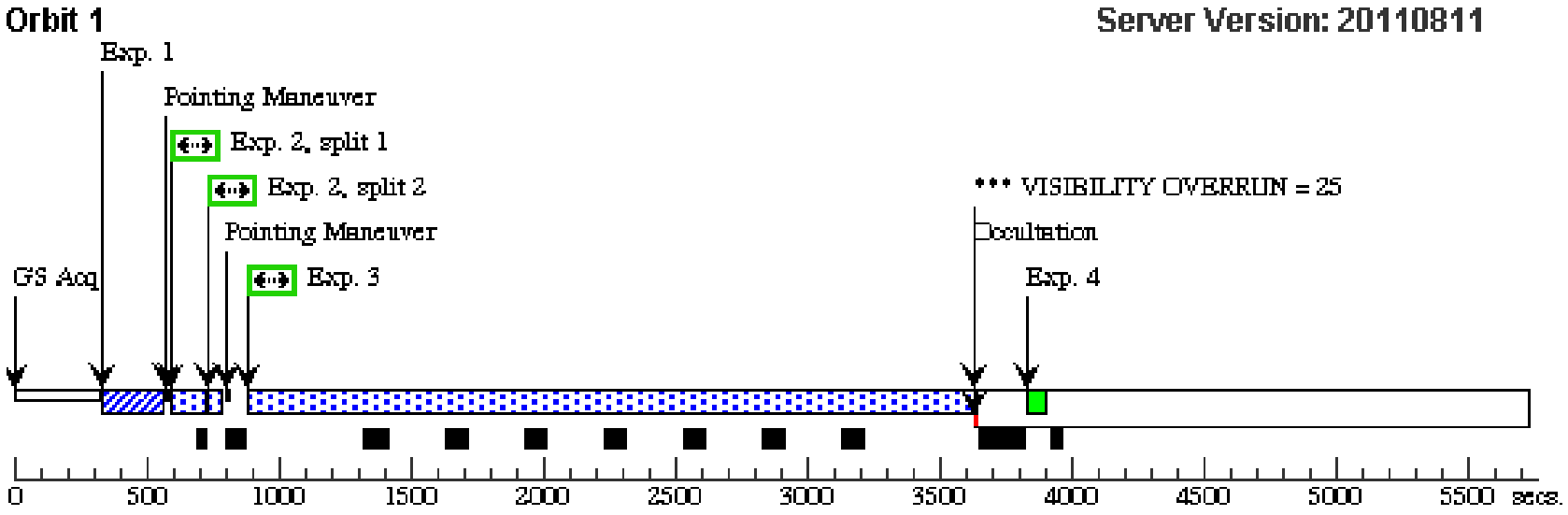
E230M: Brightest pixel about 0.6 cts/s at 2796 A (Mg II), by scaling TW Hya E230M spectrum to Mg II flux of 5e-12 erg/cm2/s

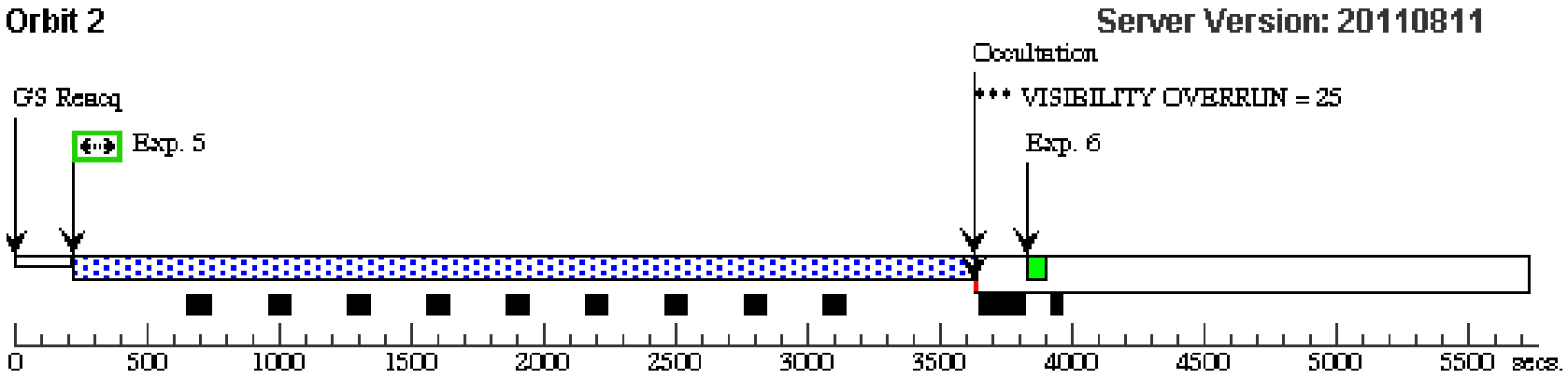
VARIABILITY: In 7 IUE observations, the Mg II flux varied from 2.8e-12 erg/cm2/s to 7.1e-12 erg/cm2/s. Continuum fluctuations are similar

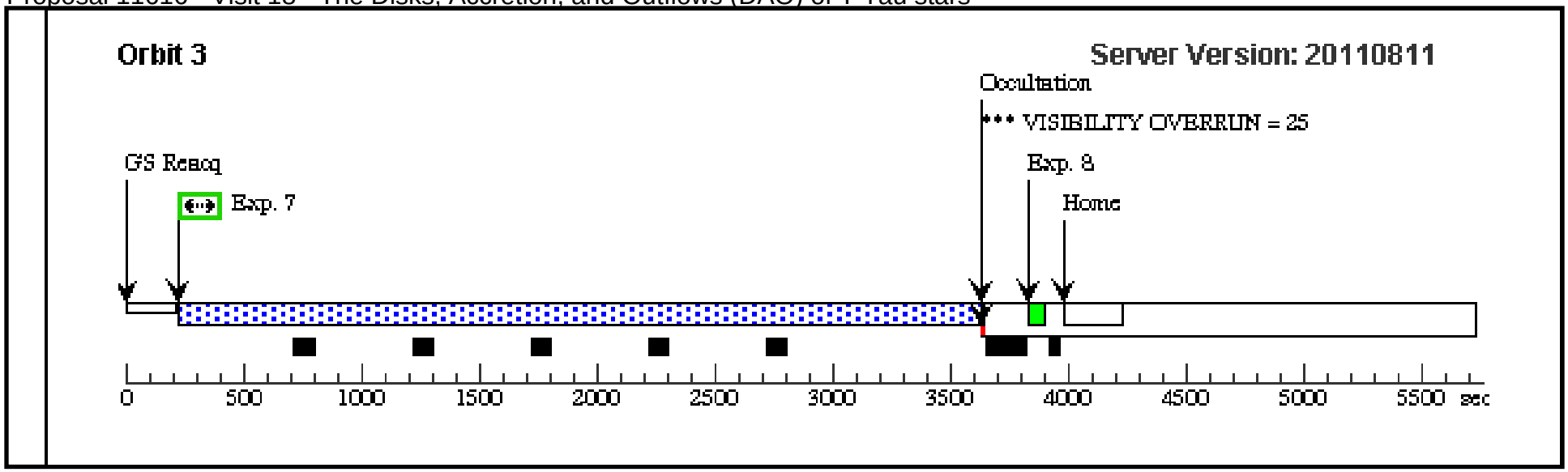
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(18) V-CV-CHA	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3		0.1 Secs *[==>]*	 ***[1]***
Comments: 0.006s => S/N=40 *1.1s => saturation*									
2		(18) V-CV-CHA	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			30 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(18) V-CV-CHA	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300			2598 Secs *[==>]*	 ***[1]***
Comments: E230M: Brightest pixel about 0.6 cts/s at 2796 A (Mg II), by using TW Hya E230M spectrum and measured Mg II fluxes. *VARIABILITY: In 7 IUE observations, the Mg II flux varied from 2.8e-12 erg/cm2/s to 7.1e-12 erg/cm2/s.*									
4		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				25 Secs *[==>]*	 ***[1]***
5		(18) V-CV-CHA	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			3265 Secs *[==>]*	 ***[2]***
Comments: C IV 1549 about 3 times weaker than TW Hya, other FUV lines are weaker than that. NUV flux is similar to TW Hya. *Bright count rate for E140M: 0.15 cts/s at 1217 A, by scaling TW Hya E140M spectrum.*									
6		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				25 Secs *[==>]*	 ***[2]***
7		(18) V-CV-CHA	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=500			3406 Secs *[==>]*	 ***[3]***
Comments: C IV 1549 about 3 times weaker than TW Hya, other FUV lines are weaker than that. NUV flux is similar to TW Hya. *Bright count rate for E140M: 0.15 cts/s at 1217 A, by scaling TW Hya E140M spectrum.*									
8		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Exp. 7
Exp. 8
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4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 19, failed Tue Aug 30 01:17:37 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 19) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 19) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 19) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	SZ-102	RA: 16 08 29.7300 (242.1238750d)	Proper Motion RA: -0.00112 sec of time/yr	V=15.5	Reference Frame: ICRS
		Dec: -39 03 10.90 (-39.05303d)	Proper Motion Dec: -0.021 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1995.949		

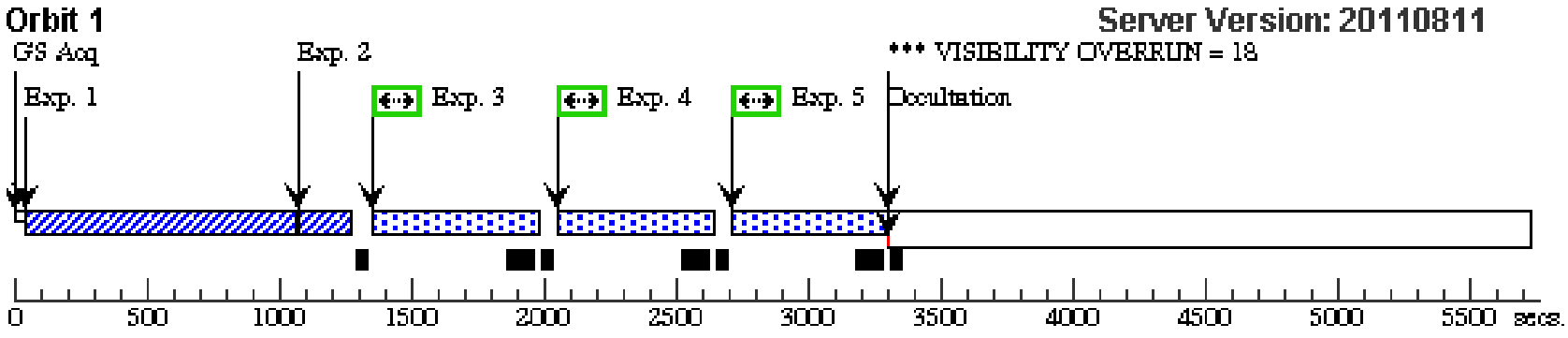
Comments: Ducourant et al. 2005
UPDATED: 23/12/09

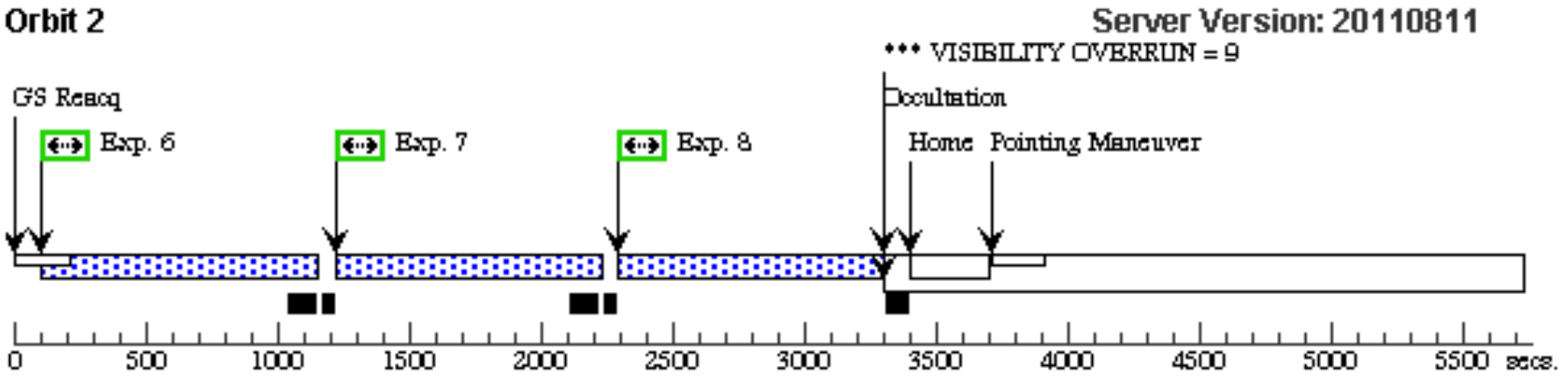
Exposures

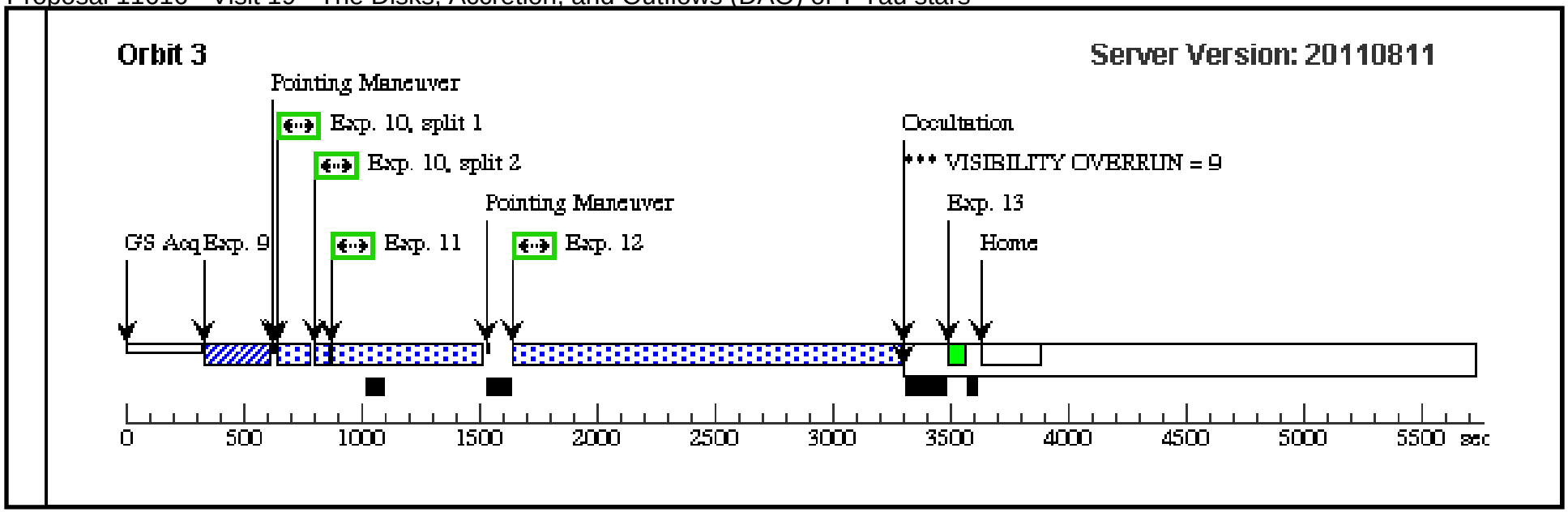
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(19) SZ-102	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		50 Secs *[==>]*	 ***[1]***
2		(19) SZ-102	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				50 Secs *[==>]*	 ***[1]***
3		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=367; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			464 Secs *[==>]*	 ***[1]***
4		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=367; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			464 Secs *[==>]*	 ***[1]***
5		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=367; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			464 Secs *[==>]*	 ***[1]***
6		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=790; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			882 Secs *[==>]*	 ***[2]***
7		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=790; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			882 Secs *[==>]*	 ***[2]***
8		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1200; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			882 Secs *[==>]*	 ***[2]***
9		(19) SZ-102	STIS/CCD, ACQ, 50CCD	MIRROR		GS ACQ SCENARIO BASE1B3		8 Secs *[==>]*	 ***[3]***

	10	(19) SZ-102	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO	60 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	11	(19) SZ-102	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A		500 Secs *[==>]*	 ***[3]***
	12	(19) SZ-102	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500	1469 Secs *[==>]*	 ***[3]***
	13	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A		25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Server Version: 20110811
Pointing Maneuver
Exp. 10, split 1
Exp. 10, split 2
Occultation
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Exp. 13
GS Acq
Exp. 9
Exp. 11
Exp. 12
Home
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 21, completed Tue Aug 30 01:17:39 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 21) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 21) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(22)	V-AK-SCO	RA: 16 54 44.8550 (253.6868958d)	Proper Motion RA: -0.00083 sec of time/yr	V=9.14	Reference Frame: ICRS
		Dec: -36 53 18.31 (-36.88842d)	Proper Motion Dec: -0.029 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1991.248		

Comments: Ducourant et al. 2005
UPDATED: 23/12/09

AK Sco lines: roughly 2x fainter than TW Hya.
STIS E140M: maximum local count rate of 0.2 cts/s at 1217, much less than max of 75
DATA: aksco_iue.dat

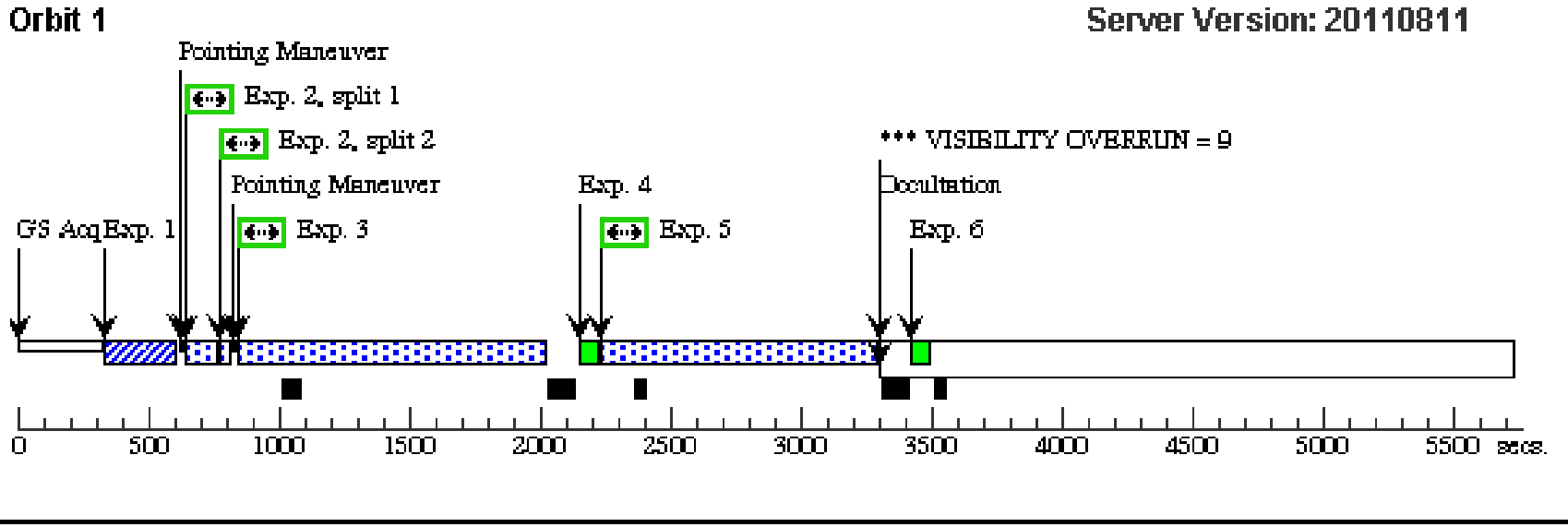
STIS E230M, long-wavelength setting: maximum local count of 0.6 cts/s.
STIS E230M: global count rate of 8000 cts/s, 3000 from source (<<200,000 limit)

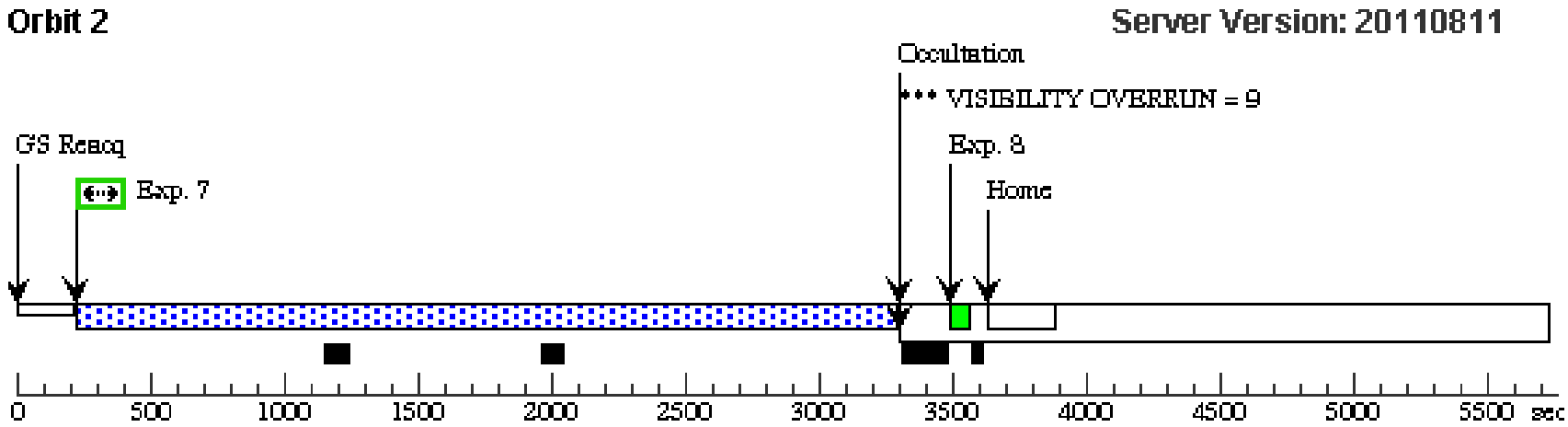
Variability: V ranges from 8.7-10 (Alencar et al. 2003). Herbst et al. (1994) indicates similar variability in U-band. I would have guessed the FUV variability to be much larger, but in three IUE observations the range in C IV fluxes is from 5-6 x10^-13 erg/cm2/s. O I 1305 and C II 1335 are a little more variable, but not much. The FUV emission is surprisingly stable for AK Sco.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(22) V-AK-SCO	STIS/CCD, ACQ, F28X50OII	MIRROR		GS ACQ SCENARIO BASE1B3		4 Secs *[==>]*	 ***[1]***
Comments: B=9.9 0.4s => S/N=40 52s => saturation									
2		(22) V-AK-SCO	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			4 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(22) V-AK-SCO	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				1015 Secs *[==>]*	 ***[1]***
4		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				25 Secs *[==>]*	 ***[1]***
5		(22) V-AK-SCO	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2707 A				942 Secs *[==>]*	 ***[1]***
Comments: 8000 cts/s detector; 3000 from source (limits=200,000) Brightest pixel: 0.63 cts/s (limit=75) from measured Mg II emission									
6		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2707 A				25 Secs *[==>]*	 ***[1]***
7		(22) V-AK-SCO	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=800			2917 Secs *[==>]*	 ***[2]***
Comments: DATA: aksco_iue.dat *Brightest pixel: 0.2 cts/s (<<75 cts/s) from ESTIMATE of Ly-alpha emission, based on simple scaling of TW Hya from other FUV lines.* *From IUE spectrum: the Ly-alpha flux is about 1.4e-11, or 0.3 times that of TW Hya, which would lead to a count rate of 0.15 cts/s.* *Both estimates above are unreliable, but are far below the brightness limits*									
8		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				25 Secs *[==>]*	 ***[2]***

Orbit Structure





Visit

Proposal 11616, Visit 22, completed Tue Aug 30 01:17:41 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: ORIENT 34.5D TO 36.5 D; ORIENT 214.5D TO 216.5 D

Diagnostics

(Visit 22) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 22) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 22) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 22) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(23)	TWA-3A	RA: 11 10 27.8220 (167.6159250d)	Proper Motion RA: -0.00919 sec of time/yr	V=12.06	Reference Frame: ICRS
		Dec: -37 31 51.22 (-37.53089d)	Proper Motion Dec: 0.0008 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2008.65		

Comments: PM from Mamajek et al. 2005
Position from ACS/SBC image: J9YJ10011
UPDATED: 23/12/09

TWA 3A:

Variability of 20-30% from U-band 6 unpublished U-band spectra. This is an older CTTS and not likely to be variable. Any significant variability would have already been noted in the literature, as the object is well-studied.

COS ACQ:

B/PSA: 1.8 cts/s in brightest pixel

COS G130M:

C II: 1.5e-14 erg/cm2/s
0.006 cts/s in brightest pixel

Ly-alpha: PREDICTED (NOT MEAUSURED) flux of 1.5e-12, based on H-alpha emission
0.20 cts/s in brightest pixel

COS G160M:

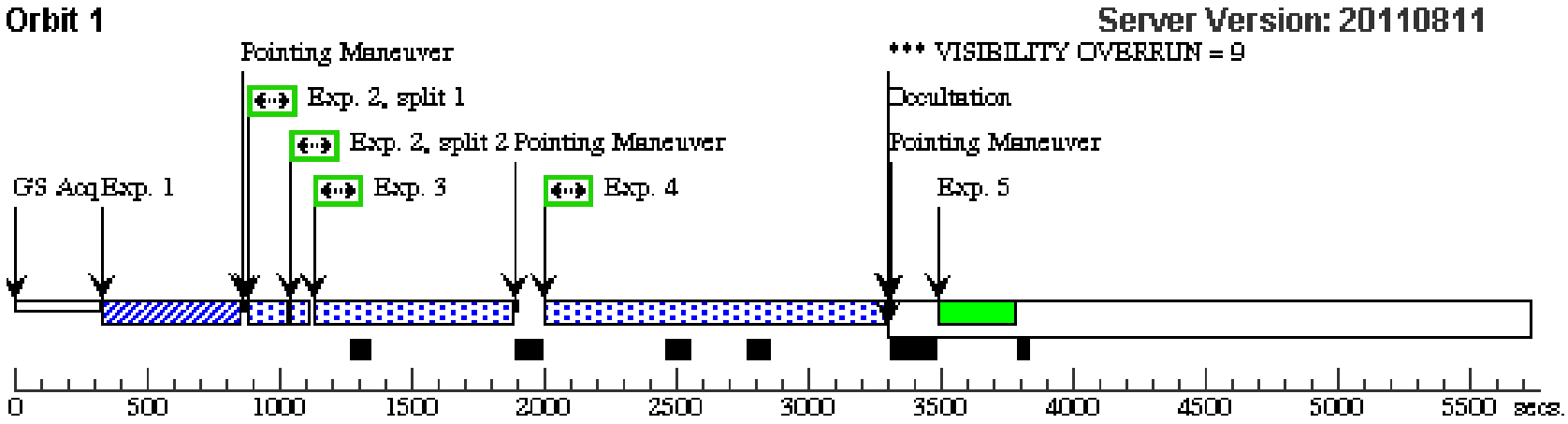
C IV flux: 5.6e-14 erg/cm2/s
=> 0.0096 cts/s in brightest pixel

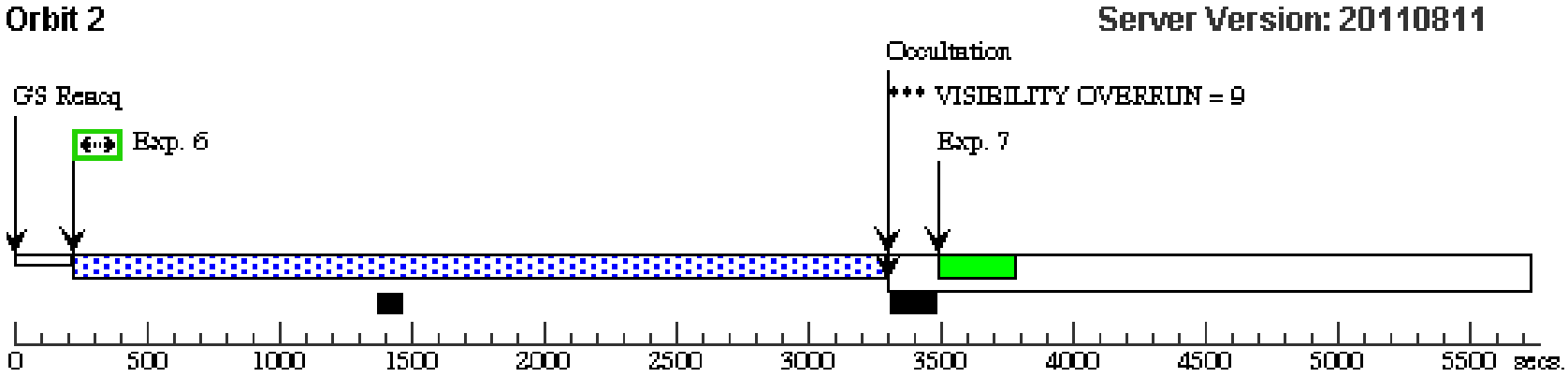
STIS ACQ:
---
flux of 7e-15 erg/cm2/s/A at 3800 A => 34 s

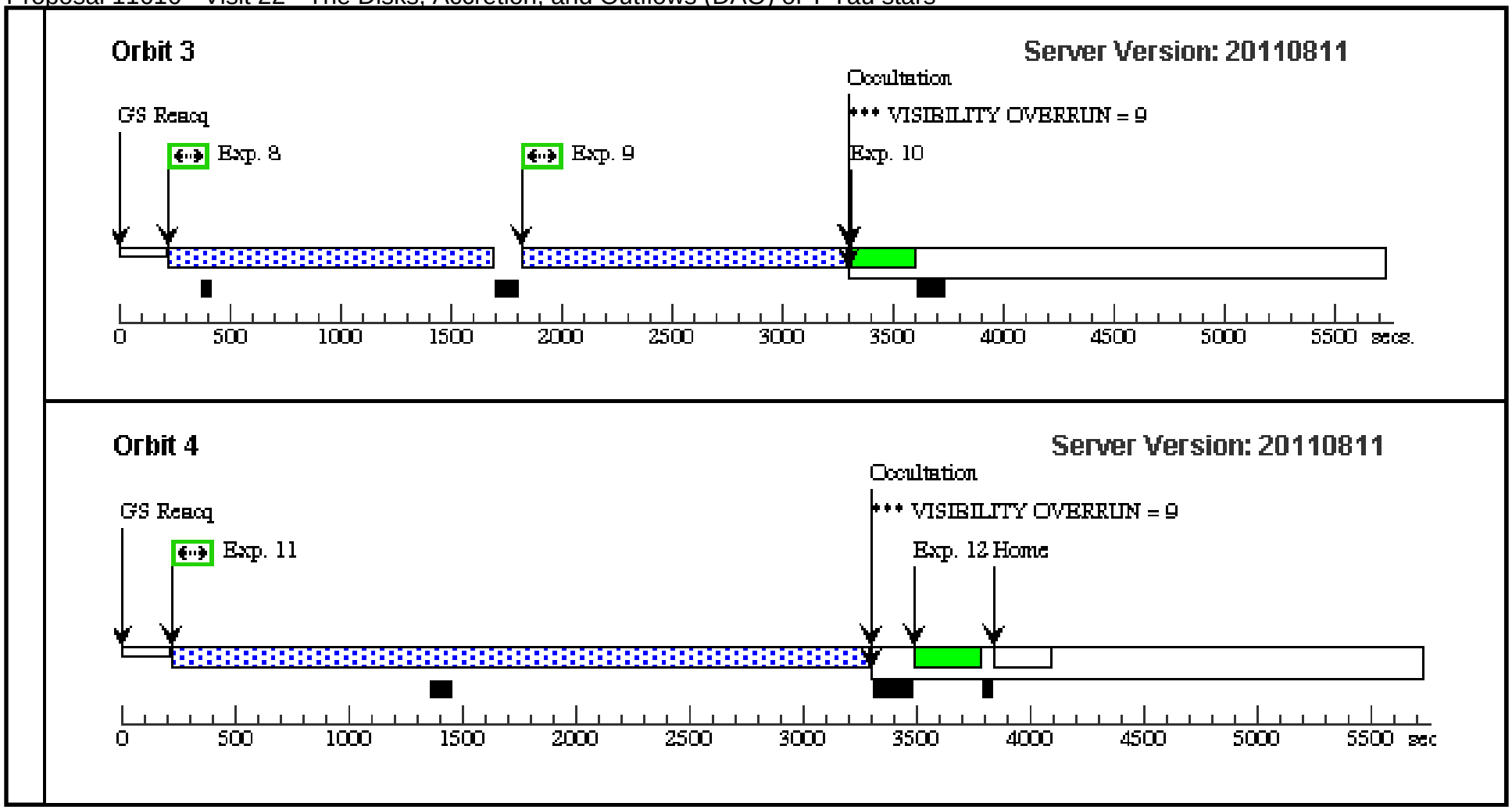
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(23) TWA-3A	STIS/CCD, ACQ, F28X50OII	MIRROR		GS ACQ SCENARIO BASE1B3		65 Secs *[==>]*	 ***[1]***
Comments: STIS ACQ: --- *flux of 7e-15 erg/cm2/s/A at 3800 A => 34 s for S/N=40*									
2		(23) TWA-3A	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			70 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(23) TWA-3A	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				610 Secs *[==>]*	 ***[1]***
4		(23) TWA-3A	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300			1107 Secs *[==>]*	 ***[1]***
5		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				240 Secs *[==>]*	 ***[1]***
6		(23) TWA-3A	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140M 1540 A	BUFFER-TIME=1000; WAVECAL=NO			2900 Secs *[==>]*	 ***[2]***
7		WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1540 A				240 Secs *[==>]*	 ***[2]***
8		(23) TWA-3A	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1222 A	WAVECAL=NO			1329 Secs *[==>]*	 ***[3]***
9		(23) TWA-3A	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1321 A				1328 Secs *[==>]*	 ***[3]***
10		WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140M 1321 A				240 Secs *[==>]*	 ***[3]***
11		(23) TWA-3A	STIS/FUV-MAMA, TIME-TAG, 52X0.2	G140L 1425 A	BUFFER-TIME=1000			2912 Secs *[==>]*	 ***[4]***
12		WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				240 Secs *[==>]*	 ***[4]***

Orbit Structure



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Exp. 9
Exp. 10
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secs.
Orbit 4
Server Version: 20110811
Occultation
GS Reacq
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Exp. 12 Home
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1500
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3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 23, completed Tue Aug 30 01:17:44 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 23) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 23) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 23) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(24)	PDS-66	RA: 13 22 7.5400 (200.5314167d)	Proper Motion RA: -0.00782 sec of time/yr	V=10.32	Reference Frame: ICRS
		Dec: -69 38 12.30 (-69.63675d)	Proper Motion Dec: -0.0230 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2000.0		

Comments: Mamajek et al. (2002)
UPDATED: 23/12/09

The observations of this target include two STIS echelle setups (E140M, E230M) and a STIS G230L observation. The G230L observation is the only one that is potentially dangerous. Based on an IUE observation, the expected count rate is 1/10 of the limit. This target is safe for STIS.

Brightness limits:
used: pds66_iue.dat, twhya_e230m.dat

Mg II 2800 flux: 2.1e-12 erg/cm2/s
STIS G230L Brightest pixel: 7.7 cts/s at Mg II 2800.
STIS E230M brightest pixel: Using TW Hya as a template: => 0.6 cts/s

E140M:

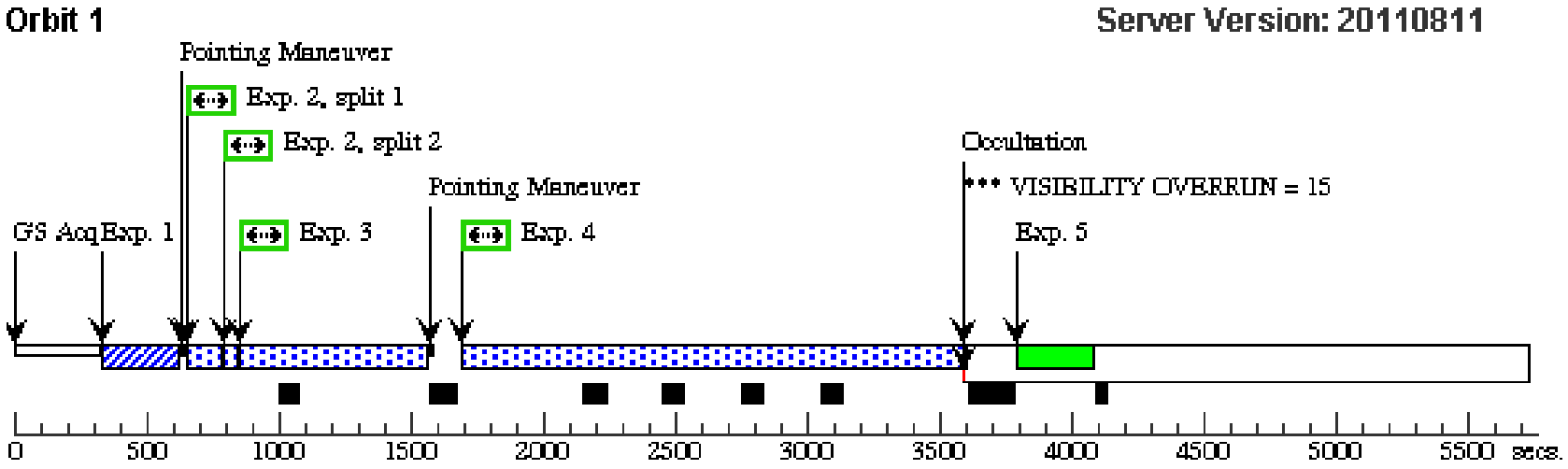
C IV 1549 A flux: 1.1e-12
Split into two lines, 1 A FWHM: 0.011 cts/s in brightest pixel
Ly-alpha: somewhat uncertain, but from IUE (including geocoronal): 0.024 cts/s in brightest pixel: far below limit of 75 cts/s

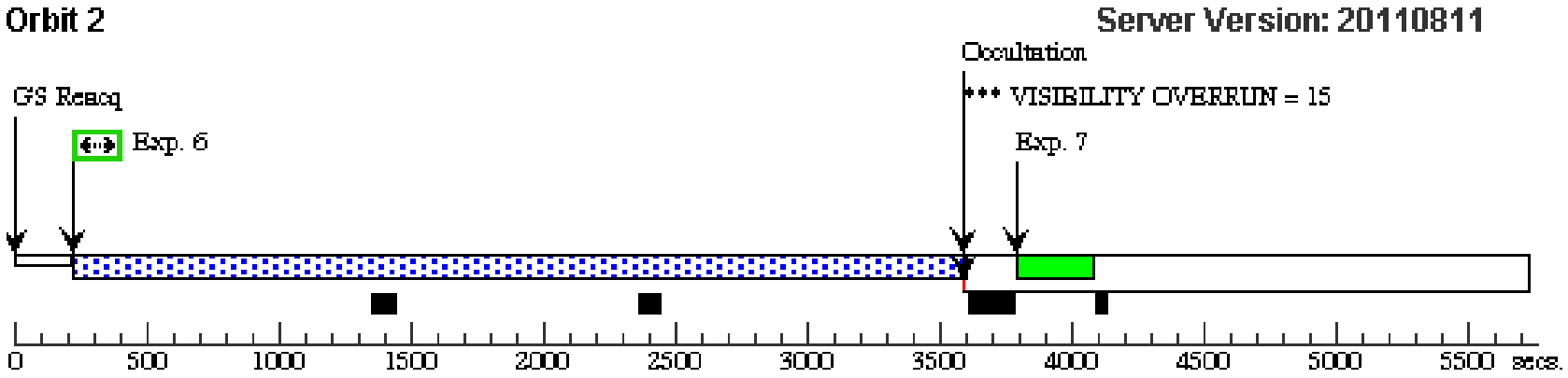
VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.

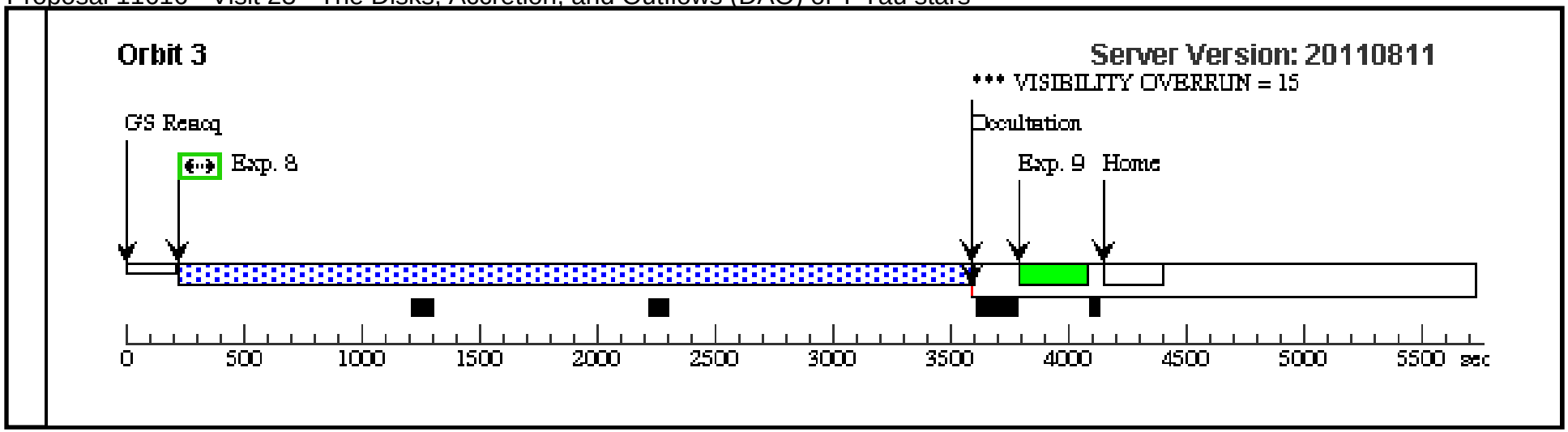
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(24) PDS-66	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3		4 Secs *[==>]*	 ***[1]***
Comments: V=10.35, time=1.4s for S/N=40 saturation=270s									
2		(24) PDS-66	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			25 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(24) PDS-66	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				570 Secs *[==>]*	 ***[1]***
Comments: pds66_iue.dat *Brightest pixel: 7.7 cts/s at Mg II.* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
4		(24) PDS-66	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300			1725 Secs *[==>]*	 ***[1]***
Comments: Mg II 2800 flux: 2.1e-12 erg/cm2/s *Using TW Hya as a template: => 0.6 cts/s* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
5		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				240 Secs *[==>]*	 ***[1]***
6		(24) PDS-66	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=1000			3221 Secs *[==>]*	 ***[2]***
Comments: C IV 1549 A flux: 1.1e-12 *Split into two lines, 1 A FWHM: 0.011 cts/s in brightest pixel* *Ly-alpha: somewhat uncertain, but from IUE (including geocoronal): 0.024 cts/s in brightest pixel: far below limit of 75 cts/s* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
7		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				240 Secs *[==>]*	 ***[2]***
8		(24) PDS-66	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=1000			3362 Secs *[==>]*	 ***[3]***
Comments: C IV 1549 A flux: 1.1e-12 *Split into two lines, 1 A FWHM: 0.011 cts/s in brightest pixel* *Ly-alpha: somewhat uncertain, but from IUE (including geocoronal): 0.024 cts/s in brightest pixel: far below limit of 75 cts/s* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
9		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				240 Secs *[==>]*	 ***[3]***

Orbit Structure



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Occultation
Exp. 9
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4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 20, scheduling Tue Aug 30 01:17:46 GMT 2011

Diagnostic Status: No Diagnostics

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

Special Requirements: (none)

Fixed Targets

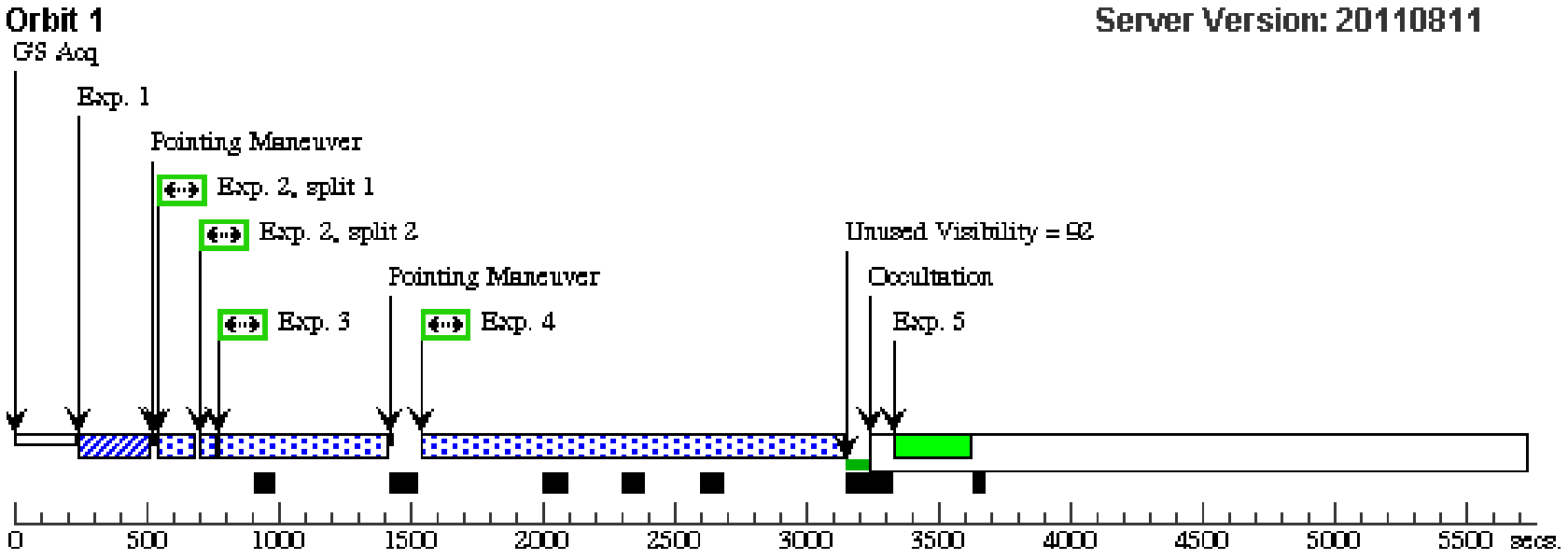
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(35)	V2129-OPH Alt Name1: 2MASS-J16274028-2422040	RA: 16 27 40.3000 (246.9179167d) Dec: -24 22 4.00 (-24.36778d) Equinox: J2000	Proper Motion RA: -13 mas/yr Proper Motion Dec: -34 mas/yr Epoch of Position: 1994.34	V=11.6	Reference Frame: ICRS

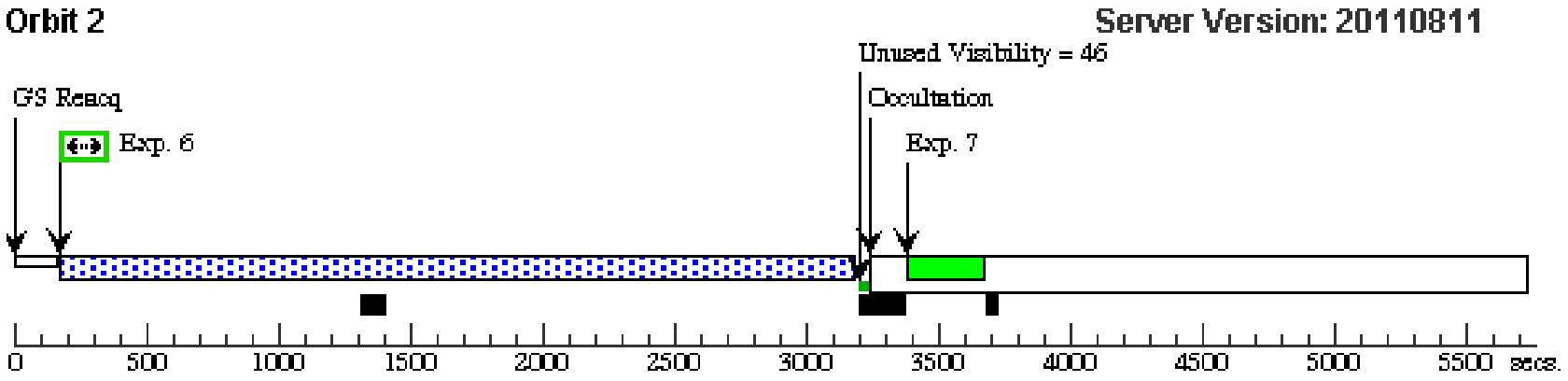
Comments: Variability in Grankin et al. (2008)

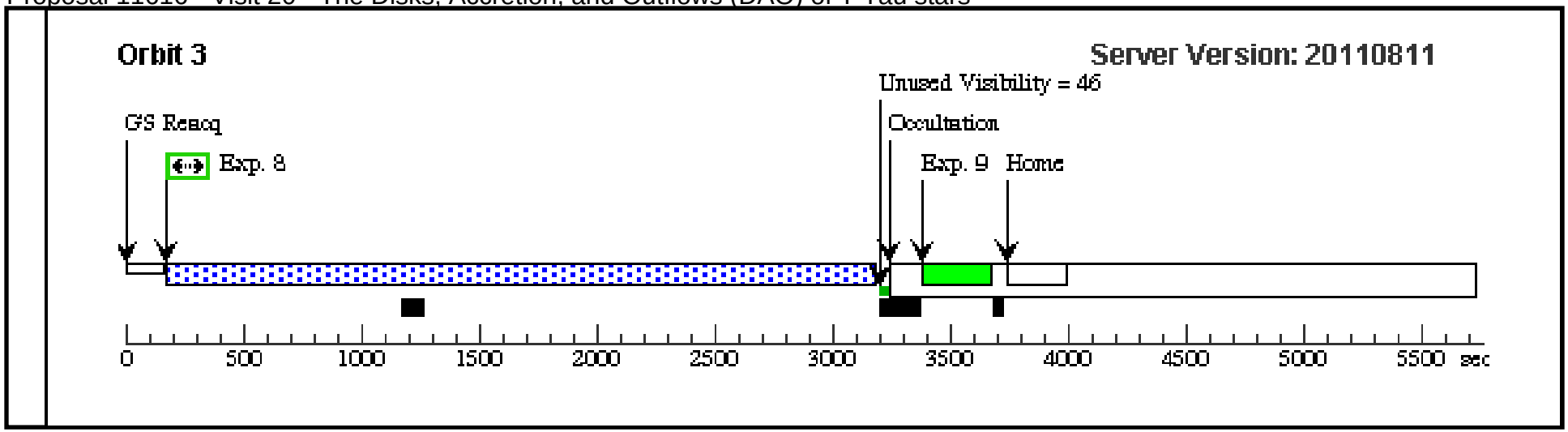
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(35) V2129-OPH	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO SINGLE		0.1 Secs *[==>]*	 ***[1]***
Comments: V=10.35, time=1.4s for S/N=40 saturation=270s									
2		(35) V2129-OPH	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			50 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(35) V2129-OPH	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				500 Secs *[==>]*	 ***[1]***
Comments: pds66_iue.dat *Brightest pixel: 7.7 cts/s at Mg II.* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
4		(35) V2129-OPH	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300			1422 Secs *[==>]*	 ***[1]***
Comments: Mg II 2800 flux: 2.1e-12 erg/cm2/s *Using TW Hya as a template: => 0.6 cts/s* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
5		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				240 Secs *[==>]*	 ***[1]***
6		(35) V2129-OPH	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=1000			2856 Secs *[==>]*	 ***[2]***
Comments: C IV 1549 A flux: 1.1e-12 *Split into two lines, 1 A FWHM: 0.011 cts/s in brightest pixel* *Ly-alpha: somewhat uncertain, but from IUE (including geocoronal): 0.024 cts/s in brightest pixel: far below limit of 75 cts/s* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
7		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				240 Secs *[==>]*	 ***[2]***
8		(35) V2129-OPH	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=1000			2997 Secs *[==>]*	 ***[3]***
Comments: C IV 1549 A flux: 1.1e-12 *Split into two lines, 1 A FWHM: 0.011 cts/s in brightest pixel* *Ly-alpha: somewhat uncertain, but from IUE (including geocoronal): 0.024 cts/s in brightest pixel: far below limit of 75 cts/s* *VARIABILITY: Batalha et al. indicate very little variability in the U-band for PDS 66 (standard deviation = 0.12 mag). It's an early-type star, so I would expect more variability than that in the lines. However, with fluxes 10 times lower than the STIS brightness limit for all observations, including the G230L, this object is safe.*									
9		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				240 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Unused Visibility = 46
GS Reacq
Exp. 8
Occultation
Exp. 9
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 24 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 24, completed Tue Aug 30 01:17:47 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 24) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 24) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 24) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 24) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(26)	RECX-11	RA: 08 47 1.6340 (131.7568083d)	Proper Motion RA: -0.0285 sec of time/yr	V=11.2	Reference Frame: ICRS
		Dec: -78 59 34.37 (-78.99288d)	Proper Motion Dec: 0.0252 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1997.69		

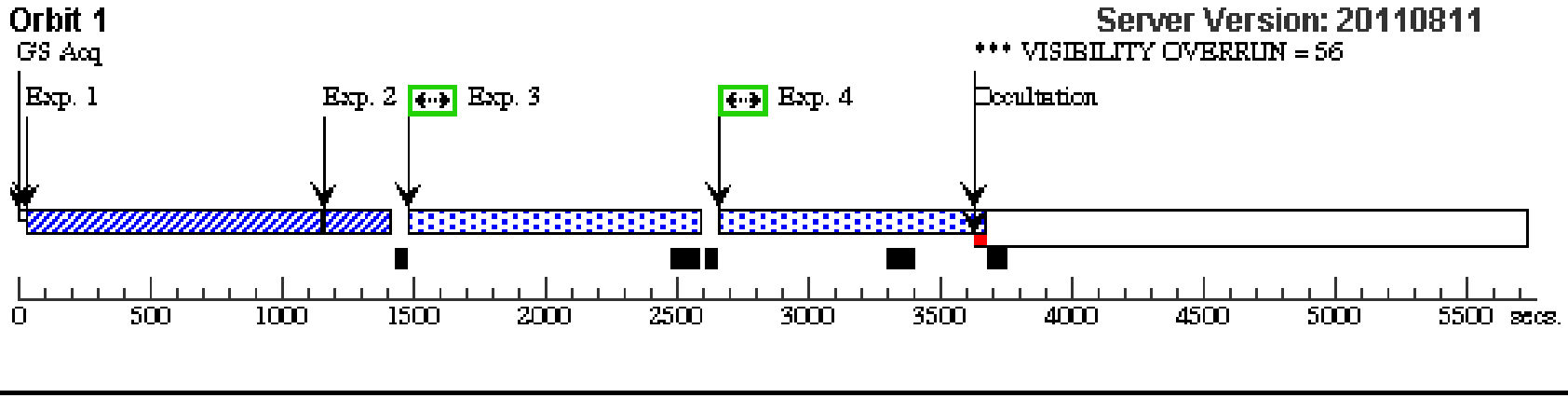
Comments: UCAC2

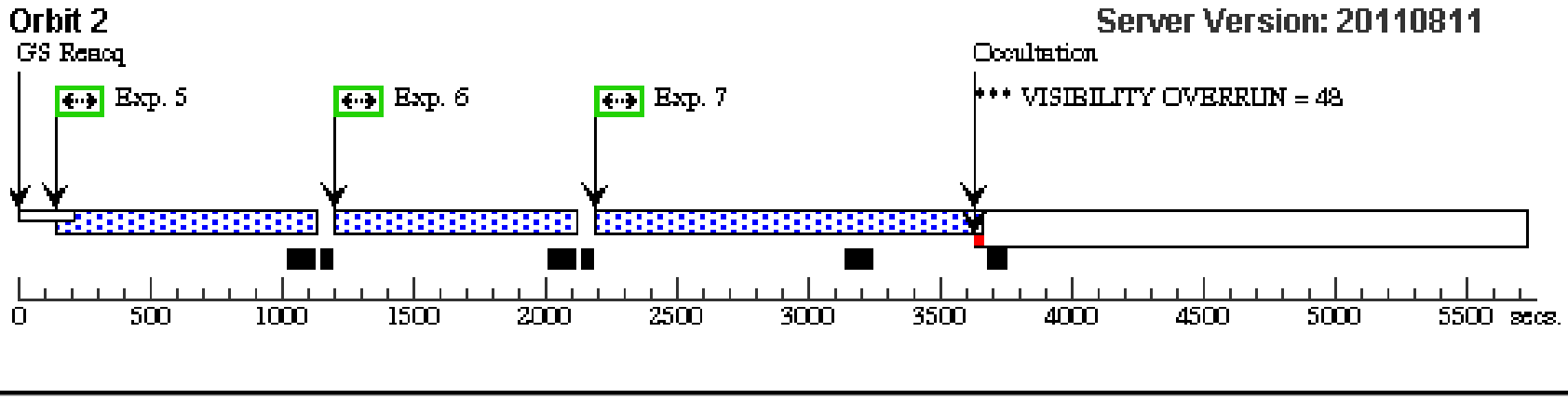
Exposures

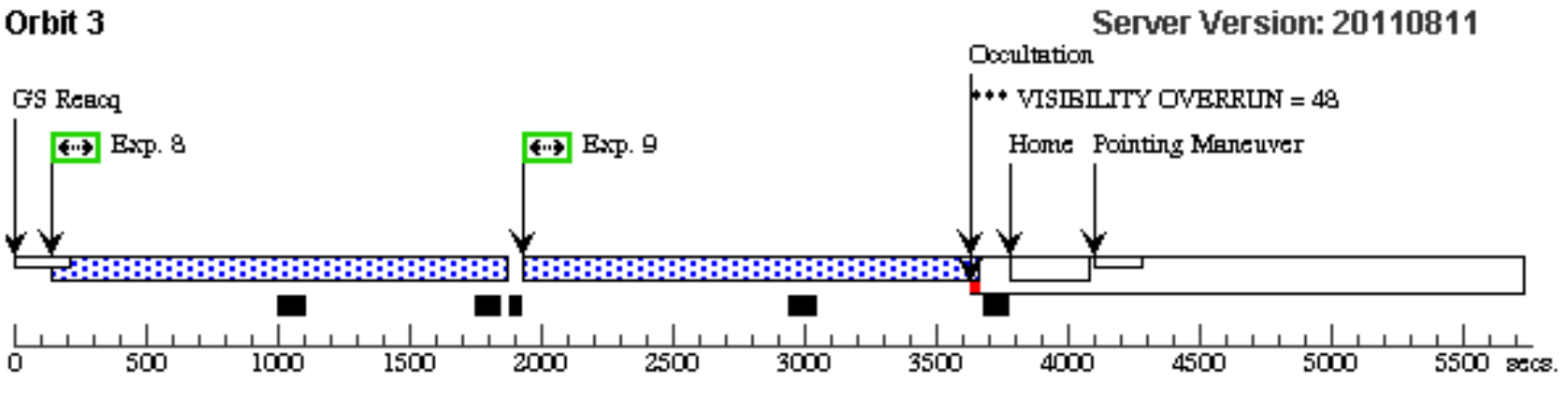
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(26) RECX-11	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		60 Secs *[==>]*	 ***[1]***
2		(26) RECX-11	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				60 Secs *[==>]*	 ***[1]***
3		(26) RECX-11	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=853; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			952 Secs *[==>]*	 ***[1]***
4		(26) RECX-11	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=600; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			952 Secs *[==>]*	 ***[1]***
5		(26) RECX-11	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=770; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			870 Secs *[==>]*	 ***[2]***
6		(26) RECX-11	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=770; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			870 Secs *[==>]*	 ***[2]***
7		(26) RECX-11	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=800; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1306 Secs *[==>]*	 ***[2]***
8		(26) RECX-11	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=752; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1603 Secs *[==>]*	 ***[3]***

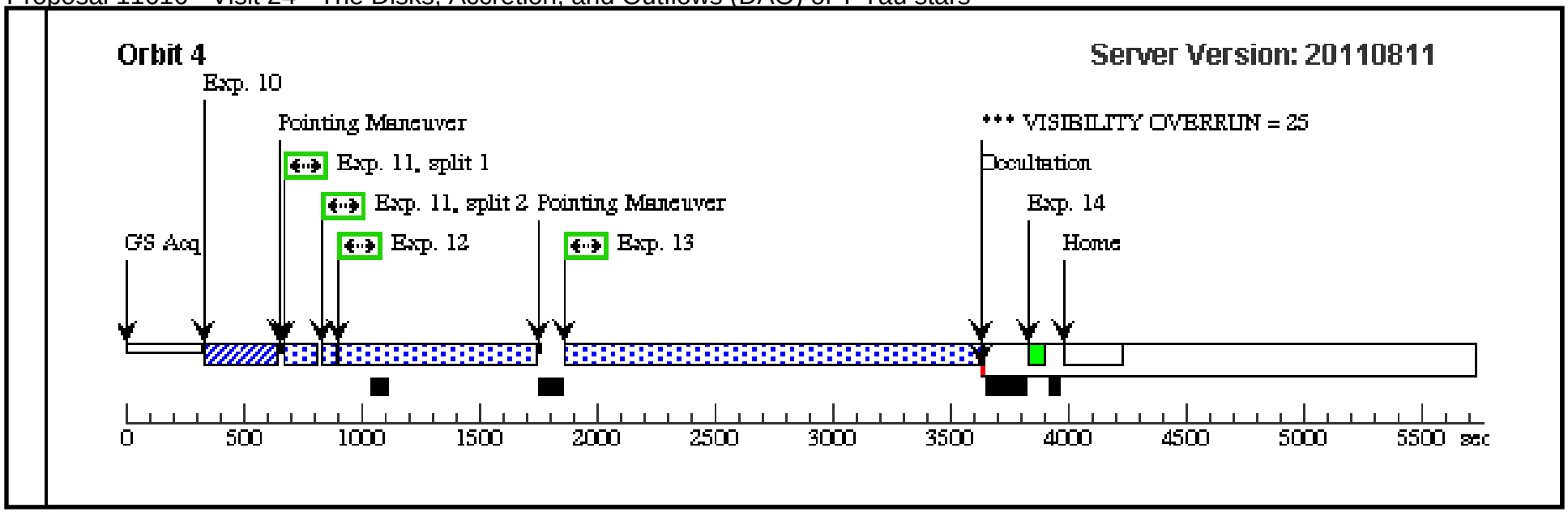
	9	(26) RECX-11	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=900; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		1604 Secs *[==>]*	 ***[3]***
	10	(26) RECX-11	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3	10 Secs *[==>]*	 ***[4]***
	11	(26) RECX-11	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		45 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[4]***
	12	(26) RECX-11	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			700 Secs *[==>]*	 ***[4]***
	13	(26) RECX-11	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=2500		1595 Secs *[==>]*	 ***[4]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[4]***

Orbit Structure








Orbit 4
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
Exp. 12
Exp. 13
*** VISIBILITY OVERRUN = 25
Occultation
Exp. 14
GS Acq
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 25, completed Tue Aug 30 01:17:49 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 25) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 25) Warning (Orbit Planner): VISIBILITY OVERRUN

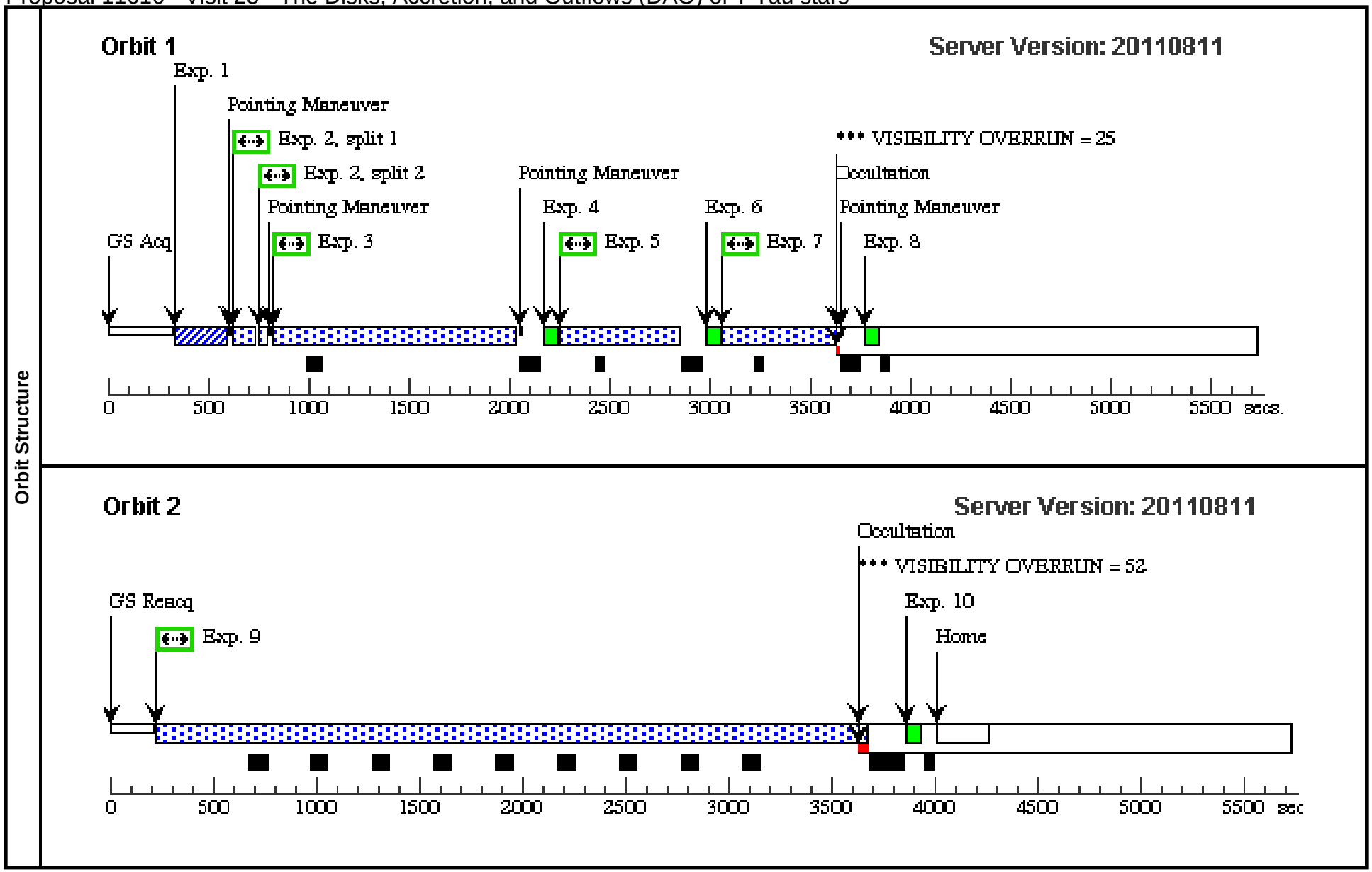
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(27)	HD-104237	RA: 12 00 5.1960 (180.0216500d) Dec: -78 11 34.51 (-78.19292d) Equinox: J2000	Proper Motion RA: -0.039 sec of time/yr Proper Motion Dec: -0.003 arcsec/yr Epoch of Position: 1991.248	V=6.592	Reference Frame: ICRS

Comments: Ducourant et al. 2005

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(27) HD-104237	STIS/CCD, ACQ, F28X50OII	MIRROR		GS ACQ SCENARIO BASE1B3		0.6 Secs *[==>]*	 ***[1]***
2		(27) HD-104237	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			0.2 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(27) HD-104237	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2124 A				1050 Secs *[==>]*	 ***[1]***
4		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2124 A				25 Secs *[==>]*	 ***[1]***
5		(27) HD-104237	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2663 A				428 Secs *[==>]*	 ***[1]***
6		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2663 A				25 Secs *[==>]*	 ***[1]***
7		(27) HD-104237	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2912 A				428 Secs *[==>]*	 ***[1]***
8		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.09	E230H 2912 A				25 Secs *[==>]*	 ***[1]***
9		(27) HD-104237	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=300			3279 Secs *[==>]*	 ***[2]***
10		WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				25 Secs *[==>]*	 ***[2]***


Orbit Structure
Orbit 1
Server Version: 20110811
Exp. 1
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Exp. 3
GS Acq
Pointing Maneuver
Exp. 4
Exp. 5
Exp. 6
Exp. 7
*** VISIBILITY OVERRUN = 25
Occultation
Pointing Maneuver
Exp. 8
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 secs.
Orbit 2
Server Version: 20110811
Occultation
*** VISIBILITY OVERRUN = 52
GS Reacq
Exp. 9
Exp. 10
Home
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec

Visit

Proposal 11616, Visit 26, completed Tue Aug 30 01:17:51 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 26) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(Visit 26) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 26) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 26) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(29)	HBC-427	RA: 04 56 2.0200 (74.0084167d)	Proper Motion RA: 0.000154 sec of time/yr	V=11.6	Reference Frame: ICRS
		Dec: +30 21 3.70 (30.35103d)	Proper Motion Dec: -0.026 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1993.711		

Comments: Ducourant et al. 2005
UPDATED 23/12/09

HBC 427: a WTTS, see LkCa 19 for longer explanation of characteristics. Very similar to cool stars.

spectra:
---
hbc427_g430l.dat (STIS G430L)
hbc427_g140l.dat (STIS G140L)
hd98800_iue.dat (IUE NUV)
hd98800blue.dat (optical-blue spectrum)

Variability, from Grankin et al. (2007): 27 U-band observations
U=14.02 +/- 0.15 (1-sigma)
Umin: 13.73, Umax=14.41
Worst-case scenario: multiply broadband emission by 1.9

COS ACQ:

MIRRORA: 16 cts/s

This is calculated from the HD98800 IUE spectrum. The two spectra match up very well from 3200-5000 A, with HBC 427 being 15 times fainter than HD98800. The HBC 427 observation occurred when U=14.3 (rough estimate), so close to its faintest level. That makes the "worst-case" count rate 30 cts/s.

G160M:

C IV flux: 1.2e-14 erg/cm2/s => 0.003 cts/s

G130M:

C II flux: 5.0e-15 erg/cm2/s => 0.0025 cts/s
Ly-alpha flux: 1.5e-15 erg/cm2/s (tentative detection)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(29) HBC-427	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=3; CENTER=FLUX-WT; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		30 Secs *[==>]*	 ***[1]***

Comments: COS ACQ:

Variability, from Grankin et al. (2007): 27 U-band observations
U=14.02 +/- 0.15 (1-sigma)
Umin: 13.73, Umax=14.41
Worst-case scenario: multiply broadband emission by 1.9

MIRRORA: 16 cts/s!!

This is calculated from the HD98800 IUE spectrum. The two spectra match up very well from 3200-5000 A, with HBC 427 being 15 times fainter than HD98800. The HBC 427 observation occurred when U=14.3 (rough estimate), so close to its faintest level. That makes the "worst-case" count rate 30 cts/s.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(29) HBC-427	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs *[==>]*	 ***[1]***

Comments: COS ACQ:

Variability, from Grankin et al. (2007): 27 U-band observations
U=14.02 +/- 0.15 (1-sigma)
Umin: 13.73, Umax=14.41
Worst-case scenario: multiply broadband emission by 1.9

MIRRORA: 16 cts/s

This is calculated from the HD98800 IUE spectrum. The two spectra match up very well from 3200-5000 A, with HBC 427 being 15 times fainter than HD98800. The HBC 427 observation occurred when U=14.3 (rough estimate), so close to its faintest level. That makes the "worst-case" count rate 30 cts/s.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(29) HBC-427	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=460; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			558 Secs *[==>]*	 ***[1]***

Comments: G130M:

C II flux: 5.0e-15 erg/cm2/s => 0.0025 cts/s
Ly-alpha flux: 1.5e-15 erg/cm2/s (tentative detection)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
4		(29) HBC-427	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=460; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			558 Secs *[==>]*	 ***[1]***

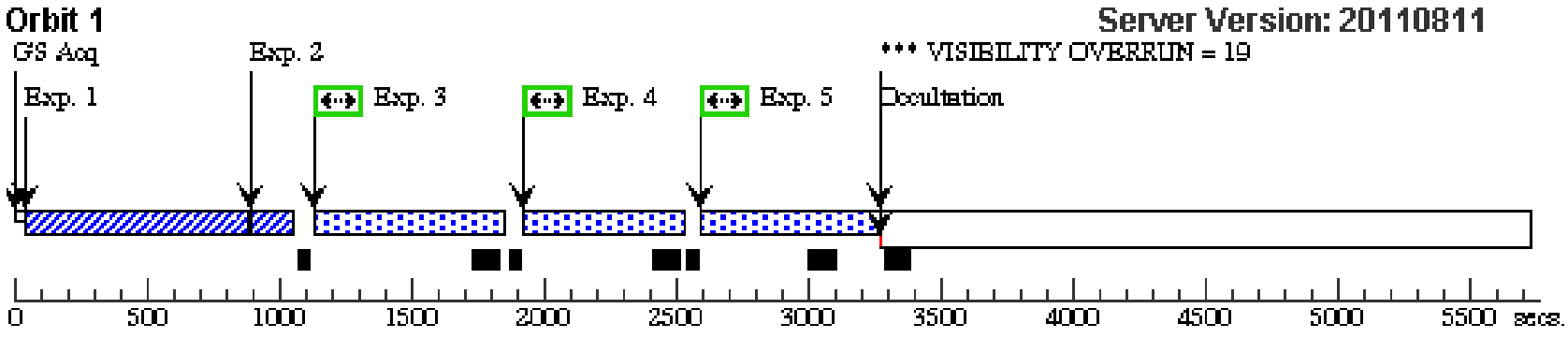
Comments: G130M:

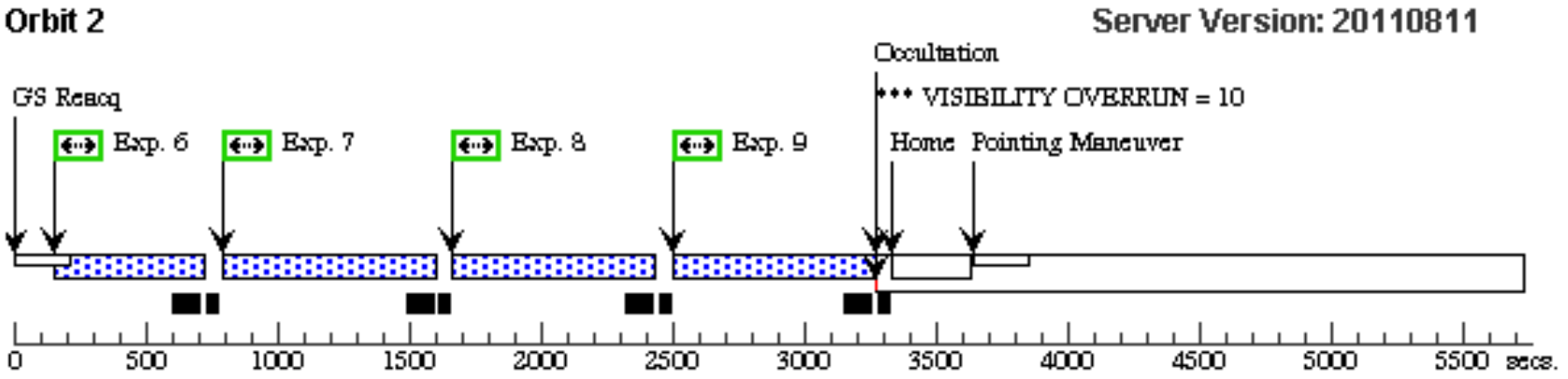
C II flux: 5.0e-15 erg/cm2/s => 0.0025 cts/s
Ly-alpha flux: 1.5e-15 erg/cm2/s (tentative detection)

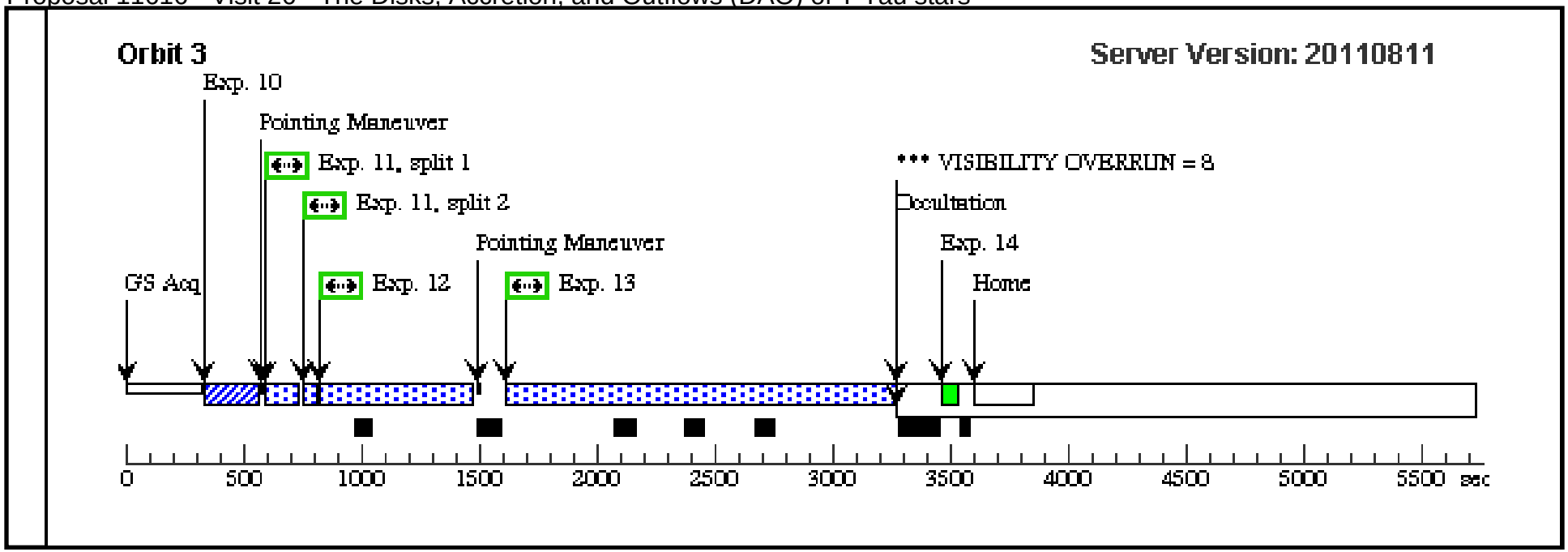
5	(29) HBC-427	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=300; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH		558 Secs *[==>]*	***[1]***
Comments: G130M: --- *C II flux: 5.0e-15 erg/cm2/s => 0.0025 cts/s* *Ly-alpha flux: 1.5e-15 erg/cm2/s (tentative detection)*							
6	(29) HBC-427	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=353; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH		449 Secs *[==>]*	***[2]***
Comments: G130M: --- *C II flux: 5.0e-15 erg/cm2/s => 0.0025 cts/s* *Ly-alpha flux: 1.5e-15 erg/cm2/s (tentative detection)*							
7	(29) HBC-427	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=550; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		645 Secs *[==>]*	***[2]***
Comments: G160M: --- *C IV flux: 1.2e-14 erg/cm2/s => 0.003 cts/s*							
8	(29) HBC-427	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=550; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		645 Secs *[==>]*	***[2]***
Comments: G160M: --- *C IV flux: 1.2e-14 erg/cm2/s => 0.003 cts/s*							
9	(29) HBC-427	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=550; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		645 Secs *[==>]*	***[2]***
Comments: G160M: --- *C IV flux: 1.2e-14 erg/cm2/s => 0.003 cts/s*							
10	(29) HBC-427	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.2 Secs *[==>]*	***[3]***
Comments: V=11.6 => saturation in 1.6s							

	11	(29) HBC-427	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO	60 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(29) HBC-427	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A		516 Secs *[==>]*	 ***[3]***
	13	(29) HBC-427	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300	1475 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A		25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
*** VISIBILITY OVERRUN = 8
Occultation
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 27 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit	**Proposal 11616, Visit 27, completed** Tue Aug 30 01:17:53 GMT 2011 **Diagnostic Status: Warning** Scientific Instruments: STIS/CCD, COS/NUV, COS/FUV, STIS/NUV-MAMA Special Requirements: (none)
Diagnostics	(Visit 27) Warning (Orbit Planner): VISIBILITY OVERRUN (Visit 27) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 27) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(30)	EM-LKCA-4	RA: 04 16 28.1110 (64.1171292d)	Proper Motion RA: 0.000605 sec of time/yr	V=12.49	Reference Frame: ICRS
		Dec: +28 07 35.72 (28.12659d)	Proper Motion Dec: -0.024 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1999.452		

Comments: Ducourant et al. 2005
UPDATED 23/12/09

LkCa 4 is a WTTS. This is what I wrote for a different WTTS:

The WTTSs present a different case than the CTTSs, though with similar problems. They are non-accreting cool stars, and exhibit spectra similar to cool stars (AU Mic, AD Leo, Epsilon Eri, etc.). Many of these sort of spectra can be found at Tom Ayres's CoolCAT website: http://casa.colorado.edu/~ayres/CoolCAT/

Per usual, Ly-alpha is usually not straightforward.

From a small sample of bright cool stars in CoolCAT

Star	*Mg II flux*	*Ly-alpha flux**	*Ratio*
70 Oph:	*6.5e-11*	*5.8e-12*	*0.089*
Eps Eri:	*7.4e-11*	*1.55e-11*	*0.21*
36 Oph:	*2.6e-11*	*4.8e-12*	*0.18*
Xi1 Boo:	*3.7e-11*	*6.6e-12*	*0.18*
kap Cet:	*2.6e-11*	*3.0e-12*	*0.12*
61 Vir:	*1.2e-11*	*6.7e-13*	*0.06*
Alpha cen:	*1.1e-9*	*5.3e-11*	*0.05*
Chi1Ori	*4.5e-11*	*4.9e-12*	*0.11*

**fluxes in erg/cm2/s*

Based on these few numbers, I'll use a flux ratio of Ly-alpha/Mg II=0.2. For stars in the Taurus Molecular Cloud, the actual Ly-alpha flux should be far less because of N(H I) in our line of sight. The WTTSs in the TW Hya Association will not necessarily suffer from a significant flux reduction because it is an older association, far from molecular material. Thus, this investigation is most important for those objects.

**for reference, for 70 Oph the Ly-alpha emission would be 3.55 cts/s in the brightest pixel for a COS G130M observation.*

VARIABILITY:
18 U-band observations by Grankin et al. 2008: U=15.1+\- 0.34 mag, min=14.4, max=15.8
278 B-band observations by Grankin et al. 2008: B=14.03 +\- 0.19 mag, min=13.66, max=14.66

From min to max is 2.5^1.4=3.6, so multiply all count rates by 4.

Spectra:
FUV: lkca4_g140l.dat
NUV: none, using hd98800_iue.dat as a template. No GALEX observation.

COS ACQUSITION, MIRROR A/PSA:

From optical spectra and photopmetry (B=10.3 for HD98800, B=14.03 for LkCa 4), LkCa 4 is 30-50 time fainter than HD98800 in the NUV, which corresponds to 7-12 cts/s. The optical spectrum (50 times fainter) was obtained at U=15.2. If LkCa 4 is at the bright end, the count rate increases to 14-24 cts/s.

COS ACQ: MIRRORA: 4.6 cts/s (x4=19 cts/s, safe for a WTTS)

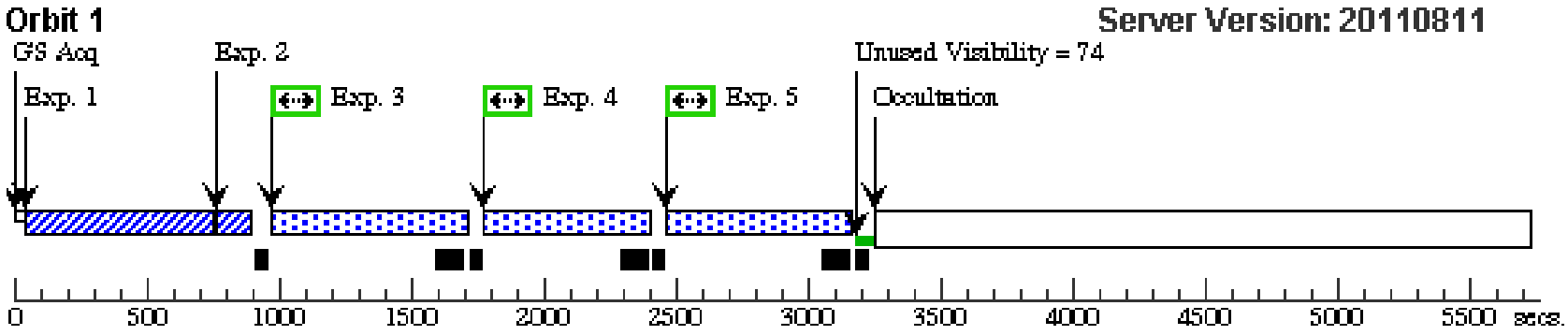
COS G130M:

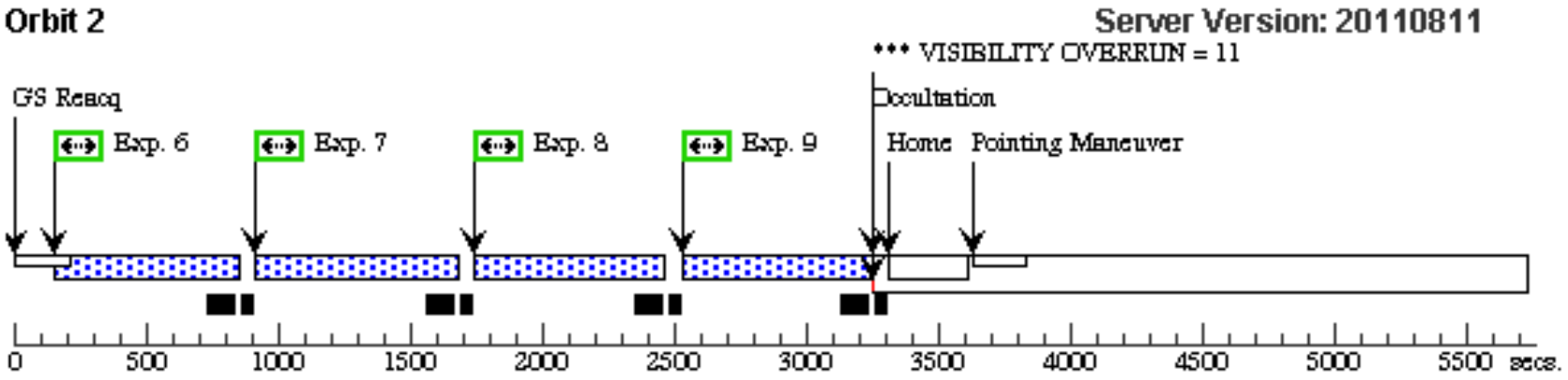
Exposures

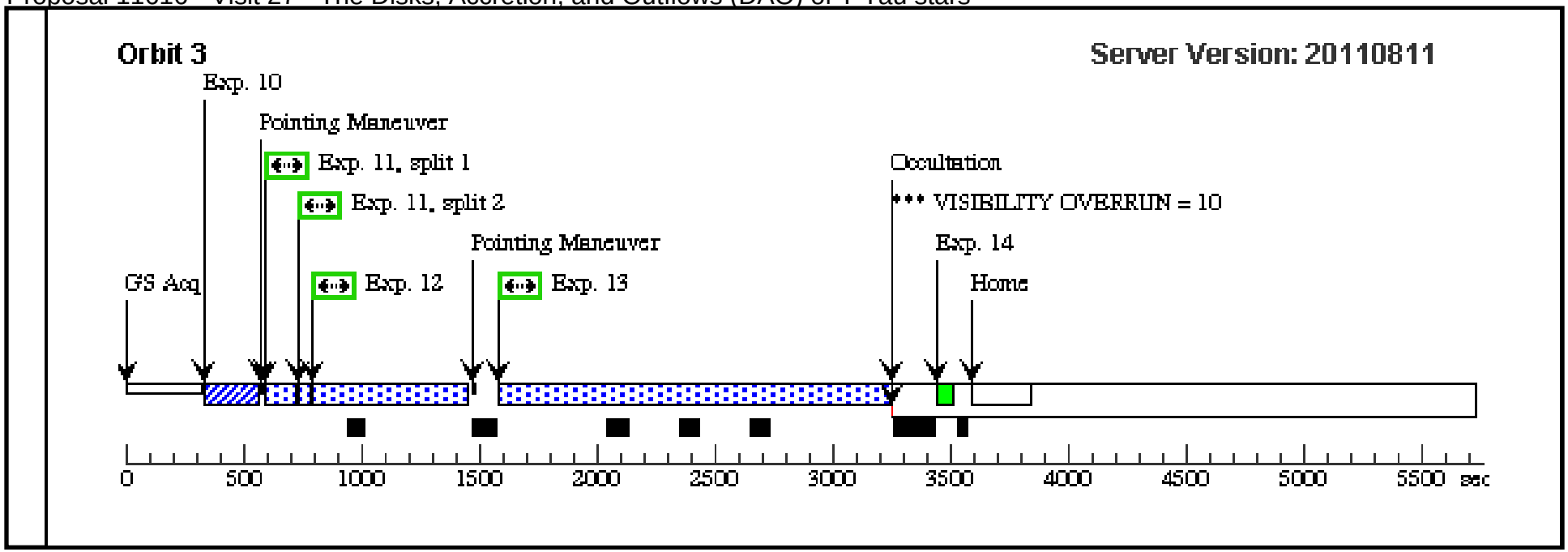
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(30) EM-LKCA-4	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		15 Secs *[==>]*	 ***[1]***
2		(30) EM-LKCA-4	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				15 Secs *[==>]*	 ***[1]***
3		(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=482; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			576 Secs *[==>]*	 ***[1]***
4		(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=482; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			576 Secs *[==>]*	 ***[1]***
5		(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=482; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			576 Secs *[==>]*	 ***[1]***
6		(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=482; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			576 Secs *[==>]*	 ***[2]***
7		(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=505; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			600 Secs *[==>]*	 ***[2]***
8		(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=505; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			600 Secs *[==>]*	 ***[2]***

	9	(30) EM-LKCA-4	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=505; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		600 Secs *[==>]*	 ***[2]***
	10	(30) EM-LKCA-4	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.3 Secs *[==>]*	 ***[3]***
	11	(30) EM-LKCA-4	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		30 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(30) EM-LKCA-4	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			520 Secs *[==>]*	 ***[3]***
	13	(30) EM-LKCA-4	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1485 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Occultation
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Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit	**Proposal 11616, Visit 28, completed** Tue Aug 30 01:17:56 GMT 2011 **Diagnostic Status: Warning** Scientific Instruments: STIS/CCD, COS/NUV, COS/FUV, STIS/NUV-MAMA Special Requirements: (none)
Diagnostics	(Visit 28) Warning (Orbit Planner): VISIBILITY OVERRUN (Visit 28) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous

(31)	EM-LKCA-19	RA: 04 55 36.9610 (73.9040042d) Dec: +30 17 55.31 (30.29870d) Equinox: J2000	Proper Motion RA: 3 mas/yr Proper Motion Dec: -19 mas/yr Epoch of Position: 1993.403	V=10.85	Reference Frame: ICRS

Comments: Ducourant et al. 2005
UPDATED 23/12/09
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*An explanation of the method first, then discussion of LkCa 19 spectra following **********
****
The WTTSs present a different case than the CTTSs, though with similar problems. They are non-accreting cool stars, and exhibit spectra similar to cool stars (AU Mic, AD Leo, Epsilon Eri, etc.). Many of these sort of spectra can be found at Tom Ayres's CoolCAT website: http://casa.colorado.edu/~ayres/CoolCAT/*

Per usual, Ly-alpha is usually not straightforward.

From a small sample of bright cool stars in CoolCAT

Star	Mg II flux	Ly-alpha flux*	Ratio
70 Oph:	6.5e-11	5.8e-12	0.089
Eps Eri:	7.4e-11	1.55e-11	0.21
36 Oph:	2.6e-11	4.8e-12	0.18
Xi1 Boo:	3.7e-11	6.6e-12	0.18
kap Cet:	2.6e-11	3.0e-12	0.12
61 Vir:	1.2e-11	6.7e-13	0.06
Alpha cen:	1.1e-9	5.3e-11	0.05
Chi1Ori	4.5e-11	4.9e-12	0.11

**fluxes in erg/cm2/s*

Based on these few numbers, I'll use a flux ratio of Ly-alpha/Mg II=0.2. For stars in the Taurus Molecular Cloud, the actual Ly-alpha flux should be far less because of N(H I) in our line of sight. The WTTSs in the TW Hya Association will not necessarily suffer from a significant flux reduction because it is an older association, far from molecular material. Thus, this investigation is most important for those objects.

**for reference, for 70 Oph the Ly-alpha emission would be 3.55 cts/s in the brightest pixel for a COS G130M observation.*

****
I used AU Mic as a spectral template for the high-resolution FUV spectrum of a cool star.
TEMPLATE FUV SPECTRUM: AU Mic

E140M spectrum: http://www.astro.caltech.edu/~gregoryh/11616/safety/aumic_e140m.dat

Use AU Mic as a template, scaling by C IV 1550 A flux
C IV flux: 3.8e-13 erg/cm2/s
G160M: 0.10 cts/s

C II flux: 2.2e-13 erg/cm2/s
G130M: 0.11 cts/s (outside of Ly-alpha)
****

LkCa 19

IUE spectrum: http://www.astro.caltech.edu/~gregoryh/11616/safety/lkca19_iue.dat

COS ACQ:
MIRRORB/PSA: 4.6 cts/s, time for S/N=40 => 50s

COS G130M:
C II: marginal detection of 1.1e-14 erg/cm2/s => 0.006 cts/s

Ly-alpha:
Measured Mg II flux (IUE): 1.8e-13 erg/cm2/s
estimated Ly-alpha flux: 3.6e-14 erg/cm2/s
=> 0.022 cts/s in brightest pixel

This estimate for Ly-alpha emission does not include the higher N(H I) and extinction to LkCa 19 relative to the nearby cool stars.

COS G160M:
Masured C IV flux: 2.0e-14 erg/cm2/s => 0.005 cts/s in G160M

VARIABILITY: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag
i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

STIS acquisition: F28x150LP filter: 0.005s for S/N=40; saturation in 0.95s

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(31) EM-LKCA-19	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		46 Secs *[==>]*	 ***[1]***

Comments: IUE spectrum: http://www.astro.caltech.edu/~gregoryh/11616/safety/lkca19_iue.dat
MIRRORB/PSA: 4.6 cts/s, time for S/N=40 => 50s

Variability: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag
i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(31) EM-LKCA-19	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				32 Secs *[==>]*	 ***[1]***

Comments: IUE spectrum: http://www.astro.caltech.edu/~gregoryh/11616/safety/lkca19_iue.dat
MIRRORB/PSA: 4.6 cts/s, time for S/N=40 => 50s

Variability: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag
i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=390; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			486 Secs *[==>]*	 ***[1]***

Comments: COS G130M:
C II: marginal detection of 1.1e-14 erg/cm2/s => 0.006 cts/s

Ly-alpha:
Measured Mg II flux (IUE): 1.8e-13 erg/cm2/s
estimated Ly-alpha flux: 3.6e-14 erg/cm2/s
=> 0.022 cts/s in brightest pixel

This estimate for Ly-alpha emission does not include the higher N(H I) and extinction to LkCa 19 relative to the nearby cool stars.

Variability: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
4		(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=390; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			486 Secs *[==>]*	 ***[1]***

Comments: COS G130M:
C II: marginal detection of 1.1e-14 erg/cm2/s => 0.006 cts/s

Ly-alpha:
Measured Mg II flux (IUE): 1.8e-13 erg/cm2/s
estimated Ly-alpha flux: 3.6e-14 erg/cm2/s
=> 0.022 cts/s in brightest pixel

This estimate for Ly-alpha emission does not include the higher N(H I) and extinction to LkCa 19 relative to the nearby cool stars.

Variability: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

5	(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=600; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	486 Secs *[==>]*	***[1]***

Comments: COS G130M:
C II: marginal detection of 1.1e-14 erg/cm2/s => 0.006 cts/s

Ly-alpha:
Measured Mg II flux (IUE): 1.8e-13 erg/cm2/s
estimated Ly-alpha flux: 3.6e-14 erg/cm2/s
=> 0.022 cts/s in brightest pixel

This estimate for Ly-alpha emission does not include the higher N(H I) and extinction to LkCa 19 relative to the nearby cool stars.

Variability: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

6	(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=390; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	486 Secs *[==>]*	***[2]***

Comments: COS G130M:
C II: marginal detection of 1.1e-14 erg/cm2/s => 0.006 cts/s

Ly-alpha:
Measured Mg II flux (IUE): 1.8e-13 erg/cm2/s
estimated Ly-alpha flux: 3.6e-14 erg/cm2/s
=> 0.022 cts/s in brightest pixel

This estimate for Ly-alpha emission does not include the higher N(H I) and extinction to LkCa 19 relative to the nearby cool stars.

Variability: Grankin et al. (2008): 61 U-band observations; U=12.54 +/- 0.07 (1-sigma); min-max=0.38 mag i.e., very little variability. Note that this method likely underestimates the amount of variability in the lines, but should be good for the broadband MIRROR images.

7	(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=530; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	630 Secs *[==>]*	***[2]***

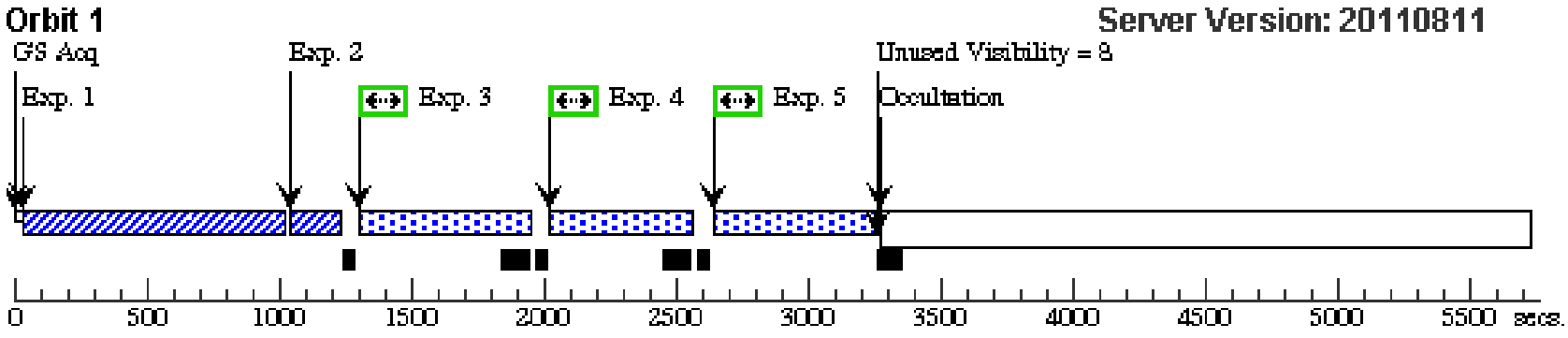
Comments: Measured C IV flux: 2.0e-14 erg/cm2/s => 0.005 cts/s in G160M

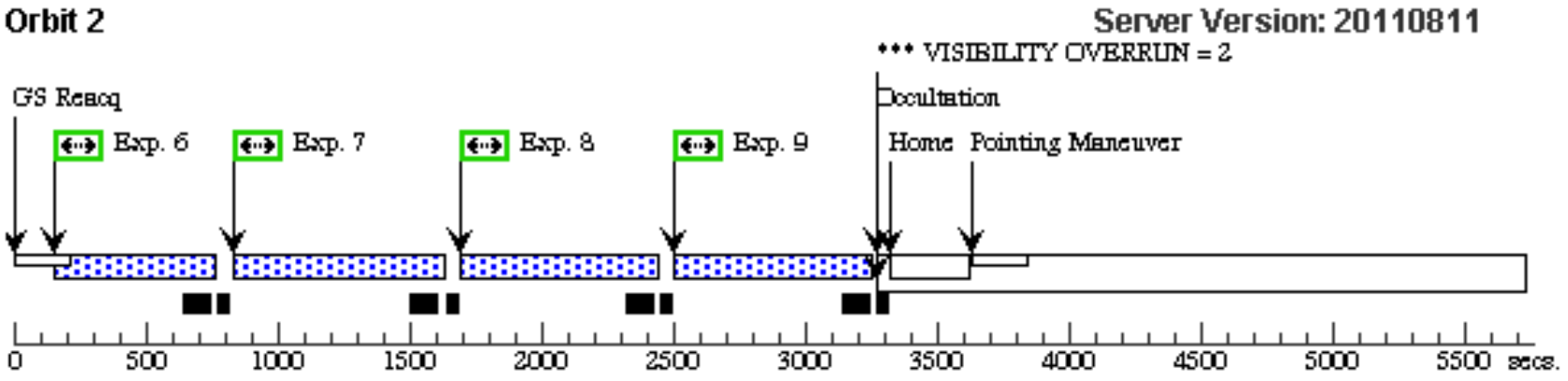
8	(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=531; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	630 Secs *[==>]*	***[2]***

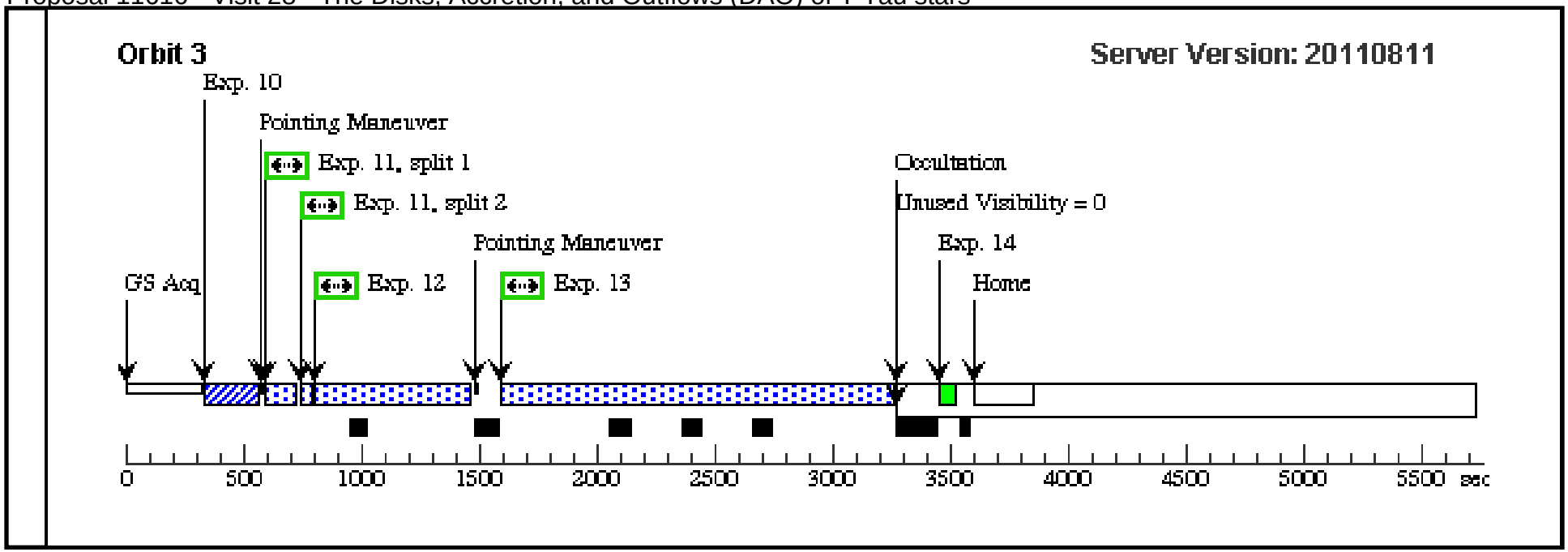
Comments: Measured C IV flux: 2.0e-14 erg/cm2/s => 0.005 cts/s in G160M

	9	(31) EM-LKCA-19	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=530; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		630 Secs *[==>]*	 ***[2]***
	Comments: Measured C IV flux: 2.0e-14 erg/cm2/s => 0.005 cts/s in G160M							
	10	(31) EM-LKCA-19	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3	0.1 Secs *[==>]*	 ***[3]***
	Comments: STIS acquisition: F28x150LP filter: 0.005s for S/N=40; saturation in 0.95s							
	11	(31) EM-LKCA-19	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		35 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(31) EM-LKCA-19	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			522 Secs *[==>]*	 ***[3]***
	Comments: Brightest pixel: 2.7 cts/s @ Mg II for a line with 1.2e-14 erg/cm2/s and FWHM=0.4 A *The 0.9e-14 is calculated from the Mg II flux, dividing by 1.5 because the line is a doublet (one is stronger).*							
	13	(31) EM-LKCA-19	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1485 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Exp. 11, split 2
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Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
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2000
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3000
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4000
4500
5000
5500
sec

Proposal 11616 - Visit 29 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 29, completed Tue Aug 30 01:17:57 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 29) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(Visit 29) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 29) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 29) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(32)	TWA-2	RA: 11 09 13.7970 (167.3074875d)	Proper Motion RA: -0.0916 sec of time/yr	V=11.08	Reference Frame: ICRS
		Dec: -30 01 39.88 (-30.02774d)	Proper Motion Dec: -0.0201 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1998.279		

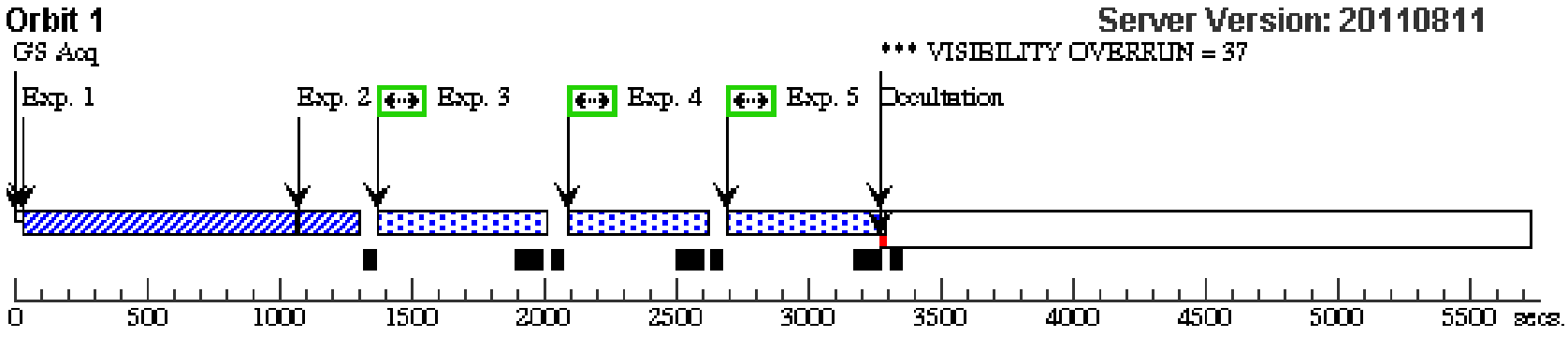
Comments: PM from Mamajek et al. 2005, Position/epoch from UCAC2

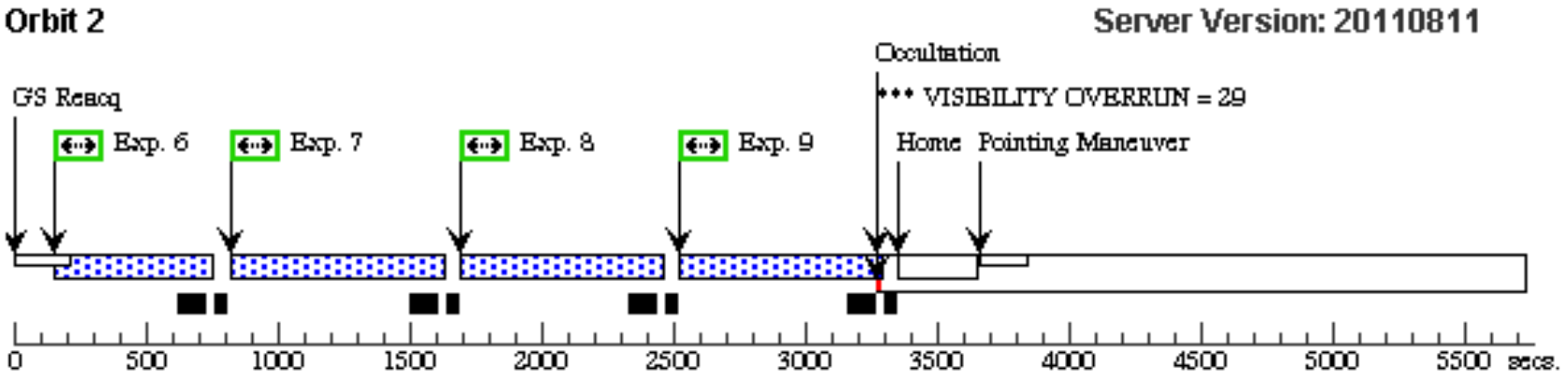
Exposures

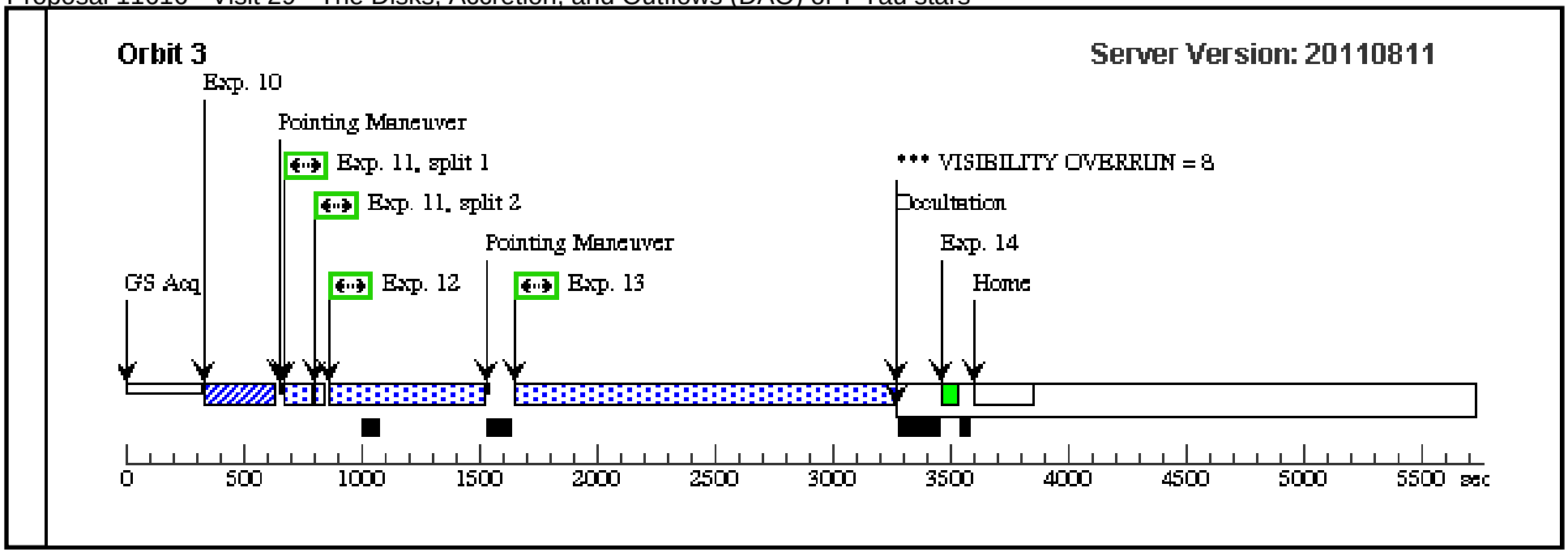
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(32) TWA-2	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=3; CENTER=FLUX-WT; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		50 Secs *[==>]*	 ***[1]***
2		(32) TWA-2	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				50 Secs *[==>]*	 ***[1]***
3		(32) TWA-2	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=377; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			477 Secs *[==>]*	 ***[1]***
4		(32) TWA-2	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=377; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			477 Secs *[==>]*	 ***[1]***
5		(32) TWA-2	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=377; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			477 Secs *[==>]*	 ***[1]***
6		(32) TWA-2	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=377; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			477 Secs *[==>]*	 ***[2]***
7		(32) TWA-2	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=540; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			642 Secs *[==>]*	 ***[2]***
8		(32) TWA-2	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=540; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			642 Secs *[==>]*	 ***[2]***

	9	(32) TWA-2	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=540; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		642 Secs *[==>]*	 ***[2]***
	10	(32) TWA-2	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3	8 Secs *[==>]*	 ***[3]***
	11	(32) TWA-2	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		15 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(32) TWA-2	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			520 Secs *[==>]*	 ***[3]***
	13	(32) TWA-2	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500		1438 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure



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Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
*** VISIBILITY OVERRUN = 8
Occultation
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 30 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 30, completed Tue Aug 30 01:18:00 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 30) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 30) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 30) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(Visit 30) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(33)	TWA-7	RA: 10 42 29.9800 (160.6249167d)	Proper Motion RA: -122.2 mas/yr	V=11.06	Reference Frame: ICRS
		Dec: -33 40 16.58 (-33.67127d)	Proper Motion Dec: -29.3 mas/yr		
		Equinox: J2000	Epoch of Position: 2007.25		

Comments: PM from Mamajek et al. 2005

Position measured from HST/ACS SBC image J9RH02011

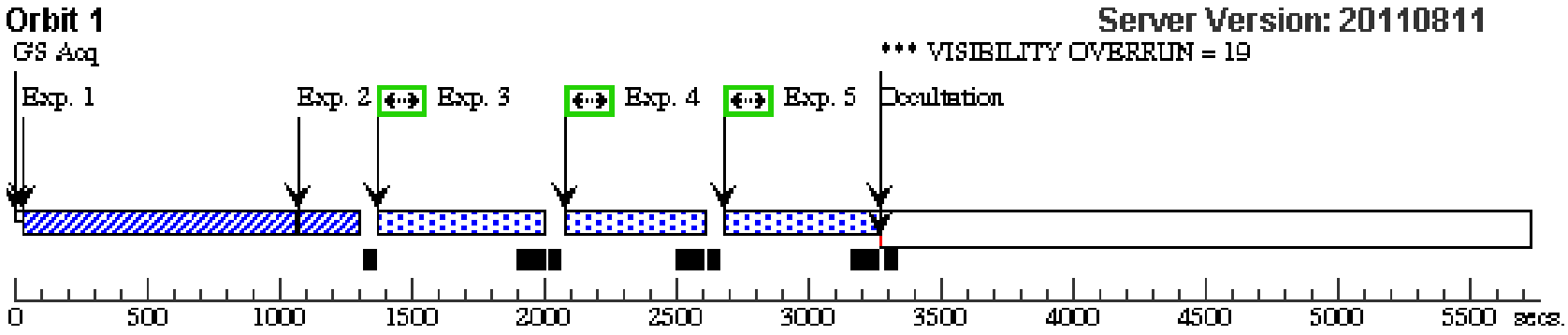
UPDATED: 23/12/09
UPDATED: 16/02/11

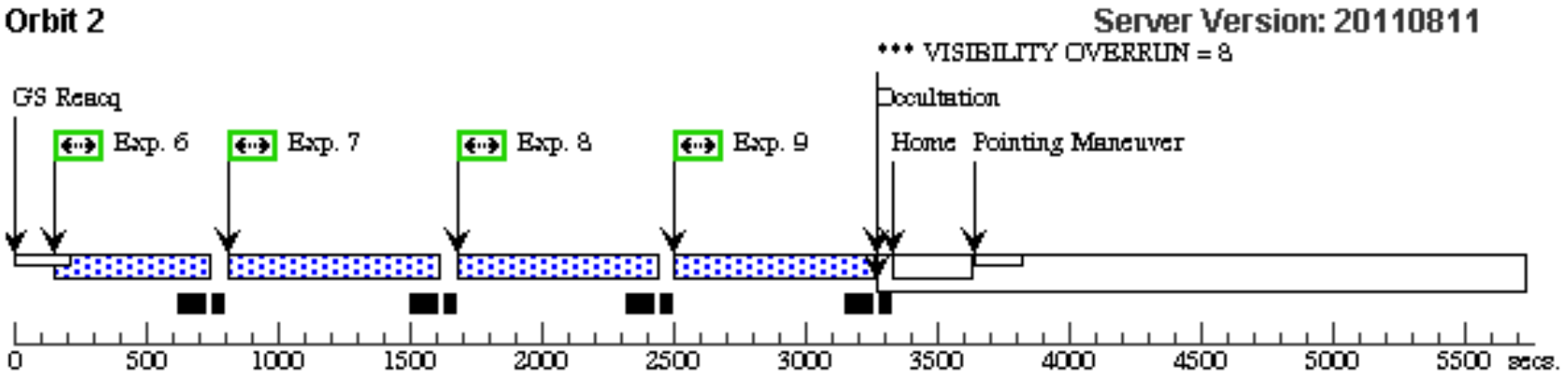
Exposures

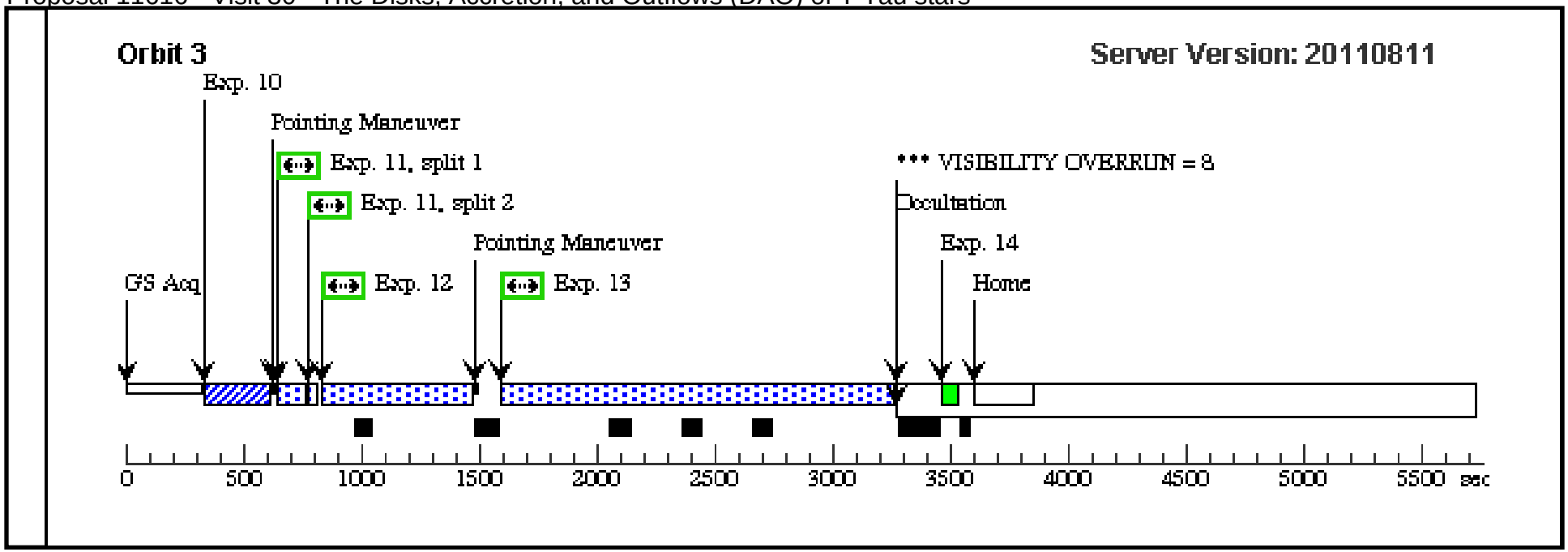
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(33) TWA-7	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		50 Secs *[==>]*	 ***[1]***
2		(33) TWA-7	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				50 Secs *[==>]*	 ***[1]***
3		(33) TWA-7	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=379; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			471 Secs *[==>]*	 ***[1]***
4		(33) TWA-7	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=379; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			471 Secs *[==>]*	 ***[1]***
5		(33) TWA-7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=379; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			471 Secs *[==>]*	 ***[1]***
6		(33) TWA-7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=377; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			471 Secs *[==>]*	 ***[2]***
7		(33) TWA-7	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=542; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			637 Secs *[==>]*	 ***[2]***
8		(33) TWA-7	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=542; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			637 Secs *[==>]*	 ***[2]***

	9	(33) TWA-7	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=542; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		637 Secs *[==>]*	 ***[2]***
	10	(33) TWA-7	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3	2 Secs *[==>]*	 ***[3]***
	11	(33) TWA-7	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		8 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(33) TWA-7	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			500 Secs *[==>]*	 ***[3]***
	13	(33) TWA-7	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300		1490 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Pointing Maneuver
*** VISIBILITY OVERRUN = 8
Occultation
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 31, completed Tue Aug 30 01:18:03 GMT 2011

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Diagnostics

(Visit 31) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 31) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 31) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 31) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	SCHJ0439016+2336030	RA: 04 39 1.6330 (69.7568042d)	Proper Motion RA: 0.000552 sec of time/yr	V=15.9	Reference Frame: ICRS
		Dec: +23 36 3.00 (23.60083d)	Proper Motion Dec: -0.0231 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2003.95		

Comments: POSITION FROM Slesnick et al. 2006
PM from ALK
UPDATED 23/12/09

SCH J0439+2336: this is the faintest object in our sample, an accreting star at the brown dwarf limit. An ACS/SBC PR130L spectrum demonstrates that the star is also faint in the FUV. Though PR130L doesn't cover Ly-alpha, based on H-alpha emission any Ly-alpha flux is surely weak.

To assess the NUV acquisition images, based on the U-band emission seen in ground-based spectrum, dividing the GM Aur STIS G230L by a factor of 70 is appropriate. The lack of variability measurements is the only problem. As far as I know, the star has only been observed in the optical by Slesnick et al. (2006) and Herczeg et al. (2008). The two observations are consistent with each other. However, with the estimated count rate of 2.2 cts/s in the brightest pixel for the PSA and MIRRORA, even a factor of 10 increase in the emission would result in a flux below the bright limit cutoff.

SPECTRA:
-schj0439+2336_optical.dat
-schj0439+2336_pr130l.dat

COS ACQ:

Divide gmaur_g230l.dat by 75: 2.2 cts/s in brightest pixel, PSA/MIRRORA

G160M:

C IV flux: 1.2e-15 erg/cm2/s => 0.0002 cts/s in brightest pixel

G130M:

C II flux: not detected
Estimated Ly-alpha flux: 3.8e-15 => 5e-4 cts/s in brightest pixel

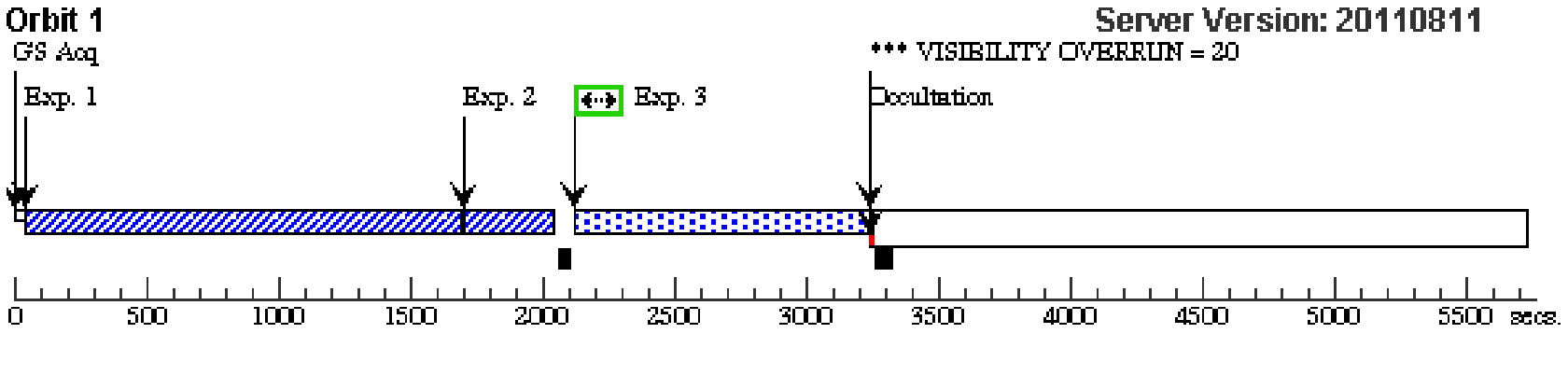
STIS ACQ: saturation in 15-35s

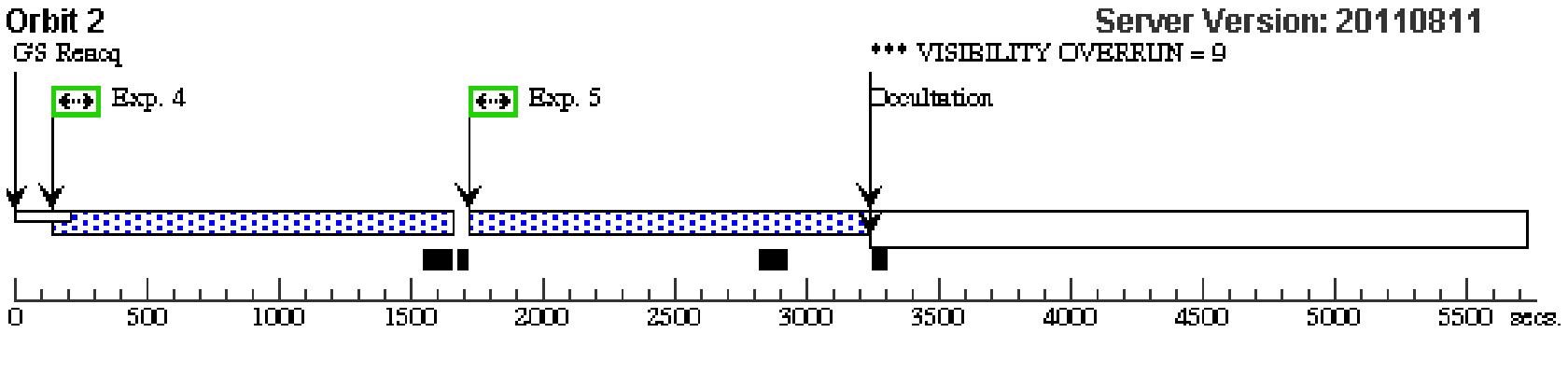
Exposures

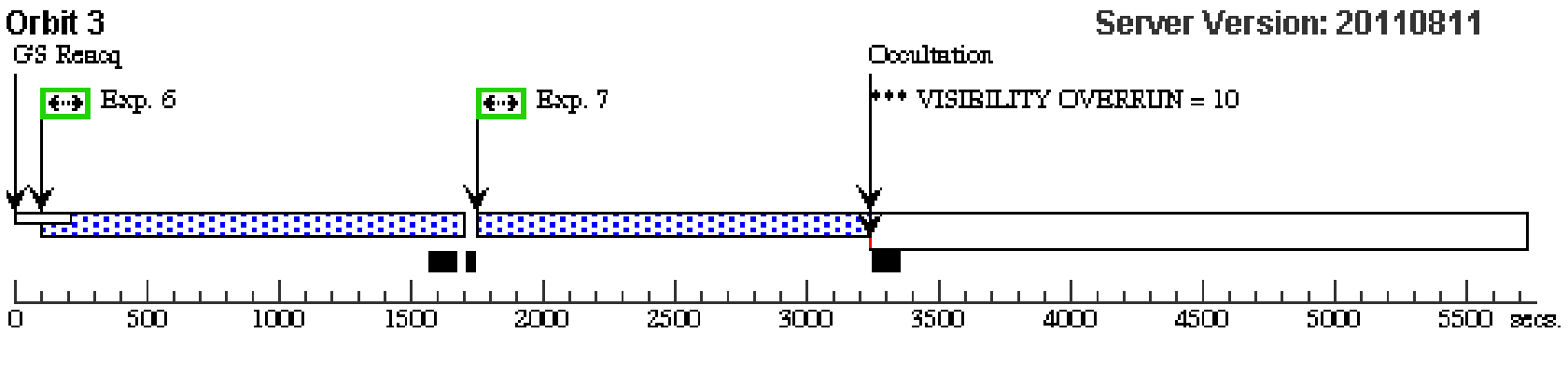
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) SCHJ0439016+2336030	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		120 Secs *[==>]*	 ***[1]***
	Comments: COS ACQ: --- *Divide gmaur_g230l.dat by 75: 2.2 cts/s in brightest pixel, PSA/MIRRORA*								
2		(8) SCHJ0439016+2336030	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				120 Secs *[==>]*	 ***[1]***
	Comments: COS ACQ: --- *Divide gmaur_g230l.dat by 75: 2.2 cts/s in brightest pixel, PSA/MIRRORA*								
3		(8) SCHJ0439016+2336030	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=2000; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			921 Secs *[==>]*	 ***[1]***
	Comments: G160M: --- *C IV flux: 1.2e-15 erg/cm2/s => 0.0002 cts/s in brightest pixel*								
4		(8) SCHJ0439016+2336030	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=1300; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1397 Secs *[==>]*	 ***[2]***
	Comments: G160M: --- *C IV flux: 1.2e-15 erg/cm2/s => 0.0002 cts/s in brightest pixel*								
5		(8) SCHJ0439016+2336030	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1000; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1397 Secs *[==>]*	 ***[2]***
	Comments: G160M: --- *C IV flux: 1.2e-15 erg/cm2/s => 0.0002 cts/s in brightest pixel*								
6		(8) SCHJ0439016+2336030	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1325; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			1431 Secs *[==>]*	 ***[3]***
	Comments: G130M: --- *C II flux: not detected* *Estimated Ly-alpha flux: 3.8e-15 => 5e-4 cts/s in brightest pixel*								

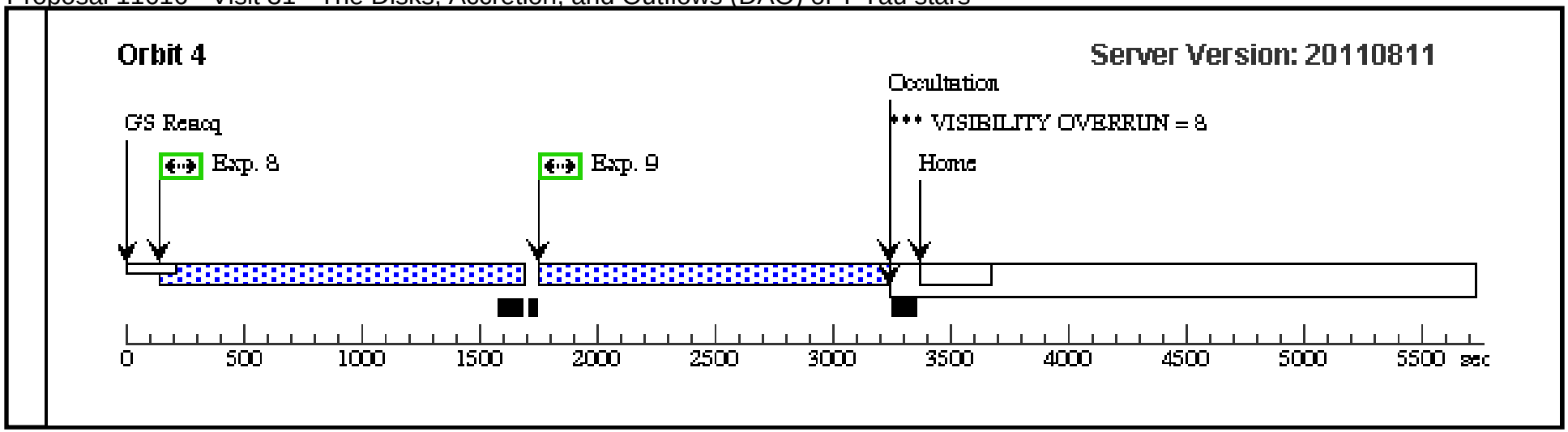
	7	(8) SCHJ0439016+2 336030	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=1600; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	1431 Secs *[==>]*	***[3]***
	Comments: G130M: --- *C II flux: not detected* *Estimated Ly-alpha flux: 3.8e-15 => 5e-4 cts/s in brightest pixel*						
	8	(8) SCHJ0439016+2 336030	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1337; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	1431 Secs *[==>]*	***[4]***
	Comments: G130M: --- *C II flux: not detected* *Estimated Ly-alpha flux: 3.8e-15 => 5e-4 cts/s in brightest pixel*						
	9	(8) SCHJ0439016+2 336030	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1600; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	1431 Secs *[==>]*	***[4]***
	Comments: G130M: --- *C II flux: not detected* *Estimated Ly-alpha flux: 3.8e-15 => 5e-4 cts/s in brightest pixel*						

Orbit Structure








Orbit 4
Server Version: 20110811
Occultation
GS Reacq
*** VISIBILITY OVERRUN = 8
Exp. 8
Exp. 9
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 11616 - Visit 32 - The Disks, Accretion, and Outflows (DAO) of T Tau stars

Visit

Proposal 11616, Visit 32, completed Tue Aug 30 01:18:06 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Diagnostics

(Visit 32) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 32) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 32) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(34)	RECX-1	RA: 08 36 56.3610 (129.2348375d)	Proper Motion RA: -0.00973 sec of time/yr	V=10.5	Reference Frame: ICRS
		Dec: -78 56 46.00 (-78.94611d)	Proper Motion Dec: 0.0269 arcsec/yr		
		Equinox: J2000	Epoch of Position: 1985.771		

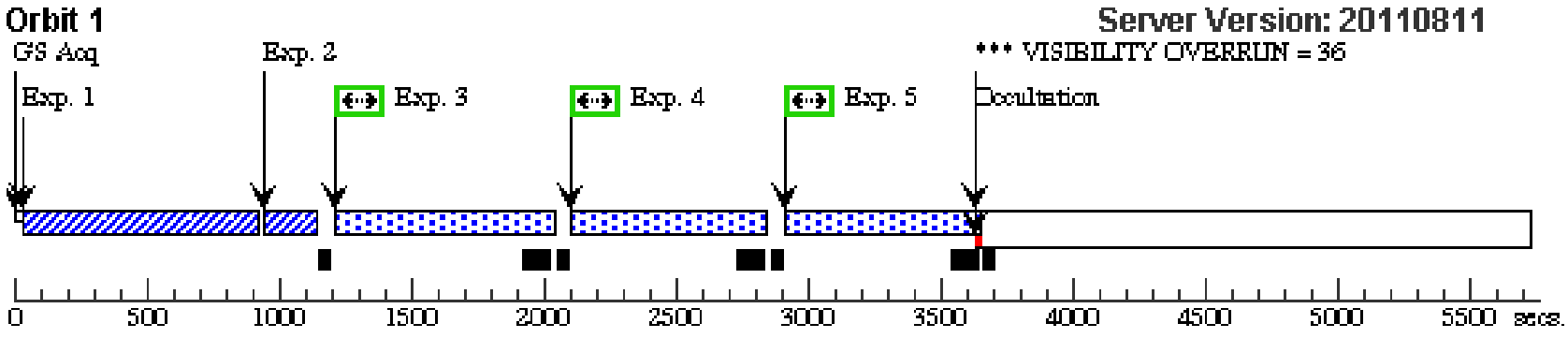
Comments: Ducourant et al. 2005
UPDATED 23/12/09

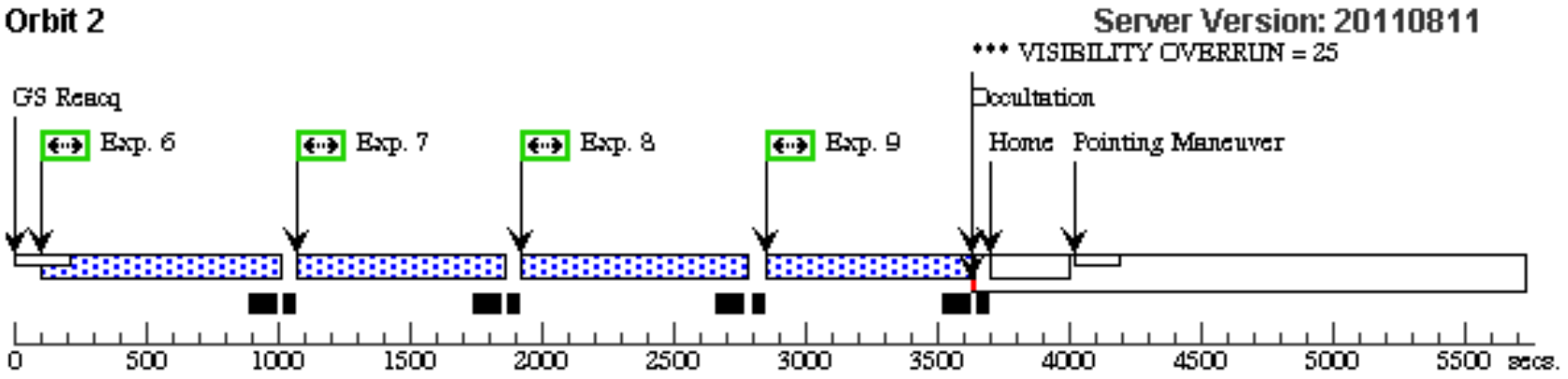
Exposures

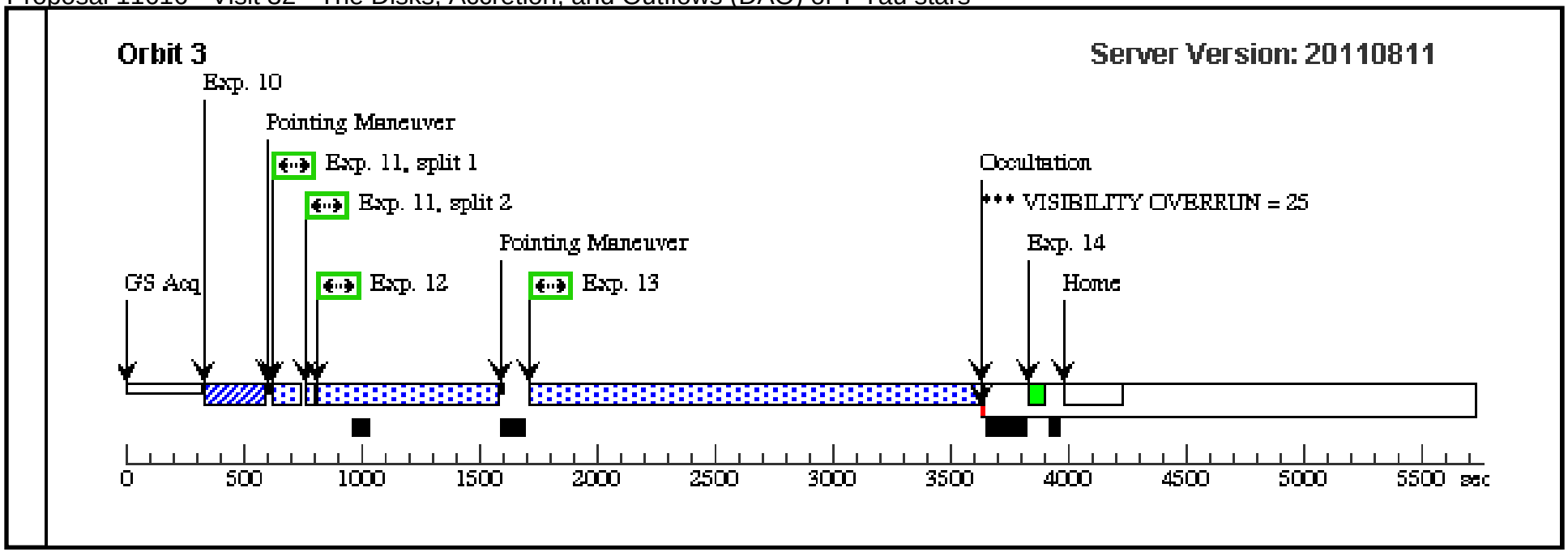
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(34) RECX-1	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=3; CENTER=FLUX-WT; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		35 Secs *[==>]*	 ***[1]***
2		(34) RECX-1	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs *[==>]*	 ***[1]***
3		(34) RECX-1	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=525; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			619 Secs *[==>]*	 ***[1]***
4		(34) RECX-1	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=525; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			619 Secs *[==>]*	 ***[1]***
5		(34) RECX-1	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=525; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			619 Secs *[==>]*	 ***[1]***
6		(34) RECX-1	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=636; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			736 Secs *[==>]*	 ***[2]***
7		(34) RECX-1	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=636; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			736 Secs *[==>]*	 ***[2]***
8		(34) RECX-1	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=636; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			736 Secs *[==>]*	 ***[2]***

	9	(34) RECX-1	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=636; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH		736 Secs *[==>]*	 ***[2]***
	10	(34) RECX-1	STIS/CCD, ACQ, F28X50OII	MIRROR		GS ACQ SCENARIO BASE1B3	0.5 Secs *[==>]*	 ***[3]***
	11	(34) RECX-1	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO		14 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[3]***
	12	(34) RECX-1	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A			629 Secs *[==>]*	 ***[3]***
	13	(34) RECX-1	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=2000		1750 Secs *[==>]*	 ***[3]***
	14	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A			25 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Exp. 10
Pointing Maneuver
Exp. 11, split 1
Exp. 11, split 2
Occultation
*** VISIBILITY OVERRUN = 25
Pointing Maneuver
Exp. 14
GS Acq
Exp. 12
Exp. 13
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 33, completed Tue Aug 30 01:18:08 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: SEQ 31,33 WITHIN 8 Orbits

Diagnostics

(Visit 33) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 33) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	SCHJ0439016+2336030	RA: 04 39 1.6330 (69.7568042d)	Proper Motion RA: 0.000552 sec of time/yr	V=15.9	Reference Frame: ICRS
		Dec: +23 36 3.00 (23.60083d)	Proper Motion Dec: -0.0231 arcsec/yr		
		Equinox: J2000	Epoch of Position: 2003.95		

Comments: POSITION FROM Slesnick et al. 2006
PM from ALK
UPDATED 23/12/09

SCH J0439+2336: this is the faintest object in our sample, an accreting star at the brown dwarf limit. An ACS/SBC PR130L spectrum demonstrates that the star is also faint in the FUV. Though PR130L doesn't cover Ly-alpha, based on H-alpha emission any Ly-alpha flux is surely weak.

To assess the NUV acquisition images, based on the U-band emission seen in ground-based spectrum, dividing the GM Aur STIS G230L by a factor of 70 is appropriate. The lack of variability measurements is the only problem. As far as I know, the star has only been observed in the optical by Slesnick et al. (2006) and Herczeg et al. (2008). The two observations are consistent with each other. However, with the estimated count rate of 2.2 cts/s in the brightest pixel for the PSA and MIRRORA, even a factor of 10 increase in the emission would result in a flux below the bright limit cutoff.

SPECTRA:
-schj0439+2336_optical.dat
-schj0439+2336_pr130l.dat

COS ACQ:

Divide gmaur_g230l.dat by 75: 2.2 cts/s in brightest pixel, PSA/MIRRORA

G160M:

C IV flux: 1.2e-15 erg/cm2/s => 0.0002 cts/s in brightest pixel

G130M:

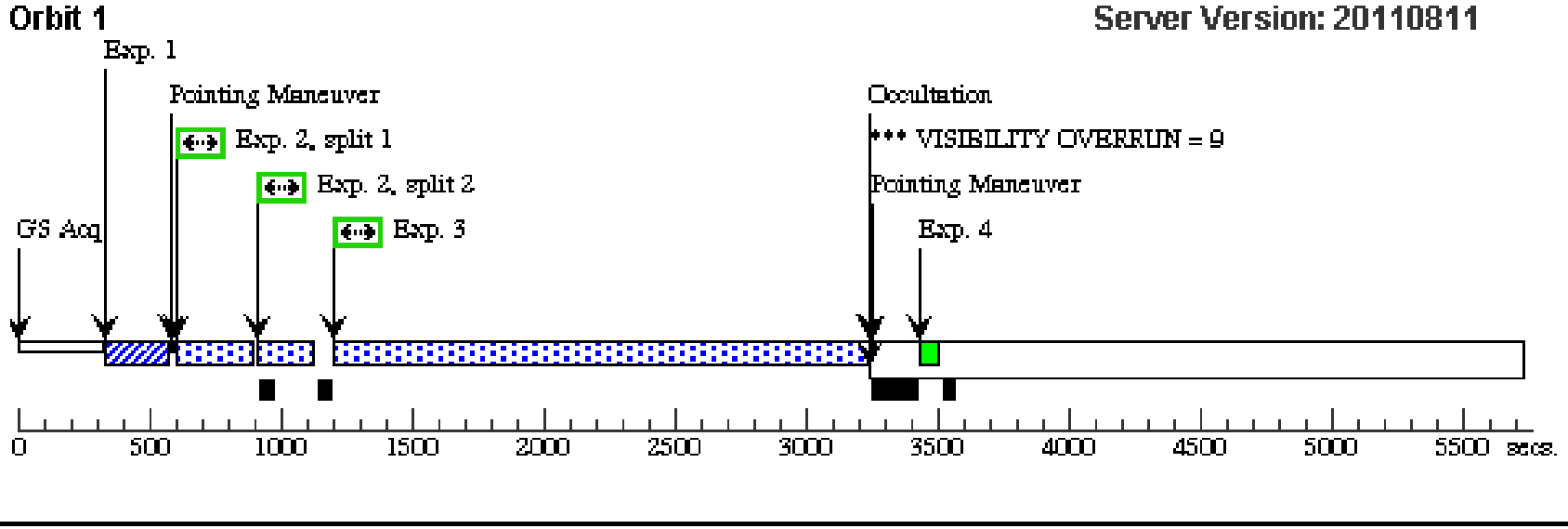
C II flux: not detected
Estimated Ly-alpha flux: 3.8e-15 => 5e-4 cts/s in brightest pixel

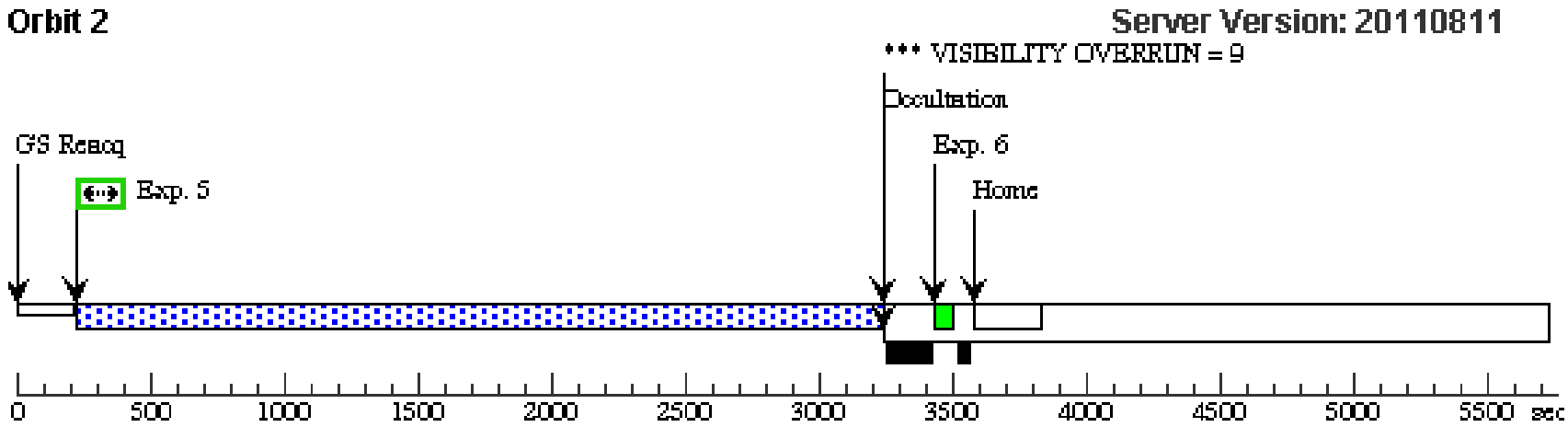
STIS ACQ: saturation in 15-35s

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) SCHJ0439016+2336030	STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARIO BASE1B3		3 Secs *[==>]*	 ***[1]***
Comments: STIS ACQ: saturation in 15-35s									
2		(8) SCHJ0439016+2336030	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			358 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(8) SCHJ0439016+2336030	STIS/NUV-MAMA, TIME-TAG, 52X0.2	G230L 2376 A	BUFFER-TIME=1000; WAVECAL=NO			1900 Secs *[==>]*	 ***[1]***
4		WAVE	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				25 Secs *[==>]*	 ***[1]***
5		(8) SCHJ0439016+2336030	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=1500			2841 Secs *[==>]*	 ***[2]***
6		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				25 Secs *[==>]*	 ***[2]***

Orbit Structure





Visit

Proposal 11616, Visit 34, failed Tue Aug 30 01:18:10 GMT 2011

Diagnostic Status: No Diagnostics

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

Special Requirements: AFTER 13 BY 1.8 Orbits TO 2.2 Orbits

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	NAME-UX-TAU-A	RA: 04 30 3.9250 (67.5163542d) Dec: +18 13 49.19 (18.23033d) Equinox: J2000	Proper Motion RA: 0.000603 sec of time/yr Proper Motion Dec: -0.02742 arcsec/yr Parallax: 0.0067" Epoch of Position: 1998.9	V=10.7	Reference Frame: ICRS

Comments: Hipparcos position/proper motion
RA/DEC from WFPC2/F606W image, U44M3101R
UPDATED: 23/12/09

UX Tau is a K5+M2 binary, so all photometry and IUE observations include both stars. However, almost all of the U-band and UV flux is produced by the primary, so we can ignore the secondary.

Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat
FUV spectrum: uxtau_iue.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

FUV spectrum: uxtau_iue.dat

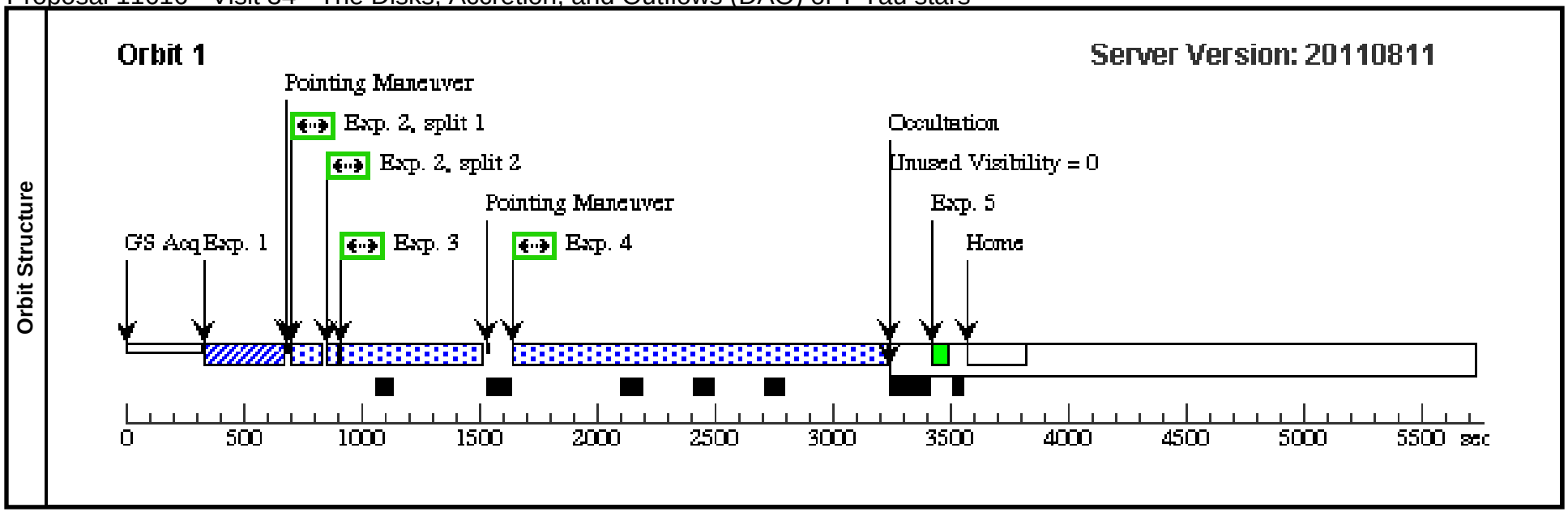
G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) NAME-UX-TAU-A	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3		16 Secs *[==>]*	 ***[1]***
Comments: V-band mag ranges from 11-12.5 (Grankin et al. 2007). With the [O III] filter and Kurucz K4 SpT, S/N=40 is reached in 2.3-10s									
2		(14) NAME-UX-TAU-A	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			40 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(14) NAME-UX-TAU-A	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				460 Secs *[==>]*	 ***[1]***
4		(14) NAME-UX-TAU-A	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300			1408 Secs *[==>]*	 ***[1]***
5		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				25 Secs *[==>]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20110811
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Occultation
Unused Visibility = 0
Exp. 5
GS Acq
Exp. 1
Exp. 3
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 53, scheduling Tue Aug 30 01:18:10 GMT 2011

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: This is a copy of failed visit 13

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	NAME-UX-TAU-A	RA: 04 30 3.9250 (67.5163542d) Dec: +18 13 49.19 (18.23033d) Equinox: J2000	Proper Motion RA: 0.000603 sec of time/yr Proper Motion Dec: -0.02742 arcsec/yr Parallax: 0.0067" Epoch of Position: 1998.9	V=10.7	Reference Frame: ICRS

Comments: Hipparcos position/proper motion
RA/DEC from WFPC2/F606W image, U44M3101R
UPDATED: 23/12/09

UX Tau is a K5+M2 binary, so all photometry and IUE observations include both stars. However, almost all of the U-band and UV flux is produced by the primary, so we can ignore the secondary.

Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat
FUV spectrum: uxtau_iue.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) NAME-UX-TAU-A	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		70 Secs *[==>]*	**[1]**

Comments: Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2		(14) NAME-UX-TAU-A	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs *[==>]*	**[1]**

Comments: Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			407 Secs *[==>]*	**[1]**

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
4		(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			407 Secs *[==>]*	**[1]**

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

5	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH	407 Secs *[==>]*	***[1]***

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

6	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=310; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH	407 Secs *[==>]*	***[2]***

Comments: FUV spectrum: uxtau_iue.dat

G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

7	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=555; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	647 Secs *[==>]*	***[2]***

Comments: FUV spectrum: uxtau_iue.dat

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

8	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=555; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	647 Secs *[==>]*	***[2]***

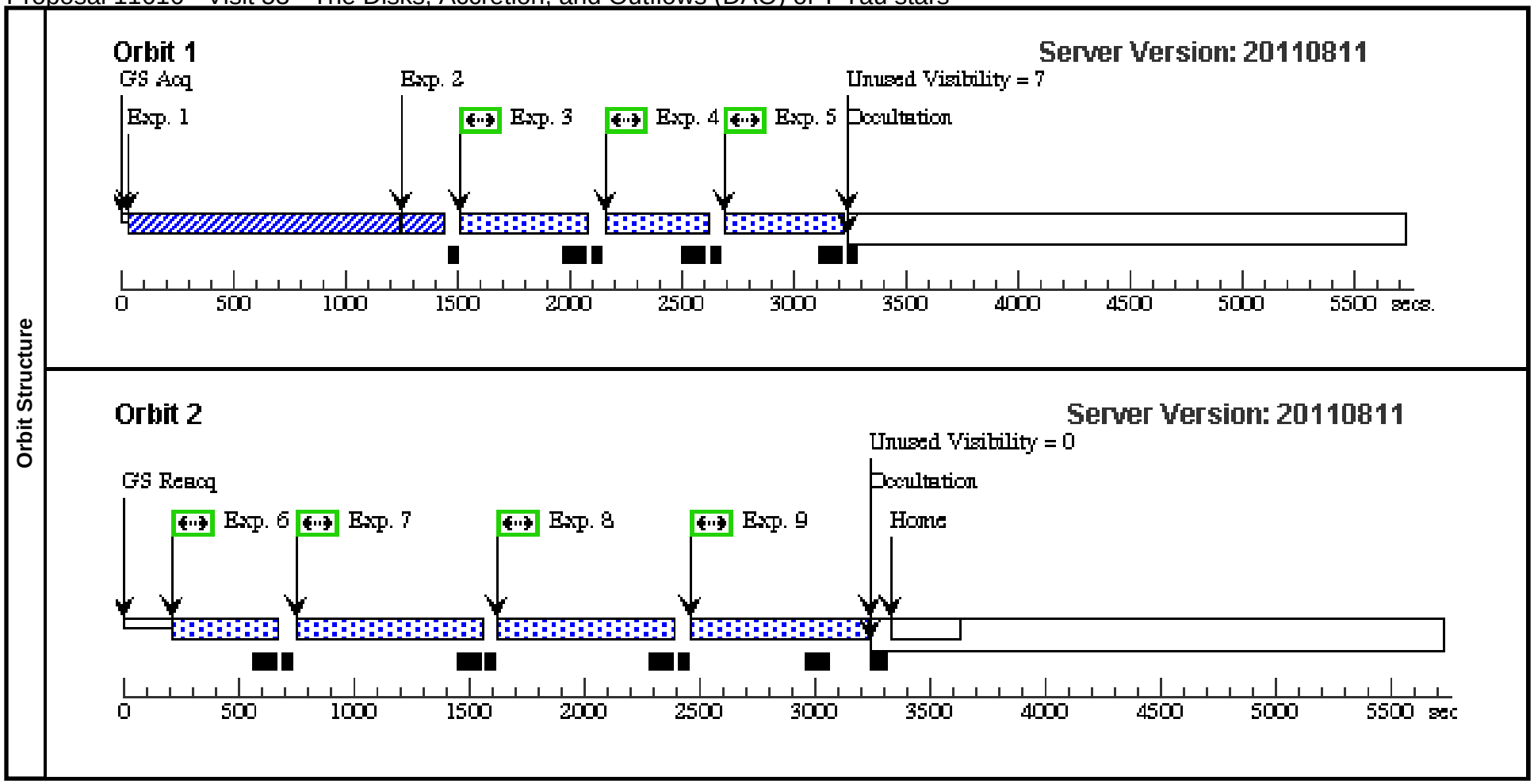
Comments: FUV spectrum: uxtau_iue.dat

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

9	(14) NAME-UX-TAU-A	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=400; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH	647 Secs *[==>]*	***[2]***

Comments: FUV spectrum: uxtau_iue.dat

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s


Orbit Structure
Orbit 1
Server Version: 20110811
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Unused Visibility = 7
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20110811
GS Reacq
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Unused Visibility = 0
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 54, scheduling Tue Aug 30 01:18:10 GMT 2011

Diagnostic Status: No Diagnostics

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

Special Requirements: AFTER 53 BY 1.8 Orbits TO 2.2 Orbits

Comments: This is a copy of failed visit 34.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	NAME-UX-TAU-A	RA: 04 30 3.9250 (67.5163542d) Dec: +18 13 49.19 (18.23033d) Equinox: J2000	Proper Motion RA: 0.000603 sec of time/yr Proper Motion Dec: -0.02742 arcsec/yr Parallax: 0.0067" Epoch of Position: 1998.9	V=10.7	Reference Frame: ICRS

Comments: Hipparcos position/proper motion
RA/DEC from WFPC2/F606W image, U44M3101R
UPDATED: 23/12/09

UX Tau is a K5+M2 binary, so all photometry and IUE observations include both stars. However, almost all of the U-band and UV flux is produced by the primary, so we can ignore the secondary.

Variability: range of 10 in 5 IUE spectra.
Grankin et al. (2007): 94 U-band spectra, U=13.02 +/- 0.72; full range of 12.2-15.2.

NUV spectrum: uxtau_lp06978.dat
FUV spectrum: uxtau_iue.dat

UX Tau: brightest IUE observation is lp06978. S/N is poor at short wavelengths, so lkca15_g230l.dat was used as a template. lkca15_g230l x 4 for the ETC. This IUE spectrum was obtained when U was about 13.3, so variability could increase the count rate by about a factor of 3.

MIRRORB: brightest pixel=4.8 cts/s for the brightest IUE spectrum. Multiplying by 3 yields a count rate of 15 cts/s, well below the 50 cts/s limit.

FUV spectrum: uxtau_iue.dat

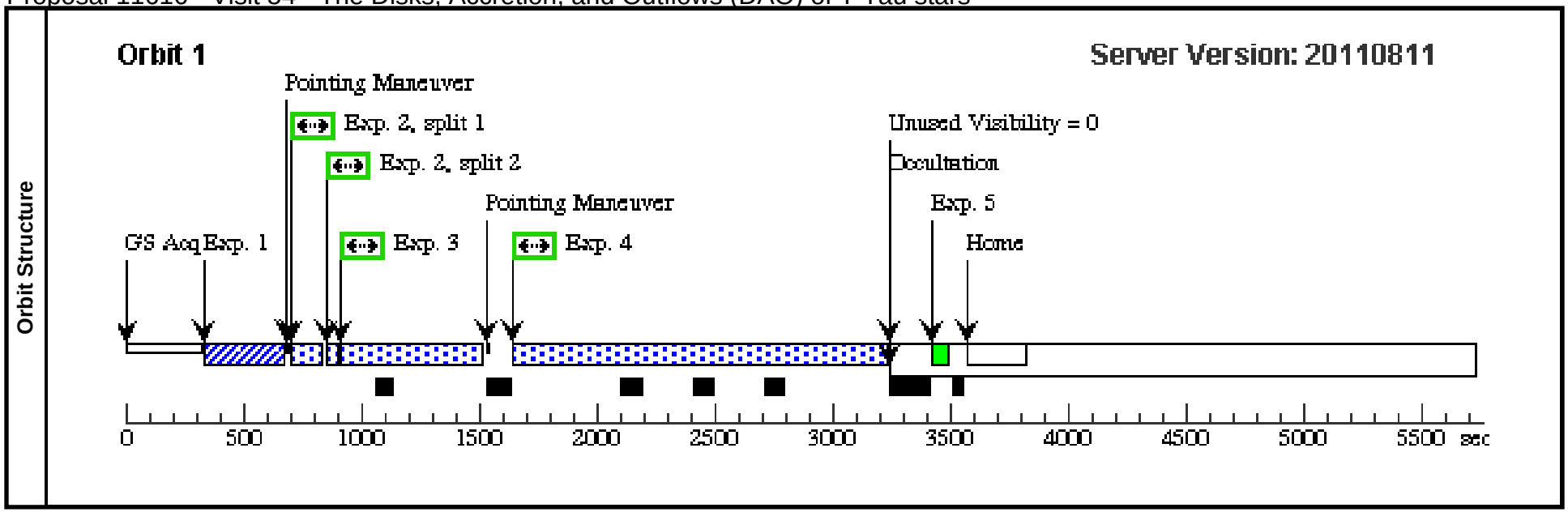
G130M: brightest line is C II 1335, flux=2.3e-14 erg/cm2/s. Using TW Hya as a template yields a count rate of 0.01 cts/s, far below brightness limit.

Ly-alpha: based on H-alpha emission, we would expect a Ly-alpha flux of 2.4e-13 erg/cm2/s, if its detected (unlikely), for a maximum count rate of 0.032 cts/s, far below the limit of 0.7 cts/s

G160M: brightest line is C IV, flux=9.4e-14 erg/cm2/s. Using TW Hya as a template, brightest pixel is 0.016 cts/s

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(14) NAME-UX-TAU-A	STIS/CCD, ACQ, F28X50OIII	MIRROR		GS ACQ SCENARIO BASE1B3		16 Secs *[==>]*	 ***[1]***
Comments: V-band mag ranges from 11-12.5 (Grankin et al. 2007). With the [O III] filter and Kurucz K4 SpT, S/N=40 is reached in 2.3-10s									
2		(14) NAME-UX-TAU-A	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	WAVECAL=NO			40 Secs *[==>(Split 1)]* *[==>(Split 2)]*	 ***[1]***
3		(14) NAME-UX-TAU-A	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				460 Secs *[==>]*	 ***[1]***
4		(14) NAME-UX-TAU-A	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2561 A	BUFFER-TIME=300			1408 Secs *[==>]*	 ***[1]***
5		WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2561 A				25 Secs *[==>]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20110811
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Pointing Maneuver
Unused Visibility = 0
Occultation
Exp. 5
GS Acq
Exp. 1
Exp. 3
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11616, Visit 59, pi Tue Aug 30 01:18:11 GMT 2011

Diagnostic Status: Warning

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

Special Requirements: (none)

Comments: This is a copy of failed visit 19.

Diagnostics

(Visit 59) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 59) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	SZ-102	RA: 16 08 29.7300 (242.1238750d) Dec: -39 03 10.90 (-39.05303d) Equinox: J2000	Proper Motion RA: -0.00112 sec of time/yr Proper Motion Dec: -0.021 arcsec/yr Epoch of Position: 1995.949	V=15.5	Reference Frame: ICRS

Comments: Ducourant et al. 2005
UPDATED: 23/12/09

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(19) SZ-102	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	CENTER=FLUX-WT; SCAN-SIZE=3; STEP-SIZE=1.767	GS ACQ SCENARIO BASE1B3		50 Secs *[==>]*	 ***[1]***
2		(19) SZ-102	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				50 Secs *[==>]*	 ***[1]***
3		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=367; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			464 Secs *[==>]*	 ***[1]***
4		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=367; EXTENDED=NO; FLASH=YES; FP-POS=1; SEGMENT=BOTH			464 Secs *[==>]*	 ***[1]***
5		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=367; EXTENDED=NO; FLASH=YES; FP-POS=4; SEGMENT=BOTH			464 Secs *[==>]*	 ***[1]***
6		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=790; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			882 Secs *[==>]*	 ***[2]***
7		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=790; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			882 Secs *[==>]*	 ***[2]***
8		(19) SZ-102	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1200; EXTENDED=NO; FLASH=YES; FP-POS=3; SEGMENT=BOTH			882 Secs *[==>]*	 ***[2]***

9	(STIS.ta.233719)	(19) SZ-102	STIS/CCD, ACQ, 50CCD	MIRROR	GS ACQ SCENARIO BASE1B3	8 Secs *[==>]*	***[3]***

Comments: STIS.ta.233716
8s = S/N=165, saturation in 94s

user: sz102_lris.dat

10	(STIS.sp.233746)	(19) SZ-102	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO	500 Secs *[==>(Split 1)]* *[==>(Split 2)]*	***[3]***

Comments: http://etc.stsci.edu/etc/results/STIS.sp.233723/

used: sz102_lris.dat
S/N=12s at 3600 , time to saturation = 3600 s (at H-beta)

brightest pixel: 9.3 cts/s
global count rate (source): 1577 cts/s

11	(http://etc.stsci.edu/etc/results/STIS.sp.233748)	(19) SZ-102	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	BUFFER-TIME=400	1739 Secs *[==>]*	***[3]***

Comments: BOT:
---
two objects were flagged by GSC2:

(1) 16:08:29.7 -39:03:10.65
(2) 16:08:28.7 -39:03:06.16

Both objects are deemed safe by the BOT. Object (1) is the science target discussed below, Object (2) is very faint.

==========
http://etc.stsci.edu/etc/results/STIS.sp.234647/
==========
Ca II H: 2.8e-14 erg/cm2/s in Keck/LRIS spectrum

TW Hya
Ca II H: 2.3e-12 erg/cm2/s in HST G430L
Mg II h: 2.1e-12 erg/cm2/s in HST E230M

Predicted Mg II h flux: 80 times weaker than TW Hya

TW Hya input spectrum with G230L:
2.2 cts/s at 2800 A, much lower than brightness limit of 75
Detector count rate of 4060 cts/s (58 from the spectrum), much lower than limit of 200,000

==========
http://etc.stsci.edu/etc/results/STIS.sp.234657/
==========
E230M spectrum o8nz44010_x1d.fits, good for Mg II only:

Mg II h: 4.1e-14 erg/cm2/s
Maximum count rate: 1.2 cts/s, lower than above because of the weak continuum emission

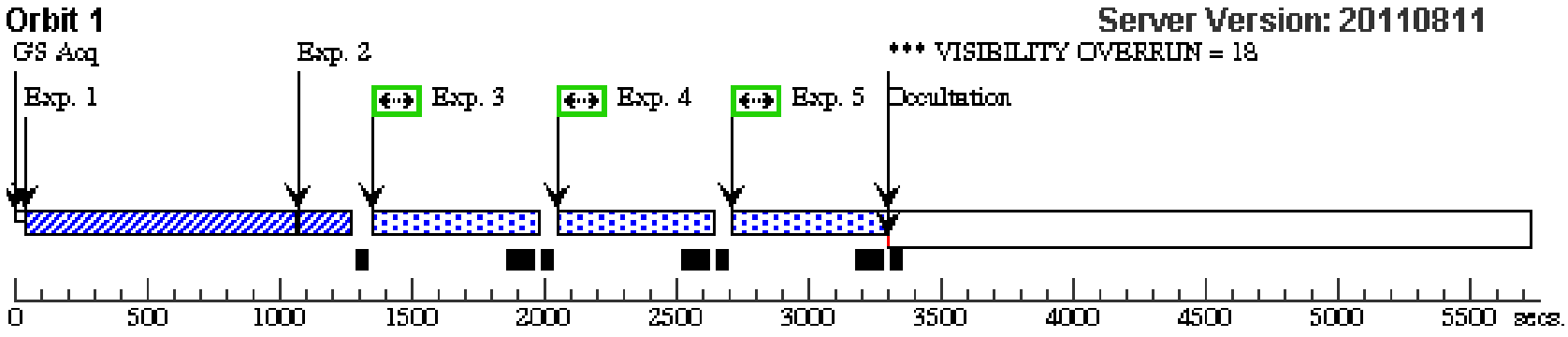
==========
http://etc.stsci.edu/etc/results/STIS.sp.234659/
==========

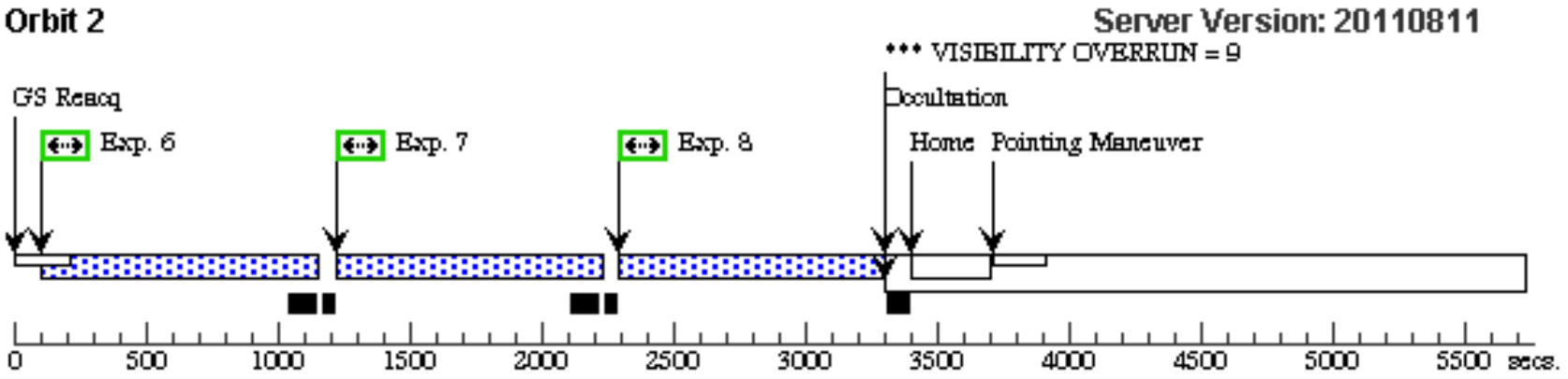
use detau_iue.dat from http://archive.stsci.edu/prepds/iuepms/datalist.html
divided by 20 to match optical spectrum of Sz 102

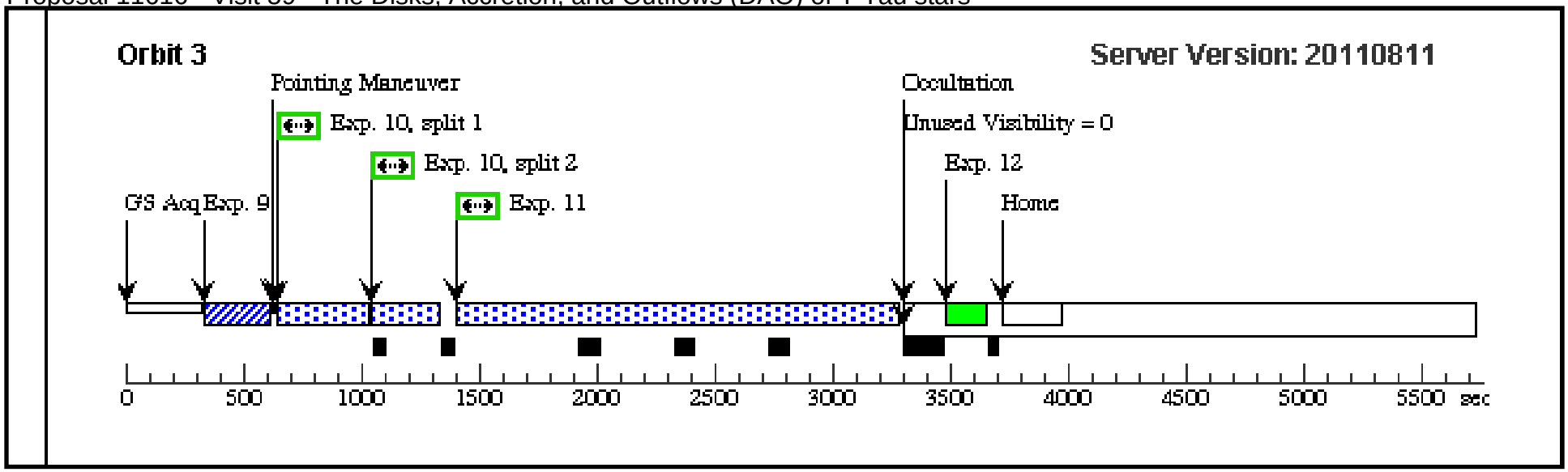
Brightest pixel: 0.22 cts/s
Total count rate: 3680 cts/s

	12	WAVE	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A	80 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20110811
Pointing Maneuver
Occultation
Exp. 10, split 1
Unused Visibility = 0
Exp. 10, split 2
Exp. 12
GS Acq
Exp. 9
Exp. 11
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec