16857 - ULLYSES M-Type T Tauri Survey Stars in Lupus III: Part 3

Cycle: 29, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Julia Christine Roman-Duval (PI) (Contact)	**Space Telescope Science Institute**	**duval@stsci.edu**
Dr. Kenneth Sembach (CoI)	Space Telescope Science Institute	sembach@stsci.edu
Dr. TalaWanda R. Monroe (CoI) (Contact)	Space Telescope Science Institute	tmonroe@stsci.edu
Joanna Taylor (CoI)	Space Telescope Science Institute	jotaylor@stsci.edu
Dr. Travis C Fischer (CoI) (ESA Member)	Space Telescope Science Institute - ESA	tfischer@stsci.edu
Dr. William J. Fischer (CoI) (Contact)	Space Telescope Science Institute	wfischer@stsci.edu
Dr. Alexander W. Fullerton (CoI) (Contact)	Space Telescope Science Institute	fullerton@stsci.edu
Dr. Alessandra Aloisi (CoI)	Space Telescope Science Institute	aloisi@stsci.edu
Christopher Britt (CoI)	Space Telescope Science Institute	cbritt@stsci.edu
Dr. Thomas M. Brown (CoI)	Space Telescope Science Institute	tbrown@stsci.edu
Ivo Busko (CoI)	Space Telescope Science Institute	busko@stsci.edu
Dr. Joleen Carlberg (CoI)	Space Telescope Science Institute	jcarlberg@stsci.edu
Dr. Gisella De Rosa (CoI)	Space Telescope Science Institute	gderosa@stsci.edu
Elaine M Frazer (CoI)	Space Telescope Science Institute	efrazer@stsci.edu
Dr. Svea S Hernandez (CoI)	Space Telescope Science Institute - ESA - JWST	sveash@stsci.edu
Dr. Alec S. Hirschauer (CoI)	Space Telescope Science Institute	ahirschauer@stsci.edu
Dr. Bethan Lesley James (CoI)	Space Telescope Science Institute - ESA - JWST	bjames@stsci.edu
Robert Jedrzejewski (CoI)	Space Telescope Science Institute	rij@stsci.edu
Sean Lockwood (CoI)	Space Telescope Science Institute	lockwood@stsci.edu
Dr. Cristina Oliveira (CoI)	Space Telescope Science Institute	oliveira@stsci.edu
Rachel Plesha (CoI)	Space Telescope Science Institute	rplesha@stsci.edu
Dr. Charles R. Proffitt (CoI)	Space Telescope Science Institute	proffitt@stsci.edu

Name	*Institution*	*E-Mail*
Dr. I. Neill Reid (CoI)	Space Telescope Science Institute	inr@stsci.edu
Dr. Adric R. Riedel (CoI)	Space Telescope Science Institute	riedel@stsci.edu
Allyssa Riley (CoI)	Space Telescope Science Institute	ariley@stsci.edu
Dr. David J. Sahnow (CoI)	Space Telescope Science Institute	sahnow@stsci.edu
Dr. Ravi Sankrit (CoI)	Space Telescope Science Institute	rsankrit@stsci.edu
Dr. Richard Shaw (CoI)	Space Telescope Science Institute	shaw@stsci.edu
Dr. Linda J. Smith (CoI)	Space Telescope Science Institute	lsmith@stsci.edu
Dr. Sangmo Tony Sohn (CoI)	Space Telescope Science Institute	tsohn@stsci.edu
Dr. Debopam Som (CoI)	Space Telescope Science Institute	dsom@stsci.edu
Dr. Leonardo Ubeda (CoI)	Space Telescope Science Institute	lubeda@stsci.edu
Dr. Daniel E. Welty (CoI)	Space Telescope Science Institute	dwelty@stsci.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
1C	(1) SZ114 (3) RXJ1608.9-3905	COS/FUV COS/NUV	5	16-Jun-2022 19:00:27.0	yes
AC	(1) SZ114 (3) RXJ1608.9-3905	COS/FUV COS/NUV	2	16-Jun-2022 19:00:28.0	yes
AD	(1) SZ114 (3) RXJ1608.9-3905	COS/FUV COS/NUV	3	16-Jun-2022 19:00:29.0	yes
1S	(1) SZ114 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	16-Jun-2022 19:00:31.0	yes
AS	(1) SZ114 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	16-Jun-2022 19:00:33.0	yes
2S	(2) SZ115 WAVE	STIS/CCD STIS/FUV-MAMA	3	16-Jun-2022 19:00:34.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
2T	(2) SZ115 CCDFLAT WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	16-Jun-2022 19:00:36.0	yes
2U	(2) SZ115 WAVE	STIS/CCD STIS/FUV-MAMA	3	16-Jun-2022 19:00:38.0	yes

21 Total Orbits Used

ABSTRACT

The Space Telescope Science Institute (STScI) Director has decided to devote up to 1000 orbits of Director's Discretionary time in observing Cycles 27-29 to a new Hubble Ultraviolet Legacy program focused on star formation and associated stellar physics. This new program, ULLYSES (UV Legacy Library of Young Stars as Essential Standards), will provide a UV spectroscopic reference sample of young (< 10 Myr) high- and low-mass stars. It will target over ~150 OB stars in the Magellanic Clouds and lower metallicity galaxies in the Local Group, and ~40 T Tauri stars and brown dwarfs in the Milky Way. In addition, ULLYSES will monitor 4 typical T Tauri stars over different rotational phases through at least three rotation periods, and over timescales of months to years. The resulting library will provide template spectra of massive stars at metallicities substantially below the well studied, while the low mass sample will cover a wide range of ages, accretion rates, and masses, including objects down to well below 0.5 M_sun. The legacy of this large UV dataset on the first 10 Myr of stellar evolution will be enhanced by complementary datasets obtained by the scientific community. In addition to the core goals of the program related to stellar astrophysics of low and high mass stars, this data will also enable exciting science in the fields of ISM, CGM, jets, and exoplanets. ULLYSES will be modeled after the Frontier Fields program: all data obtained will be non-proprietary. The implementation team at STScI is developing high-level science data products and a sophisticated database and website for disseminating data from the ULLYSES program and ancillary datasets for the ULLYSES target sample from space and ground-based facilities.

OBSERVING DESCRIPTION

This proposal includes a subset of the low mass ULLYSES survey stars. Each target will be observed with the COS c1291 + c1589 + c1623 settings, as well as with STIS G230L, G430L, and G750L. All observations will normally be constrained to occur within 1 day.

Signal-to-noise requirements used to determine the desired exposures times were defined as follows:
COS/G130M/c1291: N V 1239 +- 1 A -- S/N=10/6-pix-resel at the peak of the line
COS/G160M/c1589: C IV 1549 +- 1 A -- S/N=20/6-pix-resel at the peak of the line (combined c1589 & c1623)

COS/G160M/c1623: C IV 1549 +- 1 A -- S/N=20/6-pix-resel at the peak of the line (combined c1589 & c1623)
STIS/G230L/52X2: Mg II 2800 +-15 A -- S/N=20/2-pix-resel at the peak of the line
STIS/G430L/52X2: continuum average 4000 +-5 A -- S/N=20/2-pix-resel (2 reads)
STIS/G750L/52X2: continuum average 5700 +-5 A -- S/N=20/2-pix-resel (2 reads)

Additional details about the scientific motivation and technical implementation strategy of the ULLYSES observations can be found at http://www.stsci.edu/stsci-research/research-topics-and-programs/ullyses. The ULLYSES program is based on the recommendations of a working group led by Sally Oey; the full text of that group's report can be found at http://www.stsci.edu/files/live/sites/www/files/home/stsci-research/research-topics-and-programs/ullyses/_documents/HSTUV-report-ULLYSES.pdf.

Visit

Proposal 16857, SZ114-COS (1C), failed Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00

Comments: vstatus; 1C; SZ114; P/COS ready for internal review; P/JRD 12/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ114 ;COS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?;No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; YEs
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; yes
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 5

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ114	RA: 16 09 1.8360 (242.2576500d)	Proper Motion RA: -9.655979398 mas/yr	V=15.208	Reference Frame: ICRS
	Alt Name1: V908-SCO	Dec: -39 05 12.79 (-39.08689d)	Proper Motion Dec: -23.9312307 mas/yr	SpT=M4.8; A_V=0.30; B=15.33 ; V=14.12; J=10.41	
		Equinox: J2000	Parallax: 0.006163281671"		
			Epoch of Position: 2015.5		

Comments: SZ114 : V908 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz114&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
Input file: lowmass_survey_Input-gaia.csv
sz114_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:39:00, v0.8
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tstatus; SZ114; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

Flux in the optical template is about 2x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

(3)	RXJ1608.9-3905	RA: 16 08 54.2629 (242.2260954d)	Proper Motion RA: -8.651165357000538 mas/yr	V=10.88	Reference Frame: ICRS
		Dec: -39 06 6.16 (-39.10171d)	Proper Motion Dec: -23.062050687015628 mas/yr	K2; U = 12.57; B = 11.91	
		Equinox: J2000	Epoch of Position: 2015.5		

Comments:
Category=EXT-STAR
Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1682361)	(3) RXJ1608.9-3905	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs (35 Secs) *[==>]*	 ***[1]***

Comments: Sz114 does not pass the M dwarf BOP with PSA and requires BOA, but that makes exptimes prohibitive (Same for spec acq). Doing an offset target acq with nearby (1.7') T Tauri star RX J1608.9-3905 (K 2, V = 10.8). This is a weakly accreting star similar to RXJ0438.6+1546 (K2, V = 10.8). We have a template for RXJ0438.6+1546 that was obtained from an observed spectrum of LkCa19 (another similar star, K0, V = 11.12, WTTS) scaled to the V mag of RXJ0438.6+1546. We use this template to clear RX J1608.9-3905 for the BOP (COS.ta.1546173).

For the exposure time, we assume the fainter scenario of a K2 V with E(B-V) = 0.17 normalized to V = 10.88 (see ETC box).

We also confirm the BOP and exptimes with a Kurucz model K0 with no extinction normalized to V = 10.8: COS.ta.1546175

All safe to observe. Pad exptimes by a factor of 2 to be conservative.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1589-3 (COS.sp.1544562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=6000; FP-POS=3			2109 Secs (2109 Secs) *[==>]*	 ***[1]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1589,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1939.5 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1589 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 77.5 cts/s/segment
brightest pixel: 0.005 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:56, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1589-4 (COS.sp.1544562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=6000; FP-POS=4			2470 Secs (2470 Secs) *[==>]*	 ***[2]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1589,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1939.5 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1589 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 77.5 cts/s/segment
brightest pixel: 0.005 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:56, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

4	G160M/162 3-1 (COS.sp.154 4562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=6000; FP-POS=1	2471 Secs (2471 Secs) [==>]	[3]

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1623,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1984.8 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1623 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 75.2 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:58, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

5	G160M/162 3-2 (COS.sp.154 4562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=6000; FP-POS=2	1223 Secs (1223 Secs) [==>]	[4]

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1623,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1984.8 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1623 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 75.2 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:58, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

6	G130M/129 1-3 (COS.sp.154 4566)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=3	1000 Secs (1000 Secs) [==>]	[4]

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1606.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 319.0 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1304.8 A
Calculation performed 2021-10-21T02:39:00, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544495 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544496, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

7	G130M/129 (1) SZ114 1-3 (COS.sp.154 4566)	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=3	609 Secs (609 Secs)	
					[==>]	***[5]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1606.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 319.0 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1304.8 A
Calculation performed 2021-10-21T02:39:00, v0.23

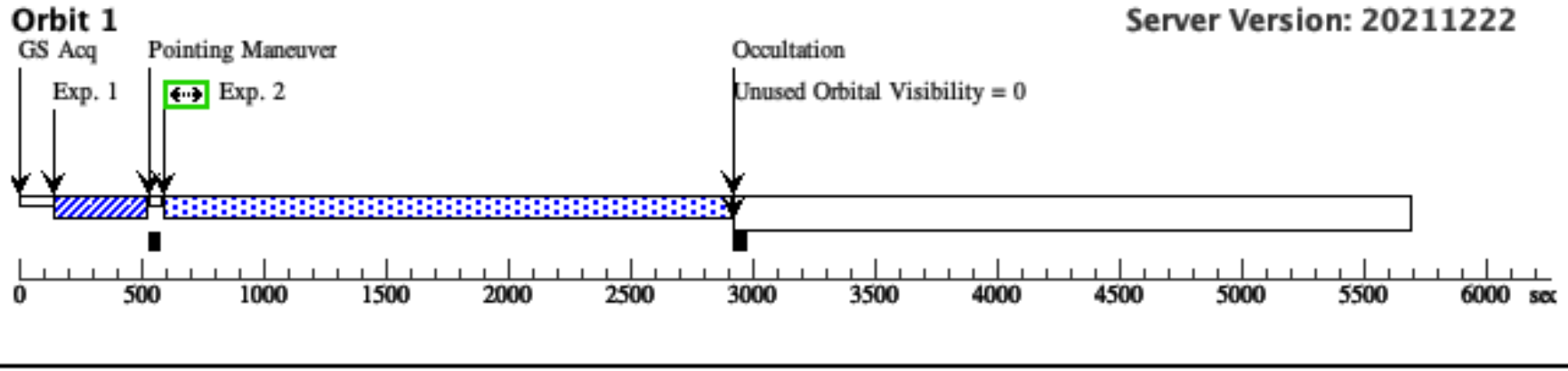
Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544495 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544496, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

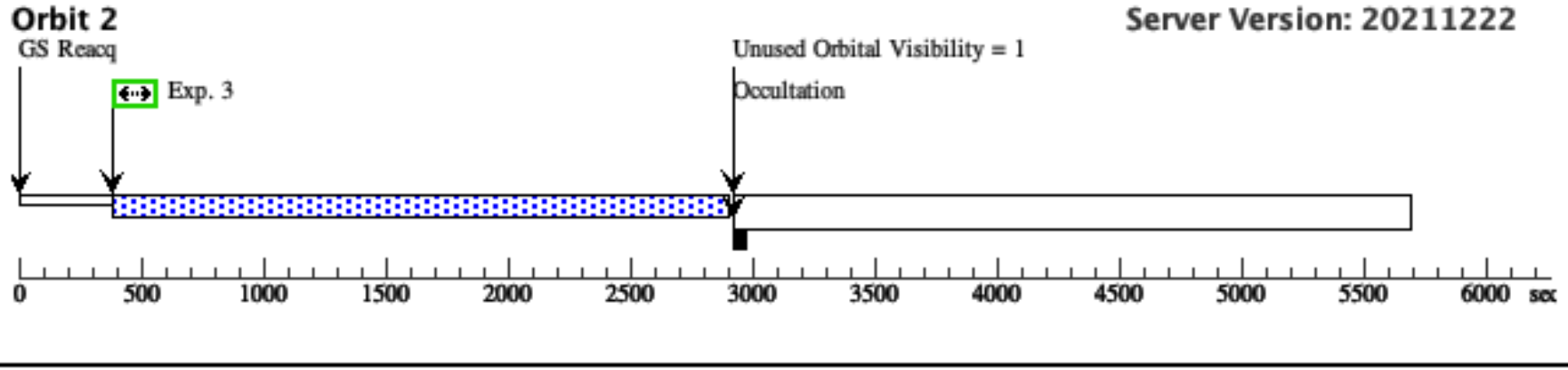
8	G130M/129 (1) SZ114 1-4 (COS.sp.154 4566)	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=4	1738 Secs (1738 Secs)	
					[==>]	***[5]***

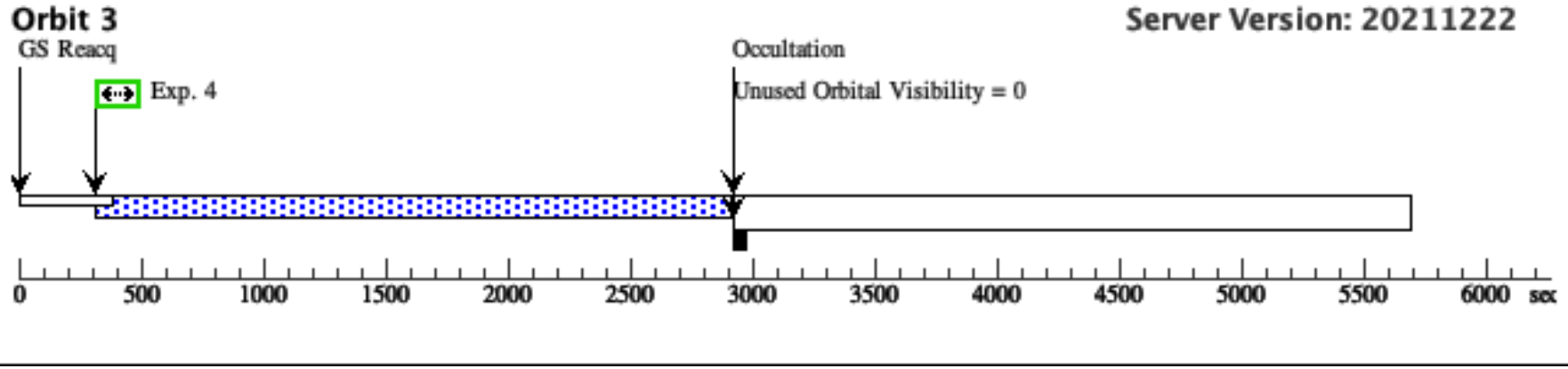
Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1606.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 319.0 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1304.8 A
Calculation performed 2021-10-21T02:39:00, v0.23

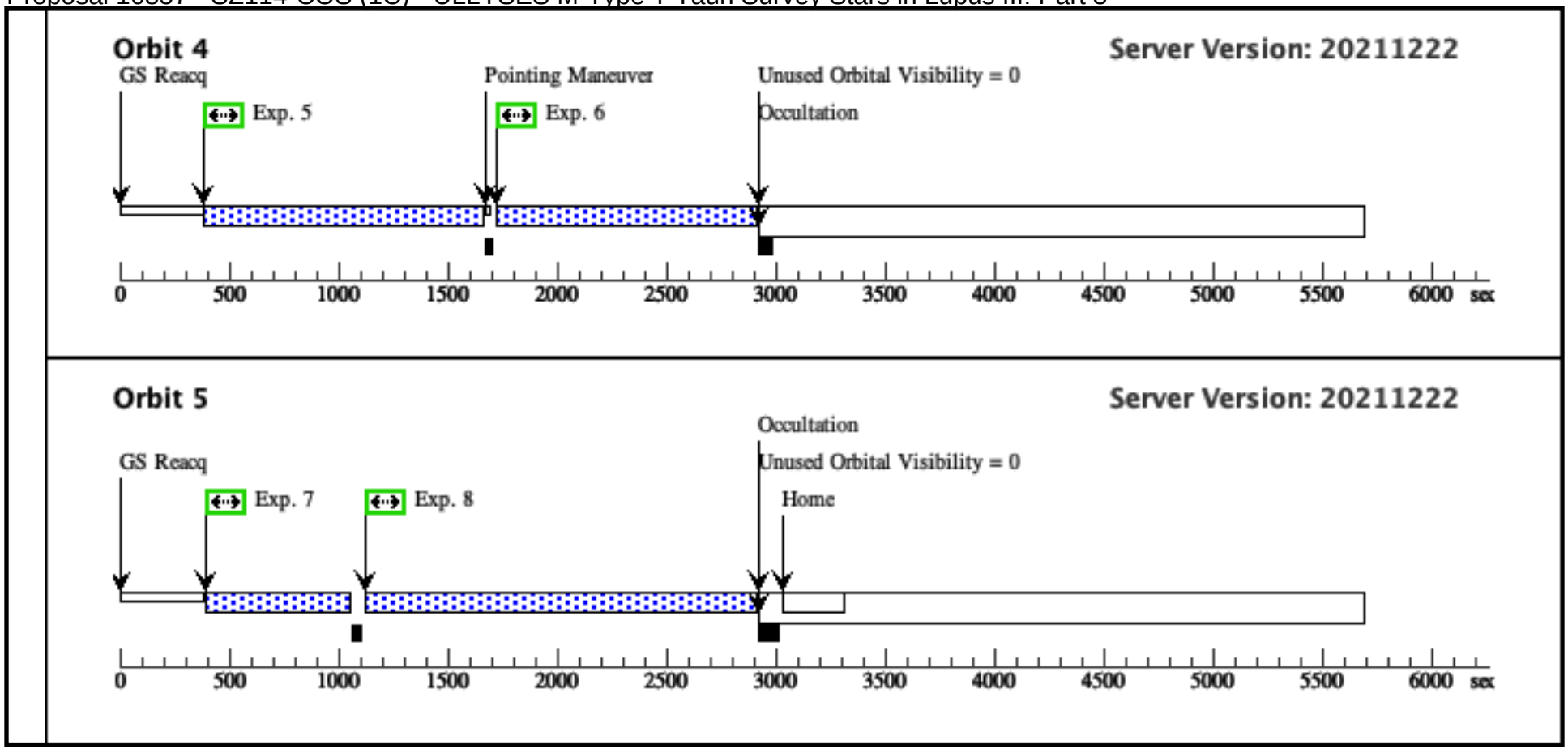
Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544495 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544496, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

Orbit Structure








Orbit 4
Server Version: 20211222
GS Reacq
Exp. 5
Pointing Maneuver
Exp. 6
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec
Orbit 5
Server Version: 20211222
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 7
Exp. 8
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16857, SZ114-COS (AC), implementation Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00

Comments: vstatus; AC; SZ114; P/COS ready for internal review; P/JRD 12/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ114 ;COS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?;No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; YEs
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; yes
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 5

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ114	RA: 16 09 1.8360 (242.2576500d)	Proper Motion RA: -9.655979398 mas/yr	V=15.208	Reference Frame: ICRS
	Alt Name1: V908-SCO	Dec: -39 05 12.79 (-39.08689d)	Proper Motion Dec: -23.9312307 mas/yr	SpT=M4.8; A_V=0.30; B=15.33 ; V=14.12; J=10.41	
		Equinox: J2000	Parallax: 0.006163281671"		
			Epoch of Position: 2015.5		

Comments: SZ114 : V908 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz114&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
Input file: lowmass_survey_Input-gaia.csv
sz114_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:39:00, v0.8
---
tstatus; SZ114; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

Flux in the optical template is about 2x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

(3)	RXJ1608.9-3905	RA: 16 08 54.2629 (242.2260954d)	Proper Motion RA: -8.651165357000538 mas/yr	V=10.88	Reference Frame: ICRS
		Dec: -39 06 6.16 (-39.10171d)	Proper Motion Dec: -23.062050687015628 mas/yr	K2; U = 12.57; B = 11.91	
		Equinox: J2000	Epoch of Position: 2015.5		

Comments:
Category=EXT-STAR
Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1682361)	(3) RXJ1608.9-3905	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs (35 Secs) *[==>]*	***[1]***

Comments: Sz114 does not pass the M dwarf BOP with PSA and requires BOA, but that makes exptimes prohibitive (Same for spec acq). Doing an offset target acq with nearby (1.7') T Tauri star RX J1608.9-3905 (K 2, V = 10.8). This is a weakly accreting star similar to RXJ0438.6+1546 (K2, V = 10.8). We have a template for RXJ0438.6+1546 that was obtained from an observed spectrum of LkCa19 (another similar star, K0, V = 11.12, WTTS) scaled to the V mag of RXJ0438.6+1546. We use this template to clear RX J1608.9-3905 for the BOP (COS.ta.1546173).

For the exposure time, we assume the fainter scenario of a K2 V with E(B-V) = 0.17 normalized to V = 10.88 (see ETC box).

We also confirm the BOP and exptimes with a Kurucz model K0 with no extinction normalized to V = 10.8: COS.ta.1546175

All safe to observe. Pad exptimes by a factor of 2 to be conservative.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1589-3 (COS.sp.1544562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=6000; FP-POS=3			2109 Secs (2109 Secs) *[==>]*	***[1]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1589,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1939.5 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1589 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 77.5 cts/s/segment
brightest pixel: 0.005 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:56, v0.23

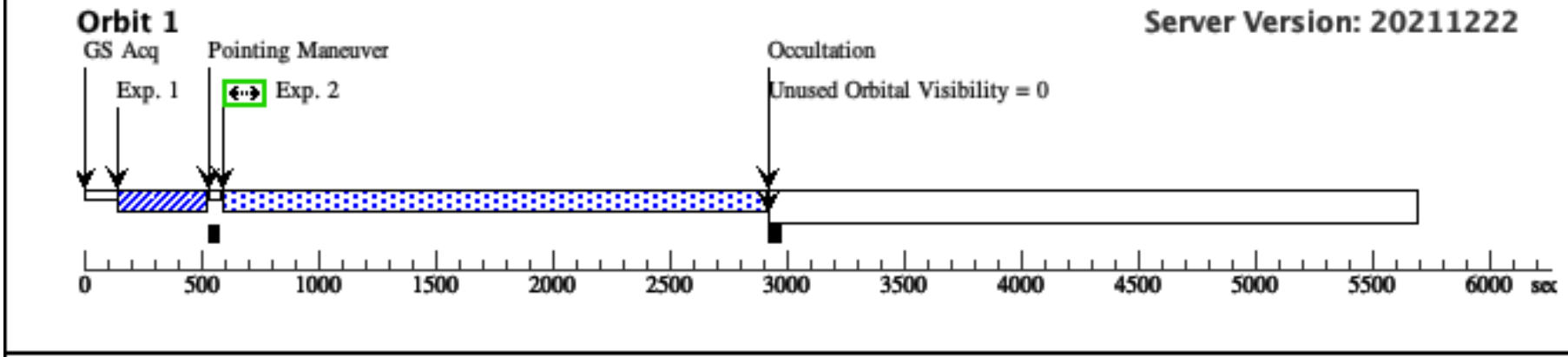
Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

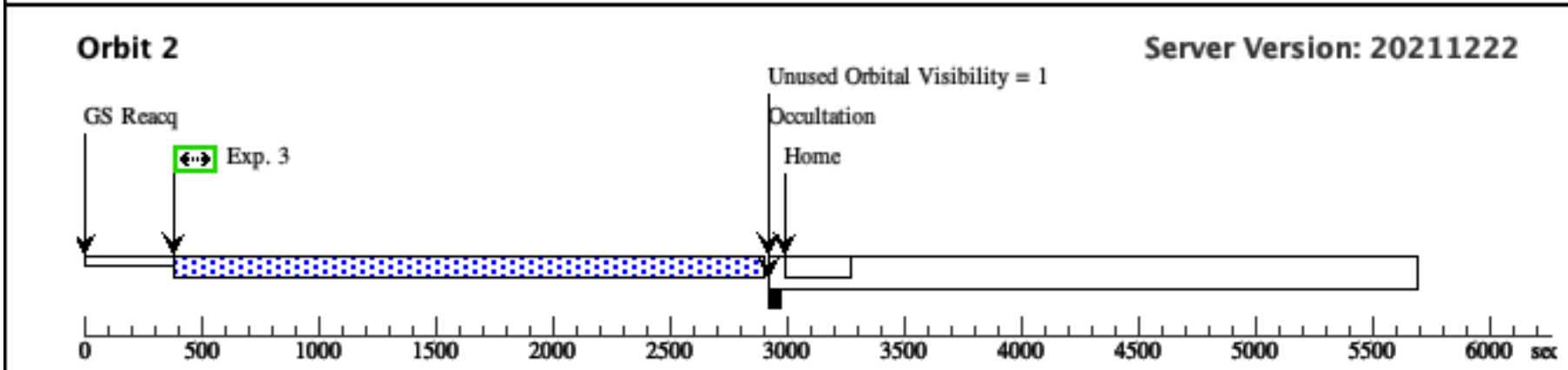
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1589-4 (COS.sp.1544562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=6000; FP-POS=4			2470 Secs (2470 Secs) *[==>]*	***[2]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1589,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1939.5 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1589 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 77.5 cts/s/segment
brightest pixel: 0.005 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:56, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

Orbit Structure





Visit

Proposal 16857, SZ114-COS (AD) Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00

Comments: vstatus; AD; SZ114; P/COS ready for internal review; P/JRD 12/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ114 ;COS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?;No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; YEs
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; yes
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 5

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ114	RA: 16 09 1.8360 (242.2576500d)	Proper Motion RA: -9.655979398 mas/yr	V=15.208	Reference Frame: ICRS
	Alt Name1: V908-SCO	Dec: -39 05 12.79 (-39.08689d)	Proper Motion Dec: -23.9312307 mas/yr	SpT=M4.8; A_V=0.30; B=15.33 ; V=14.12; J=10.41	
		Equinox: J2000	Parallax: 0.006163281671"		
			Epoch of Position: 2015.5		

Comments: SZ114 : V908 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz114&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
Input file: lowmass_survey_Input-gaia.csv
sz114_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:39:00, v0.8
---
tstatus; SZ114; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

Flux in the optical template is about 2x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

(3)	RXJ1608.9-3905	RA: 16 08 54.2629 (242.2260954d)	Proper Motion RA: -8.651165357000538 mas/yr	V=10.88	Reference Frame: ICRS
		Dec: -39 06 6.16 (-39.10171d)	Proper Motion Dec: -23.062050687015628 mas/yr	K2; U = 12.57; B = 11.91	
		Equinox: J2000	Epoch of Position: 2015.5		

Comments:
Category=EXT-STAR
Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1682361)	(3) RXJ1608.9-3905	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				35 Secs (35 Secs) *[==>]*	 ***[1]***

Comments: Sz114 does not pass the M dwarf BOP with PSA and requires BOA, but that makes exptimes prohibitive (Same for spec acq). Doing an offset target acq with nearby (1.7') T Tauri star RX J1608.9-3905 (K 2, V = 10.8). This is a weakly accreting star similar to RXJ0438.6+1546 (K2, V = 10.8). We have a template for RXJ0438.6+1546 that was obtained from an observed spectrum of LkCa19 (another similar star, K0, V = 11.12, WTTS) scaled to the V mag of RXJ0438.6+1546. We use this template to clear RX J1608.9-3905 for the BOP (COS.ta.1546173).

For the exposure time, we assume the fainter scenario of a K2 V with E(B-V) = 0.17 normalized to V = 10.88 (see ETC box).

We also confirm the BOP and exptimes with a Kurucz model K0 with no extinction normalized to V = 10.8: COS.ta.1546175

All safe to observe. Pad exptimes by a factor of 2 to be conservative.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1623-1 (COS.sp.1544562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=6000; FP-POS=1			2099 Secs (2099 Secs) *[==>]*	 ***[1]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1623,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1984.8 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1623 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 75.2 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:58, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1623-2 (COS.sp.1544562)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=6000; FP-POS=2			1223 Secs (1223 Secs) *[==>]*	 ***[2]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1623,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1984.8 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel for combined c1589 & c1623
The exptime for this c1623 exposure has been halved because c1589 & c1623 target the same line.
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 75.2 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-10-21T02:38:58, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544550 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544551, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

4	G130M/129 1-3 (COS.sp.154 4566)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=3	1000 Secs (1000 Secs) *[==>]*	***[2]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1606.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 319.0 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1304.8 A
Calculation performed 2021-10-21T02:39:00, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544495 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544496, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

5	G130M/129 1-3 (COS.sp.154 4566)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=3	609 Secs (609 Secs) *[==>]*	***[3]***

Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1606.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 319.0 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1304.8 A
Calculation performed 2021-10-21T02:39:00, v0.23

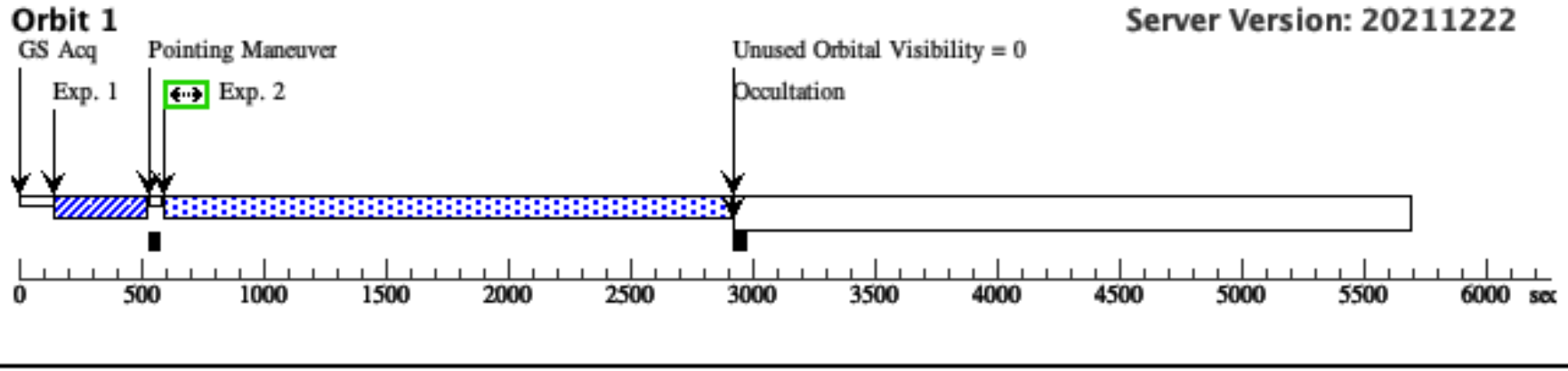
Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544495 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544496, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

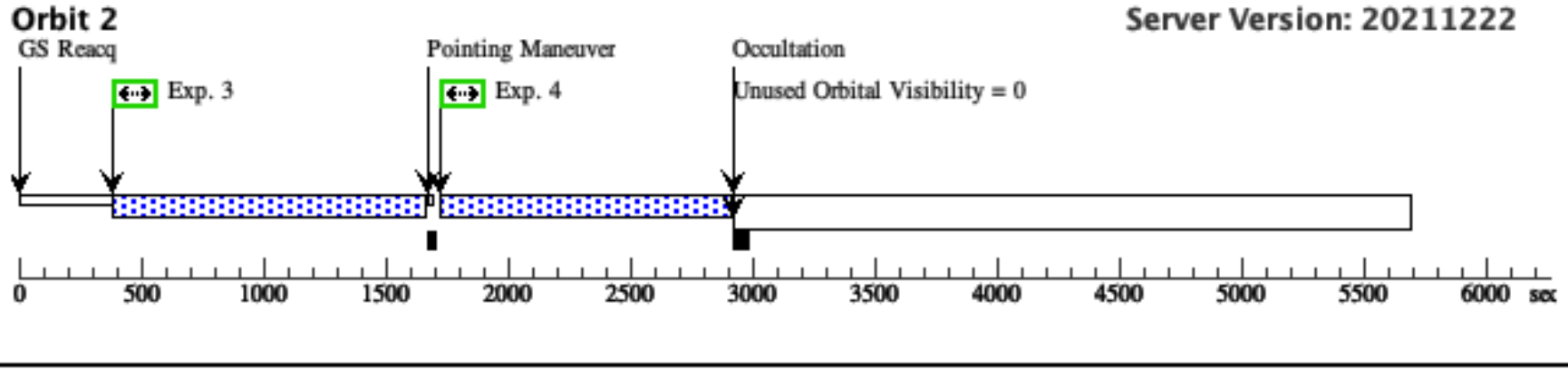
6	G130M/129 1-4 (COS.sp.154 4566)	(1) SZ114	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=4	1738 Secs (1738 Secs) *[==>]*	***[3]***

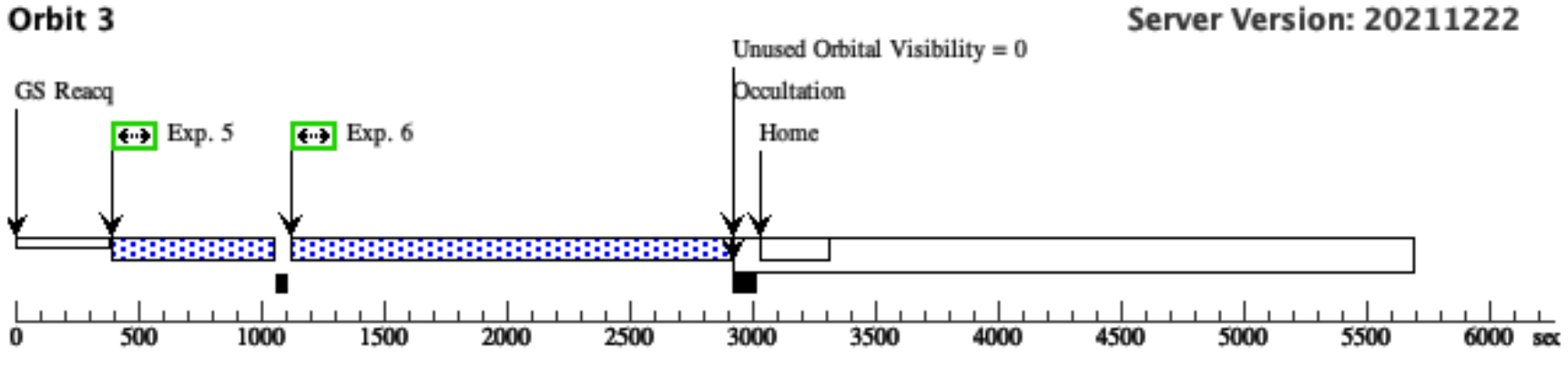
Comments: sz114_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
For exptime=1606.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 319.0 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1304.8 A
Calculation performed 2021-10-21T02:39:00, v0.23

Exptime computed with sz114_lya2_etc_scaled_pAV0.50.txt (extra A_V of 0.5)
Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt), see COS.sp.1544495 (also buffer time from this template)
Safe under flare M dwarf conditions, see COS.sp.1544496, generated with sz114_flarespec.fits, obtained with Elaine Fraizer's tool with J mag as input. J mag is input instead of V mag due to veiling in the V band (veiling at 710 nm from Alcala+2014 is 5%, more in the V band).

Orbit Structure







Visit

Proposal 16857, SZ114-STIS (1S), failed Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00; GROUP 1S,1C WITHIN 1D

Comments: vstatus; 1S; SZ114; S/STIS ready for internal review; S/JRD 12/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ114; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; Yes
vcheck; Possible ACQ or Sci spoilers?; no
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated STIS orbits = 2 (constrained in input CSV)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ114	RA: 16 09 1.8360 (242.2576500d)	Proper Motion RA: -9.655979398 mas/yr	V=15.208	Reference Frame: ICRS
	Alt Name1: V908-SCO	Dec: -39 05 12.79 (-39.08689d)	Proper Motion Dec: -23.9312307 mas/yr	SpT=M4.8; A_V=0.30; B=15.33 ; V=14.12; J=10.41	
		Equinox: J2000	Parallax: 0.006163281671"		
			Epoch of Position: 2015.5		

Comments: SZ114 : V908 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz114&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
Input file: lowmass_survey_Input-gaia.csv
sz114_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:39:00, v0.8
---
tstatus; SZ114; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

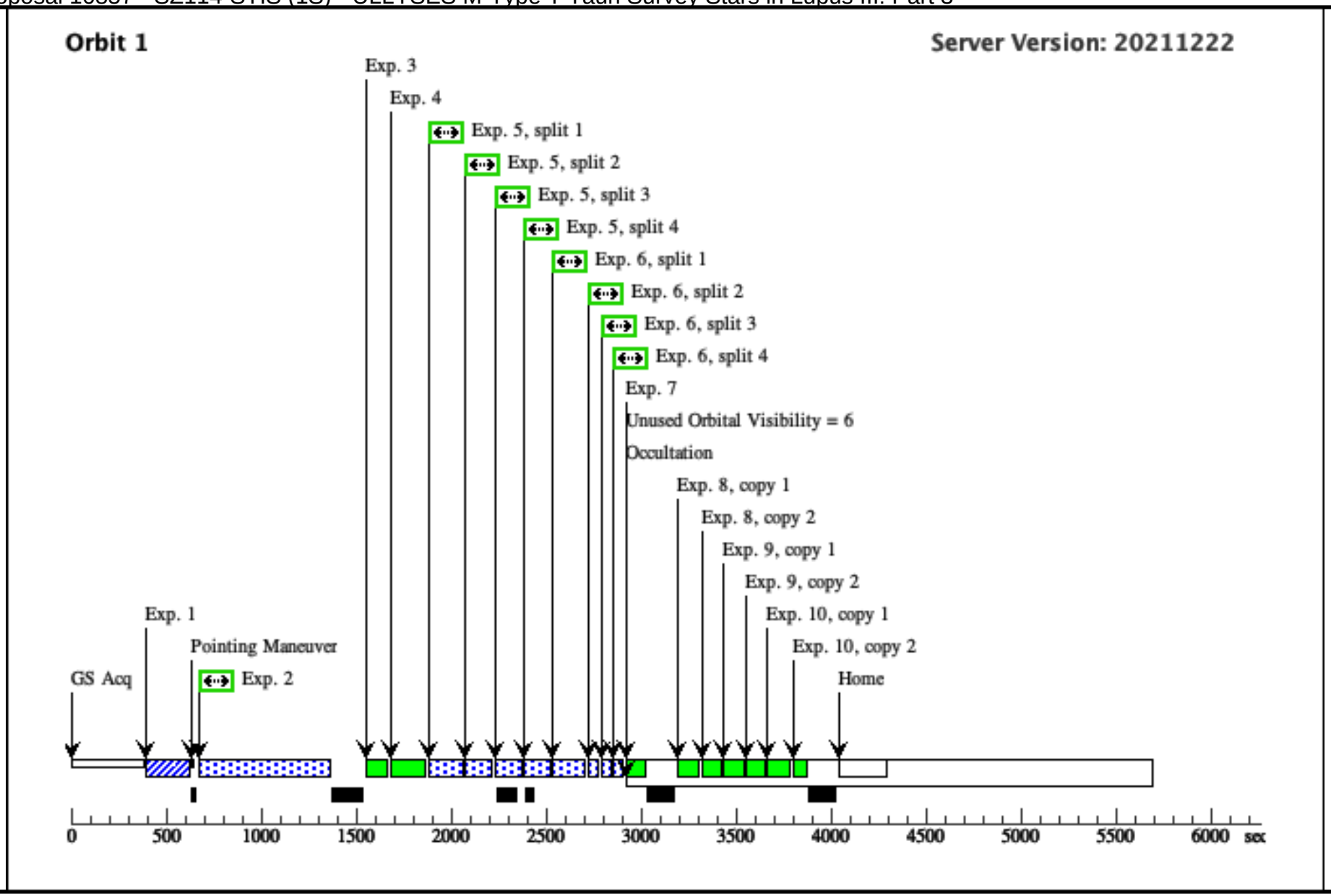
Flux in the optical template is about 2x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1546177)	(1) SZ114	STIS/CCD, ACQ, F28X50LP	MIRROR				0.2 Secs (0.2 Secs) *[==>]*	*[1]*
Comments: Time to saturation 1.36s using the x4 accretion rate template: STIS.ta.1546178									
2	G230L/2376 (STIS.sp.1546180)	(1) SZ114	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=500			536 Secs (536 Secs) *[==>]*	*[1]*
Comments: sz114_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59670 *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200* *M*: 0.21 ; log(dm/dt): -8.96* *For exptime=138.1 s, spectral region:* *2800.0 +- 15.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 2381.1 cts/s/segment* *brightest pixel: 0.597 cts/s/pix at 2796.8 A* *Calculation performed 2021-10-21T02:39:00, v0.23* *Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt, STIS.sp.1546181), BT = 667s* *Safe with M dwarf flare (sz114_flarespec.fits, obtained with J mag input): STIS.sp.1546182* *padding exptime since template is brighter than photometry at longer wavlengths.*									
3	G230L/2376 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 52X0.1	G230L 2376 A				*[==>]*	*[1]*
4	G430L/4300 WAVECAL	WAVE	STIS/CCD, ACCUM, 52X0.1	G430L 4300 A				*[==>]*	*[1]*
5	G430L/4300 (STIS.sp.1546183)	(1) SZ114	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=4; GAIN=1			430 Secs (430 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
Comments: sz114_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g430l,c4300,52x2,mjd#59670 *WARNING: operating mode = ACCUM* *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200* *M*: 0.21 ; log(dm/dt): -8.96* *For exptime=55.4 s, n_reads=2, spectral region:* *4000.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 42341.2 cts/s/segment* *brightest pixel: 19.506 cts/s/pix at 4560.5 A* *Calculation performed 2021-10-21T02:39:00, v0.23* *Time to saturation wtih x4 accretion rate = 215s: STIS.sp.1546184. Exptime for each CR split is half of that.* *Padding exptimes by a factor of 4 since optical photometry is a factor 2 below the template.*									

	6	G750L/7751 (1) SZ114 (STIS.sp.15 46185)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=4; GAIN=1	80 Secs (80 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***
		Comments: sz114_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g750l,c7751,52x2,mjd#59670 *WARNING: operating mode = ACCUM* *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200* *M*: 0.21 ; log(dm/dt): -8.96* *For exptime=4.8 s, n_reads=2, spectral region:* *5700.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 84281.4 cts/s/segment* *brightest pixel: 146.061 cts/s/pix at 6563.9 A* *Calculation performed 2021-10-21T02:39:00, v0.23* *padding exptime by a factor 8 since photometry lies factor 4 below the template at 5700 A.* *Time to saturation with x4 accretion rate = 33s (STIS.sp.1546186), more that each CR split exptime*						
	7	G750L/7751 WAVE WAVECAL	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A		*[==>]*	***[1]***
	8	G750L/7751 CCDFLAT CCDFLAT 1	STIS/CCD, ACCUM, 0.3X0.09	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	10	G750L/7751 CCDFLAT CCDFLAT 3	STIS/CCD, ACCUM, 52X2	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16857, SZ114-STIS (AS), implementation Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00; GROUP AS,AC,AD WITHIN 1D

Comments: vstatus; 1S; SZ114; S/STIS ready for internal review; S/JRD 12/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ114; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; Yes
vcheck; Possible ACQ or Sci spoilers?; no
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated STIS orbits = 2 (constrained in input CSV)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ114	RA: 16 09 1.8360 (242.2576500d)	Proper Motion RA: -9.655979398 mas/yr	V=15.208	Reference Frame: ICRS
	Alt Name1: V908-SCO	Dec: -39 05 12.79 (-39.08689d)	Proper Motion Dec: -23.9312307 mas/yr	SpT=M4.8; A_V=0.30; B=15.33 ; V=14.12; J=10.41	
		Equinox: J2000	Parallax: 0.006163281671"		
			Epoch of Position: 2015.5		

Comments: SZ114 : V908 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz114&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200
M: 0.21 ; log(dm/dt): -8.96*
Input file: lowmass_survey_Input-gaia.csv
sz114_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:39:00, v0.8
---
tstatus; SZ114; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

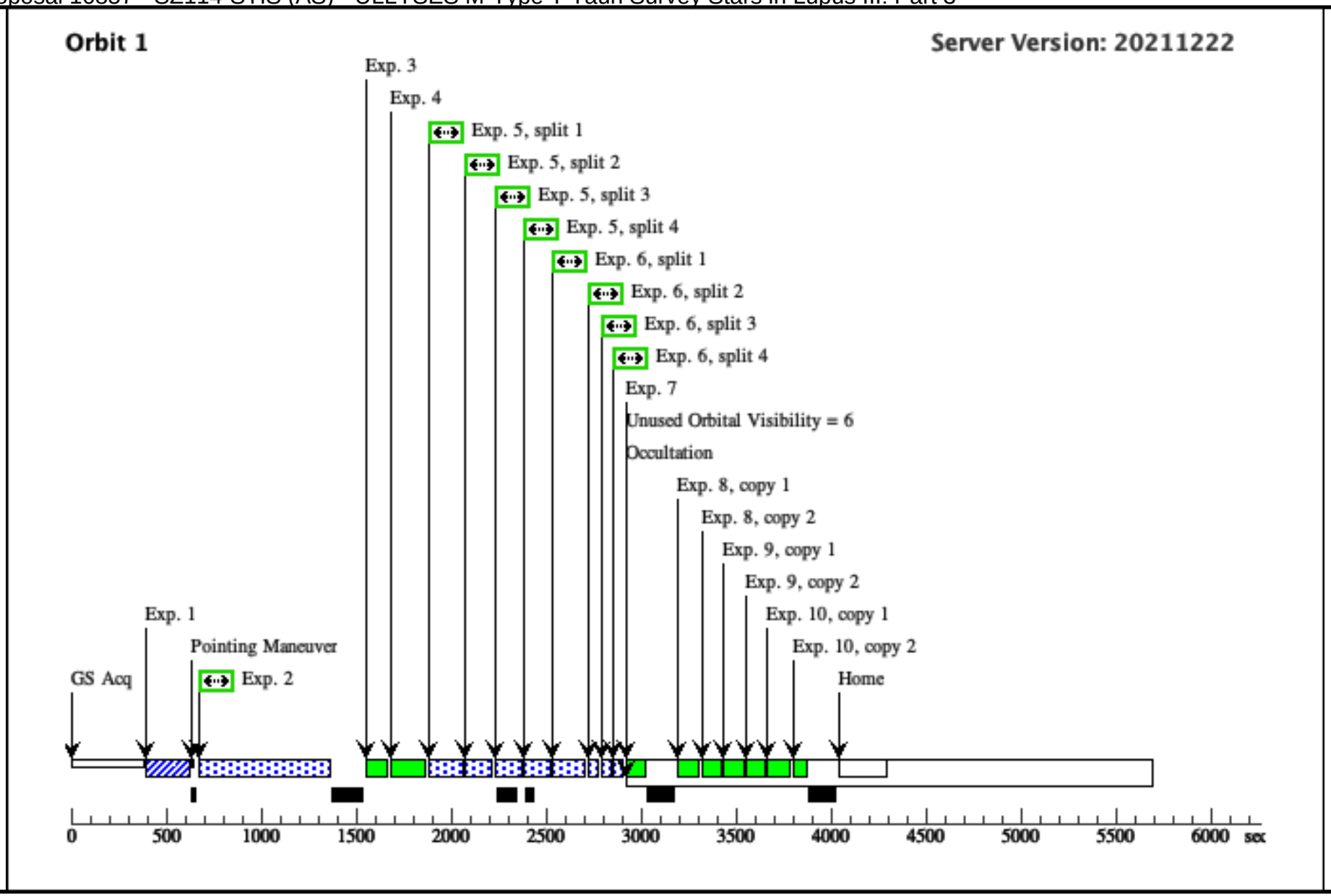
Flux in the optical template is about 2x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1546177)	(1) SZ114	STIS/CCD, ACQ, F28X50LP	MIRROR				0.2 Secs (0.2 Secs) *[==>]*	*[1]*
	Comments: Time to saturation 1.36s using the x4 accretion rate template: STIS.ta.1546178								
2	G230L/2376 (STIS.sp.1546180)	(1) SZ114	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=500			536 Secs (536 Secs) *[==>]*	*[1]*
	Comments: sz114_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59670 *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200* *M*: 0.21 ; log(dm/dt): -8.96* *For exptime=138.1 s, spectral region:* *2800.0 +- 15.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 2381.1 cts/s/segment* *brightest pixel: 0.597 cts/s/pix at 2796.8 A* *Calculation performed 2021-10-21T02:39:00, v0.23* *Safe with x4 accretion rate (sz114_lya2_x4.00_etc.txt, STIS.sp.1546181), BT = 667s* *Safe with M dwarf flare (sz114_flarespec.fits, obtained with J mag input): STIS.sp.1546182* *padding exptime since template is brighter than photometry at longer wavlengths.*								
3	G230L/2376 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 52X0.1	G230L 2376 A				*[==>]*	*[1]*
4	G430L/4300 WAVECAL	WAVE	STIS/CCD, ACCUM, 52X0.1	G430L 4300 A				*[==>]*	*[1]*
5	G430L/4300 (STIS.sp.1546183)	(1) SZ114	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=4; GAIN=1			430 Secs (430 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
	Comments: sz114_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g430l,c4300,52x2,mjd#59670 *WARNING: operating mode = ACCUM* *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200* *M*: 0.21 ; log(dm/dt): -8.96* *For exptime=55.4 s, n_reads=2, spectral region:* *4000.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 42341.2 cts/s/segment* *brightest pixel: 19.506 cts/s/pix at 4560.5 A* *Calculation performed 2021-10-21T02:39:00, v0.23* *Time to saturation wtih x4 accretion rate = 215s: STIS.sp.1546184. Exptime for each CR split is half of that.* *Padding exptimes by a factor of 4 since optical photometry is a factor 2 below the template.*								

	6	G750L/7751 (1) SZ114 (STIS.sp.15 46185)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=4; GAIN=1	80 Secs (80 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
		Comments: sz114_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g750l,c7751,52x2,mjd#59670 *WARNING: operating mode = ACCUM* *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: M4.8 ; A_V: 0.3 ; Distance (pc): 200* *M*: 0.21 ; log(dm/dt): -8.96* *For exptime=4.8 s, n_reads=2, spectral region:* *5700.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 84281.4 cts/s/segment* *brightest pixel: 146.061 cts/s/pix at 6563.9 A* *Calculation performed 2021-10-21T02:39:00, v0.23* *padding exptime by a factor 8 since photometry lies factor 4 below the template at 5700 A.* *Time to saturation with x4 accretion rate = 33s (STIS.sp.1546186), more that each CR split exptime*						
	7	G750L/7751 WAVE WAVECAL	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A		*[==>]*	***[1]***
	8	G750L/7751 CCDFLAT CCDFLAT 1	STIS/CCD, ACCUM, 0.3X0.09	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	10	G750L/7751 CCDFLAT CCDFLAT 3	STIS/CCD, ACCUM, 52X2	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16857, SZ115-STIS (2S), completed Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00; GROUP 2S,2T,2U WITHIN 1.5D

Comments: vstatus; 2C; SZ115; S/STIS ready for internal review; P/JRD 24/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ115 ; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; Yes
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; NA
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 13 - modified to use STIS/G140L due to inability to safely acquiring the target (M dwarf BOP, no viable offset target)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ115	RA: 16 09 6.1988 (242.2758283d) Dec: -39 08 52.25 (-39.14785d) Equinox: J2000	Proper Motion RA: -11.13662414 mas/yr Proper Motion Dec: -24.23333703 mas/yr Parallax: 0.0063329112629999995" Epoch of Position: 2015.5	V=16.105 SpT=M4.5; A_V=0.50; B=16.88 ; V=15.48; J=11.33	Reference Frame: ICRS

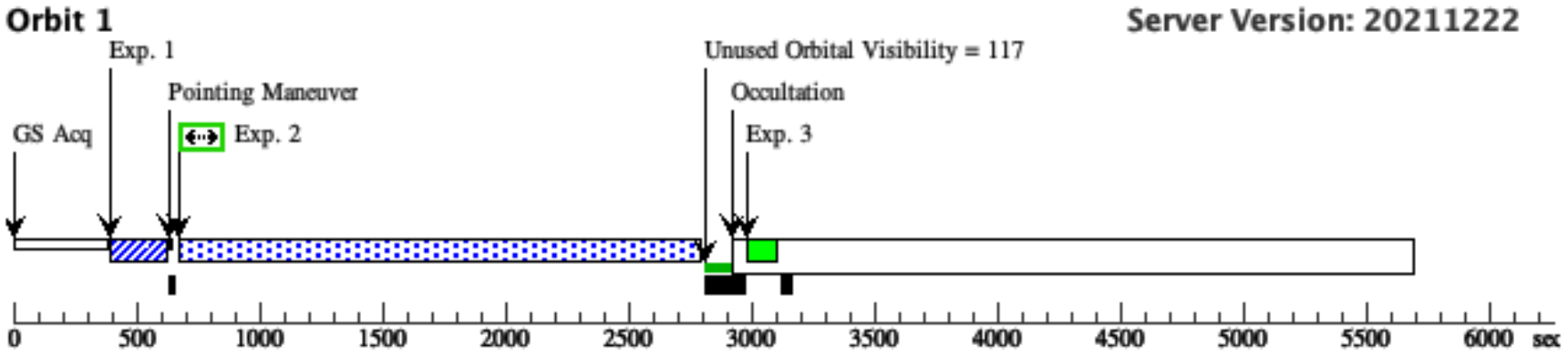
Comments: SZ115
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz115&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.5 ; A_V: 0.5 ; Distance (pc): 200
M: 0.19 ; log(dm/dt): -9.24*
Input file: lowmass_survey_Input-gaia.csv
sz115_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:38:50, v0.8
---
tstatus; SZ115; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

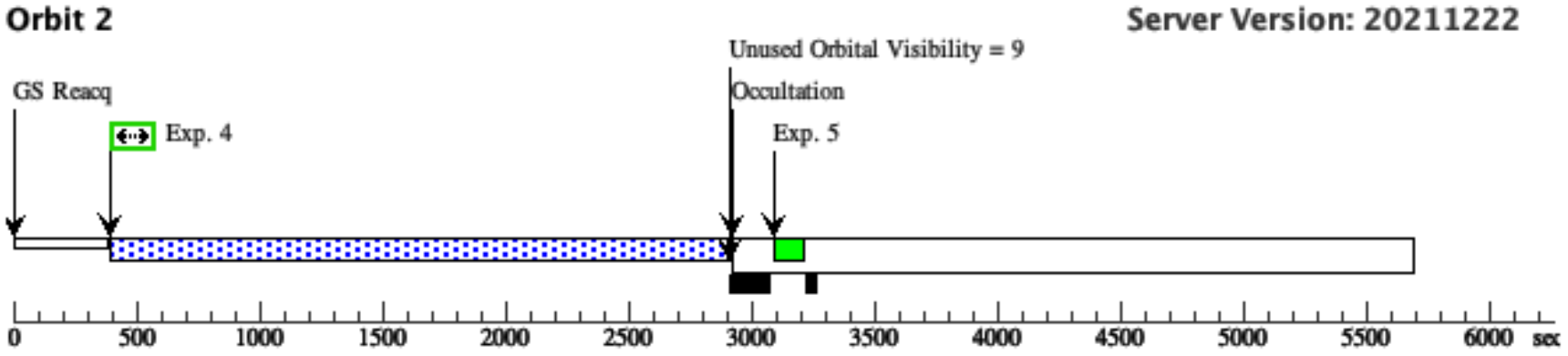
Flux in the optical template is about 3-4x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

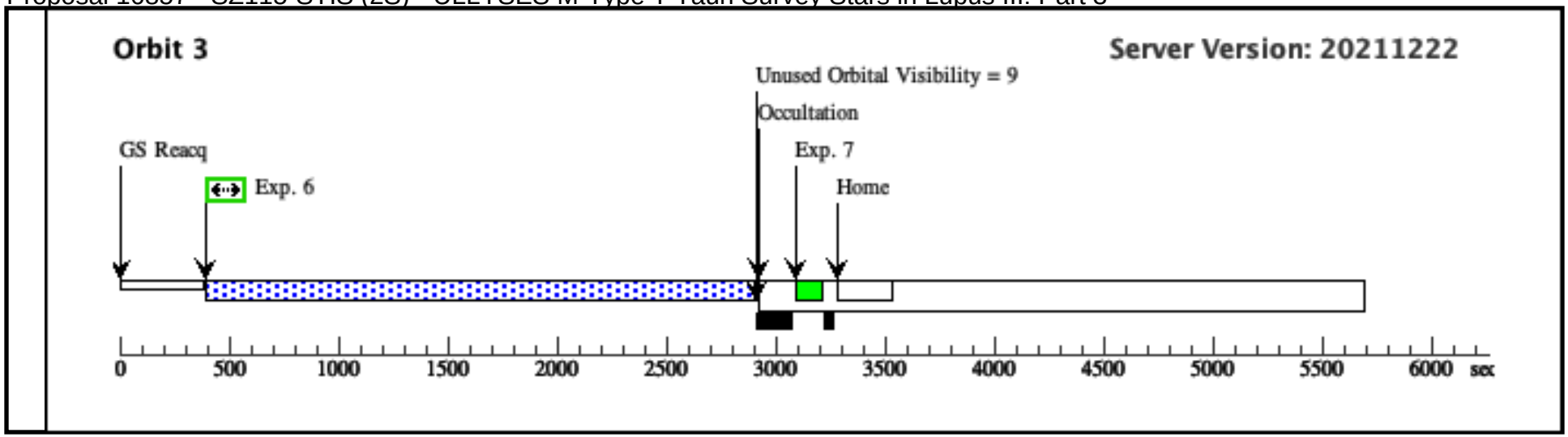
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1666094)	(2) SZ115	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	 ***[1]***
Comments: Exptime run with M6, EBV = 0.3, normalized to V = 15.46 (0.14s, time to saturation 24s)									
2	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			1965 Secs (1965 Secs) *[==>]*	 ***[1]***
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction).									
Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)									
Target clears BOP under M dwarf flare conditions, see STIS.sp.1666100 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.									
3	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	***[1]***
4	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			2450 Secs (2450 Secs) *[==>]*	 ***[2]***
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction).									
Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)									
Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.									
5	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	***[2]***
6	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			2450 Secs (2450 Secs) *[==>]*	 ***[3]***
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction).									
Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)									
Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.									
7	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20211222
Unused Orbital Visibility = 9
Occultation
GS Reacq
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16857, SZ115-STIS (2T), completed Thu Jun 16 23:00:39 GMT 2022

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00

Comments: vstatus; 2C; SZ115; S/STIS ready for internal review; P/JRD 24/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ115 ; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; Yes
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; NA
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 13 - modified to use STIS/G140L due to inability to safely acquiring the target (M dwarf BOP, no viable offset target)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ115	RA: 16 09 6.1988 (242.2758283d) Dec: -39 08 52.25 (-39.14785d) Equinox: J2000	Proper Motion RA: -11.13662414 mas/yr Proper Motion Dec: -24.23333703 mas/yr Parallax: 0.0063329112629999995" Epoch of Position: 2015.5	V=16.105 SpT=M4.5; A_V=0.50; B=16.88 ; V=15.48; J=11.33	Reference Frame: ICRS

Comments: SZ115
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz115&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.5 ; A_V: 0.5 ; Distance (pc): 200
M: 0.19 ; log(dm/dt): -9.24*
Input file: lowmass_survey_Input-gaia.csv
sz115_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:38:50, v0.8
---
tstatus; SZ115; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

Flux in the optical template is about 3-4x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1666094)	(2) SZ115	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	*[1]*
Comments: Exptime run with M6, EBV = 0.3, normalized to V = 15.46 (0.14s, time to saturation 24s)									
2	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			2080 Secs (2080 Secs) *[==>]*	*[1]*
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction). *Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)* *Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.*									
3	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	*[1]*
4	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			2450 Secs (2450 Secs) *[==>]*	*[2]*
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction). *Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)* *Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.*									
5	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	*[2]*
6	G230L/2376 (STIS.sp.1666106)	(2) SZ115	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=600			830 Secs (830 Secs) *[==>]*	*[3]*
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction). *Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666107)* *Target clears BOP under M dwarf flare conditions, see STIS.sp.1666108 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.*									
7	G230L/2376 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 52X0.1	G230L 2376 A				*[==>]*	*[3]*
8	G430L/4300 WAVECAL	WAVE	STIS/CCD, ACCUM, 52X0.1	G430L 4300 A				*[==>]*	*[3]*
9	G430L/4300 (STIS.sp.1666109)	(2) SZ115	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1			560 Secs (560 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[3]*
Comments: Nominal exptime computed with a Castelli & Kurucz M6 with EBV = 0.3 normalized to V = 15.48, with some padding. Time to saturation is 10ks even without extinction, so not a concern (STIS.sp.1666110)									

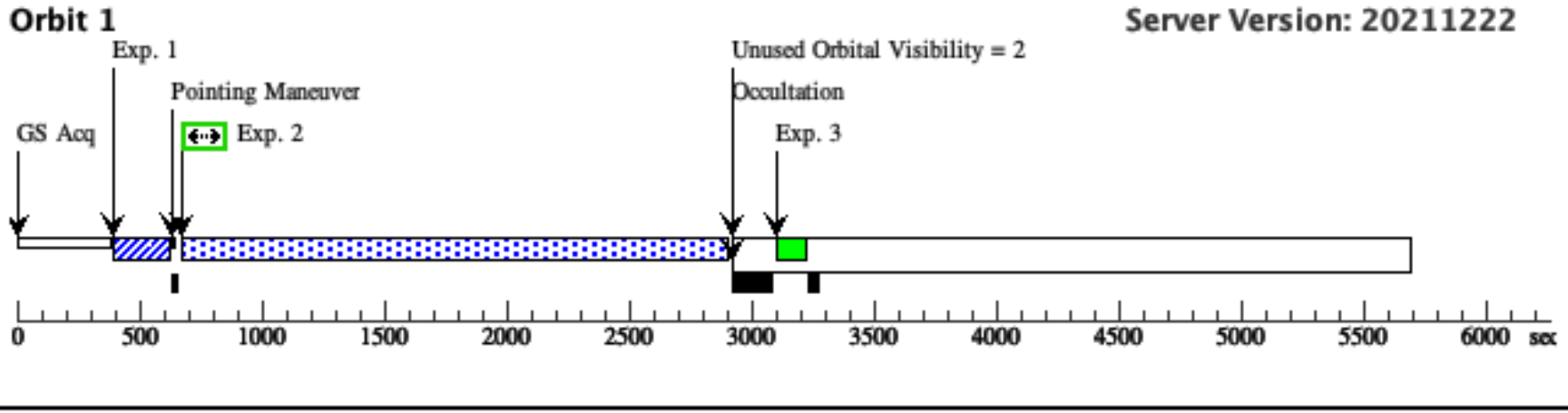
10	G750L/7751 (2) SZ115 (STIS.sp.16 66111)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1	64 Secs (64 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[3]***

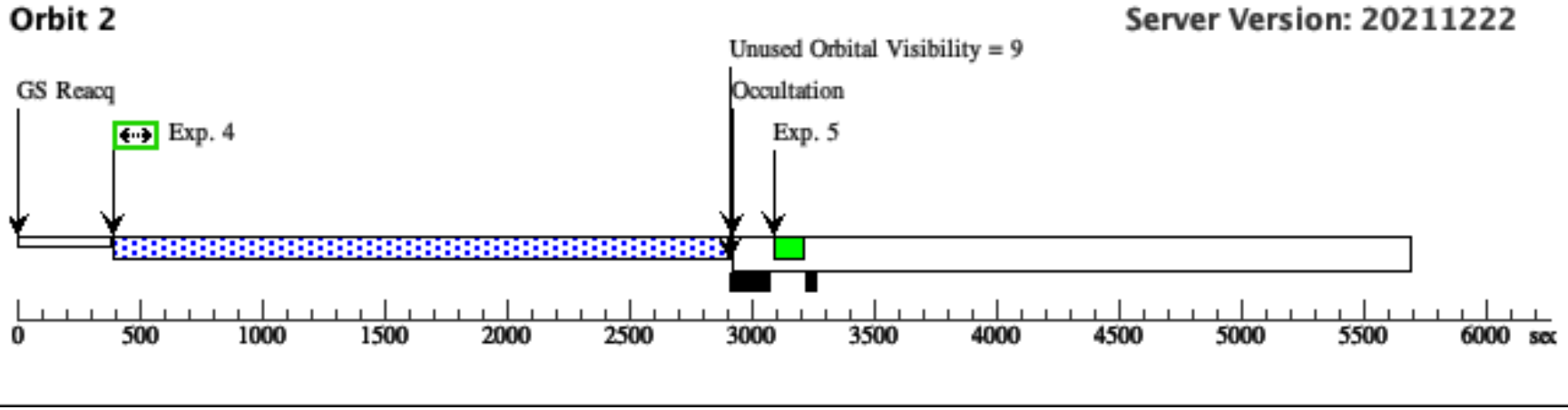
Comments: Nominal exptime computed with a Castelli & Kurucz M6 with EBV = 0.3 normalized to V = 15.48, with some padding. Brightest case for saturation computed without extinction (STIS.sp.1666112)

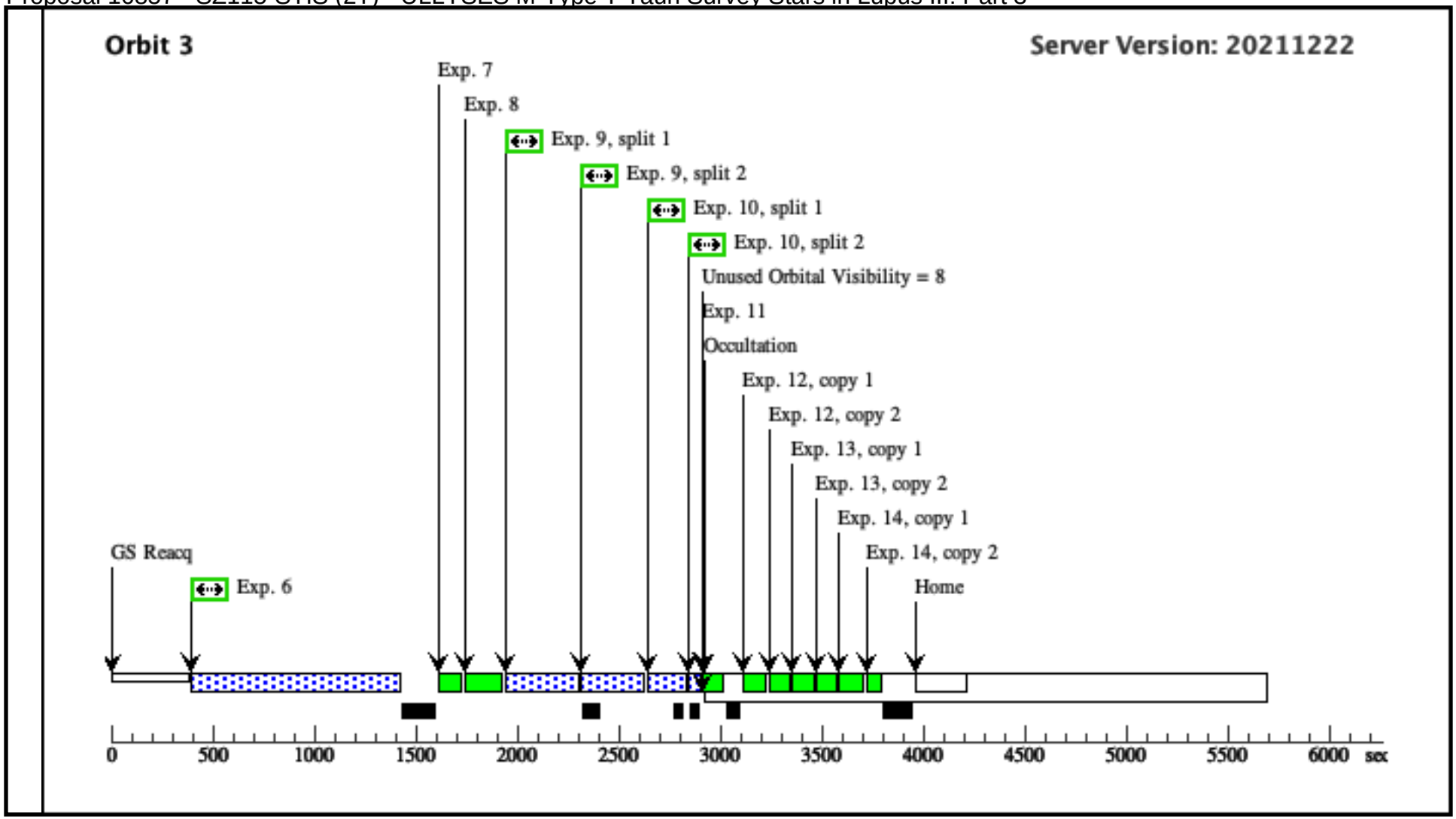
sz115_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g750l,c7751,52x2,mjd#59670
WARNING: operating mode = ACCUM
Input file: lowmass_survey_Input-gaia.csv
Spectral type: M4.5 ; A_V: 0.5 ; Distance (pc): 200
M: 0.19 ; log(dm/dt): -9.24*
For exptime=8.3 s, n_reads=2, spectral region:
5700.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 66182.1 cts/s/segment
brightest pixel: 95.388 cts/s/pix at 6563.9 A
Calculation performed 2021-10-21T02:38:50, v0.23

11	G750L/7751 WAVE WAVECAL	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A	*[==>]*		***[3]***
12	G750L/7751 CCDFLAT CCDFLAT 1	STIS/CCD, ACCUM, 0.3X0.09	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*		***[3]***
13	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*		***[3]***
14	G750L/7751 CCDFLAT CCDFLAT 3	STIS/CCD, ACCUM, 52X2	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*		***[3]***

Orbit Structure






Orbit 3
Server Version: 20211222
Exp. 7
Exp. 8
Exp. 9, split 1
Exp. 9, split 2
Exp. 10, split 1
Exp. 10, split 2
Unused Orbital Visibility = 8
Exp. 11
Occultation
Exp. 12, copy 1
Exp. 12, copy 2
Exp. 13, copy 1
Exp. 13, copy 2
Exp. 14, copy 1
Exp. 14, copy 2
Home
GS Reacq
Exp. 6
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16857, SZ115-STIS (2U), completed Thu Jun 16 23:00:40 GMT 2022

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 25-MAR-2022:00:00:00 AND 30-JUL-2022:00:00:00

Comments: vstatus; 2C; SZ115; S/STIS ready for internal review; P/JRD 24/11/21 ; intrev: complete ; P/AH 17/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ115 ; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; Yes
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Yes
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; NA
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 13 - modified to use STIS/G140L due to inability to safely acquiring the target (M dwarf BOP, no viable offset target)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ115	RA: 16 09 6.1988 (242.2758283d) Dec: -39 08 52.25 (-39.14785d) Equinox: J2000	Proper Motion RA: -11.13662414 mas/yr Proper Motion Dec: -24.23333703 mas/yr Parallax: 0.0063329112629999995" Epoch of Position: 2015.5	V=16.105 SpT=M4.5; A_V=0.50; B=16.88 ; V=15.48; J=11.33	Reference Frame: ICRS

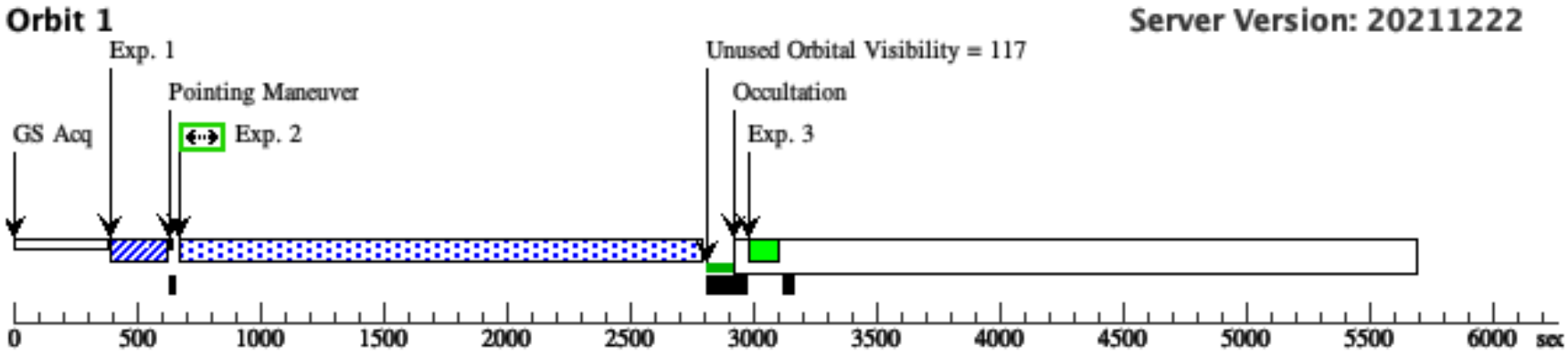
Comments: SZ115
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz115&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M4.5 ; A_V: 0.5 ; Distance (pc): 200
M: 0.19 ; log(dm/dt): -9.24*
Input file: lowmass_survey_Input-gaia.csv
sz115_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:38:50, v0.8
---
tstatus; SZ115; P/COS ready for internal review; S/STIS ready for internal review; P/JRD 11/05/21; S/JRD 11/05/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes

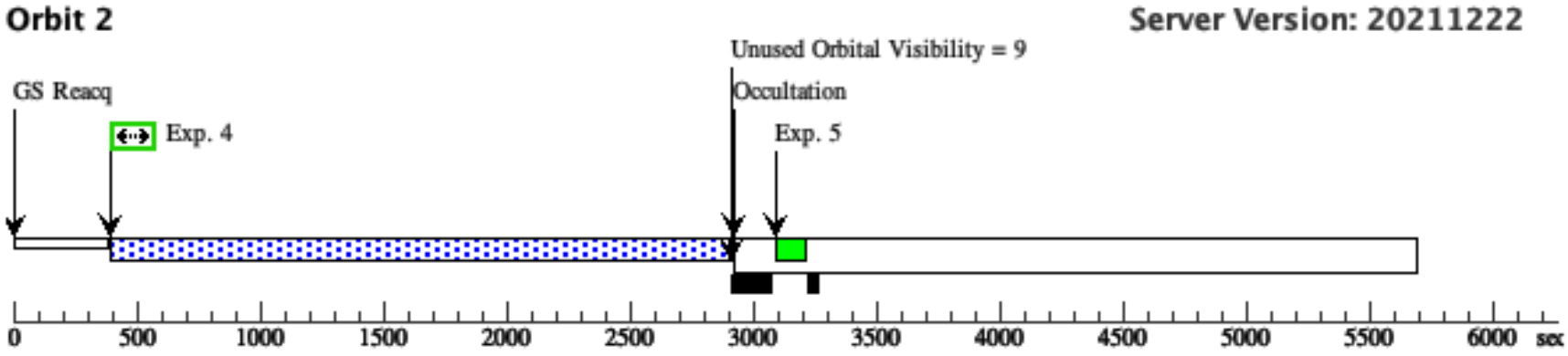
Flux in the optical template is about 3-4x flux in the photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

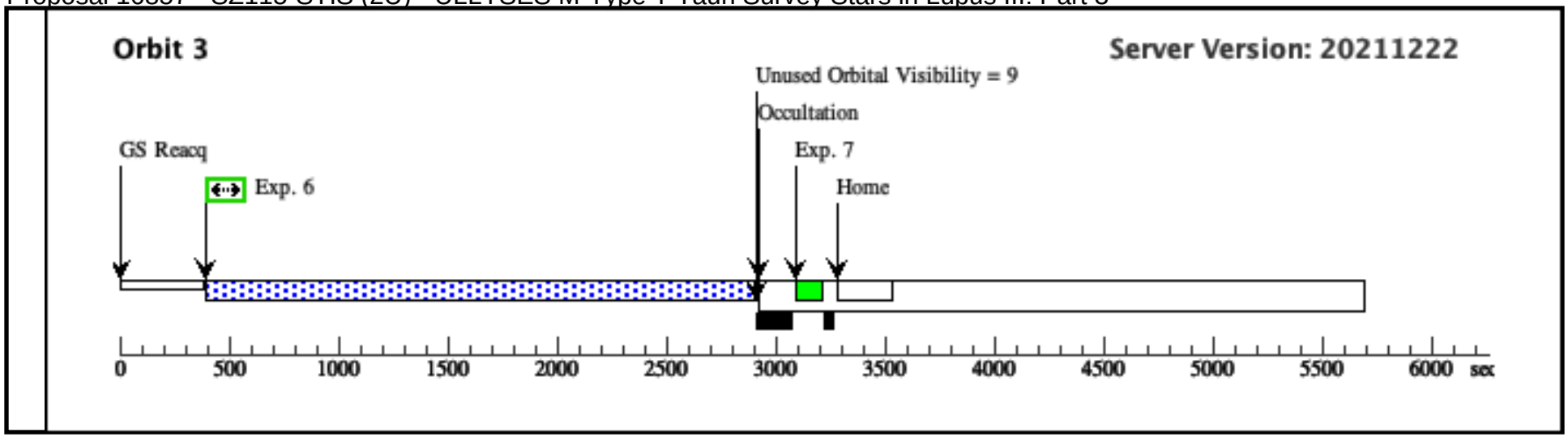
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1666094)	(2) SZ115	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	***[1]***
Comments: Exptime run with M6, EBV = 0.3, normalized to V = 15.46 (0.14s, time to saturation 24s)									
2	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			1965 Secs (1965 Secs) *[==>]*	***[1]***
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction). *Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)* *Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.*									
3	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	***[1]***
4	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			2450 Secs (2450 Secs) *[==>]*	***[2]***
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction). *Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)* *Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.*									
5	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	***[2]***
6	G140L (STIS.sp.1666098)	(2) SZ115	STIS/FUV-MAMA, TIME-TAG, 52X2	G140L 1425 A	BUFFER-TIME=2000; WAVECAL=NO			2450 Secs (2450 Secs) *[==>]*	***[3]***
Comments: Exptime computed from sz115_lya2_etc_scaled_pAV0.50.txt with factor 2 padding (template scaled by accretion rate, distance, and extinction). *Buffer time computed from x4 accretion rate (sz115_lya2_x4.00_etc.txt), also shows that this target is safe to observe under x4 variability (STIS.sp.1666099)* *Target clears BOP under M dwarf flare conditions, see STIS.sp.16661003 computed with sz115_flarespec.fits. This spectrum was itself obtained using Elaine Frazer's M dwarf flare simulator, with V mag of 15.48 input.*									
7	G140L/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 52X0.2	G140L 1425 A				*[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20211222
Unused Orbital Visibility = 9
Occultation
GS Reacq
Exp. 6
Exp. 7
Home
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4500
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5500
6000
sec