16476 - ULLYSES T Tauri stars in Lupus

Cycle: 28, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
1C	(1) SZ71	COS/FUV COS/NUV	3	06-Apr-2021 18:00:23.0	yes
1D	(1) SZ71	COS/FUV COS/NUV	2	06-Apr-2021 18:00:25.0	yes
1S	(1) SZ71 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	06-Apr-2021 18:00:26.0	yes
2C	(2) SZ75	COS/FUV COS/NUV	2	06-Apr-2021 18:00:28.0	yes
2S	(2) SZ75 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	06-Apr-2021 18:00:30.0	yes
3C	(3) SZ77	COS/FUV COS/NUV	2	06-Apr-2021 18:00:31.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
3S	(3) SZ77 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	06-Apr-2021 18:00:33.0	yes

12 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 + c1611 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/c1611: C IV 1549 +- 1 A -- S/N=20/6-pix-resel at the peak of the line
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 16476, SZ71-COS (1C), implementation Tue Apr 06 22:00:34 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:15:40:00; BETWEEN 12-MAY-2021:19:40:00 AND 25-MAY-2021:20:55:00

Comments: vstatus; 1C; SZ71; P/COS internal review complete ; P/JRD 02/03/Y21 ; intrev: complete ; P/RS 03/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Sz71 ; 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?; -------
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)	SZ71 Alt Name1: GW-LUP Alt Name2: J15464473-3430354	RA: 15 46 44.7117 (236.6862988d) Dec: -34 30 36.04 (-34.51001d) Equinox: J2000	Proper Motion RA: -13.853081983945817 mas/yr Proper Motion Dec: -23.352372910250146 mas/yr Parallax: 0.0064146856249999995" Epoch of Position: 2015.5	V=13.54 SpT=M1.5; A_V=0.50; U=14.0; V=13.5; J=10.1	Reference Frame: ICRS

Comments: Sz71 : GW Lup, J15464473-3430354
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15464473-3430354&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
Input file: spring-survey-todo-crp04feb21.csv
sz71_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:57, v0.5
---
tstatus; SZ71; P/COS internal review complete ; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; None
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/Image (COS.ta.1477076)	(1) SZ71	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				120 Secs (120 Secs) *[==>]*	***[1]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt (COS.ta.1477076) yields t = 60s for S/N = 20 with PSA/MIRRORB, and multiplied exposure time by 2 to account for variability (this template already assumes an extra A_V of 0.5 to account for uncertainties on extinction).

sz71_lya2_x4.00_etc.txt used as upper limit on accretion spectrum (nominal times 4, no added extinction, COS.ta.1477087) yields brightest pixel of 9.7 cts/pix/s (global 70 cts/s).

Sz71_flarespec.fits generated using M dwarf flare code (COS.ta.1477088) under flare conditions (M1.5) normalized to V mag with nominal extction yields brightest pixel of 11 cts/pix/s (global 80 cts/pix/s).

Only target generates BOT H&S error, assuming O5V. This is an M1.5 and can be cleared with ETC as above. Field objects are safe.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1589/FP3 (COS.sp.1477181)	(1) SZ71	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=6000; FP-POS=3			1939 Secs (1939 Secs) *[==>]*	***[1]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=4013.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel (max at 1548.43 A)
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 85.9 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:54, v0.18

Accretion BOP: COS.sp.1477187 using sz71_lya2_x4.00_etc.txt (x4 nominal brightness, no additional extinction), resulting in brightest pixel of 0.06 cts/pix/s with global count rate <300 cts/s

M dwarf flare BOP: COS.sp.1477188 using Sz71_flarespec.fits, resulting in brightest pixel of 0.063 cts/pix/s and global count rate <110 cts/s

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1589/FP4 (COS.sp.1477181)	(1) SZ71	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=6000; FP-POS=4			1791 Secs (1791 Secs) *[==>]*	***[2]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=4013.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel (max at 1548.43 A)
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 85.9 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:54, v0.18

Accretion BOP: COS.sp.1477187 using sz71_lya2_x4.00_etc.txt (x4 nominal brightness, no additional extinction), resulting in brightest pixel of 0.06 cts/pix/s with global count rate <300 cts/s

M dwarf flare BOP: COS.sp.1477188 using Sz71_flarespec.fits, resulting in brightest pixel of 0.063 cts/pix/s and global count rate <110 cts/s

4	G160M/162 (1) SZ71 3/FP1 (COS.sp.147 7181)	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=60 00; FP-POS=1	477 Secs (477 Secs) *[==>]*	***[2]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=4013.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel (max at 1548.43 A)
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 85.9 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:54, v0.18

Accretion BOP: COS.sp.1477187 using sz71_lya2_x4.00_etc.txt (x4 nominal brightness, no additional extinction), resulting in brightest pixel of 0.06 cts/pix/s with global count rate <300 cts/s

M dwarf flare BOP: COS.sp.1477188 using Sz71_flarespec.fits, resulting in brightest pixel of 0.063 cts/pix/s and global count rate <110 cts/s

5	G160M/162 (1) SZ71 3/FP1 (COS.sp.147 7181)	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=60 00; FP-POS=1	1491 Secs (1491 Secs) *[==>]*	***[3]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=4013.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel (max at 1548.43 A)
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 85.9 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:54, v0.18

Accretion BOP: COS.sp.1477187 using sz71_lya2_x4.00_etc.txt (x4 nominal brightness, no additional extinction), resulting in brightest pixel of 0.06 cts/pix/s with global count rate <300 cts/s

M dwarf flare BOP: COS.sp.1477188 using Sz71_flarespec.fits, resulting in brightest pixel of 0.063 cts/pix/s and global count rate <110 cts/s

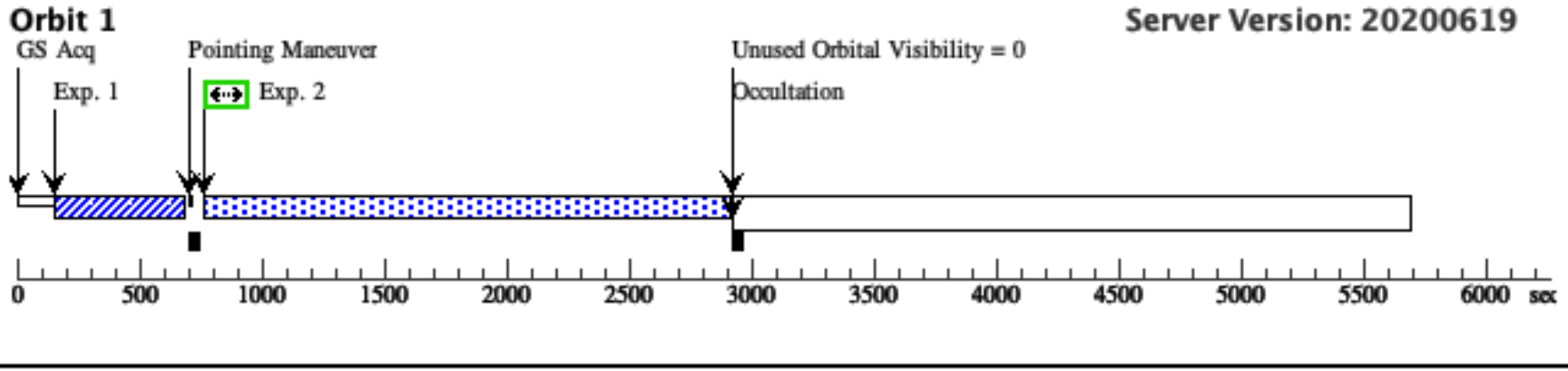
6	G160M/162 (1) SZ71 3/FP2 (COS.sp.147 7181)	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=60 00; FP-POS=2	856 Secs (856 Secs) *[==>]*	***[3]***

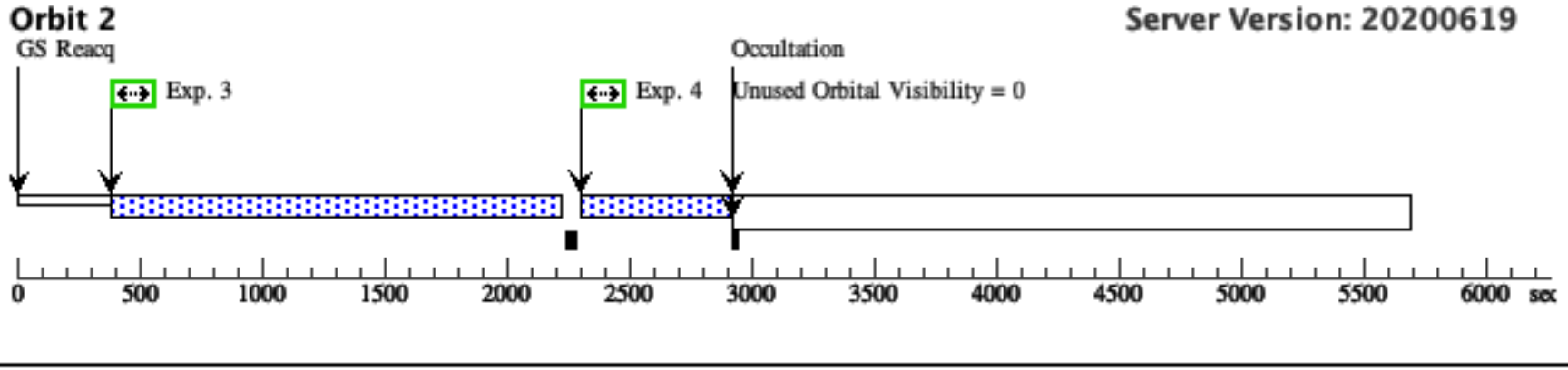
Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=4013.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel (max at 1548.43 A)
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 85.9 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:54, v0.18

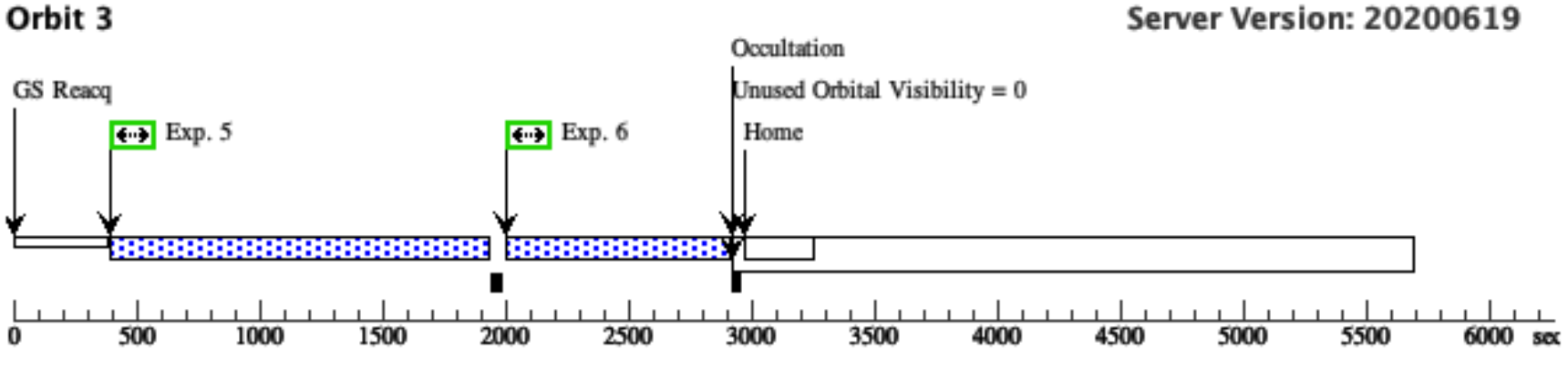
Accretion BOP: COS.sp.1477187 using sz71_lya2_x4.00_etc.txt (x4 nominal brightness, no additional extinction), resulting in brightest pixel of 0.06 cts/pix/s with global count rate <300 cts/s

M dwarf flare BOP: COS.sp.1477188 using Sz71_flarespec.fits, resulting in brightest pixel of 0.063 cts/pix/s and global count rate <110 cts/s

Orbit Structure







Visit

Proposal 16476, SZ71-COS (1D), implementation Tue Apr 06 22:00:34 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:17:15:00; BETWEEN 12-MAY-2021:19:40:00 AND 25-MAY-2021:22:30:00

Comments: vstatus; 1D; SZ71; P/COS internal review complete; P/JRD 02/03/Y21 ; intrev: complete ; P/RS 03/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Sz71 ; 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?; -------
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)	SZ71 Alt Name1: GW-LUP Alt Name2: J15464473-3430354	RA: 15 46 44.7117 (236.6862988d) Dec: -34 30 36.04 (-34.51001d) Equinox: J2000	Proper Motion RA: -13.853081983945817 mas/yr Proper Motion Dec: -23.352372910250146 mas/yr Parallax: 0.0064146856249999995" Epoch of Position: 2015.5	V=13.54 SpT=M1.5; A_V=0.50; U=14.0; V=13.5; J=10.1	Reference Frame: ICRS

Comments: Sz71 : GW Lup, J15464473-3430354
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15464473-3430354&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
Input file: spring-survey-todo-crp04feb21.csv
sz71_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:57, v0.5
---
tstatus; SZ71; P/COS internal review complete ; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; None
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/Image (COS.ta.1477076)	(1) SZ71	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				120 Secs (120 Secs) *[==>]*	 ***[1]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt (COS.ta.1477076) yields t = 60s for S/N = 20 with PSA/MIRRORB, and multiplied exposure time by 2 to account for variability (this template already assumes an extra A_V of 0.5 to account for uncertainties on extinction).

sz71_lya2_x4.00_etc.txt used as upper limit on accretion spectrum (nominal times 4, no added extinction, COS.ta.1477087) yields brightest pixel of 9.7 cts/pix/s (global 70 cts/s).

Sz71_flarespec.fits generated using M dwarf flare code (COS.ta.1477088) under flare conditions (M1.5) normalized to V mag with nominal extction yields brightest pixel of 11 cts/pix/s (global 80 cts/pix/s).

Only target generates BOT H&S error, assuming O5V. This is an M1.5 and can be cleared with ETC as above. Field objects are safe.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1623/FP2 (COS.sp.1477181)	(1) SZ71	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=6000; FP-POS=2			700 Secs (700 Secs) *[==>]*	 ***[1]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=4013.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel (max at 1548.43 A)
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 85.9 cts/s/segment
brightest pixel: 0.004 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:54, v0.18

Accretion BOP: COS.sp.1477187 using sz71_lya2_x4.00_etc.txt (x4 nominal brightness, no additional extinction), resulting in brightest pixel of 0.06 cts/pix/s with global count rate <300 cts/s

M dwarf flare BOP: COS.sp.1477188 using Sz71_flarespec.fits, resulting in brightest pixel of 0.063 cts/pix/s and global count rate <110 cts/s

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G130M/1291/1-3 (COS.sp.1477185)	(1) SZ71	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=3			990 Secs (990 Secs) *[==>]*	 ***[1]***

Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=2010.3 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): 324.2 cts/s/segment
brightest pixel: 0.014 cts/s/pix at 1304.8 A
Calculation performed 2021-02-08T11:50:56, v0.18

Accretion BOP: COS.sp.1477186, using sz71_lya2_x4.00_etc.txt (x4 the nominal brightness, no additional extinction). Brightest pixel 0.095, global count rate < 700.

M dwarf flare BOP: COS.sp.1477189 using Sz71_flarespec.fits resulting in brightest pixel of 0.095 cts/pix/s and global count rate < 300 cts/s

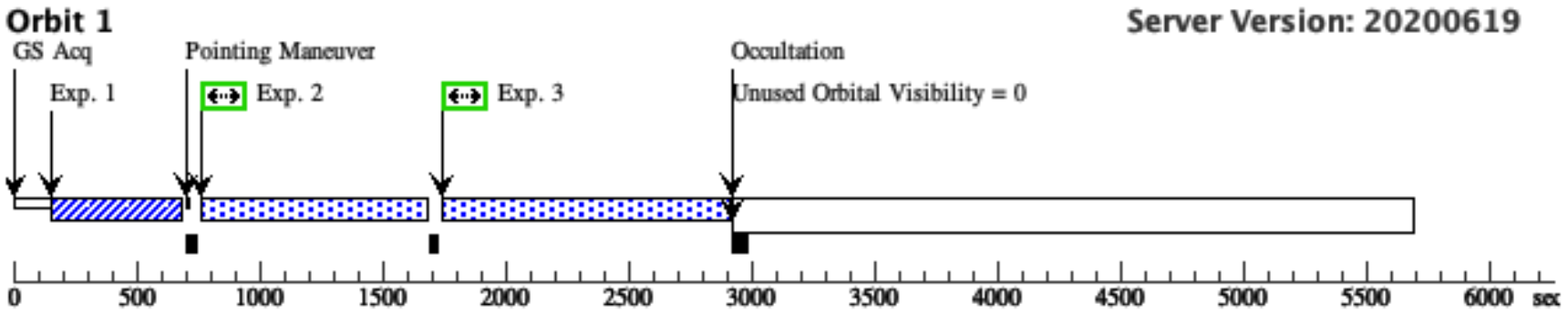
4	G130M/129 1-4 (COS.sp.1477185)	(1) SZ71	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=4	2471 Secs (2471 Secs) [==>] [2]

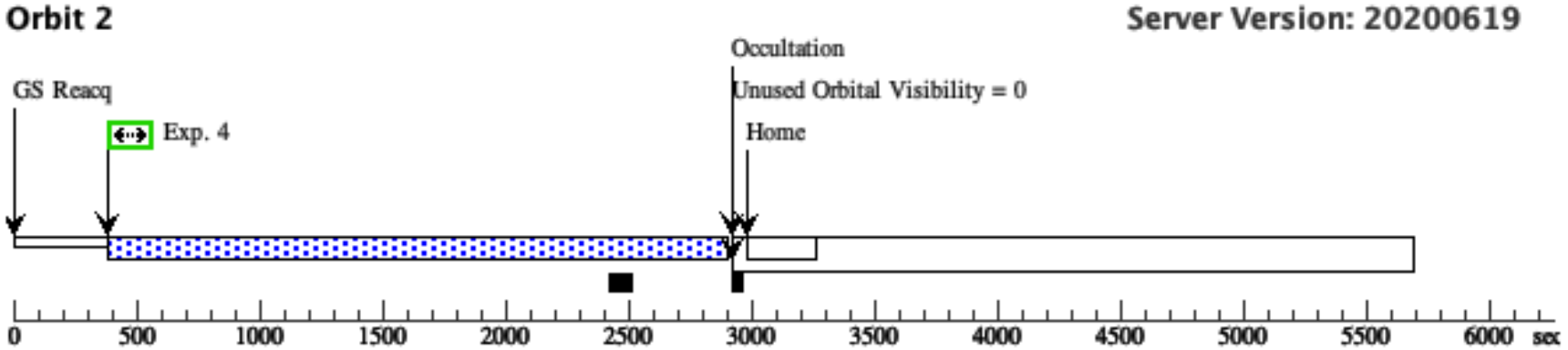
Comments: sz71_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
For exptime=2010.3 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 324.2 cts/s/segment
brightest pixel: 0.014 cts/s/pix at 1304.8 A
Calculation performed 2021-02-08T11:50:56, v0.18

Accretion BOP: COS.sp.1477186, using sz71_lya2_x4.00_etc.txt (x4 the nominal brightness, no additional extinction). Brightest pixel 0.095, global count rate < 700.

M dwarf flare BOP: COS.sp.1477189 using Sz71_flarespec.fits resulting in brightest pixel of 0.095 cts/pix/s and global count rate < 300 cts/s

Orbit Structure





Visit

Proposal 16476, SZ71-STIS (1S), implementation Tue Apr 06 22:00:34 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:18:50:00; BETWEEN 12-MAY-2021:19:40:00 AND 26-MAY-2021:00:05:00; GROUP 1S,1C,1D WITHIN 1D

Comments: vstatus; 1S; SZ71; S/STIS ready for internal review; S/JRD 02/03/21 ; intrev: complete ; S/DW 04/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Sz71 ; 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 -- exptime for E230L increased to 514 sec
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; -------
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated STIS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ71 Alt Name1: GW-LUP Alt Name2: J15464473-3430354	RA: 15 46 44.7117 (236.6862988d) Dec: -34 30 36.04 (-34.51001d) Equinox: J2000	Proper Motion RA: -13.853081983945817 mas/yr Proper Motion Dec: -23.352372910250146 mas/yr Parallax: 0.0064146856249999995" Epoch of Position: 2015.5	V=13.54 SpT=M1.5; A_V=0.50; U=14.0; V=13.5; J=10.1	Reference Frame: ICRS

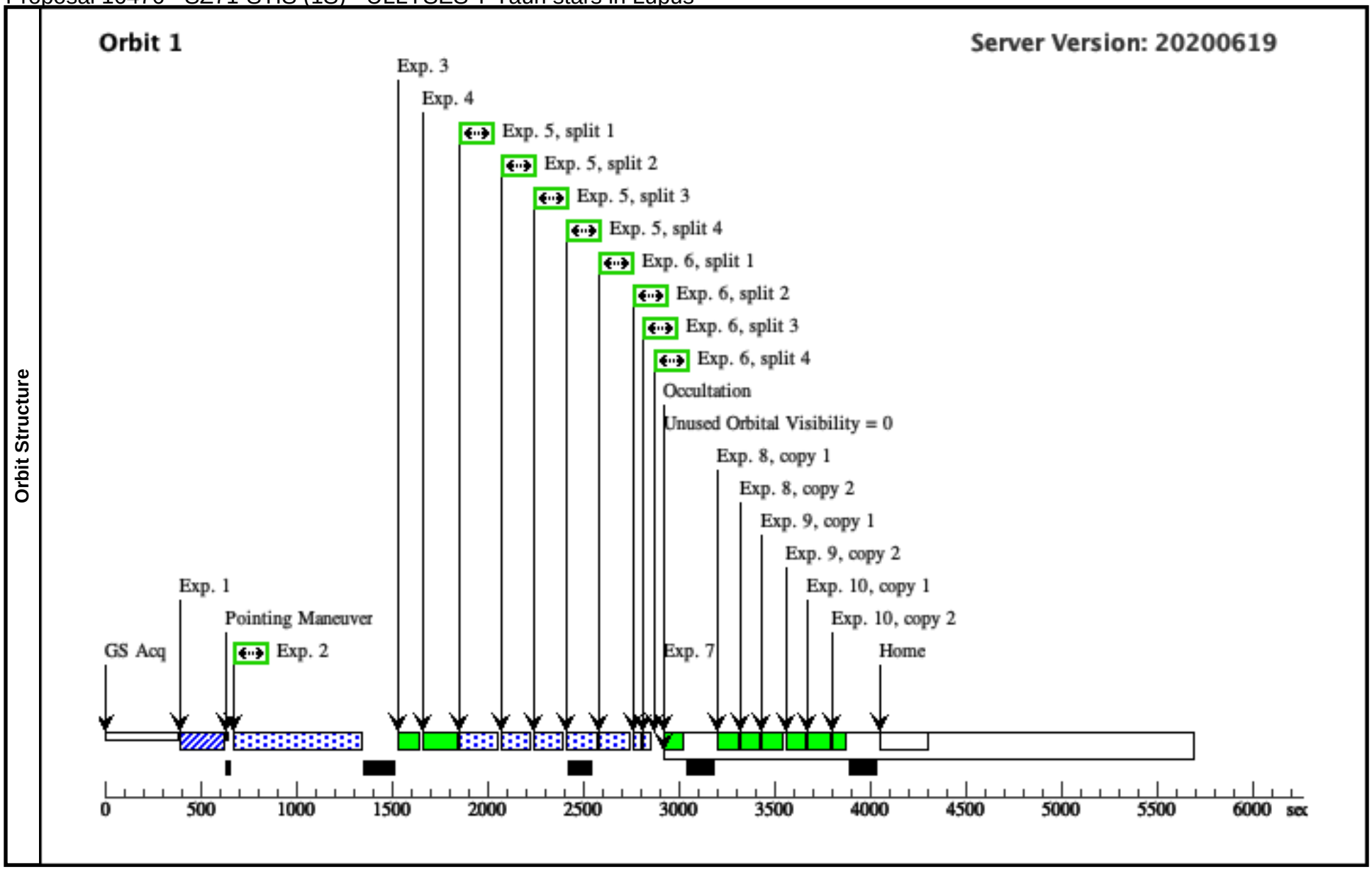
Comments: Sz71 : GW Lup, J15464473-3430354
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15464473-3430354&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150
M: 0.42 ; log(dm/dt): -9.06*
Input file: spring-survey-todo-crp04feb21.csv
sz71_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:57, v0.5
---
tstatus; SZ71; P/COS internal review complete ; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; None
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	(1) SZ71	STIS/CCD, ACQ, F28X50LP	MIRROR				0.2 Secs (0.2 Secs) *[==>]*	***[1]***
	Comments: Flux in PANSTARR r: 7.06e-15 erg cm-2 s-1 Ang-1 with M2V Kurucz model (STIS.ta.1478353) *With Sz 71 template (sz71_lya2_etc_scaled_pAV0.50.txt): STIS.ta.1478354. Time to saturation ~ 10s. Exptime 0.07sx2 = 0.15s* *With upper limit template, time to saturation = 0.97s (STIS.ta.1478366)*								
2	G230L/2376 (STIS.sp.14 77216)	(1) SZ71	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=50 0			514 Secs (514 Secs) *[==>]*	***[1]***
	Comments: sz71_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305 *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150* *M*: 0.42 ; log(dm/dt): -9.06* *For exptime=129.5 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): 2381.4 cts/s/segment* *brightest pixel: 0.635 cts/s/pix at 2796.8 A* *Calculation performed 2021-02-08T11:50:56, v0.18* *Accretion BOP and BT: STIS.sp.1477217, using sz71_lya2_x4.00_etc.txt (BT = 700s)* *NOTE: the ETC results (above) are for the 52x2 aperture -- not the 52x0.2 listed in the ETC 1477216 -- and the BT for that aperture is 668s (not 700s) -- see ETC 1480468 and 1480470*								
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.14 78360)	(1) SZ71	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=4; GAIN=4			500 Secs (500 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
	Comments: sz71_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g430l,c4300,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150* *M*: 0.42 ; log(dm/dt): -9.06* *For exptime=44.9 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): 44638.2 cts/s/segment* *brightest pixel: 24.153 cts/s/pix at 4560.5 A* *Calculation performed 2021-02-08T11:50:56, v0.18* *Using upper limit template (sz71_lya2_x4.00_etc.txt): STIS.sp.1478357, time to saturation is only 200s for gain = 1, 700s for gain = 4 (STIS.sp.1478358). So we choose gain = 4. For the nominal template (sz71_lya2_etc_scaled_pAV0.50.txt), exp time is 128s x 2 = 250s (STIS.sp.1478360).*								

	6	G750L/7751 (1) SZ71 (STIS.sp.14 78361)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=4; GAIN=4	40 Secs (40 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
		Comments: sz71_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: M1.5 ; A_V: 0.5 ; Distance (pc): 150* *M*: 0.42 ; log(dm/dt): -9.06* *For exptime=3.6 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): 106284.4 cts/s/segment* *brightest pixel: 204.021 cts/s/pix at 6563.9 A* *Calculation performed 2021-02-08T11:50:57, v0.18* *With nominal template (sz71_lya2_x4.00_etc.txt): STIS.sp.1478361. Exptime is 9.3s x 2 (padding). With upper limit template (), STIS.sp.1478362 shows time to saturation of 87s with gain = 4.*						
	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 16476, SZ75-COS (2C), implementation Tue Apr 06 22:00:34 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:17:15:00; BETWEEN 12-MAY-2021:19:40:00 AND 25-MAY-2021:22:30:00

Comments: vstatus; 2C; SZ75; P/COS internal review complete ; P/JRD 02/03/21 ; intrev: complete ; P/RS 03/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ75- ; COS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; NA
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?; -------
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ75 Alt Name1: GQ-LUP Alt Name2: J15491210-3539051	RA: 15 49 12.0874 (237.3003642d) Dec: -35 39 5.42 (-35.65151d) Equinox: J2000	Proper Motion RA: -14.133345789587562 mas/yr Proper Motion Dec: -23.328559068820223 mas/yr Parallax: 0.006489" Epoch of Position: 2015.5	V=11.4 SpT=K6; A_V=0.70; U=12.2; V=11.4; J=8.61	Reference Frame: ICRS

Comments: Sz75 : GQ Lup, J15491210-3539051
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15491210-3539051&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150
M: 0.86 ; log(dm/dt): -7.67*
Input file: spring-survey-todo-crp04feb21.csv
sz75_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:41, v0.5
---
tstatus; SZ75; P/COS internal review complete ; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; ------
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/Image (COS.ta.1478409)	(2) SZ75	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				430 Secs (430 Secs) *[==>]*	*[1]*
	Comments: Imaging TA safe with BOA/MIRRORA (COS.ta.1478410, brightest pixel = 6 cts/pix/s) for the upper limit template (sz75_lya2_x4.00_etc.txt) *With BOA/MIRRORA, exptime is 217s x 2 (COS.ta.1478409)*								
2	G160M/1589/FP3 (COS.sp.1478413)	(2) SZ75	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=3600; FP-POS=3			350 Secs (350 Secs) *[==>]*	*[1]*
	Comments: sz75_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None) *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150* *M*: 0.86 ; log(dm/dt): -7.67* *For exptime=626.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 97.8 cts/s/segment* *brightest pixel: 0.016 cts/s/pix at 1548.4 A* *Calculation performed 2021-02-08T11:50:33, v0.18* *With nominal template (sz75_lya2_etc_scaled_pAV0.50.txt, includes extra A_V = 0.5), COS.sp.1478413 shows exptime of 630s x 2 = 1260s is required.* *With upper limit template (sz75_lya2_x4.00_etc.txt), observations are safe (brightest pix 0.2 cts/pix/s, global count rate < 500 cts/s). BT is 5,700s*2/3 ~3500s*								
3	G160M/1589/FP4 (COS.sp.1478413)	(2) SZ75	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=3600; FP-POS=4			350 Secs (350 Secs) *[==>]*	*[1]*
	Comments: sz75_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None) *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150* *M*: 0.86 ; log(dm/dt): -7.67* *For exptime=626.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 97.8 cts/s/segment* *brightest pixel: 0.016 cts/s/pix at 1548.4 A* *Calculation performed 2021-02-08T11:50:33, v0.18* *With nominal template (sz75_lya2_etc_scaled_pAV0.50.txt, includes extra A_V = 0.5), COS.sp.1478413 shows exptime of 630s x 2 = 1260s is required.* *With upper limit template (sz75_lya2_x4.00_etc.txt), observations are safe (brightest pix 0.2 cts/pix/s, global count rate < 500 cts/s). BT is 5,700s*2/3 ~3500s*								
4	G160M/1623/FP1 (COS.sp.1478413)	(2) SZ75	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=3600; FP-POS=1			324 Secs (324 Secs) *[==>]*	*[1]*
	Comments: sz75_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None) *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150* *M*: 0.86 ; log(dm/dt): -7.67* *For exptime=626.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 97.8 cts/s/segment* *brightest pixel: 0.016 cts/s/pix at 1548.4 A* *Calculation performed 2021-02-08T11:50:33, v0.18* *With nominal template (sz75_lya2_etc_scaled_pAV0.50.txt, includes extra A_V = 0.5), COS.sp.1478413 shows exptime of 630s x 2 = 1260s is required.* *With upper limit template (sz75_lya2_x4.00_etc.txt), observations are safe (brightest pix 0.2 cts/pix/s, global count rate < 500 cts/s). BT is 5,700s*2/3 ~3500s*								

5	G160M/162 3/FP2 (COS.sp.147 8413)	(2) SZ75	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=3500; FP-POS=2	310 Secs (310 Secs) *[==>]*	***[2]***

Comments: sz75_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150
M: 0.86 ; log(dm/dt): -7.67*
For exptime=626.3 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 97.8 cts/s/segment
brightest pixel: 0.016 cts/s/pix at 1548.4 A
Calculation performed 2021-02-08T11:50:33, v0.18

With nominal template (sz75_lya2_etc_scaled_pAV0.50.txt, includes extra A_V = 0.5), COS.sp.1478413 shows exptime of 630s x 2 = 1260s is required.

*With upper limit template (sz75_lya2_x4.00_etc.txt), observations are safe (brightest pix 0.2 cts/pix/s, global count rate < 500 cts/s). BT is 5,700s*2/3 ~3500s*

6	G130M/129 1-3 (COS.sp.147 8425)	(2) SZ75	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=3	900 Secs (900 Secs) *[==>]*	***[2]***

Comments: sz75_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150
M: 0.86 ; log(dm/dt): -7.67*
For exptime=954.9 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): 315.2 cts/s/segment
brightest pixel: 0.008 cts/s/pix at 1304.9 A
Calculation performed 2021-02-08T11:50:35, v0.18

*WIth upper limit template (sz75_lya2_x4.00_etc.txt), observations are safe (COS.sp.1478422, brightest pix = 0.1 cts/pix/s, global count rate < 650 cts/s). BT is 3,700s * 2/3*

WIth nominal template (sz75_lya2_etc_scaled_pAV0.50.txt), observations take 1000s x2 (COS.sp.1478425)

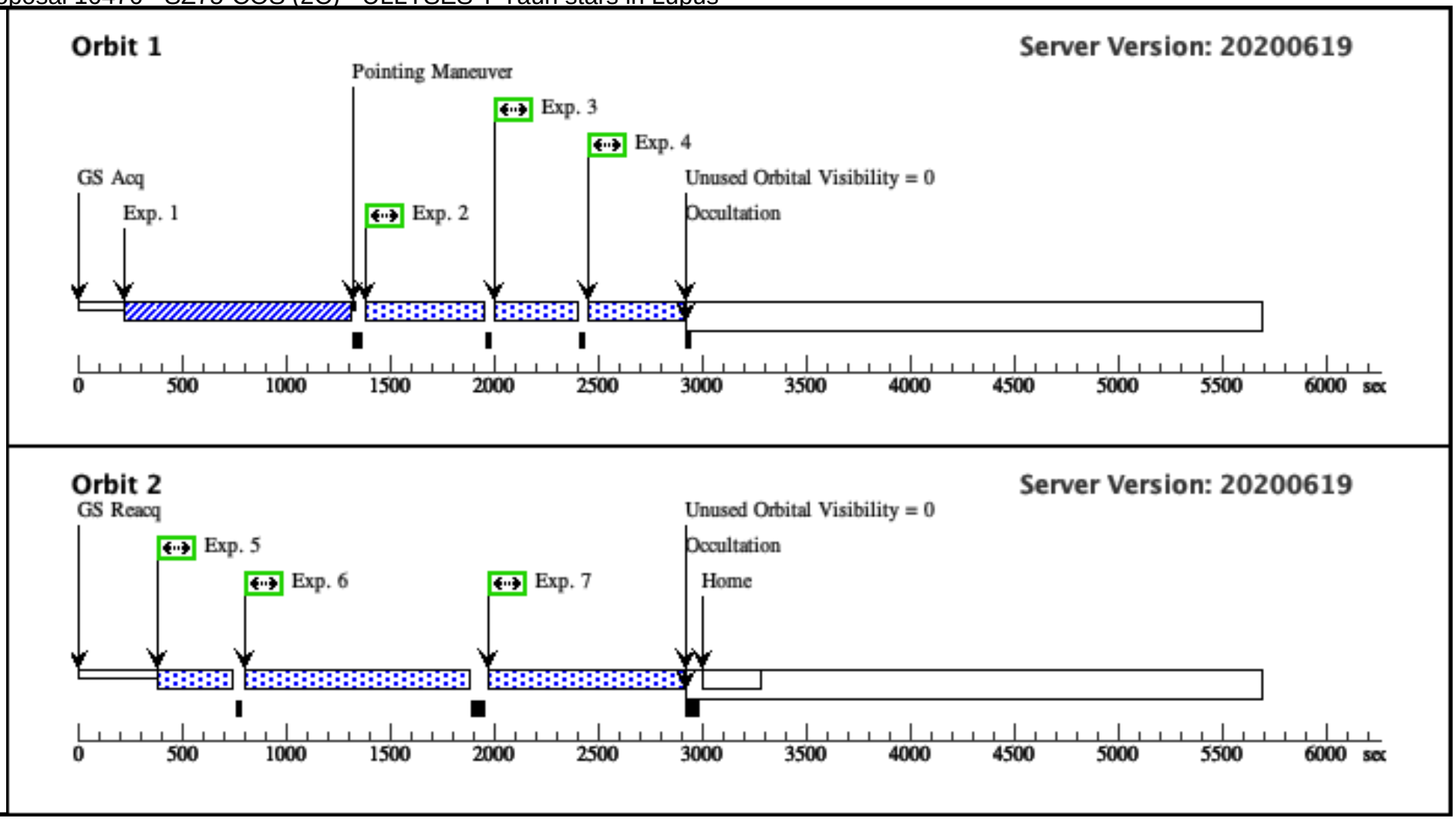
7	G130M/129 1-4 (COS.sp.147 8425)	(2) SZ75	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2000; FP-POS=4	889 Secs (889 Secs) *[==>]*	***[2]***

Comments: sz75_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150
M: 0.86 ; log(dm/dt): -7.67*
For exptime=954.9 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): 315.2 cts/s/segment
brightest pixel: 0.008 cts/s/pix at 1304.9 A
Calculation performed 2021-02-08T11:50:35, v0.18

*WIth upper limit template (sz75_lya2_x4.00_etc.txt), observations are safe (COS.sp.1478422, brightest pix = 0.1 cts/pix/s, global count rate < 650 cts/s). BT is 3,700s * 2/3*

WIth nominal template (sz75_lya2_etc_scaled_pAV0.50.txt), observations take 1000s x2 (COS.sp.1478425)

Orbit Structure



Visit

Proposal 16476, SZ75-STIS (2S), implementation Tue Apr 06 22:00:34 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:18:50:00; BETWEEN 12-MAY-2021:19:40:00 AND 26-MAY-2021:00:05:00; GROUP 2S,2C WITHIN 1D

Comments: vstatus; 2S; SZ75; S/STIS ready for internal review; S/JRD 02/03/21 ; intrev: complete ; S/DW 06/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ75 ; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; N/A
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 -- texp for E230L increased to 514 sec
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; -------
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated STIS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ75 Alt Name1: GQ-LUP Alt Name2: J15491210-3539051	RA: 15 49 12.0874 (237.3003642d) Dec: -35 39 5.42 (-35.65151d) Equinox: J2000	Proper Motion RA: -14.133345789587562 mas/yr Proper Motion Dec: -23.328559068820223 mas/yr Parallax: 0.006489" Epoch of Position: 2015.5	V=11.4 SpT=K6; A_V=0.70; U=12.2; V=11.4; J=8.61	Reference Frame: ICRS

Comments: Sz75 : GQ Lup, J15491210-3539051
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15491210-3539051&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150
M: 0.86 ; log(dm/dt): -7.67*
Input file: spring-survey-todo-crp04feb21.csv
sz75_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:41, v0.5
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tstatus; SZ75; P/COS internal review complete ; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; ------
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	(2) SZ75	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: Time to saturation obtained from upper limit template (sz75_lya2_x4.00_etc.txt, STIS.ta.1478848), and it is 0.4s *Exposure time obtained from nominal template (sz75_lya2_etc_scaled_pAV0.50.txt, STIS.ta.1478849), which is 0.02s, so set to 0.1s*								
2	G230L/2376 (STIS.sp.1478852)	(2) SZ75	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=200			514 Secs (514 Secs) *[==>]*	***[1]***
	Comments: sz75_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305 *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150* *M*: 0.86 ; log(dm/dt): -7.67* *For exptime=36.3 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): 2823.0 cts/s/segment* *brightest pixel: 2.235 cts/s/pix at 2788.8 A* *Calculation performed 2021-02-08T11:50:37, v0.18* *Exposure time obtained from nominal template (sz75_lya2_etc_scaled_pAV0.50.txt, STIS.sp.1478852), or 36sx2 = 72s.* *BOP checked with upper limit template (sz75_lya2_x4.00_etc.txt, STIS.sp.1478853). Brightest pix = 21 cts/pix/s (BT = 266s so 200s)*								
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.1478863)	(2) SZ75	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=4; GAIN=4			500 Secs (500 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
	Comments: sz75_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g430l,c4300,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150* *M*: 0.86 ; log(dm/dt): -7.67* *For exptime=17.0 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): 72185.9 cts/s/segment* *brightest pixel: 65.687 cts/s/pix at 4871.0 A* *Calculation performed 2021-02-08T11:50:40, v0.18* *Time to saturation of 75s with gain = 1 obtained from the upper limit template (sz75_lya2_x4.00_etc.txt ,STIS.sp.1478862)* *Time to saturation with gain = 4 is 273s (STIS.sp.1478875)* *Exposure time obtained with nominal template (sz75_lya2_etc_scaled_pAV0.50.txt ,STIS.sp.1478863), or 41sx2 = 82s* *Exposure time with gain = 4 (STIS.sp.1478871) = 53sx2 = 106s* *NOTE: the above values are for the 52x0.2 aperture (not 52x2)* *for 52x2, the nominal template and gain=4 yield texp = 46s x 2 (1480608)*								

6	G750L/7751 (2) SZ75 (STIS.sp.14 78877)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=4; GAIN=4	40 Secs (40 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***

Comments: sz75_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g750l,c7751,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K6 ; A_V: 0.7 ; Distance (pc): 150
M: 0.86 ; log(dm/dt): -7.67*
For exptime=1.4 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): 214202.5 cts/s/segment
brightest pixel: 474.569 cts/s/pix at 6563.9 A
Calculation performed 2021-02-08T11:50:41, v0.18

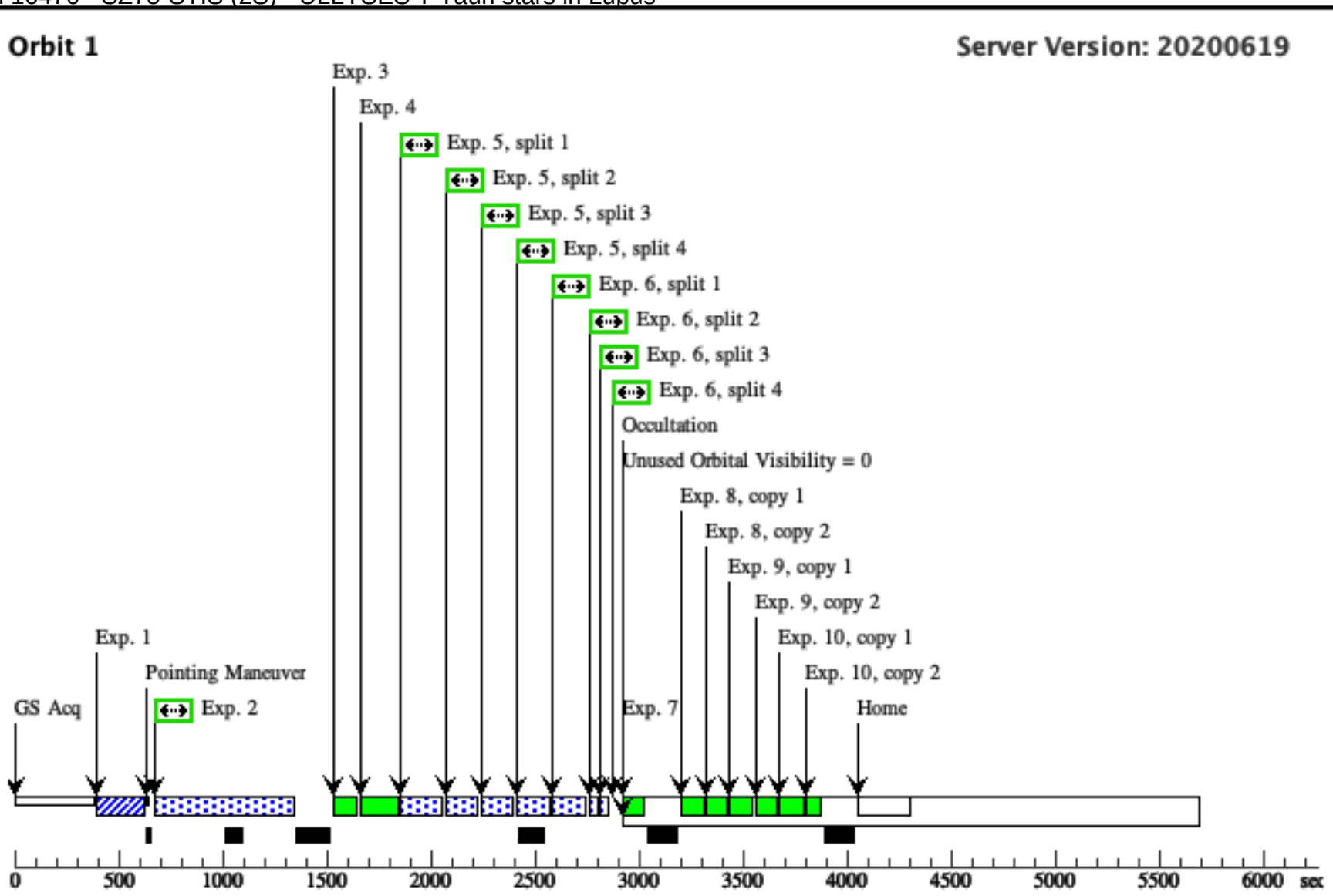
Exposure time with gain = 4 from nominal template (sz75_lya2_etc_scaled_pAV0.50.txt) gives STIS.sp.1478877, exptime = 4sx2 = 8s

Time to saturation with gain = 4 with upper limit template (sz75_lya2_x4.00_etc.txt) from STIS.sp.1478878, time to saturation = 43s.

NOTE : the above values are for the 52x0.2 aperture (not 52x2)
for 52x2, the nominal template and gain=4 yield 3.6s x 2 (1480612)

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 16476, SZ77-COS (3C), implementation Tue Apr 06 22:00:34 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:17:15:00; BETWEEN 12-MAY-2021:19:40:00 AND 25-MAY-2021:22:30:00

Comments: vstatus; 3C; SZ77; P/COS internal review complete ; P/JRD 02/03/21 ; intrev: complete ; P/RS 03/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ77 ; COS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; N/A
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 = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SZ77 Alt Name1: HBC-603 Alt Name2: J15514695-3556440	RA: 15 51 46.9421 (237.9455921d) Dec: -35 56 44.49 (-35.94569d) Equinox: J2000	Proper Motion RA: -12.55043188505111 mas/yr Proper Motion Dec: -24.18251843987182 mas/yr Parallax: 0.0064411" Epoch of Position: 2015.5	V=13.26 SpT=K7; A_V=0.00; U=13.3; V=13.3; J=9.44	Reference Frame: ICRS

Comments: Sz77 : HBC 603, J15514695-3556440
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15514695-3556440&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
Input file: spring-survey-todo-crp04feb21.csv
sz77_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:49, v0.5
---
tstatus; SZ77; P/COS internal review complete; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; ------
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/Image (COS.ta.1479169)	(3) SZ77	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				26 Secs (26 Secs) *[==>]*	***[1]***

Comments: ACQ/IMAGE with PSA + MIRRORB is safe with the upper limit template (sz77_lya2_x4.00_etc.txt, no extra extinction, factor x4 above nominal), see COS.ta.1479168. Brightest pixel has 45 cts/pix/s.

Exposure time computed with nominal template (extra A_V of 0.5, sz77_lya2_etc_scaled_pAV0.50.txt), see COS.ta.1479169. Exposure time is 13sx2 = 26s

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1589/FP3 (COS.sp.1479170)	(3) SZ77	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1200; FP-POS=3			530 Secs (530 Secs) *[==>]*	***[1]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=762.9 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 149.3 cts/s/segment
brightest pixel: 0.027 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:47, v0.18

Exposure time computed with nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see COS.sp.1479170. Exptime = 762sx2 = 1530s

Target is safe to observe given upper limit template (sz77_lya2_x4.00_etc.txt, no extra extinction, nominal flux x4), see COS.sp.1479172. Brightest pixel = 0.4 cts/pix/s; global count rate < 1500 cts/s. BT = 1940sx2/3 = 1200s

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1589/FP4 (COS.sp.1479170)	(3) SZ77	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1200; FP-POS=4			540 Secs (540 Secs) *[==>]*	***[1]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=762.9 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 149.3 cts/s/segment
brightest pixel: 0.027 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:47, v0.18

Exposure time computed with nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see COS.sp.1479170. Exptime = 762sx2 = 1530s

Target is safe to observe given upper limit template (z77_lya2_x4.00_etc.txt, no extra extinction, nominal flux x4), see COS.sp.1479172. Brightest pixel = 0.4 cts/pix/s; global count rate < 1500 cts/s. BT = 1940sx2/3 = 1200s

4	G160M/162 3/FP1 (COS.sp.1479170)	(3) SZ77	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1200; FP-POS=1	700 Secs (700 Secs) *[==>]*	***[1]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=762.9 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 149.3 cts/s/segment
brightest pixel: 0.027 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:47, v0.18

Exposure time computed with nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see COS.sp.1479170. Exptime = 762sx2 = 1530s

Target is safe to observe given upper limit template (z77_lya2_x4.00_etc.txt, no extra extinction, nominal flux x4), see COS.sp.1479172. Brightest pixel = 0.4 cts/pix/s; global count rate < 1500 cts/s. BT = 1940sx2/3 = 1200s

5	G160M/162 3/FP2 (COS.sp.1479170)	(3) SZ77	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1200; FP-POS=2	650 Secs (650 Secs) *[==>]*	***[2]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=762.9 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 149.3 cts/s/segment
brightest pixel: 0.027 cts/s/pix at 1446.2 A
Calculation performed 2021-02-08T11:50:47, v0.18

Exposure time computed with nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see COS.sp.1479170. Exptime = 762sx2 = 1530s

Target is safe to observe given upper limit template (z77_lya2_x4.00_etc.txt, no extra extinction, nominal flux x4), see COS.sp.1479172. Brightest pixel = 0.4 cts/pix/s; global count rate < 1500 cts/s. BT = 1940sx2/3 = 1200s

6	G130M/129 1-3 (COS.sp.1479177)	(3) SZ77	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=400; FP-POS=3	680 Secs (680 Secs) *[==>]*	***[2]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=218.8 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): 582.6 cts/s/segment
brightest pixel: 0.112 cts/s/pix at 1304.8 A
Calculation performed 2021-02-08T11:50:49, v0.18

Target is safe to observe with 1291, assuming conservative upper limit template (z77_lya2_x4.00_etc.txt), see COS.sp.1479176. Brightest pixel = 0.5 cts/pix/s; global count rate < 4000 cts/s. BT = 640x2/3 = 400s

Exposure time obtained from nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see COS.sp.1479177. Exposure time = 212sx2 = 424s.

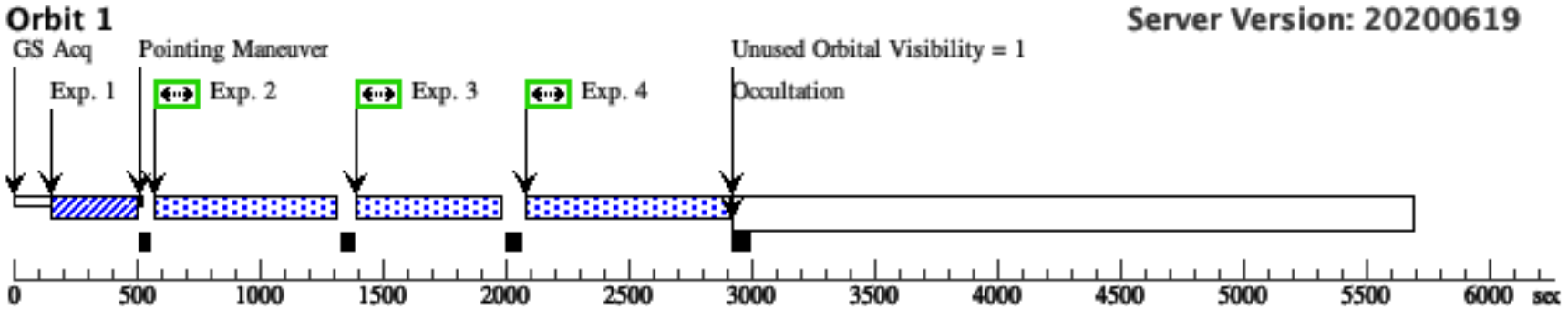
7	G130M/129 1-4 (COS.sp.1479177)	(3) SZ77	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=400; FP-POS=4	680 Secs (680 Secs) *[==>]*	*[2]*

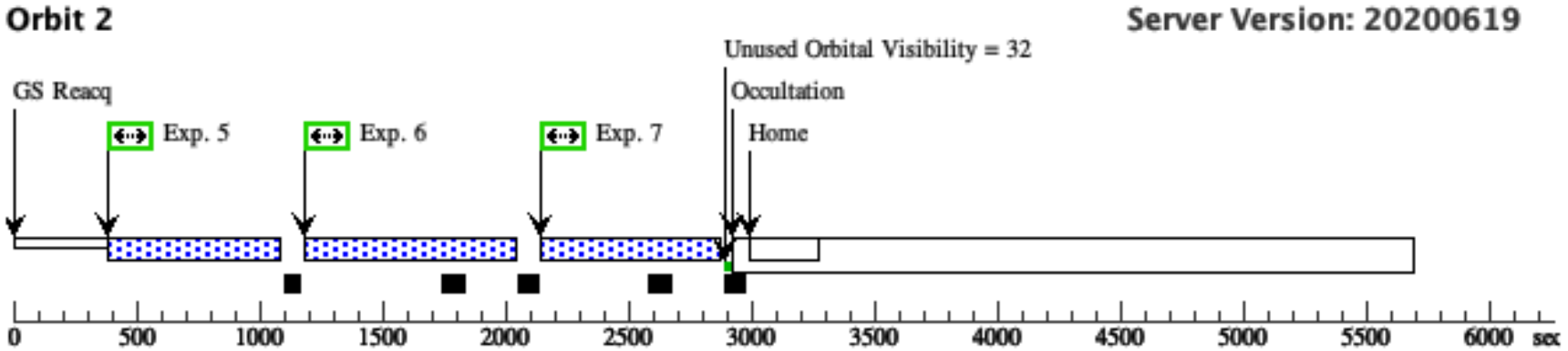
Comments: sz77_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=218.8 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 582.6 cts/s/segment
brightest pixel: 0.112 cts/s/pix at 1304.8 A
Calculation performed 2021-02-08T11:50:49, v0.18

Target is safe to observe with 1291, assuming conservative upper limit template (z77_lya2_x4.00_etc.txt), see COS.sp.1479176. Brightest pixel = 0.5 cts/pix/s; global count rate < 4000 cts/s. BT = 640x2/3 = 400s

Exposure time obtained from nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see COS.sp.1479177. Exposure time = 212sx2 = 424s.

Orbit Structure





Visit

Proposal 16476, SZ77-STIS (3S), implementation Tue Apr 06 22:00:35 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 29-APR-2021:09:00:00 AND 11-MAY-2021:18:50:00; BETWEEN 12-MAY-2021:19:40:00 AND 26-MAY-2021:00:05:00; GROUP 3S,3C WITHIN 1D

Comments: vstatus; 3S; SZ77; S/STIS ready for internal review; S/JRD 02/03/21 ; intrev: complete ; S/DW 06/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SZ77 ; STIS ; JRD
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; NA
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 -- increased texp for G230L to 522s, G430L to 480s
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 STIS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SZ77 Alt Name1: HBC-603 Alt Name2: J15514695-3556440	RA: 15 51 46.9421 (237.9455921d) Dec: -35 56 44.49 (-35.94569d) Equinox: J2000	Proper Motion RA: -12.55043188505111 mas/yr Proper Motion Dec: -24.18251843987182 mas/yr Parallax: 0.0064411" Epoch of Position: 2015.5	V=13.26 SpT=K7; A_V=0.00; U=13.3; V=13.3; J=9.44	Reference Frame: ICRS

Comments: Sz77 : HBC 603, J15514695-3556440
Region: Lupus I
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J15514695-3556440&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
Input file: spring-survey-todo-crp04feb21.csv
sz77_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-02-08T11:50:49, v0.5
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tstatus; SZ77; P/COS internal review complete; S/STIS internal review complete; P/JRD 03/02/21; S/JRD 03/02/21
tcheck; APT/SIMBAD target names: ; OK
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. verified, epoch checked?; OK
tcheck; Adopted SED compared to Observations?; ------
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	(3) SZ77	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***

Comments: With upper limit template (sz77_lya2_x4.00_etc.txt), saturation time for ACQ is 0.5s (see STIS.ta.1479178).

Exposure time obtained from nominal template (sz77_lya2_etc_scaled_pAV0.50.txt) is 0.045s (STIS.ta.1479179).

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G230L/2376 (STIS.sp.1479180)	(3) SZ77	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=250			522 Secs (522 Secs) *[==>]*	***[1]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=34.1 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): 2603.1 cts/s/segment
brightest pixel: 2.381 cts/s/pix at 2796.8 A
Calculation performed 2021-02-08T11:50:49, v0.18

Exposure time from nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see STIS.sp.1479180. Exptime = 46sx2 = 92s

Target is safe to observe with G230L, as shown by upper limit template (sz77_lya2_x4.00_etc.txt), see STIS.sp.1479181. Brightest pixel = 19 cts/pix/s and global count rate < 5000s. BT = 421x2/3 = 250s

NOTE: the ETC runs listed above used the 52x0.2 aperture
for the 52x2 aperture, the nominal template yields exptime/brightest/entire rates 38.3s/2.37/2372 and BT=766
and the upper limit template yields 3.92s/23.01/5294 and BT=378

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
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.1479183)	(3) SZ77	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=4; GAIN=4			480 Secs (480 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***

Comments: sz77_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g430l,c4300,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: spring-survey-todo-crp04feb21.csv
Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150
M: 0.75 ; log(dm/dt): -8.79*
For exptime=16.3 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): 66757.0 cts/s/segment
brightest pixel: 61.143 cts/s/pix at 4560.5 A
Calculation performed 2021-02-08T11:50:49, v0.18

We calculate the time to saturation using the upper limit template (sz77_lya2_x4.00_etc.txt), see STIS.sp.1479182. Time to saturation is 249s with gain = 4.

Exptime calculated with the nominal template (sz77_lya2_etc_scaled_pAV0.50.txt). See STIS.sp.1479183. Exptime = 40sx2 = 80s

	6	G750L/7751 (3) SZ77 (STIS.sp.14 7918)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=4; GAIN=4	50 Secs (50 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
		Comments: sz77_lya2_etc_scaled_pAV0.50.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: spring-survey-todo-crp04feb21.csv* *Spectral type: K7 ; A_V: 0.0 ; Distance (pc): 150* *M*: 0.75 ; log(dm/dt): -8.79* *For exptime=1.6 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): 167470.4 cts/s/segment* *brightest pixel: 384.504 cts/s/pix at 6563.9 A* *Calculation performed 2021-02-08T11:50:49, v0.18* *Exptime computed with nominal template (sz77_lya2_etc_scaled_pAV0.50.txt), see STIS.sp.1479184. Exptime = 4.2sx2 = 8.5s* *Time to saturation obtained from upper limit template (sz77_lya2_x4.00_etc.txt), see STIS.sp.1479185. Time to sat = 46s for gain = 4*						
	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