16854 - ULLYSES Late K-Type T Tauri Survey Stars in Lupus III and IV

Cycle: 29, 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) SZ129	COS/FUV COS/NUV	2	17-Dec-2021 11:00:50.0	yes
1D	(1) SZ129	COS/FUV COS/NUV	2	17-Dec-2021 11:00:51.0	yes
1E	(1) SZ129	COS/FUV COS/NUV	3	17-Dec-2021 11:00:52.0	yes
1F	(1) SZ129	COS/FUV COS/NUV	3	17-Dec-2021 11:00:53.0	yes
1G	(1) SZ129	COS/FUV COS/NUV	2	17-Dec-2021 11:00:53.0	yes
1S	(1) SZ129 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	17-Dec-2021 11:00:55.0	yes
2C	(2) SZ98	COS/FUV COS/NUV	2	17-Dec-2021 11:00:55.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
2D	(2) SZ98	COS/FUV COS/NUV	2	17-Dec-2021 11:00:56.0	yes
2E	(2) SZ98	COS/FUV COS/NUV	3	17-Dec-2021 11:00:57.0	yes
2F	(2) SZ98	COS/FUV COS/NUV	3	17-Dec-2021 11:00:57.0	yes
2S	(2) SZ98 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	17-Dec-2021 11:00:59.0	yes

24 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 16854, SZ129-COS (1C) Fri Dec 17 16:00:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022:00:00:00 AND 29-JUL-2022:00:00:00; GROUP 1C,1D,1E,1F,1G,1S WITHIN 2D

Comments: vstatus; 1C; SZ129; P/COS approved for submission; P/RP 20/11/21 ; approved for submission; P/CP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes ...
Same problem as BOT that the target is mislabeled as an M-dwarf. No other M-dwarfs in the COS macroaperture
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 ...
There is a health alert in the BOT, but it appears to be this K7 star, SZ129, mislabeled as an O5 star
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 ... 1C, 1D, 1E, 1F, 1G, 1S within 2 days
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes ... March 26, 2022 - July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 12

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ129	RA: 15 59 16.4569 (239.8185704d)	Proper Motion RA: -10.46297637 mas/yr	V=13.149	Reference Frame: ICRS
	Alt Name1: HBC-609	Dec: -41 57 10.66 (-41.95296d)	Proper Motion Dec: -23.11371226 mas/yr	SpT=K7; A_V=0.90; B=14.55; V=13.15; J=9.933	
		Equinox: J2000	Parallax: 0.00618496974"		
			Epoch of Position: 2015.5		

Comments: SZ129 : HBC 609
Region: Lupus IV
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz129&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
Input file: lowmass_survey_Input-gaia.csv
sz129_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:35, v0.8
---
tstatus; SZ129; P/COS approved for submission; S/STIS approved for submission; P/RP 20/11/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; WRAY 15-1400 & Sz 129 ...
There are two matches on the Gaia archive. 5995168724780802944 matches simbad and the coordinates here.
tcheck; Target info verification status?; Yes...
Model compared against B=14.546, V=13.149, R=11.78
tcheck; Coordinates & P.M. verified, epoch checked?; Yes...matches Gaia DR2
tcheck; Adopted SED compared to Observations?; Yes
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.1547349)	(1) SZ129	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				95.4 Secs (95.4 Secs) *[==>]*	*[1]*
	Comments: Expected S/N ~25 with ACQ/IMAGE PSA MIRRORB								
2	G130M/1291-4 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=4			509 Secs (509 Secs) *[==>]*	*[1]*
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								
3	G160M/1589-3 (COS.sp.1547360)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=14327; FP-POS=3			1300 Secs (1300 Secs) *[==>]*	*[1]*
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=1898.2 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): 65.9 cts/s/segment* *brightest pixel: 0.003 cts/s/pix at 1548.4 A* *Calculation performed 2021-10-21T02:37:31, v0.23* *Expected S/N of 20 combined with all G160M exposures at 1549A* *ETC Buffertime = 21,490 with 4x scaled model ETC run COS.sp.1547361;* *2/3 * 21,490 = 14327*								

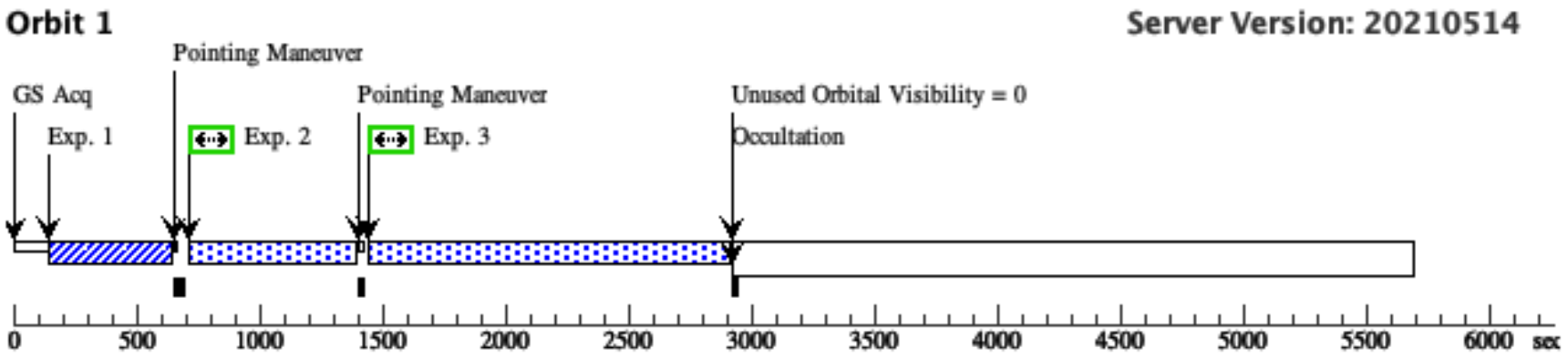
4	G160M/158 9-4 (COS.sp.154 7360)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=14 327; FP-POS=4	2473 Secs (2473 Secs) [==>]	[2]

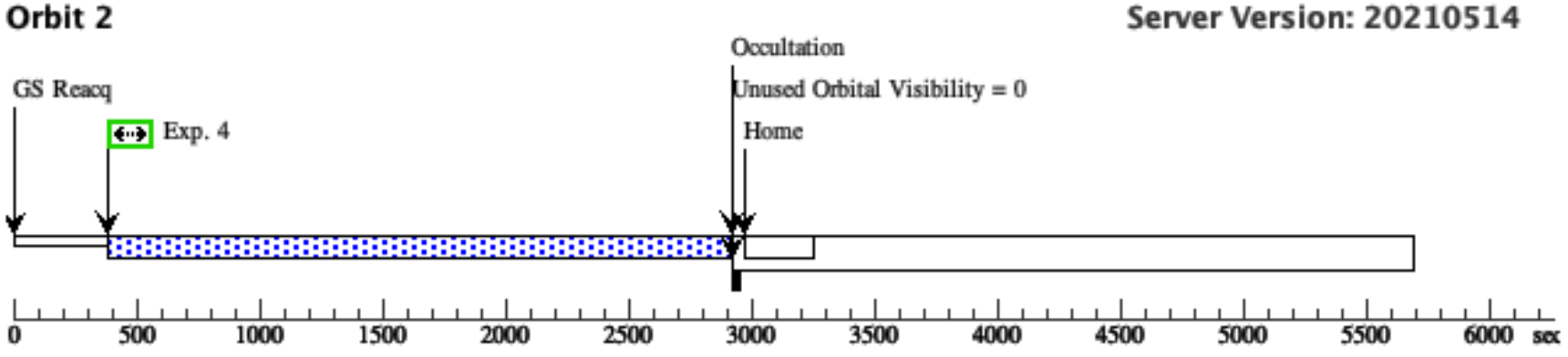
Comments: sz129_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1589,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
For exptime=1898.2 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 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): 65.9 cts/s/segment
brightest pixel: 0.003 cts/s/pix at 1548.4 A
Calculation performed 2021-10-21T02:37:31, v0.23

Expected S/N of 20 combined with all G160M exposures at 1549A

ETC Buffertime = 21,490 with 4x scaled model ETC run COS.sp.1547361;
*2/3 * 21,490 = 14327*

Orbit Structure





Visit

Proposal 16854, SZ129-COS (1D) Fri Dec 17 16:00:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022:00:00:00 AND 29-JUL-2022:00:00:00; GROUP 1D,1C,1E,1F,1G,1S WITHIN 2D

Comments: vstatus; 1D; SZ129; P/COS approved for submission; P/RP 20/11/21 ;internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes ...
Same problem as BOT that the target is mislabeled as an M-dwarf. No other M-dwarfs in the COS macroaperture
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 ...
There is a health alert in the BOT, but it appears to be this K7 star, SZ129, mislabeled as an O5 star
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 ... 1C, 1D, 1E, 1F, 1G, 1S within 2 days
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes ... March 26, 2022 - July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 12

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ129	RA: 15 59 16.4569 (239.8185704d)	Proper Motion RA: -10.46297637 mas/yr	V=13.149	Reference Frame: ICRS
	Alt Name1: HBC-609	Dec: -41 57 10.66 (-41.95296d)	Proper Motion Dec: -23.11371226 mas/yr	SpT=K7; A_V=0.90; B=14.55; V=13.15; J=9.933	
		Equinox: J2000	Parallax: 0.00618496974"		
			Epoch of Position: 2015.5		

Comments: SZ129 : HBC 609
Region: Lupus IV
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz129&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
Input file: lowmass_survey_Input-gaia.csv
sz129_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:35, v0.8
---
tstatus; SZ129; P/COS approved for submission; S/STIS approved for submission; P/RP 20/11/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; WRAY 15-1400 & Sz 129 ...
There are two matches on the Gaia archive. 5995168724780802944 matches simbad and the coordinates here.
tcheck; Target info verification status?; Yes...
Model compared against B=14.546, V=13.149, R=11.78
tcheck; Coordinates & P.M. verified, epoch checked?; Yes...matches Gaia DR2
tcheck; Adopted SED compared to Observations?; Yes
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.1547349)	(1) SZ129	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				95.4 Secs (95.4 Secs) *[==>]*	***[1]***
	Comments: Expected S/N ~25 with ACQ/IMAGE PSA MIRRORB								
2	G130M/1291-3 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=3			499 Secs (499 Secs) *[==>]*	***[1]***
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								
3	G160M/1623-1 (COS.sp.1547362)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=14905; FP-POS=1			1300 Secs (1300 Secs) *[==>]*	***[1]***
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=1885.5 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): 65.6 cts/s/segment* *brightest pixel: 0.003 cts/s/pix at 1548.4 A* *Calculation performed 2021-10-21T02:37:33, v0.23* *Expected S/N of 20 combined with all G160M exposures at 1549A* *ETC Buffertime = 22,357 with 4x scaled model ETC run COS.sp.1547363;* *2/3 * 22,357 = 14905*								

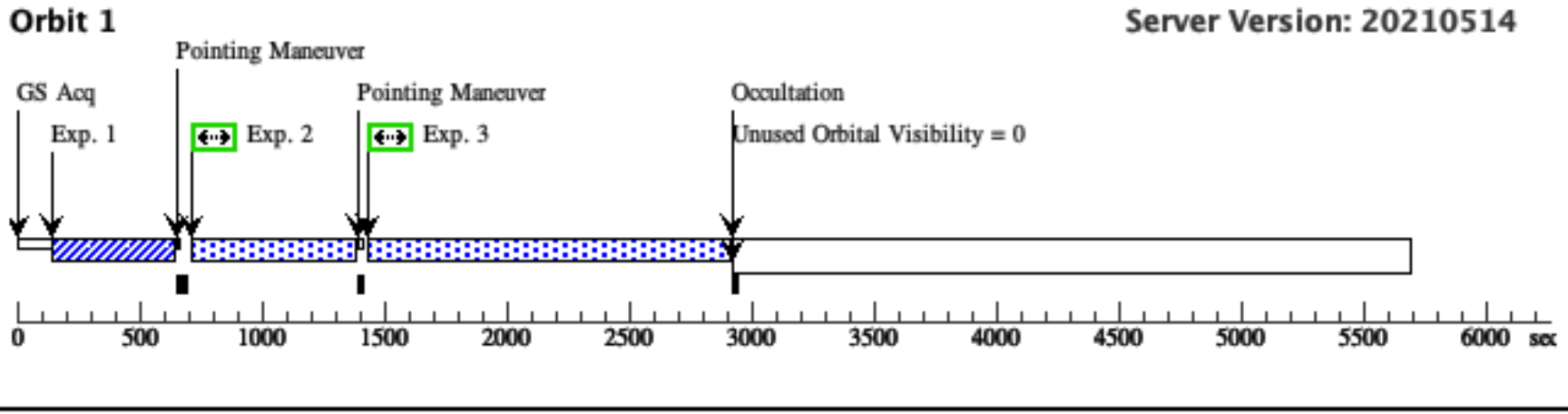
4	G160M/162 3-2 (COS.sp.154 7362)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=14 905; FP-POS=2	2473 Secs (2473 Secs) [==>]	[2]

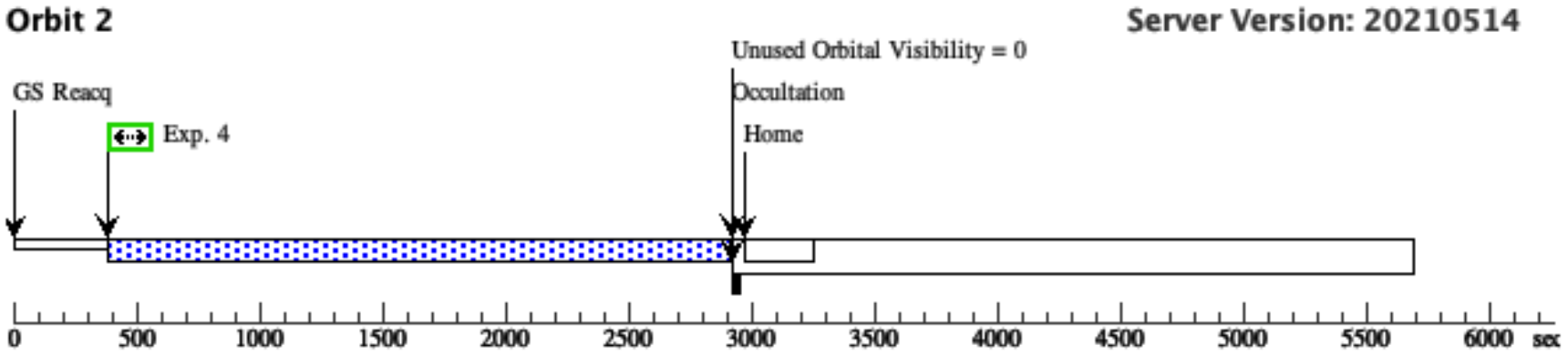
Comments: sz129_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1623,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
For exptime=1885.5 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 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): 65.6 cts/s/segment
brightest pixel: 0.003 cts/s/pix at 1548.4 A
Calculation performed 2021-10-21T02:37:33, v0.23

Expected S/N of 20 combined with all G160M exposures at 1549A

ETC Buffertime = 22,357 with 4x scaled model ETC run COS.sp.1547363;
*2/3 * 22,357 = 14905*

Orbit Structure





Visit

Proposal 16854, SZ129-COS (1E) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022:00:00:00 AND 29-JUL-2022:00:00:00; GROUP 1E,1C,1D,1F,1G,1S WITHIN 2D

Comments: vstatus; 1E; SZ129; P/COS approved for submission; P/RP 20/11/21 ;internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes ...
Same problem as BOT that the target is mislabeled as an M-dwarf. No other M-dwarfs in the COS macroaperture
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 ...
There is a health alert in the BOT, but it appears to be this K7 star, SZ129, mislabeled as an O5 star
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 ... 1C, 1D, 1E, 1F, 1G, 1S within 2 days
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes ... March 26, 2022 - July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 12

Fixed Targets

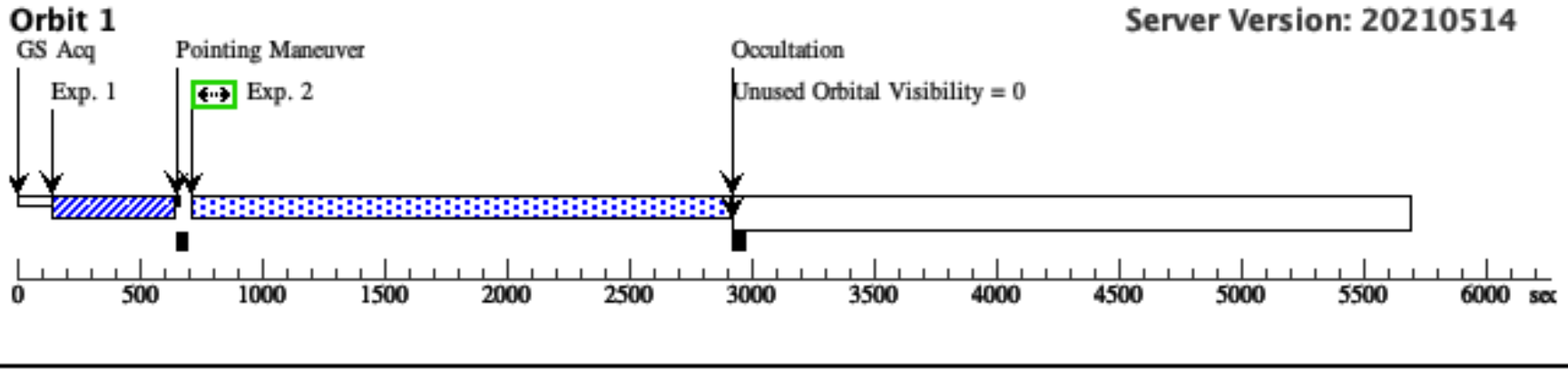
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ129	RA: 15 59 16.4569 (239.8185704d)	Proper Motion RA: -10.46297637 mas/yr	V=13.149	Reference Frame: ICRS
	Alt Name1: HBC-609	Dec: -41 57 10.66 (-41.95296d)	Proper Motion Dec: -23.11371226 mas/yr	SpT=K7; A_V=0.90; B=14.55; V=13.15; J=9.933	
		Equinox: J2000	Parallax: 0.00618496974"		
			Epoch of Position: 2015.5		

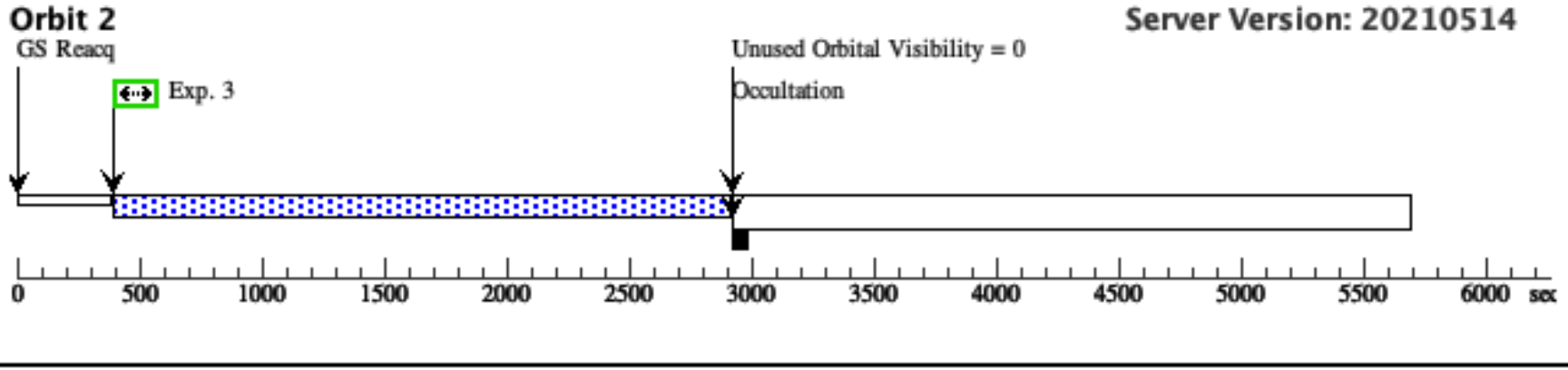
Comments: SZ129 : HBC 609
Region: Lupus IV
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz129&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
Input file: lowmass_survey_Input-gaia.csv
sz129_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:35, v0.8
---
tstatus; SZ129; P/COS approved for submission; S/STIS approved for submission; P/RP 20/11/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; WRAY 15-1400 & Sz 129 ...
There are two matches on the Gaia archive. 5995168724780802944 matches simbad and the coordinates here.
tcheck; Target info verification status?; Yes...
Model compared against B=14.546, V=13.149, R=11.78
tcheck; Coordinates & P.M. verified, epoch checked?; Yes...matches Gaia DR2
tcheck; Adopted SED compared to Observations?; Yes
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

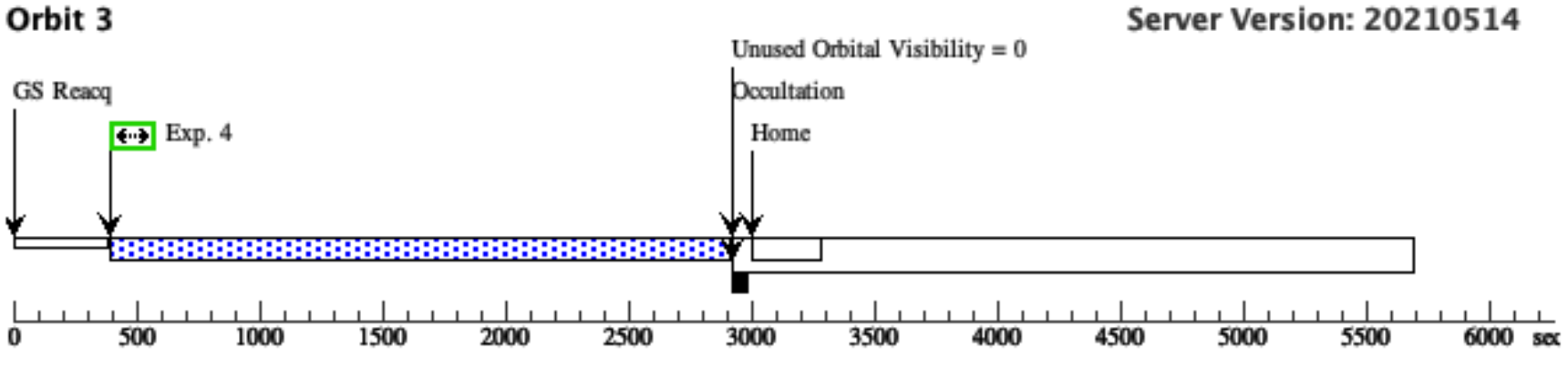
Exposures

#	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.1547349)	(1) SZ129	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				95.4 Secs (95.4 Secs) *[==>]*	*[1]*
Comments: Expected S/N ~25 with ACQ/IMAGE PSA MIRRORB									
2	G130M/1291-3 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=3			2031 Secs (2031 Secs) *[==>]*	*[1]*
Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*									
3	G130M/1291-3 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=3			2473 Secs (2473 Secs) *[==>]*	*[2]*
Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*									
4	G130M/1291-3 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=3			2473 Secs (2473 Secs) *[==>]*	*[3]*
Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*									

Orbit Structure







Visit

Proposal 16854, SZ129-COS (1F) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022:00:00:00 AND 29-JUL-2022:00:00:00; GROUP 1F,1C,1D,1E,1G,1S WITHIN 2D

Comments: vstatus; 1F; SZ129; P/COS approved for submission; P/RP 20/11/21 ; internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes ...
Same problem as BOT that the target is mislabeled as an M-dwarf. No other M-dwarfs in the COS macroaperture
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 ...
There is a health alert in the BOT, but it appears to be this K7 star, SZ129, mislabeled as an O5 star
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 ... 1C, 1D, 1E, 1F, 1G, 1S within 2 days
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes ... March 26, 2022 - July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 12

Fixed Targets

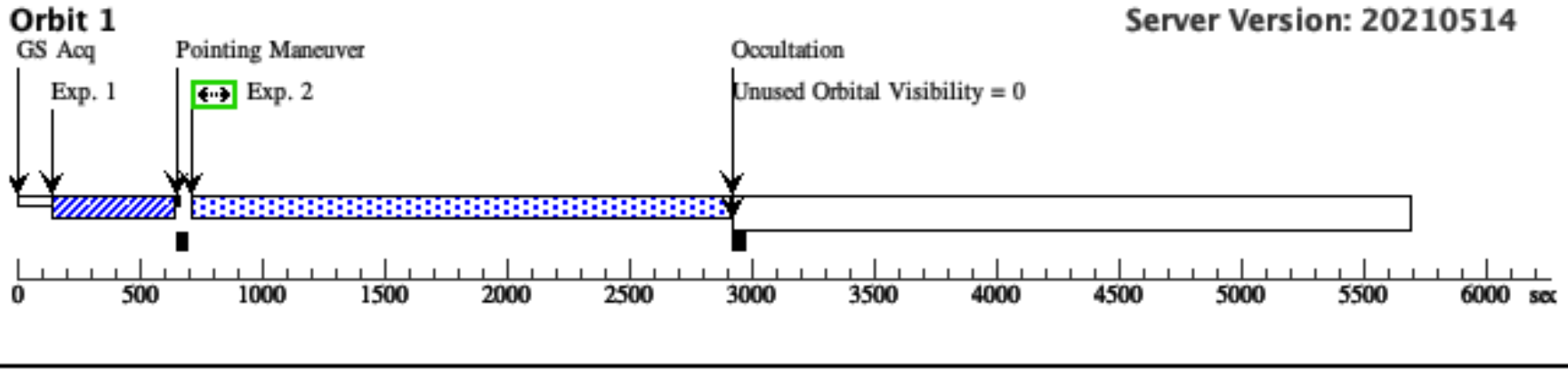
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ129	RA: 15 59 16.4569 (239.8185704d)	Proper Motion RA: -10.46297637 mas/yr	V=13.149	Reference Frame: ICRS
	Alt Name1: HBC-609	Dec: -41 57 10.66 (-41.95296d)	Proper Motion Dec: -23.11371226 mas/yr	SpT=K7; A_V=0.90; B=14.55; V=13.15; J=9.933	
		Equinox: J2000	Parallax: 0.00618496974"		
			Epoch of Position: 2015.5		

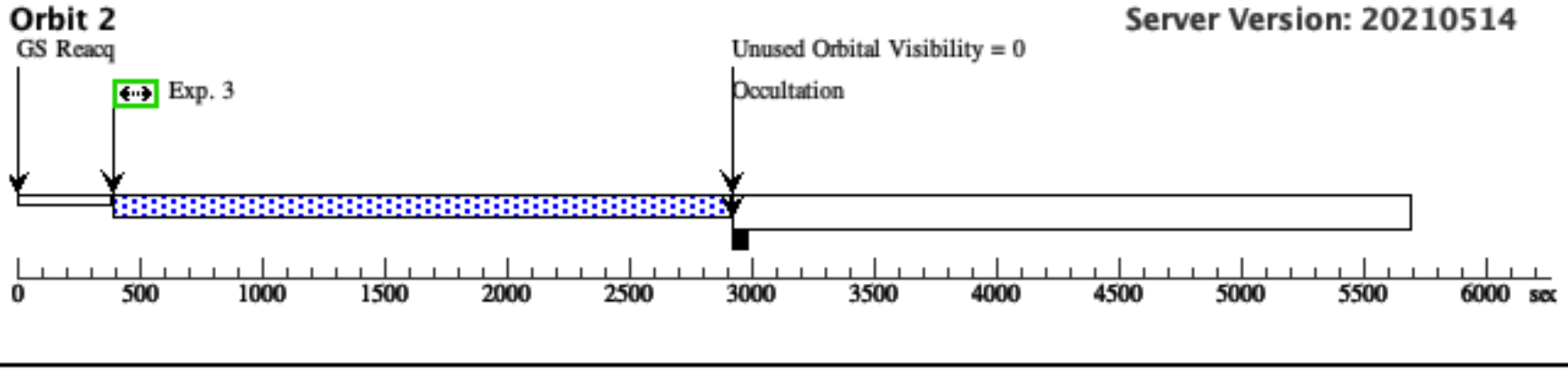
Comments: SZ129 : HBC 609
Region: Lupus IV
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz129&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
Input file: lowmass_survey_Input-gaia.csv
sz129_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:35, v0.8
---
tstatus; SZ129; P/COS approved for submission; S/STIS approved for submission; P/RP 20/11/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; WRAY 15-1400 & Sz 129 ...
There are two matches on the Gaia archive. 5995168724780802944 matches simbad and the coordinates here.
tcheck; Target info verification status?; Yes...
Model compared against B=14.546, V=13.149, R=11.78
tcheck; Coordinates & P.M. verified, epoch checked?; Yes...matches Gaia DR2
tcheck; Adopted SED compared to Observations?; Yes
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

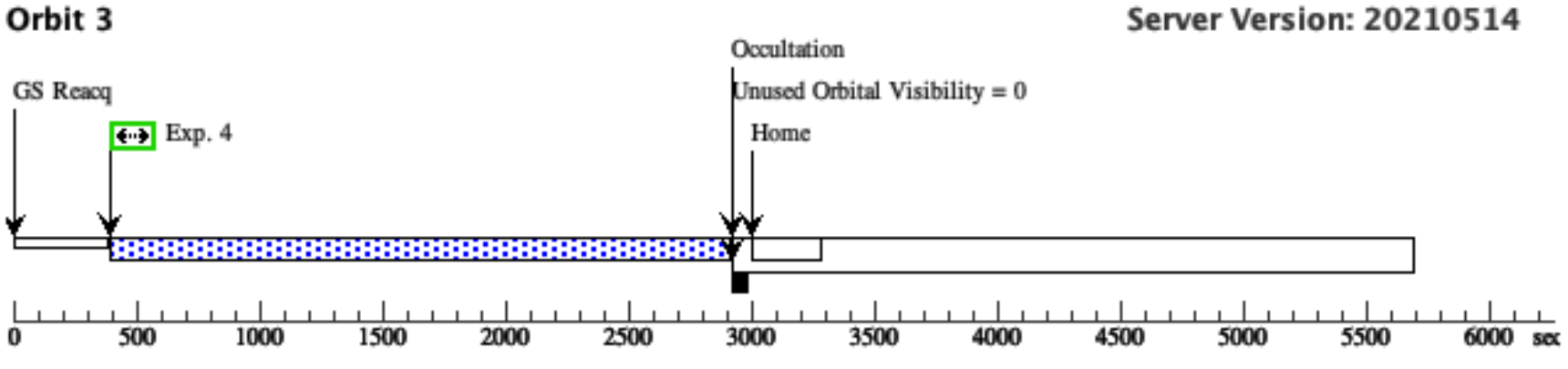
Exposures

#	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.1547349)	(1) SZ129	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				95.4 Secs (95.4 Secs) *[==>]*	*[1]*
	Comments: Expected S/N ~25 with ACQ/IMAGE PSA MIRRORB								
2	G130M/1291-4 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=4			2031 Secs (2031 Secs) *[==>]*	*[1]*
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								
3	G130M/1291-4 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=4			2473 Secs (2473 Secs) *[==>]*	*[2]*
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								
4	G130M/1291-4 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=4			2473 Secs (2473 Secs) *[==>]*	*[3]*
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								

Orbit Structure







Visit

Proposal 16854, SZ129-COS (1G) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022:00:00:00 AND 29-JUL-2022:00:00:00; GROUP 1G,1C,1D,1E,1F,1S WITHIN 2D

Comments: vstatus; 1G; SZ129; P/COS approved for submission; P/RP 20/11/21 ; internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes ...
Same problem as BOT that the target is mislabeled as an M-dwarf. No other M-dwarfs in the COS macroaperture
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 ...
There is a health alert in the BOT, but it appears to be this K7 star, SZ129, mislabeled as an O5 star
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 ... 1C, 1D, 1E, 1F, 1G, 1S within 2 days
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes ... March 26, 2022 - July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 12

Fixed Targets

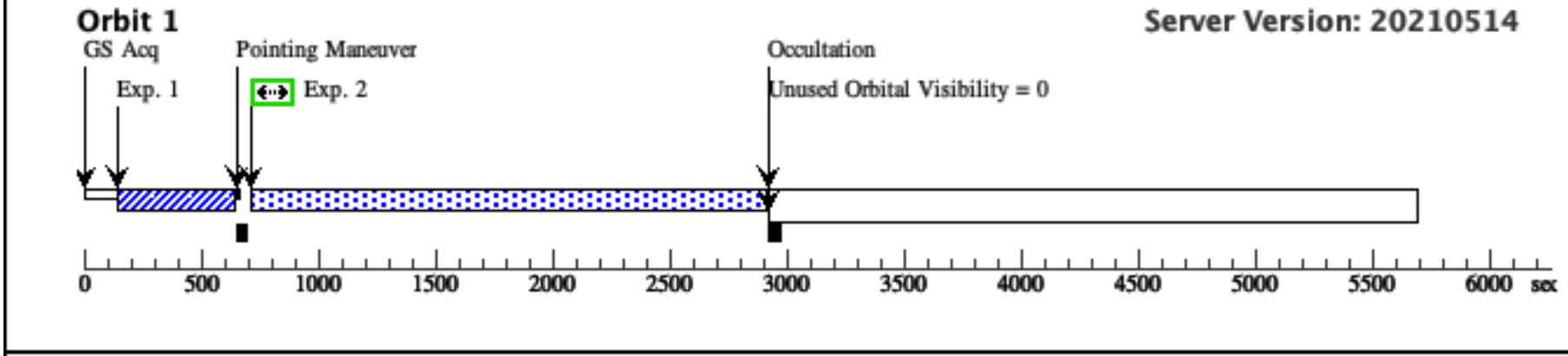
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ129	RA: 15 59 16.4569 (239.8185704d)	Proper Motion RA: -10.46297637 mas/yr	V=13.149	Reference Frame: ICRS
	Alt Name1: HBC-609	Dec: -41 57 10.66 (-41.95296d)	Proper Motion Dec: -23.11371226 mas/yr	SpT=K7; A_V=0.90; B=14.55; V=13.15; J=9.933	
		Equinox: J2000	Parallax: 0.00618496974"		
			Epoch of Position: 2015.5		

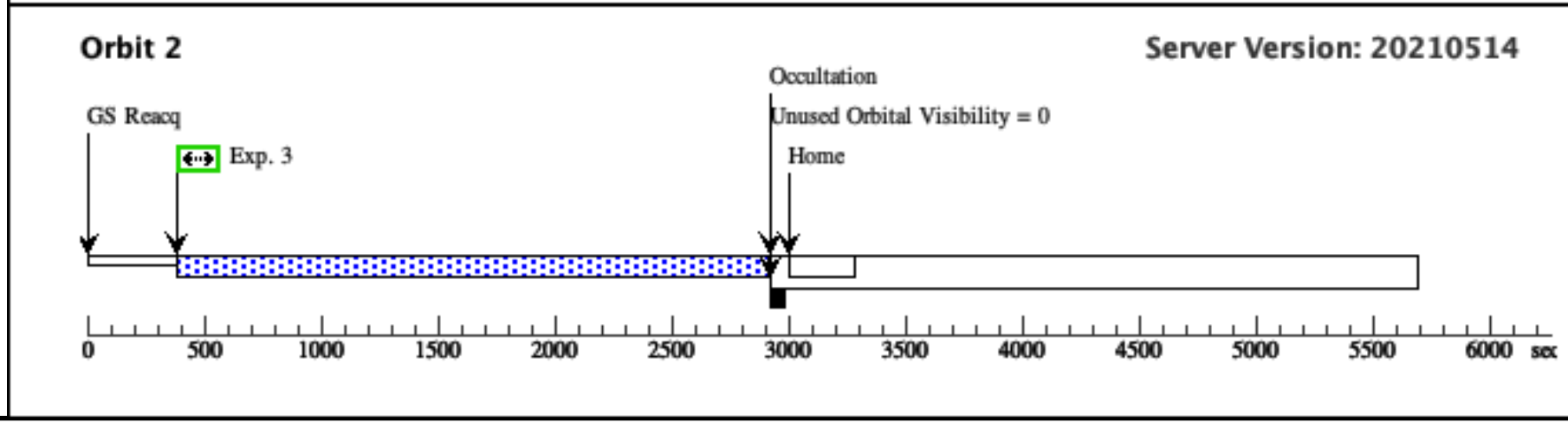
Comments: SZ129 : HBC 609
Region: Lupus IV
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz129&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
Input file: lowmass_survey_Input-gaia.csv
sz129_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:35, v0.8
---
tstatus; SZ129; P/COS approved for submission; S/STIS approved for submission; P/RP 20/11/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; WRAY 15-1400 & Sz 129 ...
There are two matches on the Gaia archive. 5995168724780802944 matches simbad and the coordinates here.
tcheck; Target info verification status?; Yes...
Model compared against B=14.546, V=13.149, R=11.78
tcheck; Coordinates & P.M. verified, epoch checked?; Yes...matches Gaia DR2
tcheck; Adopted SED compared to Observations?; Yes
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.1547349)	(1) SZ129	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				95.4 Secs (95.4 Secs) *[==>]*	***[1]***
	Comments: Expected S/N ~25 with ACQ/IMAGE PSA MIRRORB								
2	G130M/1291-3 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=3			2031 Secs (2031 Secs) *[==>]*	***[1]***
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								
3	G130M/1291-4 (COS.sp.1547358)	(1) SZ129	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5198; FP-POS=4			2473 Secs (2473 Secs) *[==>]*	***[2]***
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=10614.1 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): 282.3 cts/s/segment* *brightest pixel: 0.001 cts/s/pix at 1304.9 A* *Calculation performed 2021-10-21T02:37:34, v0.23* *Expected S/N of 12 combined with all 1291 exposures at 1239A* *ETC Buffertime = 7796 with 4x scaled model ETC run COS.sp.1547359;* *2/3 * 7796 = 5198s*								

Orbit Structure





Visit

Proposal 16854, SZ129-STIS (1S) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022:00:00:00 AND 29-JUL-2022:00:00:00; GROUP 1S,1C,1D,1E,1F,1G WITHIN 2D

Comments: vstatus; 1S; SZ129; S/STIS approved for submission; P/RP 22/11/21 ;internal review complete; S/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes ...
No M-dwarfs in the G230L macroaperture.
This target, SZ129, is however mislabeled as an M-dwarf
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 ... 1C, 1D, 1E, 1F, 1G, 1S within 2 days
vcheck; phase constraint for ground based observations added?; N/A
vcheck; BETWEENS for coordinated observations added?; Yes ... March 26, 2022 - July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated STIS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SZ129	RA: 15 59 16.4569 (239.8185704d)	Proper Motion RA: -10.46297637 mas/yr	V=13.149	Reference Frame: ICRS
	Alt Name1: HBC-609	Dec: -41 57 10.66 (-41.95296d)	Proper Motion Dec: -23.11371226 mas/yr	SpT=K7; A_V=0.90; B=14.55; V=13.15; J=9.933	
		Equinox: J2000	Parallax: 0.00618496974"		
			Epoch of Position: 2015.5		

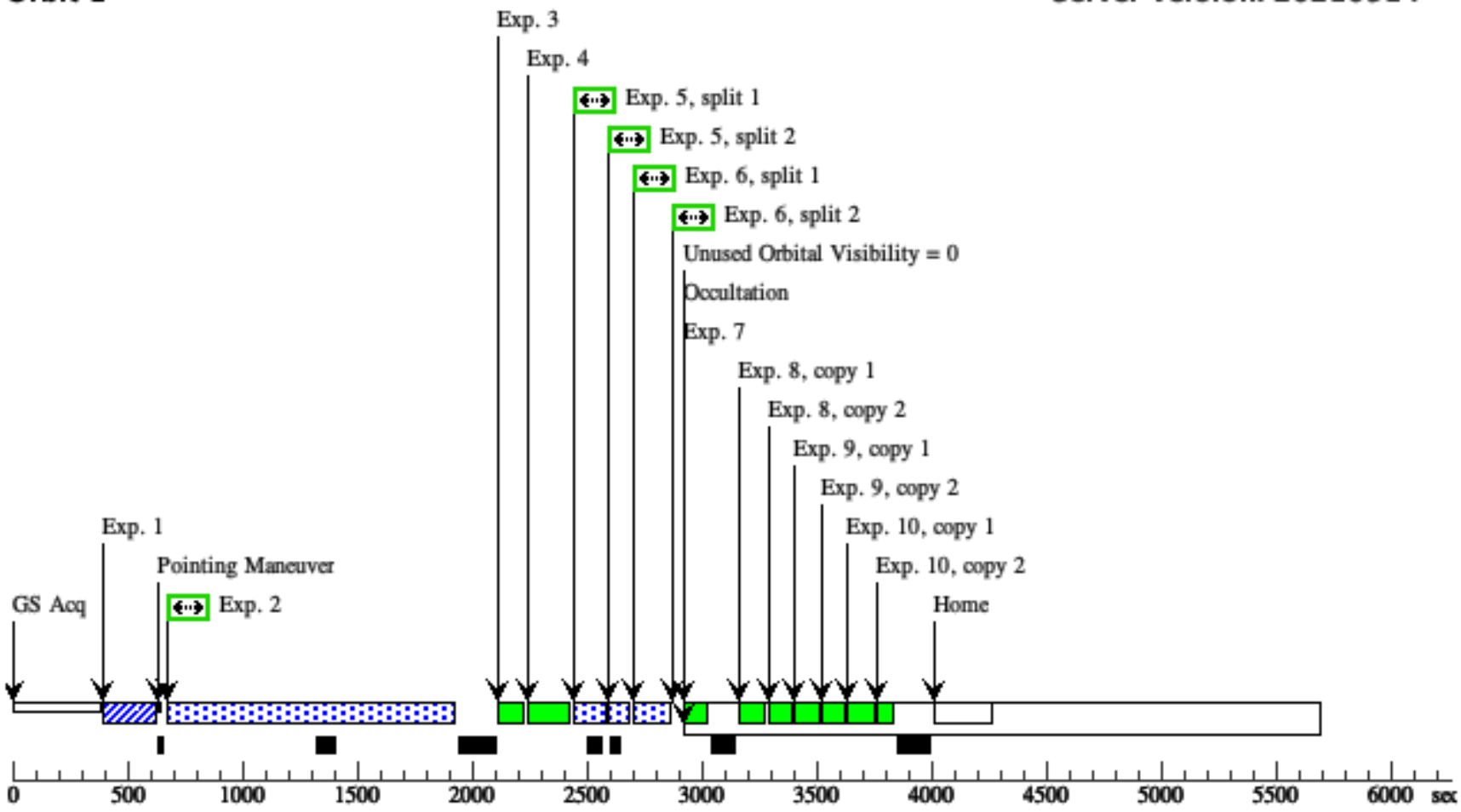
Comments: SZ129 : HBC 609
Region: Lupus IV
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz129&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150
M: 0.79 ; log(dm/dt): -8.4*
Input file: lowmass_survey_Input-gaia.csv
sz129_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:35, v0.8
---
tstatus; SZ129; P/COS approved for submission; S/STIS approved for submission; P/RP 20/11/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; WRAY 15-1400 & Sz 129 ...
There are two matches on the Gaia archive. 5995168724780802944 matches simbad and the coordinates here.
tcheck; Target info verification status?; Yes...
Model compared against B=14.546, V=13.149, R=11.78
tcheck; Coordinates & P.M. verified, epoch checked?; Yes...matches Gaia DR2
tcheck; Adopted SED compared to Observations?; Yes
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.1547367)	(1) SZ129	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
	Comments: With a 0.1s exposure we get a S/N of ~69 *The check for this target acq with a 4x scaled model was done in ETC run STIS.ta.1545737, which had a saturation time of 0.98s, so we want to stay under that time.*								
2	G230L/2376 (STIS.sp.1547391)	(1) SZ129	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=511			1100 Secs (1100 Secs) *[==>]*	*[1]*
	Comments: sz129_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59670 *Input file: lowmass_survey_Input-gaia.csv* *Spectral type: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=214.0 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): 2394.6 cts/s/segment* *brightest pixel: 0.389 cts/s/pix at 2790.4 A* *Calculation performed 2021-10-21T02:37:35, v0.23* *ETC Buffertime = 639.49 with 4x scaled model ETC run STIS.sp.1547392;* *80% = 511.59 s* *Expected S/N ~ 44/resel at 2800A*								
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.1547383)	(1) SZ129	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			123.4 Secs (123.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
	Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=61.7 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): 42963.8 cts/s/segment* *brightest pixel: 19.684 cts/s/pix at 4871.0 A* *Calculation performed 2021-10-21T02:37:35, v0.23* *Saturation time with 4x scaled model ETC run STIS.sp.1547382 = 509.7s;* *with gain=1 4x scaled model ETC run STIS.sp.1547381, the saturation time was 62.7s, so we need to use gain =4 instead* *Expected S/N ~ 24/resel at 4000A*								

	6	G750L/7751 (1) SZ129 (STIS.sp.15 47388)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1	8.0 Secs (8 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
		Comments: sz129_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: K7 ; A_V: 0.9 ; Distance (pc): 150* *M*: 0.79 ; log(dm/dt): -8.4* *For exptime=4.6 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): 107670.3 cts/s/segment* *brightest pixel: 196.403 cts/s/pix at 6563.9 A* *Calculation performed 2021-10-21T02:37:35, v0.23* *Saturation time with 4x scaled model ETC run STIS.sp.1547387 = 8.05s* *Expected S/N ~ 23/resel at 5700A*						
	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 16854, SZ98-COS (2C) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022 AND 29-JUL-2022; GROUP 2C,2D,2E,2F,2S WITHIN 1D

Comments: vstatus; 2C; SZ98; P/COS approved for submission; P/RP 09/11/21 ;internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
2 M-dwarfs in the field, but both are outside of the macroaperture
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 ...
March 26, 2022 through July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 10

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ98	RA: 16 08 22.4807 (242.0936696d)	Proper Motion RA: -9.59431537 mas/yr	V=13.52	Reference Frame: ICRS
	Alt Name1: V1279-SCO	Dec: -39 04 46.81 (-39.07967d)	Proper Motion Dec: -24.4749916 mas/yr	SpT=K7; A_V=1.00; B=14.80; V=13.52; J=9.530	
		Equinox: J2000	Parallax: 0.006401347854"		
			Epoch of Position: 2015.5		

Comments: SZ98 : V1279 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz98&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
Input file: lowmass_survey_Input-gaia.csv
sz98_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:25, v0.8
---
tstatus; SZ98; P/COS approved for submission; S/STIS approved for submission; P/RP 12/14/21; S/?? 14/12/21
tcheck; APT/SIMBAD target names: ; V V1279 Sco & Sz 98 & V* HK Lup*
tcheck; Target info verification status?; Yes...
Model compared against B=14.805, V=13.52, U=13.6, R=11.7, I=11.21
SpT on Simbad is M0.4. However, we are using the more recent reference Alcala et al. (2017, A&A, 600, A20), which states it is K7 in Table A.2
tcheck; Coordinates & P.M. verified, epoch checked?; Yes... Matches Gaia DR2.
tcheck; Adopted SED compared to Observations?; Yes
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.1545593)	(2) SZ98	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				128 Secs (128 Secs) *[==>]*	***[1]***

Comments: Expected S/N ~30

An ACQ/IMAGE was selected over the PEAKD/PEAKXD stategy as the two were similar in the amount of time that would be used, and the ACQ/IMAGE will provide visual confirmation that the target was acquired.

#	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.1545706)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=2914; FP-POS=3			1917 Secs (1917 Secs) *[==>]*	***[1]***

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=2328.0 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): 98.0 cts/s/segment
brightest pixel: 0.003 cts/s/pix at 1402.8 A
Calculation performed 2021-10-21T02:37:21, v0.23

Expected S/N of 20 combined with all G160M exposures at 1549A

ETC Buffertime = 4371 with 4x scaled model ETC run COS.sp.1545708;
*2/3 * 4371 = 2914*

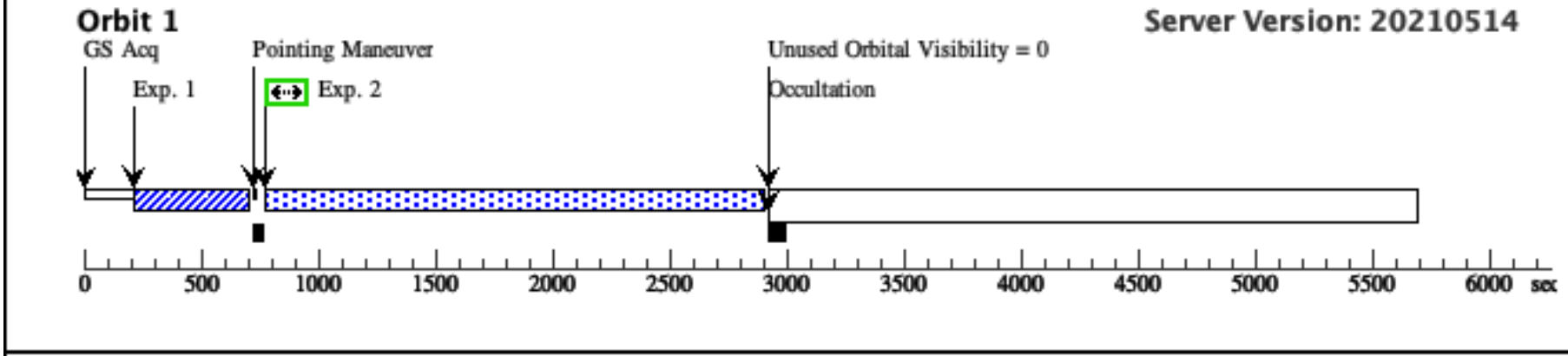
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1589-4 (COS.sp.1545706)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=2914; FP-POS=4			2471 Secs (2471 Secs) *[==>]*	***[2]***

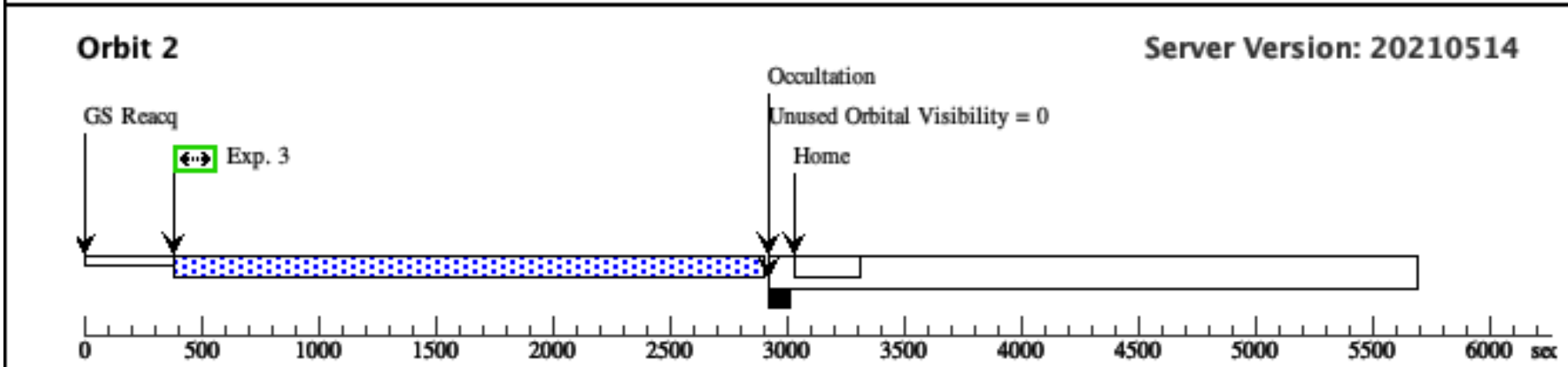
Comments: sz98_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1589,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=2328.0 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 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): 98.0 cts/s/segment
brightest pixel: 0.003 cts/s/pix at 1402.8 A
Calculation performed 2021-10-21T02:37:21, v0.23

Expected S/N of 20 combined with all G160M exposures at 1549A

ETC Buffertime = 4371 with 4x scaled model ETC run COS.sp.1545708;
*2/3 * 4371 = 2914*

Orbit Structure





Visit

Proposal 16854, SZ98-COS (2D) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022 AND 29-JUL-2022; GROUP 2D,2C,2E,2F,2S WITHIN 1D

Comments: vstatus; 2D; SZ98; P/COS approved for submission; P/RP 09/11/21 ;internal review complete; P/?? DD/MM/YY
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
2 M-dwarfs in the field, but both are outside of the macroaperture
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 ...
March 26, 2022 through July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 10

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ98	RA: 16 08 22.4807 (242.0936696d)	Proper Motion RA: -9.59431537 mas/yr	V=13.52	Reference Frame: ICRS
	Alt Name1: V1279-SCO	Dec: -39 04 46.81 (-39.07967d)	Proper Motion Dec: -24.4749916 mas/yr	SpT=K7; A_V=1.00; B=14.80; V=13.52; J=9.530	
		Equinox: J2000	Parallax: 0.006401347854"		
			Epoch of Position: 2015.5		

Comments: SZ98 : V1279 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz98&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
Input file: lowmass_survey_Input-gaia.csv
sz98_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:25, v0.8
---
tstatus; SZ98; P/COS approved for submission; S/STIS approved for submission; P/RP 12/14/21; S/?? 14/12/21
tcheck; APT/SIMBAD target names: ; V V1279 Sco & Sz 98 & V* HK Lup*
tcheck; Target info verification status?; Yes...
Model compared against B=14.805, V=13.52, U=13.6, R=11.7, I=11.21
SpT on Simbad is M0.4. However, we are using the more recent reference Alcala et al. (2017, A&A, 600, A20), which states it is K7 in Table A.2
tcheck; Coordinates & P.M. verified, epoch checked?; Yes... Matches Gaia DR2.
tcheck; Adopted SED compared to Observations?; Yes
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.1545593)	(2) SZ98	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				128 Secs (128 Secs) *[==>]*	***[1]***

Comments: Expected S/N ~30

An ACQ/IMAGE was selected over the PEAKD/PEAKXD stategy as the two were similar in the amount of time that would be used, and the ACQ/IMAGE will provide visual confirmation that the target was acquired.

#	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.1545816)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=3211; FP-POS=1			1907 Secs (1907 Secs) *[==>]*	***[1]***

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=2272.4 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): 95.1 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1504.9 A
Calculation performed 2021-10-21T02:37:23, v0.23

Expected S/N of 20 combined with all G160M exposures at 1549A

ETC Buffertime = 4817 with 4x scaled model ETC run COS.sp.1545818;
*2/3 * 4817 = 3211*

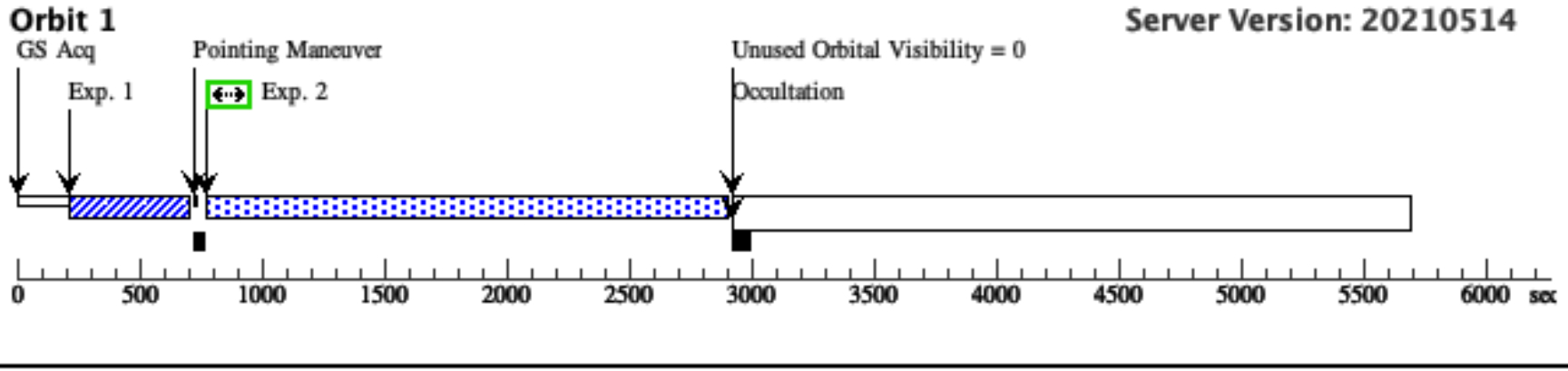
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G160M/1623-2 (COS.sp.1545816)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=3211; FP-POS=2			2471 Secs (2471 Secs) *[==>]*	***[2]***

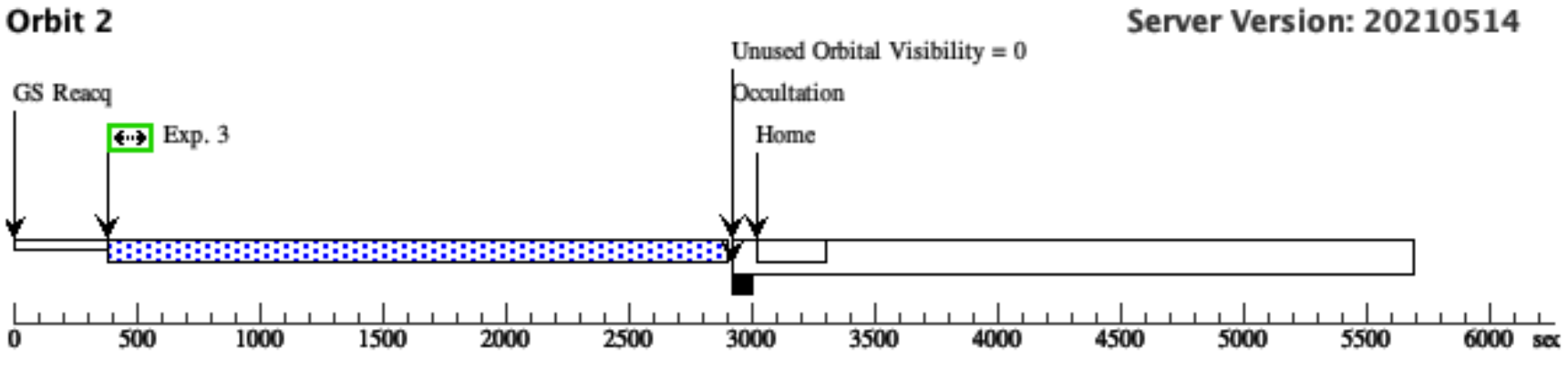
Comments: sz98_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g160m,c1623,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=2272.4 s, spectral region:
1549.0 +- 1.0 A achieves SNR=20.0 / 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): 95.1 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1504.9 A
Calculation performed 2021-10-21T02:37:23, v0.23

Expected S/N of 20 combined with all G160M exposures at 1549A

ETC Buffertime = 4817 with 4x scaled model ETC run COS.sp.1545818;
*2/3 * 4817 = 3211*

Orbit Structure





Visit

Proposal 16854, SZ98-COS (2E) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022 AND 29-JUL-2022; GROUP 2E,2C,2D,2F,2S WITHIN 1D

Comments: vstatus; 2E; SZ98; P/COS approved for submission; P/RP 09/11/21 ; internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
2 M-dwarfs in the field, but both are outside of the macroaperture
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 ...
March 26, 2022 through July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 10

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ98	RA: 16 08 22.4807 (242.0936696d)	Proper Motion RA: -9.59431537 mas/yr	V=13.52	Reference Frame: ICRS
	Alt Name1: V1279-SCO	Dec: -39 04 46.81 (-39.07967d)	Proper Motion Dec: -24.4749916 mas/yr	SpT=K7; A_V=1.00; B=14.80; V=13.52; J=9.530	
		Equinox: J2000	Parallax: 0.006401347854"		
			Epoch of Position: 2015.5		

Comments: SZ98 : V1279 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz98&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
Input file: lowmass_survey_Input-gaia.csv
sz98_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:25, v0.8
---
tstatus; SZ98; P/COS approved for submission; S/STIS approved for submission; P/RP 12/14/21; S/?? 14/12/21
tcheck; APT/SIMBAD target names: ; V V1279 Sco & Sz 98 & V* HK Lup*
tcheck; Target info verification status?; Yes...
Model compared against B=14.805, V=13.52, U=13.6, R=11.7, I=11.21
SpT on Simbad is M0.4. However, we are using the more recent reference Alcala et al. (2017, A&A, 600, A20), which states it is K7 in Table A.2
tcheck; Coordinates & P.M. verified, epoch checked?; Yes... Matches Gaia DR2.
tcheck; Adopted SED compared to Observations?; Yes
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.1545593)	(2) SZ98	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				128 Secs (128 Secs) *[==>]*	***[1]***

Comments: Expected S/N ~30

An ACQ/IMAGE was selected over the PEAKD/PEAKXD stategy as the two were similar in the amount of time that would be used, and the ACQ/IMAGE will provide visual confirmation that the target was acquired.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G130M/1291-3 (COS.sp.1545822)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2858; FP-POS=3			1965 Secs (1965 Secs) *[==>]*	***[1]***

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7367.7 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): 300.2 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1402.7 A
Calculation performed 2021-10-21T02:37:25, v0.23

Expected S/N of 12 combined with all 1291 exposures at 1239A

ETC Buffertime = 4,228 with 4x scaled model ETC run COS.sp.1545823;
*2/3 * 4228 = 2858s*

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G130M/1291-3 (COS.sp.1545822)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2858; FP-POS=3			2471 Secs (2471 Secs) *[==>]*	***[2]***

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7367.7 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): 300.2 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1402.7 A
Calculation performed 2021-10-21T02:37:25, v0.23

Expected S/N of 12 combined with all 1291 exposures at 1239A

ETC Buffertime = 4,228 with 4x scaled model ETC run COS.sp.1545823;
*2/3 * 4228 = 2858s*

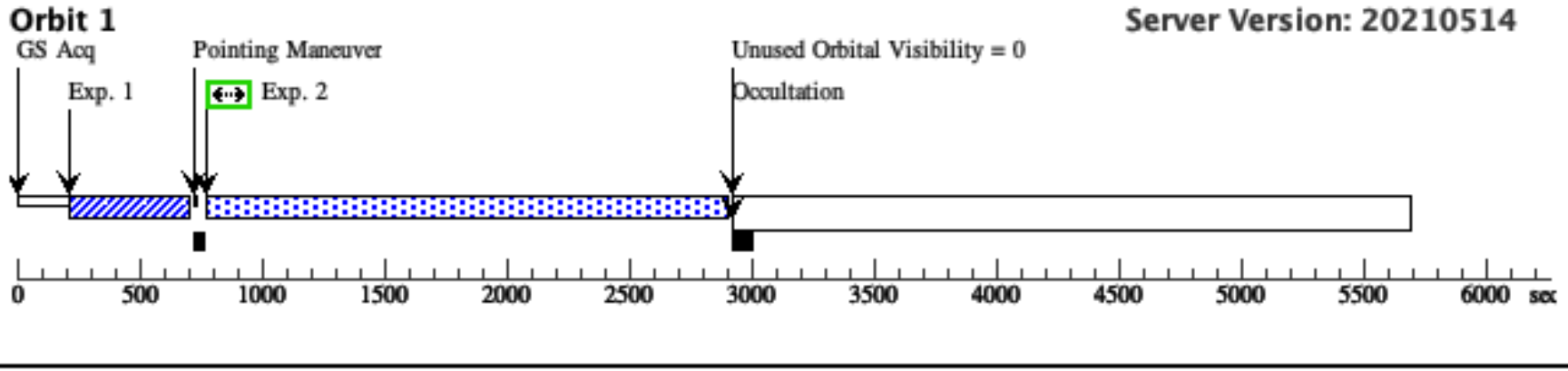
	4	G130M/129 1-3 (COS.sp.1545822) (2) SZ98	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2858; FP-POS=3	2471 Secs (2471 Secs) *[==>]*	 ***[3]***

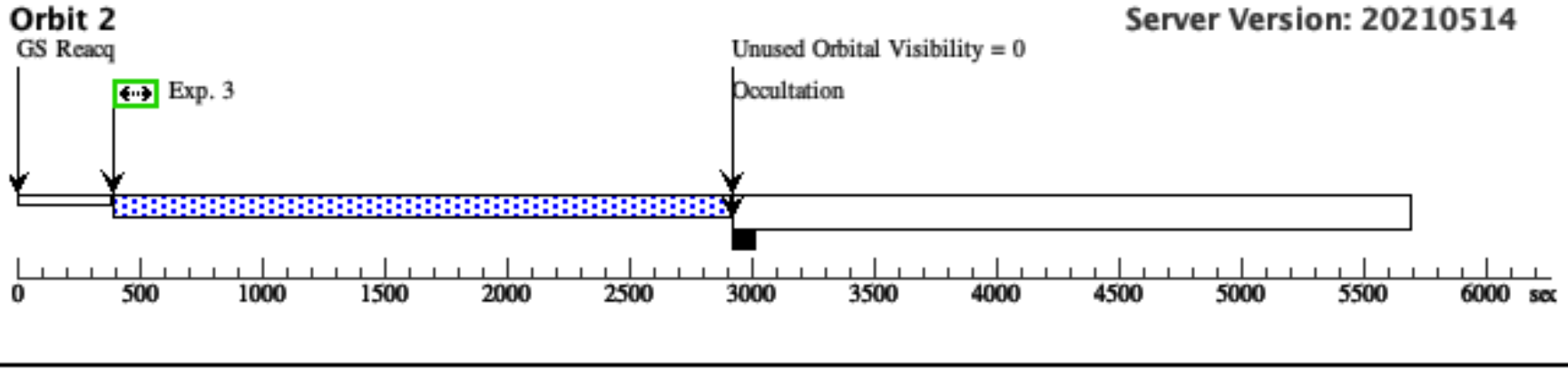
Comments: sz98_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7367.7 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 300.2 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1402.7 A
Calculation performed 2021-10-21T02:37:25, v0.23

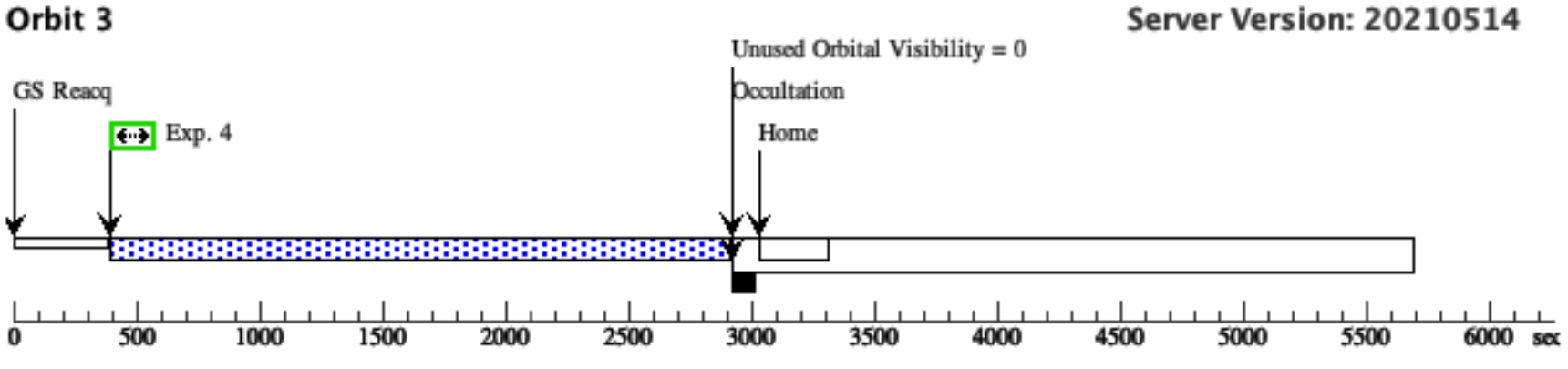
Expected S/N of 12 combined with all 1291 exposures at 1239A

ETC Buffertime = 4,228 with 4x scaled model ETC run COS.sp.1545823;
*2/3 * 4228 = 2858s*

Orbit Structure







Visit

Proposal 16854, SZ98-COS (2F) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022 AND 29-JUL-2022; GROUP 2F,2C,2D,2E,2S WITHIN 1D

Comments: vstatus; 2F; SZ98; P/COS approved for submission; P/RP 09/11/21 ;internal review complete; P/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; Yes
2 M-dwarfs in the field, but both are outside of the macroaperture
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 ...
March 26, 2022 through July 29, 2022
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 10

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ98	RA: 16 08 22.4807 (242.0936696d)	Proper Motion RA: -9.59431537 mas/yr	V=13.52	Reference Frame: ICRS
	Alt Name1: V1279-SCO	Dec: -39 04 46.81 (-39.07967d)	Proper Motion Dec: -24.4749916 mas/yr	SpT=K7; A_V=1.00; B=14.80; V=13.52; J=9.530	
		Equinox: J2000	Parallax: 0.006401347854"		
			Epoch of Position: 2015.5		

Comments: SZ98 : V1279 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz98&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
Input file: lowmass_survey_Input-gaia.csv
sz98_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:25, v0.8
---
tstatus; SZ98; P/COS approved for submission; S/STIS approved for submission; P/RP 12/14/21; S/?? 14/12/21
tcheck; APT/SIMBAD target names: ; V V1279 Sco & Sz 98 & V* HK Lup*
tcheck; Target info verification status?; Yes...
Model compared against B=14.805, V=13.52, U=13.6, R=11.7, I=11.21
SpT on Simbad is M0.4. However, we are using the more recent reference Alcala et al. (2017, A&A, 600, A20), which states it is K7 in Table A.2
tcheck; Coordinates & P.M. verified, epoch checked?; Yes... Matches Gaia DR2.
tcheck; Adopted SED compared to Observations?; Yes
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.1545593)	(2) SZ98	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				128 Secs (128 Secs) *[==>]*	***[1]***

Comments: Expected S/N ~30

An ACQ/IMAGE was selected over the PEAKD/PEAKXD stategy as the two were similar in the amount of time that would be used, and the ACQ/IMAGE will provide visual confirmation that the target was acquired.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G130M/1291-4 (COS.sp.1545822)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2858; FP-POS=4			1965 Secs (1965 Secs) *[==>]*	***[1]***

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7367.7 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): 300.2 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1402.7 A
Calculation performed 2021-10-21T02:37:25, v0.23

Expected S/N of 12 combined with all 1291 exposures at 1239A

ETC Buffertime = 4,228 with 4x scaled model ETC run COS.sp.1545823;
*2/3 * 4228 = 2858s*

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	G130M/1291-4 (COS.sp.1545822)	(2) SZ98	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2858; FP-POS=4			2471 Secs (2471 Secs) *[==>]*	***[2]***

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7367.7 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): 300.2 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1402.7 A
Calculation performed 2021-10-21T02:37:25, v0.23

Expected S/N of 12 combined with all 1291 exposures at 1239A

ETC Buffertime = 4,228 with 4x scaled model ETC run COS.sp.1545823;
*2/3 * 4228 = 2858s*

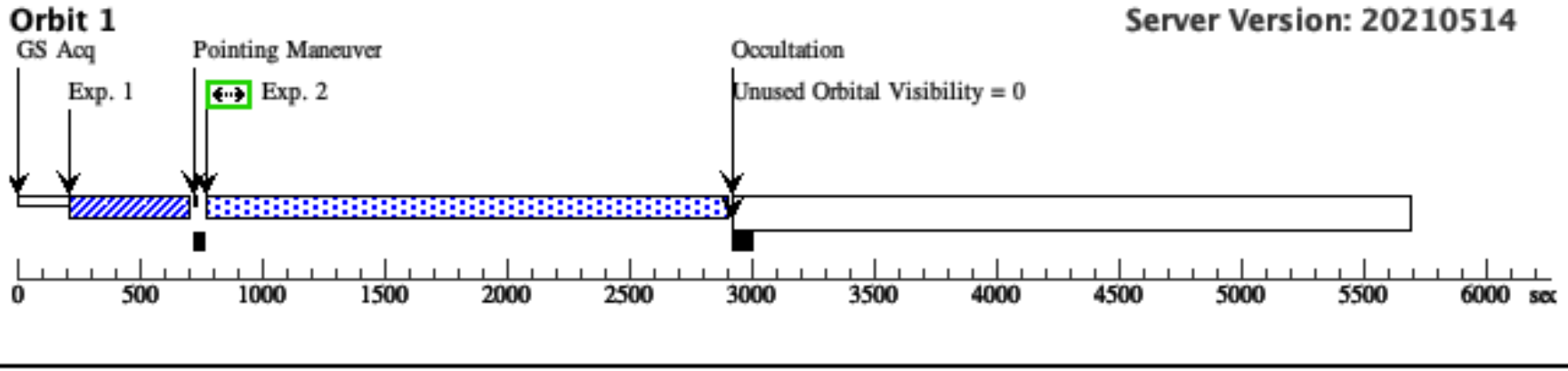
	4	G130M/129 (2) SZ98 1-4 (COS.sp.154 5822)	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2858; FP-POS=4	2471 Secs (2471 Secs) *[==>]*	**[3]**

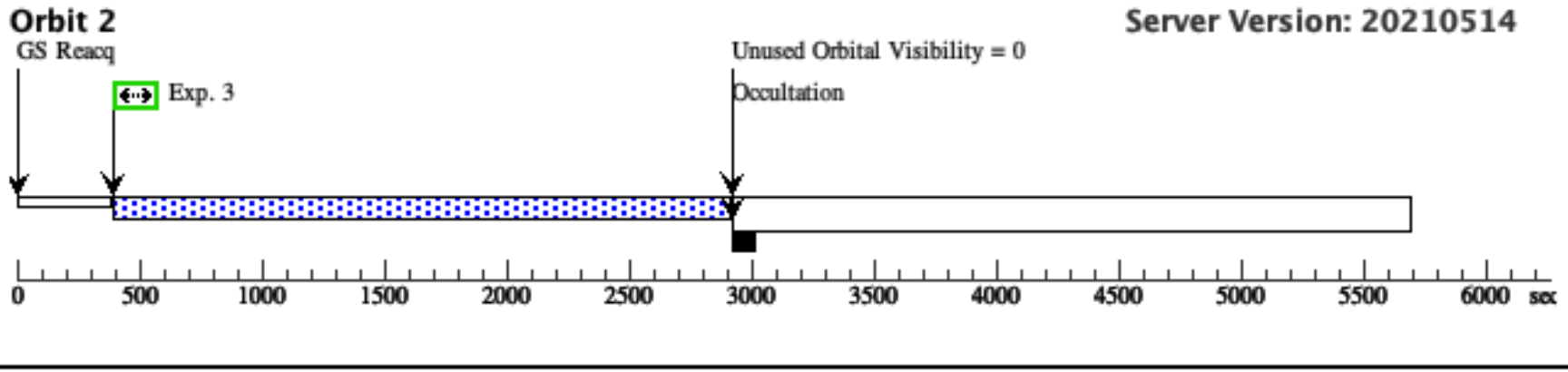
Comments: sz98_lya2_etc_scaled_pAV0.50.txt; cos,fuv,g130m,c1291,psa,mjd#59670; fp-pos=None, segment=None)
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7367.7 s, spectral region:
1239.0 +- 1.0 A achieves SNR=10.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 300.2 cts/s/segment
brightest pixel: 0.002 cts/s/pix at 1402.7 A
Calculation performed 2021-10-21T02:37:25, v0.23

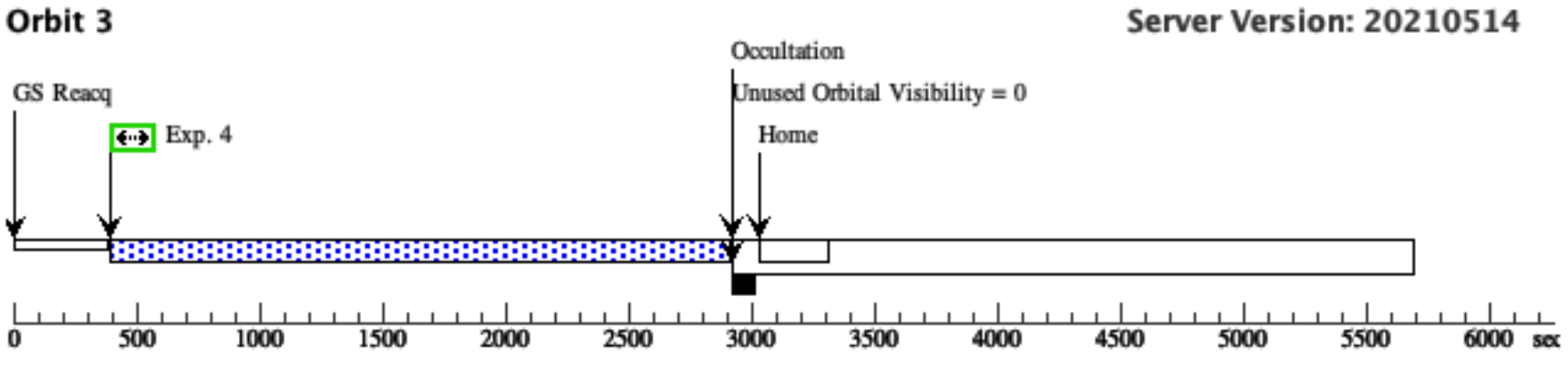
Expected S/N of 12 combined with all 1291 exposures at 1239A

ETC Buffertime = 4,228 with 4x scaled model ETC run COS.sp.1545823;
*2/3 * 4228 = 2858s*

Orbit Structure







Visit

Proposal 16854, SZ98-STIS (2S) Fri Dec 17 16:01:00 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 26-MAR-2022 AND 29-JUL-2022; GROUP 2S,2C,2D,2E,2F WITHIN 1D

Comments: vstatus; 2S; SZ98; S/STIS approved for submission; RP/P 16/12/21 ; intrev: internal review complete; S/CRP 10/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; Yes ; Yes ; Yes
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; No...
SZ97 is an M-dwarf that could fall in the edge of the slit if oriented a certain way as it is 26 arcsec away; observed in 16855
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 ...
March 26, 2022 through July 29, 2022
vcheck; Is visit ready for int. review?; No
Allocated STIS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SZ98	RA: 16 08 22.4807 (242.0936696d)	Proper Motion RA: -9.59431537 mas/yr	V=13.52	Reference Frame: ICRS
	Alt Name1: V1279-SCO	Dec: -39 04 46.81 (-39.07967d)	Proper Motion Dec: -24.4749916 mas/yr	SpT=K7; A_V=1.00; B=14.80; V=13.52; J=9.530	
		Equinox: J2000	Parallax: 0.006401347854"		
			Epoch of Position: 2015.5		

Comments: SZ98 : V1279 Sco
Region: Lupus III
Simbad: http://simbad.u-strasbg.fr/simbad/sim-id?Ident=sz98&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
Input file: lowmass_survey_Input-gaia.csv
sz98_lya2_etc_scaled_pAV0.50.txt
Calculation performed 2021-10-21T02:37:25, v0.8
---
tstatus; SZ98; P/COS approved for submission; S/STIS approved for submission; P/RP 12/14/21; S/?? 14/12/21
tcheck; APT/SIMBAD target names: ; V V1279 Sco & Sz 98 & V* HK Lup*
tcheck; Target info verification status?; Yes...
Model compared against B=14.805, V=13.52, U=13.6, R=11.7, I=11.21
SpT on Simbad is M0.4. However, we are using the more recent reference Alcala et al. (2017, A&A, 600, A20), which states it is K7 in Table A.2
tcheck; Coordinates & P.M. verified, epoch checked?; Yes... Matches Gaia DR2.
tcheck; Adopted SED compared to Observations?; Yes
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.1679338)	(2) SZ98	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	*[1]*

Comments: With a 0.3s exposure we get a S/N of ~173

The check for this target acq with a 4x scaled model was done in ETC run STIS.ta.1679339, which had a saturation time of 0.52s, so we want to stay under that time.

#	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.1545779)	(2) SZ98	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=142			1207.4 Secs (1207.4 Secs) *[==>]*	*[1]*

Comments: sz98_lya2_etc_scaled_pAV0.50.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59670
Input file: lowmass_survey_Input-gaia.csv
Spectral type: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=36.2 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): 3194.6 cts/s/segment
brightest pixel: 2.246 cts/s/pix at 2801.6 A
Calculation performed 2021-10-21T02:37:25, v0.23

ETC Buffertime = 178.27 with 4x scaled model ETC run STIS.sp.1545780;
80% = 142.616 s

Expected S/N ~ 105/resel at 2800A

#	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.1545793)	(2) SZ98	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1			15.6 Secs (15.6 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200
M: 0.7 ; log(dm/dt): -7.23*
For exptime=7.8 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): 72749.5 cts/s/segment
brightest pixel: 52.158 cts/s/pix at 5178.8 A
Calculation performed 2021-10-21T02:37:25, v0.23

Saturation time with 4x scaled model ETC run STIS.sp.1545794 = 22.37s

Expected S/N ~ 25/resel at 4000A

	6	G750L/7751 (2) SZ98 (STIS.sp.15 45774)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1	4.0 Secs (4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
		Comments: sz98_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: K7 ; A_V: 1.0 ; Distance (pc): 200* *M*: 0.7 ; log(dm/dt): -7.23* *For exptime=2.4 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): 177976.2 cts/s/segment* *brightest pixel: 367.420 cts/s/pix at 6563.9 A* *Calculation performed 2021-10-21T02:37:25, v0.23* *Saturation time with 4x scaled model ETC run STIS.sp.1545775 = 4.3s* *Expected S/N ~ 23/resel at 5700A*					
	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