16113 - ULLYSES K-type T Tauri stars in the Orion OBIb and Sigma Ori Star Forming Regions

Cycle: 28, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

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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) CVSO-146	COS/FUV COS/NUV	3	14-Jan-2021 15:00:22.0	yes
1S	(1) CVSO-146 CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	14-Jan-2021 15:00:24.0	yes
2C	(2) V-TX-ORI	COS/FUV COS/NUV	3	14-Jan-2021 15:00:25.0	yes
2S	(2) V-TX-ORI CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	14-Jan-2021 15:00:27.0	yes
3C	(3) V505-ORI	COS/FUV COS/NUV	3	14-Jan-2021 15:00:28.0	yes
3S	(3) V505-ORI CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	14-Jan-2021 15:00:30.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
4C	(4) V510-ORI	COS/FUV COS/NUV	2	14-Jan-2021 15:00:31.0	yes
4D	(4) V510-ORI	COS/FUV COS/NUV	2	14-Jan-2021 15:00:31.0	yes
4S	(4) V510-ORI CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	14-Jan-2021 15:00:33.0	yes
DC	(4) V510-ORI	COS/FUV COS/NUV	2	14-Jan-2021 15:00:34.0	yes
DD	(4) V510-ORI	COS/FUV COS/NUV	2	14-Jan-2021 15:00:35.0	yes
DS	(4) V510-ORI CCDFLAT WAVE	STIS/CCD STIS/NUV-MAMA	1	14-Jan-2021 15:00:36.0	yes

22 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=15/6-pix-resel at the peak of the line
COS/G160M/c1611: C IV 1549 +- 1 A -- S/N=30/6-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.

To obtain near simultaneous coverage, all visits to a given target should be grouped within 1 day.

The visits in this proposal are all constrained to occur between 19 November and 17 December 2020 to be simultaneous with planned TESS observations.

We also wish to attempt to obtain simultaneous coverage with telescopes of the LCOGT network. Unfortuneately, this network has an approximately 2 to 3 hour gap in coverage for the Orion targets due to the lack of an observataory at an appropriate longitude. We will therefore add a period and a phase constraint to these obervations to prevent the HST observations from being schedulled during this daily gap. The period when the Orion stars can be observed by this networks starts when they reach ~ airmass of 2 from the Sutherland observatory in South Africa, and ends about 21 hours later due to the start of morning twilight in Siding Springs Australia. Originally we had planned to enforce this scheduling restriction using APT phase constraints, but instead the Program Coordinator will manually restrict the planning windows in the LRP to achieve the desired effect. This is less error prone and more flexible as these constraints, unlike APT ones, can be relaxed during the schedule building process.

TESS sector 32 observations:

At each TESS perigee, there are two LAHO (low-altitude housekeeping operations) contacts. TESSscience observations stop 10 minutes before the beginning of the first LAHO and resume 5 minutes before the end of the second LAHO. Times of LAHO contacts are posted on the TESS operations calendar at
https://calendar.google.com/calendar/b/0/r/week?cid=a21va3YydDM0dmpsc2w2Ymw2Z29vdWE2OGNAZ3JvdXAuY2FsZW5kYXIuZ29vZ2xlLmNvbQ approximately 3 months in advance.
We will require that our visits start at least 45minutes prior to the start of any gap in TESS operations.
For TESS sector 32,
LAHO Passes
(1) 19-Nov-2020 08:45-13:45 start 5m before LAHO end
(2) 02-Dec-2020 10:45-15:45 stop 10m before LAHO start
(3) 03-Dec-2020 05:45-10:45 start 5m before LAHO end
(4) 16-Dec-2020 17:45-22:45 stop 10m before LAHO start

TESS start/stop times
19-Nov-2020:13:40 to 02-Dec-2020:10:35
03-Nov-2020:10:40 to 16-Dec-2020:17:35

Constrain end of HST BETWEENs to be 55m, 2h30m, and 4h5m before TESS end for 1, 2, and 3 orbit visits to allow HST to complete before TESS end

HST-1 orbit: subtract 50 minutes from end times
19-Nov-2020:13:40 to 02-Dec-2020:09:40
03-Nov-2020:10:40 to 16-Dec-2020:16:40
HST-2 orbit: subtract 2h25m from end times
19-Nov-2020:13:40 to 02-Dec-2020:08:05
03-Nov-2020:10:40 to 16-Dec-2020:15:05

HST-3 orbit: subtract 4h from end times

19-Nov-2020:13:40 to 02-Dec-2020:06:30

03-Nov-2020:10:40 to 16-Dec-2020:13:30

Visit

Proposal 16113, CVSO-146-COS (1C), completed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:06:30:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:13:30:00

Comments: vstatus; 1C; CVSO-146; P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; CVSO-146 ; COS ; CP
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, GSC2, 2MASS, and SDSS
vcheck; Selected ACQ strategy?; PSA MIRRORB
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; Yes ...
PSA check shows one "unknown" with Fmag=14.71 about 2.5" away from central target, but no extra bump at this location is visible in either the GSC2, SDSS, or 2MASS images and Gaia shows no such 2nd star, so this appears to be a spurious detection and/or misalignment of the primary target. All Gaia sources other than the target within the PSA or BOA macro-apertures have BPmag values fainter than 19.3.
vcheck; Visual BOT check for stars not in catalog?; No unflagged stars visible
vcheck; Orbit packing finalized?; yes ...
105% of desired c1611 exposure
95% of desired c1291
vcheck; Buffer times optimized?; yes
vcheck; Verify visit grouping correct; 1S has group 1S,1C within 1 day
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; 19-Nov to 17-Dec 2020 to coordinate with TESS
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	CVSO-146	RA: 05 35 46.0042 (83.9416842d)	Proper Motion RA: 1.99875984 mas/yr	V=14.01	Reference Frame: ICRS
	Alt Name1: V499-ORI	Dec: -00 57 52.25 (-.96451d)	Proper Motion Dec: -0.860579525 mas/yr	SpT=K6; A_V=0.10; U=15.25; V=14.01; J=11.3	
	Alt Name2: 2MASS-J05354600-0057522	Equinox: J2000	Parallax: 0.002953692966"		
			Epoch of Position: 2015.5		

Comments: CVSO-146 : V499 Ori, J05354600-0057522
Region: Ori OB1b
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05354600-0057522&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440
M: 0.92 ; log(dm/dt): -8.06*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
cvso146_lya2_etc.txt
Calculation performed 2020-07-30T14:20:33, v0.4
---
tstatus; CVSO-146; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
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?; Yes fluxes are within expected uncertainties
See cvso-146-sed-vs-photo-revised.png
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.1458427)	(1) CVSO-146	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				91 Secs (91 Secs) *[==>]*	*[1]*

Comments: Nominal CVSO-146_sed.fits: COS.ta.1460250: S/N=39.8, bright pix=2.5 cnts/s
4X cvso146_lya2_x4.00_etc.txt: COS.ta.1460251: Sn=79, bright pix = 9.79 cnts/s

Aim for S/N=40 to allow for 4X fading below nominal
Brightest pixel with nominal spectrum is ~ 2.5 cnts/s

Dispersed c1611 ACQ would require 141 s per dwell point for S/N=40 with nominal SED
Dispersed c1291 would require 99 s per dwell point
G230L c3360 stripeA would require 84 s per dwell point; or 48s for c2635 StripeA if we can clear Mg II

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1611 (COS.sp.1467810)	(1) CVSO-146	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=823; FP-POS=ALL			933 Secs (3732 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]* *[2]*

Comments: 4x calc -cvso146_lya2_x4.00_etc.txt COS.sp.1460255 - peak local only 0.050
baseline S/N calc - COS.sp.1467810

cvso146_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)

Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440
M: 0.92 ; log(dm/dt): -8.06*
For exptime=1776.6 s, spectral region:
1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 90.8 cts/s/segment
brightest pixel: 0.013 cts/s/pix at 1548.4 A
Calculation performed 2020-07-30T14:20:31, v0.9

#	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.1459484)	(1) CVSO-146	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=135; FP-POS=3			245 Secs (245 Secs) *[==>]*	*[2]*

Comments: 4X calculation cvso146_lya2_x4.00_etc.txt COS.sp.1459484 - peak local rate still at Lyman alpha
Baseline S/N calculation COS.sp.1458435

cvso146_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440
M: 0.92 ; log(dm/dt): -8.06*
For exptime=1355.1 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 343.2 cts/s/segment
brightest pixel: 0.010 cts/s/pix at 1214.2 A
Calculation performed 2020-07-30T14:20:33, v0.9

	4	G130M/129 1-3 (COS.sp.1459484)	(1) CVSO-146	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=941; FP-POS=3	1051 Secs (1051 Secs) *[==>]*	***[3]***

Comments: 4X calculation COS.sp.1459484 - peak local rate still at Lyman alpha
Baseline S/N calculation COS.sp.1458435

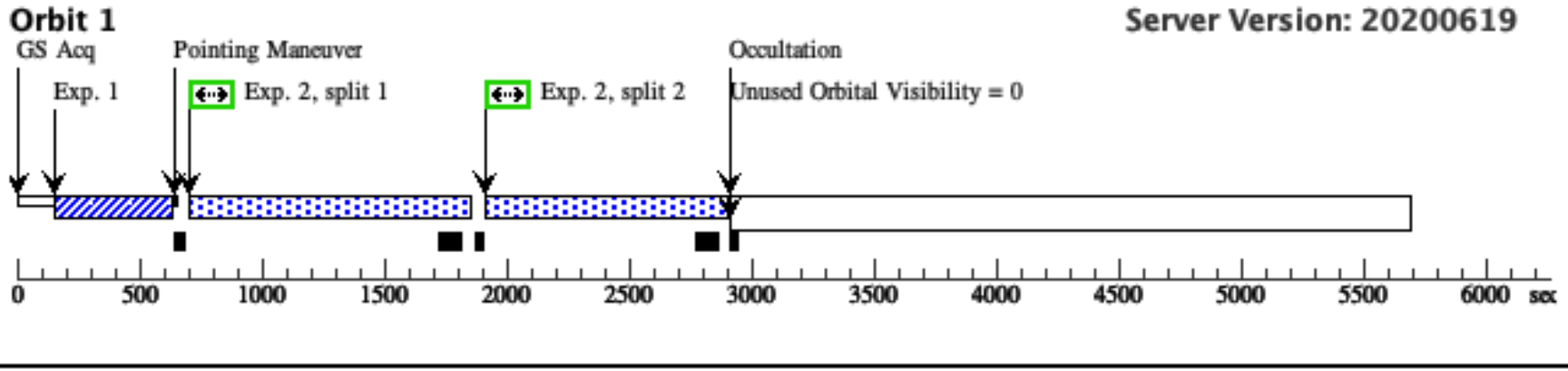
cvso146_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440
M: 0.92 ; log(dm/dt): -8.06*
For exptime=1355.1 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 343.2 cts/s/segment
brightest pixel: 0.010 cts/s/pix at 1214.2 A
Calculation performed 2020-07-30T14:20:33, v0.9

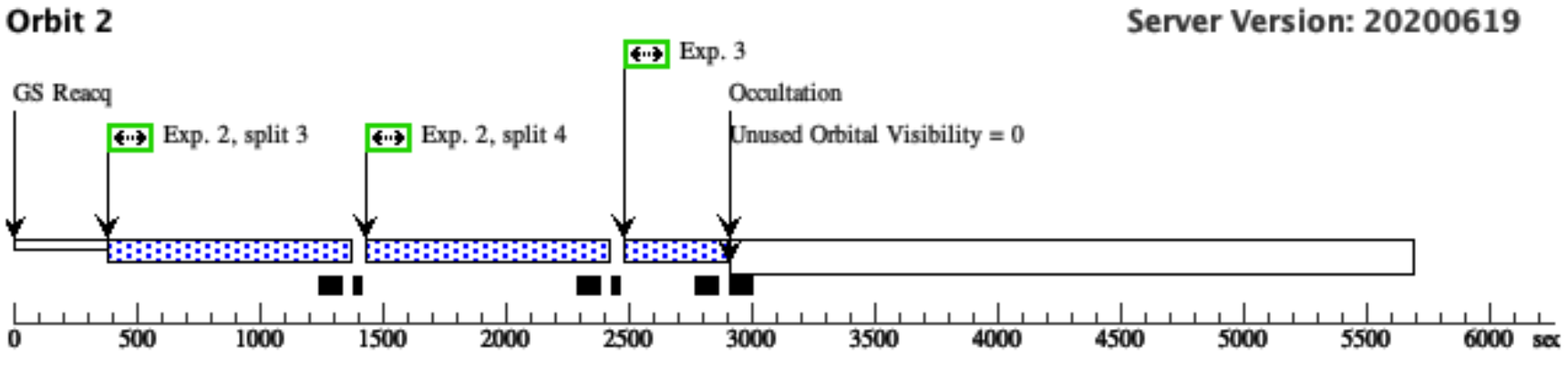
	5	G130M/129 1-4 (COS.sp.1459484)	(1) CVSO-146	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1186; FP-POS=4	1296 Secs (1296 Secs) *[==>]*	***[3]***

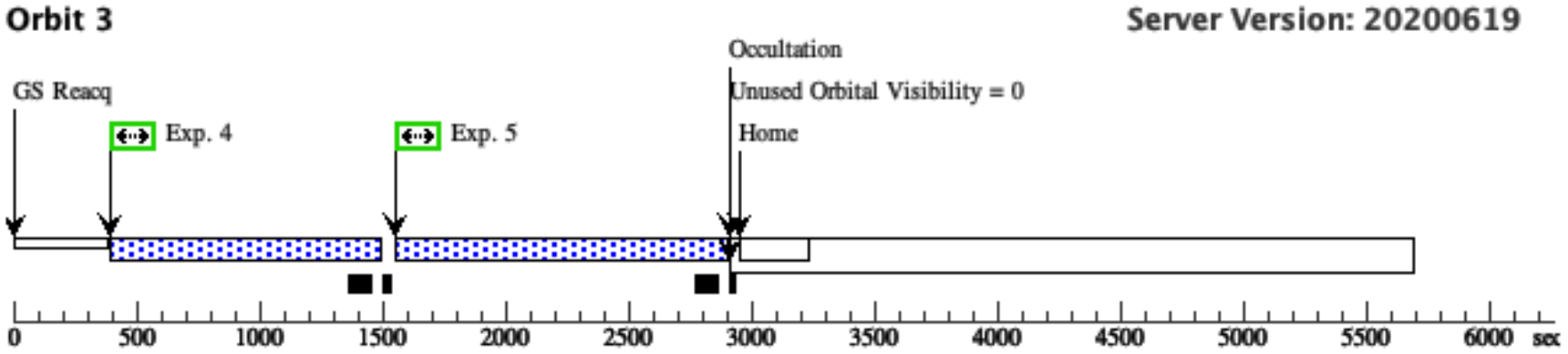
Comments: 4X calculation COS.sp.1459484 - peak local rate still at Lyman alpha
Baseline S/N calculation COS.sp.1458435

cvso146_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440
M: 0.92 ; log(dm/dt): -8.06*
For exptime=1355.1 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 343.2 cts/s/segment
brightest pixel: 0.010 cts/s/pix at 1214.2 A
Calculation performed 2020-07-30T14:20:33, v0.9

Orbit Structure







Visit

Proposal 16113, CVSO-146-STIS (1S), completed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:09:40:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:16:40:00; GROUP 1S,1C WITHIN 1D

Comments: vstatus; 1S; CVSO-146; S/STIS Approved for submission; S/CP 28/08/20 ; internal review complete ; S/DW 11/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; CVSO 146 ; COS ; CP
vcheck; ETC numbers entered in APT?; Done
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 ...
STIS CCD observations require significantlly more time than estimated by script - need to check script assumptions for these
vcheck; Field images checked & saved?; yes
vcheck; Selected ACQ strategy?; F28X50LP for 0.6 s
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; Yes ...
Unknowns flagged but only for CCD observations so no safety issue
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes, set to 1/2 exposure time
vcheck; Verify visit grouping correct; Yes
vcheck; phase constraint for ground based observations added?; Yes
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)	CVSO-146	RA: 05 35 46.0042 (83.9416842d)	Proper Motion RA: 1.99875984 mas/yr	V=14.01	Reference Frame: ICRS
	Alt Name1: V499-ORI	Dec: -00 57 52.25 (-.96451d)	Proper Motion Dec: -0.860579525 mas/yr	SpT=K6; A_V=0.10; U=15.25; V=14.01; J=11.3	
	Alt Name2: 2MASS-J05354600-0057522	Equinox: J2000	Parallax: 0.002953692966"		
			Epoch of Position: 2015.5		

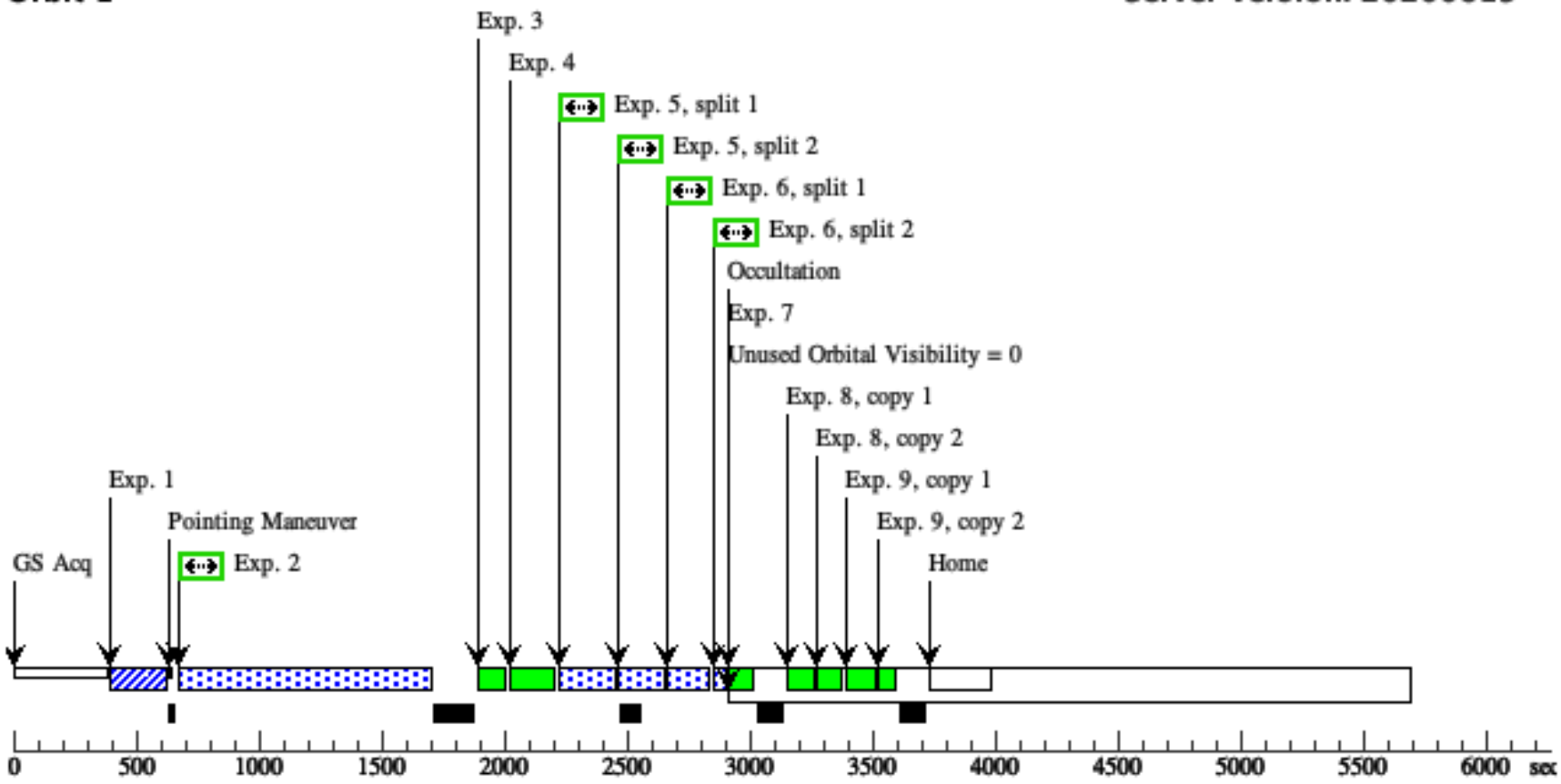
Comments: CVSO-146 : V499 Ori, J05354600-0057522
Region: Ori OB1b
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05354600-0057522&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440
M: 0.92 ; log(dm/dt): -8.06*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
cvso146_lya2_etc.txt
Calculation performed 2020-07-30T14:20:33, v0.4
---
tstatus; CVSO-146; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
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?; Yes fluxes are within expected uncertainties
See cvso-146-sed-vs-photo-revised.png
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.1458494)	(1) CVSO-146	STIS/CCD, ACQ, F28X50LP	MIRROR				0.6 Secs (0.6 Secs) *[==>]*	*[1]*
Comments: S/N=80 requies 0.3s, with 14s to saturation. Will adopt 2x this or 0.6s									
2	G230L/2376 (STIS.sp.1459540)	(1) CVSO-146	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=438			875 Secs (875 Secs) *[==>]*	*[1]*
Comments: Baseline S/N calc = STIS.sp.1458503 *4X BOP ETC Calc = STIS.sp.1459540 (entered above), B.P. = 3.36 cnts/pixel/s* *cvso146_lya2_etc.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440* *M*: 0.92 ; log(dm/dt): -8.06* *For exptime=97.3 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): 2528.0 cts/s/segment* *brightest pixel: 0.842 cts/s/pix at 2788.8 A* *Calculation performed 2020-07-30T14:20:33, v0.9*									
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.1458500)	(1) CVSO-146	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			307.2 Secs (307.2 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
Comments: I need 153.6s to get S/N=20 at 4000, not 62.2s stated below! *cvso146_lya2_etc.txt; stis,ccd,g430l,c4300,52x2,mjd#59305* *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440* *M*: 0.92 ; log(dm/dt): -8.06* *For exptime=62.2 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): 39423.3 cts/s/segment* *brightest pixel: 16.200 cts/s/pix at 4871.0 A* *Calculation performed 2020-07-30T14:20:33, v0.9*									
6	G750L/7751 (STIS.sp.1458499)	(1) CVSO-146	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			34.4 Secs (34.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
Comments: I'm getting needed 17.25s with ETC STIS.sp.1458499 and CVSO-146_sed.fits *cvso146_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305* *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440* *M*: 0.92 ; log(dm/dt): -8.06* *For exptime=7.3 s, n_reads=2, spectral region:* *5700.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 62991.1 cts/s/segment* *brightest pixel: 97.853 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:20:33, v0.9*									

	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]***
		Comments: cvso146_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440* *M*: 0.92 ; log(dm/dt): -8.06* *For exptime=7.3 s, n_reads=2, spectral region:* *5700.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 62991.1 cts/s/segment* *brightest pixel: 97.853 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:20:33, v0.9*				
	9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X2	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
		Comments: cvso146_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6 ; A_V: 0.1 ; Distance (pc): 440* *M*: 0.92 ; log(dm/dt): -8.06* *For exptime=7.3 s, n_reads=2, spectral region:* *5700.0 +- 5.0 A achieves SNR=20.0 / 2-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 62991.1 cts/s/segment* *brightest pixel: 97.853 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:20:33, v0.9*				

Orbit Structure



Visit

Proposal 16113, V-TX-ORI-COS (2C), completed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:06:30:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:13:30:00

Comments: vstatus; 2C; V-TX-ORI;P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V-TX ori ; COS ; CP
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; no
vcheck; M-dwarf check complete and added to box folder?; n/a - K star
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; PSA/MIRRORB, S/N=40
vcheck; Possible ACQ or Sci spoilers?; none
vcheck; Field BOT clear?; Yes, cleared with explanations. BOT for PSA, MIRRORB TA exposure finds that the target is unsafe and an additional 2 unknowns in PSA macro-aperture, but all three of these objects appear to be misplaced entries for the prime target as Gaia DR2 shows only a single star at this location. See the discussion in the COS TA exposure level comments for details of how we cleared the primary target.
vcheck; Visual BOT check for stars not in catalog?; none found
vcheck; Orbit packing finalized?; yes got 1.43X request for c1291 and 1.60x for c1611
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; GROUP 2S,2C within 1 day attached to STIS visit
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	V-TX-ORI Alt Name1: SO583 Alt Name2: J05383368-0244141	RA: 05 38 33.6890 (84.6403708d) Dec: -02 44 14.17 (-2.73727d) Equinox: J2000	Proper Motion RA: -1.2904703990000002 mas/yr Proper Motion Dec: -2.701258988 mas/yr Parallax: 0.001748598808" Epoch of Position: 2015.5	V=12.06 SpT=K4.5; A_V=0.00; U=13.75 ; B=13.16; V=12.06; R=11.38; I =10.73; J=10.1	Reference Frame: ICRS

Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide much fainter photometry, V=13.71, B=15.08, U=16.21, more in line with our expectations

V TX Ori : SO583, J05383368-0244141
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05383368-0244141&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385
M: 1.087 ; log(dm/dt): -8.13*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so583_lya2_etc.txt
Calculation performed 2020-07-30T14:20:49, v0.4
---
tstatus; V-TX-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; OK ...
note that the name SO583 actually corresponds to the SIMBAD name [HHM2007] 583
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Good
tcheck; Adopted SED compared to Observations?; yes, but ...
published UBVRI photometry is about 4.4 to 5.9 X brighter than our scaled T Tauri SED, but this is because that model understimates the stellar contribution. If we normalize a K4.5V Kurucz star to the observed V magnitude, the predicted U mag of the star alone then explains about 3/4ths of the observed U band flux (tx-ori-kstar-vs-photo-revised.png), and the remaining residual U excess is within 35% of the prediction of our scaled accretion flux model (the 'u,johnson' point in the figure tx-ori-sed-vs-phot-usub.png has had the estimated stellar U flux subtracted). We conclude that our scaled SED should provide an good approximation to the NUV and FUV flux, but that a K4.5V star normalzed to an optical band should be used to predict the required G430L and G750L exposure times.
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.1467805)	(2) V-TX-ORI	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				60 Secs (60 Secs) *[==>]*	**[1]**

Comments: We've constructed SEDs which add the expected stellar spectrum (normalized to the observed V band) to 1x, 4x, and 12x the expected accretion spectra and input them into the ETC for a S/N=40 with PSA, MIRRORB. These combine the SED's contained in the files TX-Ori_K4.5V_sed.fits (star only) and TX_Ori_sed.fits (presumed to be accretion only)

so583_lya2_x1_plus_star.fits: nominal accretion + star: COS.ta.1467805, S/N=40 in 49.6s, B.P. = 4.49
so583_lya2_x4_plus_star.fits: 4x accretion + 1 x star: COS.ta.1467806, B.P. = 14.7
so583_lya2_x12_plus_star.fits: 12x accretion + 1 x star: COS.ta.1467807, B.P. = 42

Note that if we renormalize the nominal accretion + star spectrum to the observed U mag of 13.75, we get almost the same answer as if we use the unnormalized spectra (COS.ta.1467808 with B.P. = 4.541). This shows that our adopted spectrum is consistent with the observed photometry.

Since even upping the nominal accretion calculation by a factor of 12 appears to be safe, we should be confident in doing the acquisition with PSA, MIRRORB with an exposure time of about 50 s.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G160M/1611 (COS.sp.1459490)	(2) V-TX-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=8534; FP-POS=ALL			964 Secs (3856 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	**[1]** **[2]**

Comments: baseline COS.sp.1459278
4x - so583_lya2_x4.00_etc.txt - COS.sp.1459490 , BP = 0.075 cnts/s
normalized to observed U=13.75: COS.sp.1459705 still has only BP = 0.116 cnts/s ~ 6X margin on local rate

so583_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385
M: 1.087 ; log(dm/dt): -8.13*
For exptime=1213.1 s, spectral region:
1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 98.6 cts/s/segment
brightest pixel: 0.018 cts/s/pix at 1548.4 A
Calculation performed 2020-07-30T14:20:46, v0.9

#	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.1459486)	(2) V-TX-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1348; FP-POS=3			182 Secs (182 Secs) *[==>]*	**[2]**

Comments: normalized to observed U=13.75: COS.sp.1459707 still dominated by Lyman alpha
normalized to 4X observed U = 12.245: COS.sp.1459709 has brightest pixel at 0.557 cnts/s so still safe even if this bright!

so583_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385
M: 1.087 ; log(dm/dt): -8.13*
For exptime=884.7 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 423.8 cts/s/segment
brightest pixel: 0.047 cts/s/pix at 1214.2 A
Calculation performed 2020-07-30T14:20:48, v0.9

	4	G130M/129 1-3 (COS.sp.14509486) (2) V-TX-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=972; FP-POS=3	1082 Secs (1082 Secs) *[==>]*	***[3]***

Comments: normalized to observed U=13.75: COS.sp.1459707 still dominated by Lyman alpha
normalized to 4X observed U = 12.245: COS.sp.1459709 has brightest pixel at 0.557 cnts/s so still safe even if this bright!

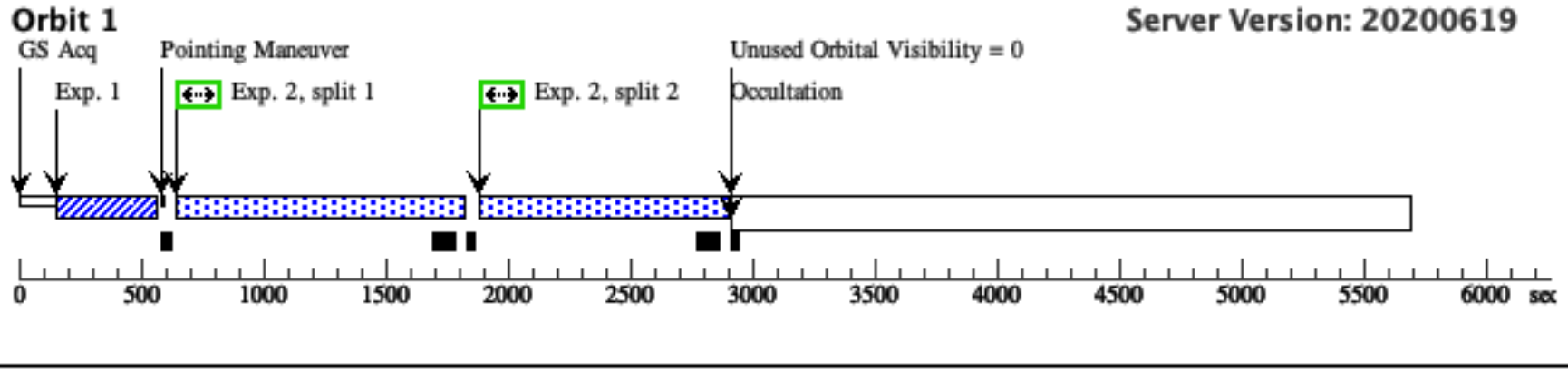
so583_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385
M: 1.087 ; log(dm/dt): -8.13*
For exptime=884.7 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 423.8 cts/s/segment
brightest pixel: 0.047 cts/s/pix at 1214.2 A
Calculation performed 2020-07-30T14:20:48, v0.9

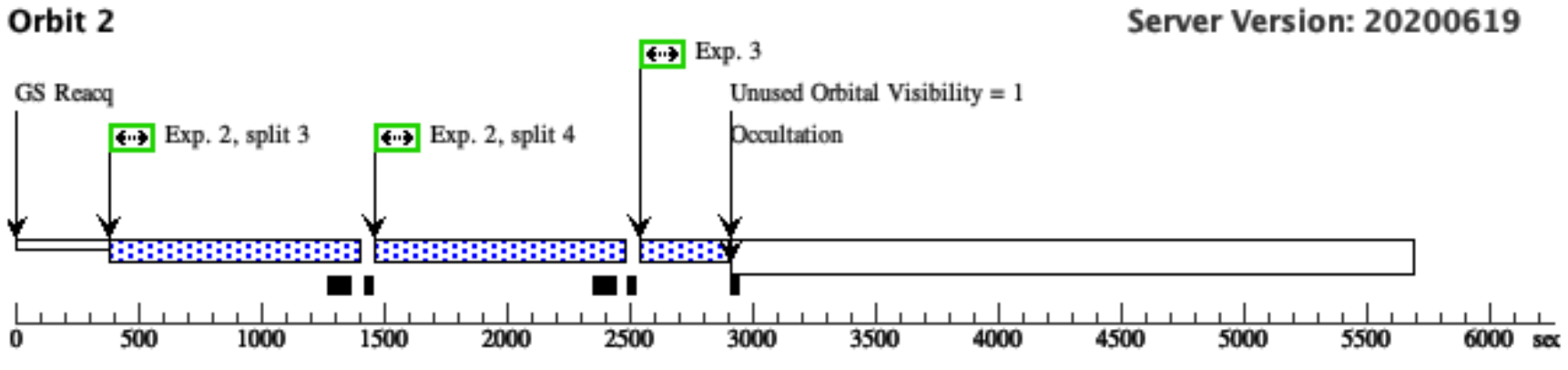
	5	G130M/129 1-4 (COS.sp.14509486) (2) V-TX-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1154; FP-POS=4	1264 Secs (1264 Secs) *[==>]*	***[3]***

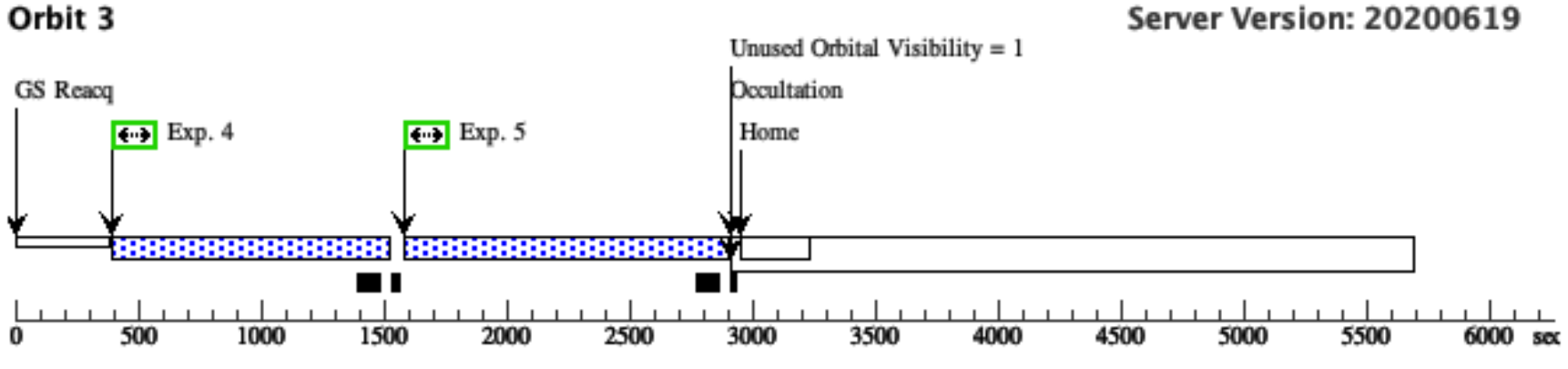
Comments: normalized to observed U=13.75: COS.sp.1459707 still dominated by Lyman alpha
normalized to 4X observed U = 12.245: COS.sp.1459709 has brightest pixel at 0.557 cnts/s so still safe even if this bright!

so583_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385
M: 1.087 ; log(dm/dt): -8.13*
For exptime=884.7 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 423.8 cts/s/segment
brightest pixel: 0.047 cts/s/pix at 1214.2 A
Calculation performed 2020-07-30T14:20:48, v0.9

Orbit Structure







Visit

Proposal 16113, V-TX-ORI-STIS (2S), completed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:09:40:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:16:40:00; GROUP 2S,2C WITHIN 1D

Comments: vstatus; 2S; V-TX-ORI; S/STIS Approved for submission; S/CP 28/08/20 ; internal review complete ; S/DW 11/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; TX-Ori ; STIS ; CP
vcheck; ETC numbers entered in APT?; YES
vcheck; Any screening violations?; No, all well below level
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?; F28X50LP with S/N=80
vcheck; Possible ACQ or Sci spoilers?; None - Gaia shows only 1 star despite multiple GSC2 entries
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; OK, only reasonably bright star is cleared by BOT for G230L
vcheck; Orbit packing finalized?; Yes - corrected G430L and G750L exposure times, and increased G230L from nominal 143s to 1089s.
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; GROUP 2S,2C within 1 day
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; BETWEEN 19-Nov-2020 and 17-Dec-2020
vcheck; Is visit ready for int. review?; Yes
Allocated STIS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	V-TX-ORI Alt Name1: SO583 Alt Name2: J05383368-0244141	RA: 05 38 33.6890 (84.6403708d) Dec: -02 44 14.17 (-2.73727d) Equinox: J2000	Proper Motion RA: -1.2904703990000002 mas/yr Proper Motion Dec: -2.701258988 mas/yr Parallax: 0.001748598808" Epoch of Position: 2015.5	V=12.06 SpT=K4.5; A_V=0.00; U=13.75 ; B=13.16; V=12.06; R=11.38; I =10.73; J=10.1	Reference Frame: ICRS

Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide much fainter photometry, V=13.71, B=15.08, U=16.21, more in line with our expectations

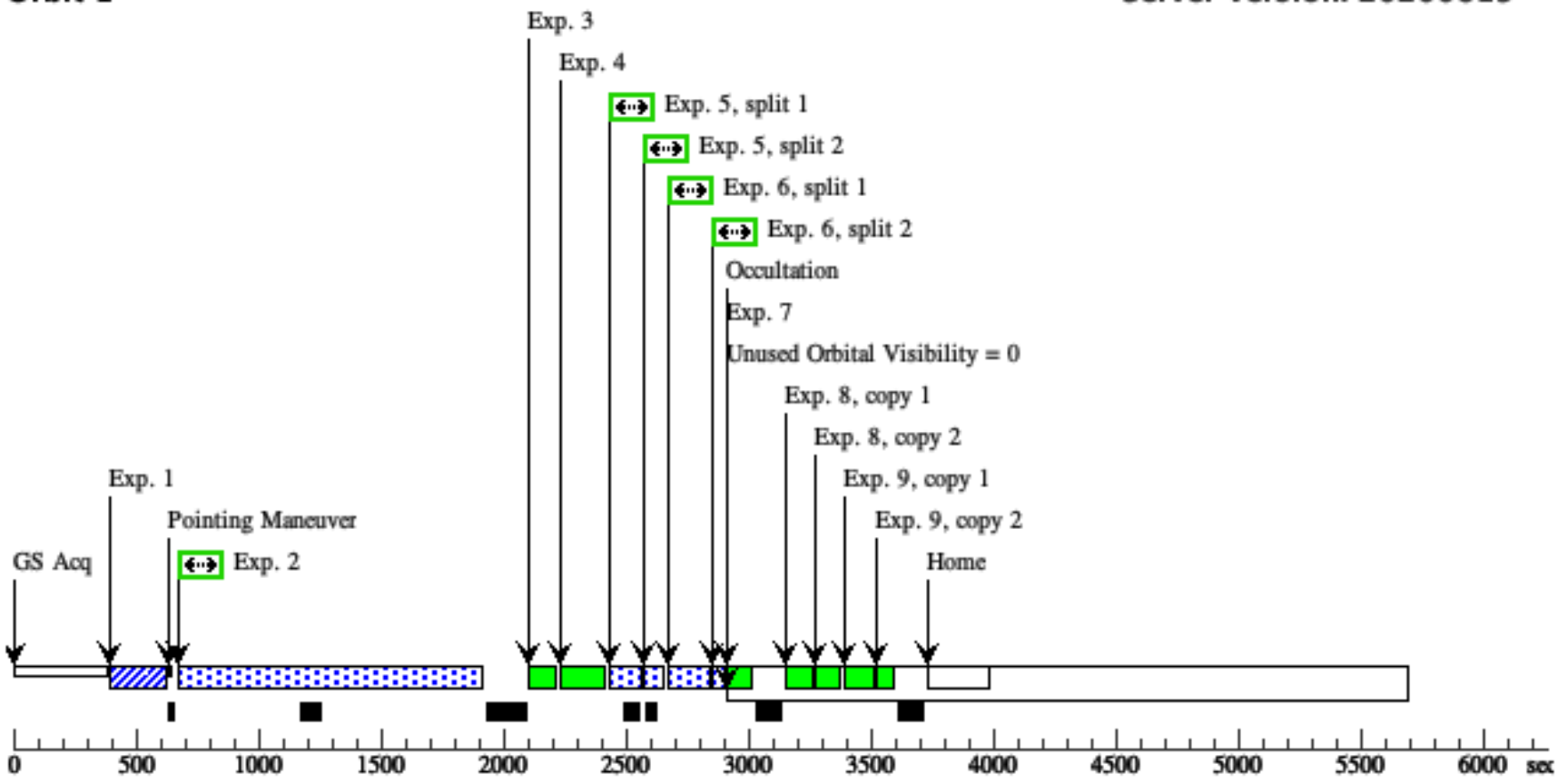
V TX Ori : SO583, J05383368-0244141
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05383368-0244141&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385
M: 1.087 ; log(dm/dt): -8.13*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so583_lya2_etc.txt
Calculation performed 2020-07-30T14:20:49, v0.4
---
tstatus; V-TX-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; OK ...
note that the name SO583 actually corresponds to the SIMBAD name [HHM2007] 583
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Good
tcheck; Adopted SED compared to Observations?; yes, but ...
published UBVRI photometry is about 4.4 to 5.9 X brighter than our scaled T Tauri SED, but this is because that model understimates the stellar contribution. If we normalize a K4.5V Kurucz star to the observed V magnitude, the predicted U mag of the star alone then explains about 3/4ths of the observed U band flux (tx-ori-kstar-vs-photo-revised.png), and the remaining residual U excess is within 35% of the prediction of our scaled accretion flux model (the 'u,johnson' point in the figure tx-ori-sed-vs-phot-usub.png has had the estimated stellar U flux subtracted). We conclude that our scaled SED should provide an good approximation to the NUV and FUV flux, but that a K4.5V star normalzed to an optical band should be used to predict the required G430L and G750L exposure times.
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.1459285)	(2) V-TX-ORI	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	***[1]***
	Comments: Use S/N=80 with nominal SED to allow for fainter than expected spectrum *Alternate calculation normalizes to observed I band giving STIS.ta.1459286 which saturates in 2.15 s, so still factor of almost 9x buffer*								
2	G230L/2376 (STIS.sp.1459544)	(2) V-TX-ORI	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=363			1089 Secs (1089 Secs) *[==>]*	***[1]***
	Comments: ETC calc for 4x nominal - STIS.sp.1459544 B.P. = 4.6 cnts/pix/s *ETC calc for nominal - STIS.sp.1459335* *Norm to U = 12.24 (4x observed U) STIS.sp.1459548 (B.P. = 20 cnts/pixel/s), still no warnings, buffer time =270 s, but observed U is mostly due to the K4.5V star, not the accretion flux, so this should drastically over estimate the actual G230L flux* *If we normalize default spectrum to observed U=13.75, ETC buffer time is only 557s (STIS.sp.1459299),* *so583_lya2_etc.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385* *M*: 1.087 ; log(dm/dt): -8.13* *For exptime=71.5 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): 2606.3 cts/s/segment* *brightest pixel: 1.141 cts/s/pix at 2788.8 A* *Calculation performed 2020-07-30T14:20:48, v0.9*								
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.1462911)	(2) V-TX-ORI	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			104 Secs (104 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
	Comments: In this case, in the optical the star outshines our estimated accretion flux by a large factor, so instead of our scaled T Tauri accretion SED, we adopt a Castelli Kurucz model of a K4.5V star normalized to the observed Johnson B band magnitude of 13.16 for the BOP check. *Exposure time using scaled T Tauri spectrum would be STIS.sp.1465023 with exptime = 104s - we adopt this to allow detection of weak accretion features.*								
6	G750L/7751 (STIS.sp.1462910)	(2) V-TX-ORI	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			26.6 Secs (26.6 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***
	Comments: In this case, in the optical the star outshines our estimated accretion flux by a large factor, so we adopt a Castelli Kurucz model of K4.5V star normalized to the observed Cousins R band magnitude of 11.38. *Exposure time using scaled T Tauri spectrum would be STIS.sp.1465025 with exptime = 13.3s, we adopt 26.6 to allow detectrion of weak accretion features.*								
7	G750L/7751 WAVECAL	WAVE	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]***
		Comments: so583_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385* *M*: 1.087 ; log(dm/dt): -8.13* *For exptime=5.6 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): 72912.7 cts/s/segment* *brightest pixel: 128.092 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:20:49, v0.9*				
	9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X2	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
		Comments: so583_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K4.5 ; A_V: 0.0 ; Distance (pc): 385* *M*: 1.087 ; log(dm/dt): -8.13* *For exptime=5.6 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): 72912.7 cts/s/segment* *brightest pixel: 128.092 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:20:49, v0.9*				

Orbit Structure



Visit

Proposal 16113, V505-ORI-COS (3C), completed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:06:30:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:13:30:00

Comments: vstatus; 3C; V505-ORI; P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V505-Ori ; COS ; CP
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?; PSA, MIRRORB, S/N=40 to allow for brightness variations. Even with 4X upper limit spectrum B.P. only 11.4 cnts/pix/s
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Clear
vcheck; Orbit packing finalized?; yes ...
Obtained 1.19x c1611 request & 1.09x c1291 request
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Group 3C, 3S WITHIN 1 DAY adde to visit 3S
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; Between 19 Nov 2020 and 17 Dec 2020
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	V505-ORI	RA: 05 38 27.2573 (84.6135721d)	Proper Motion RA: 1.128755277 mas/yr	V=14.16	Reference Frame: ICRS
	Alt Name1: SO518	Dec: -02 45 9.72 (-2.75270d)	Proper Motion Dec: -0.6748409870000001 mas/yr	SpT=K6.0; A_V=0.00; V=14.16 ; R=13.54; I=12.85; J=12.0; i_DENIS=12.847	
	Alt Name2: J05382725-0245096	Equinox: J2000	Parallax: 0.0025163961339999996"		
			Epoch of Position: 2015.5		

Comments: V505 Ori : SO518, J05382725-0245096
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05382725-0245096&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so518_lya2_etc.txt
Calculation performed 2020-07-30T14:20:41, v0.4
---
tstatus; V505-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; OK, also Haro 5-10, Kiso A-0976 328, and [HHM2007] 518
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; good
tcheck; Adopted SED compared to Observations?; V, R, and I in fair agreement, sloane u also appears good
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.1459346)	(3) V505-ORI	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				73.9 Secs (73.9 Secs) *[==>]*	*[1]*
	Comments: PSA, MIRRORB, so518_lya2_etc.txt, no-renorm, S/N=40 gives COS.ta.1459346, peak local=3 (margin of 16x), 73.9s *PSA, MIRRORB, so518_lya2_x4.00_etc.txt, Texp = 73.9s gives COS.ta.1460253, peak local = 11.4* *Alt with BOA, MIRRORA puts unknown in PSA, but this star has SDSS u fainter than 22.1, so not an issue*								
2	G160M/1611-1 (COS.sp.1459489)	(3) V505-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1230; FP-POS=1			1340 Secs (1340 Secs) *[==>]*	*[1]*
	Comments: 4X BOP Calc so518_lya2_x4.00_etc.txt COS.sp.1459489, PB = 0.106 cnts/pixel/s *default soectrum S/N calc COS.sp.1460260* *so518_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385* *M*: 0.754 ; log(dm/dt): -8.54* *For exptime=2234.1 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 139.9 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1446.2 A* *Calculation performed 2020-07-30T14:20:38, v0.9*								
3	G160M/1611-2 (COS.sp.1459489)	(3) V505-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=426; FP-POS=2			536 Secs (564 Secs) *[==>564.0 Secs]*	*[1]*
	Comments: 4X BOP Calc so518_lya2_x4.00_etc.txt COS.sp.1459489, PB = 0.106 cnts/pixel/s *default soectrum S/N calc COS.sp.1460260* *sso518_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385* *M*: 0.754 ; log(dm/dt): -8.54* *For exptime=2234.1 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 139.9 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1446.2 A* *Calculation performed 2020-07-30T14:20:38, v0.9*								
4	G160M/1611-2 (COS.sp.1459489)	(3) V505-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=694; FP-POS=2			804 Secs (804 Secs) *[==>]*	*[2]*
	Comments: 4X BOP Calc so518_lya2_x4.00_etc.txt COS.sp.1459489, PB = 0.106 cnts/pixel/s *default soectrum S/N calc COS.sp.1460260* *sso518_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385* *M*: 0.754 ; log(dm/dt): -8.54* *For exptime=2234.1 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 139.9 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1446.2 A* *Calculation performed 2020-07-30T14:20:38, v0.9*								

5	G160M/161 (3) V505-ORI 1-3 (COS.sp.145 9489)	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1433; FP-POS=3	1543 Secs (1543 Secs) *[==>]*		***[2]***

Comments: 4X BOP Calc so518_lya2_x4.00_etc.txt COS.sp.1459489, PB = 0.106 cnts/pixel/s default soectrum S/N calc COS.sp.1460260

sso518_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
For exptime=2234.1 s, spectral region:
1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 139.9 cts/s/segment
brightest pixel: 0.026 cts/s/pix at 1446.2 A
Calculation performed 2020-07-30T14:20:38, v0.9

6	G160M/161 (3) V505-ORI 1-4 (COS.sp.145 9489)	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1182; FP-POS=4	1292 Secs (1292 Secs) *[==>]*		***[3]***

Comments: 4X BOP Calc so518_lya2_x4.00_etc.txt COS.sp.1459489, PB = 0.106 cnts/pixel/s default soectrum S/N calc COS.sp.1460260

sso518_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
For exptime=2234.1 s, spectral region:
1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 139.9 cts/s/segment
brightest pixel: 0.026 cts/s/pix at 1446.2 A
Calculation performed 2020-07-30T14:20:38, v0.9

7	G130M/129 (3) V505-ORI 1-3 (COS.sp.145 9488)	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=295; FP-POS=3	405 Secs (405 Secs) *[==>]*		***[3]***

Comments: Baseline ETC COS.sp.1459352 gives B.P.=0.111 or about 6X below limits ...
4x spectrum so518_lya2_x4.00_etc.txt: COS.sp.1459488, B.P. = 0.143 cnts/pixel/s

so518_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
For exptime=372.2 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 652.9 cts/s/segment
brightest pixel: 0.130 cts/s/pix at 1304.8 A
Calculation performed 2020-07-30T14:20:41, v0.9

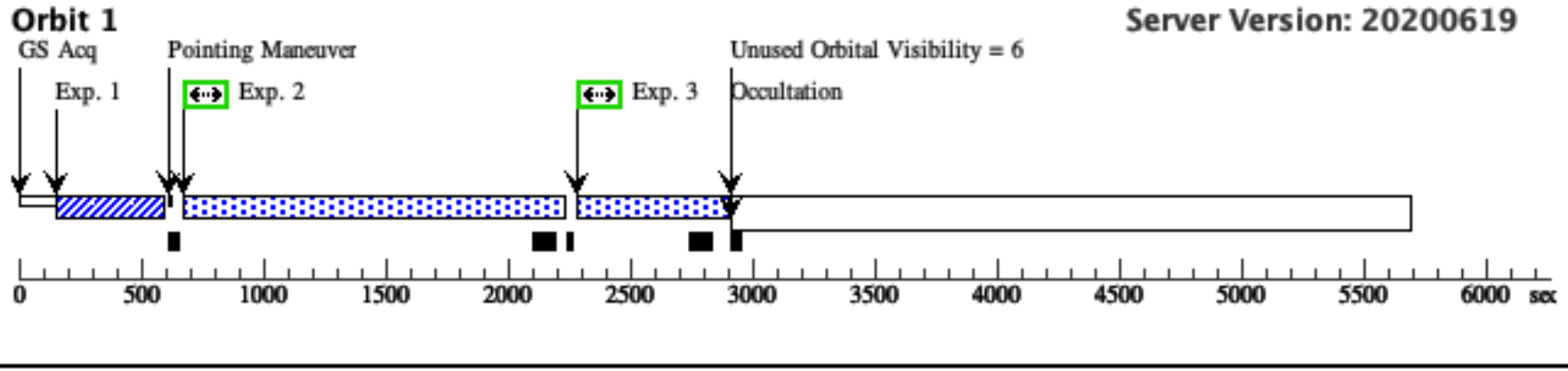
	8	G130M/129 1-4 (COS.sp.1459488)	(3) V505-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=295; FP-POS=4	405 Secs (405 Secs)
							[==>]

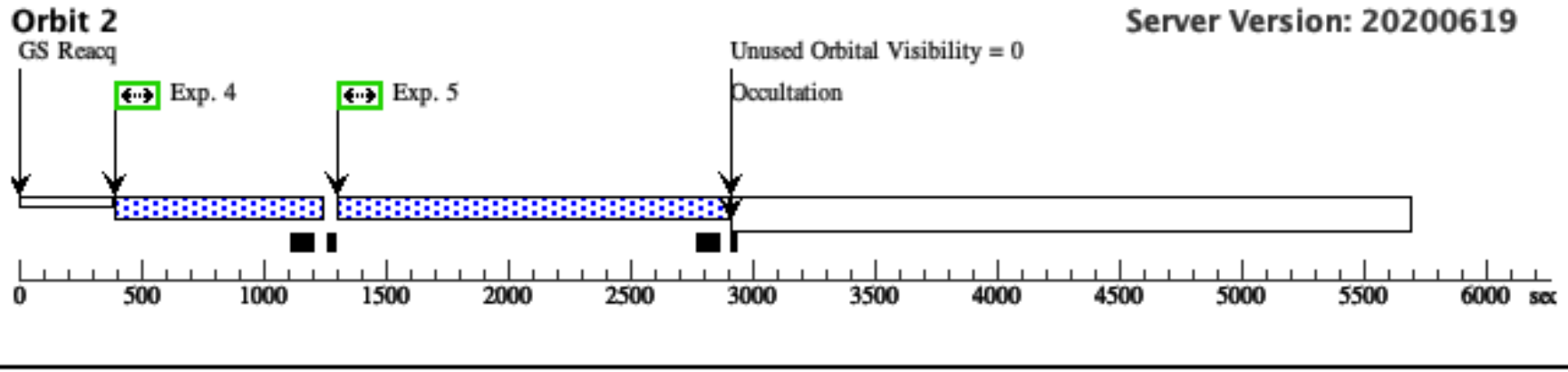
[3]

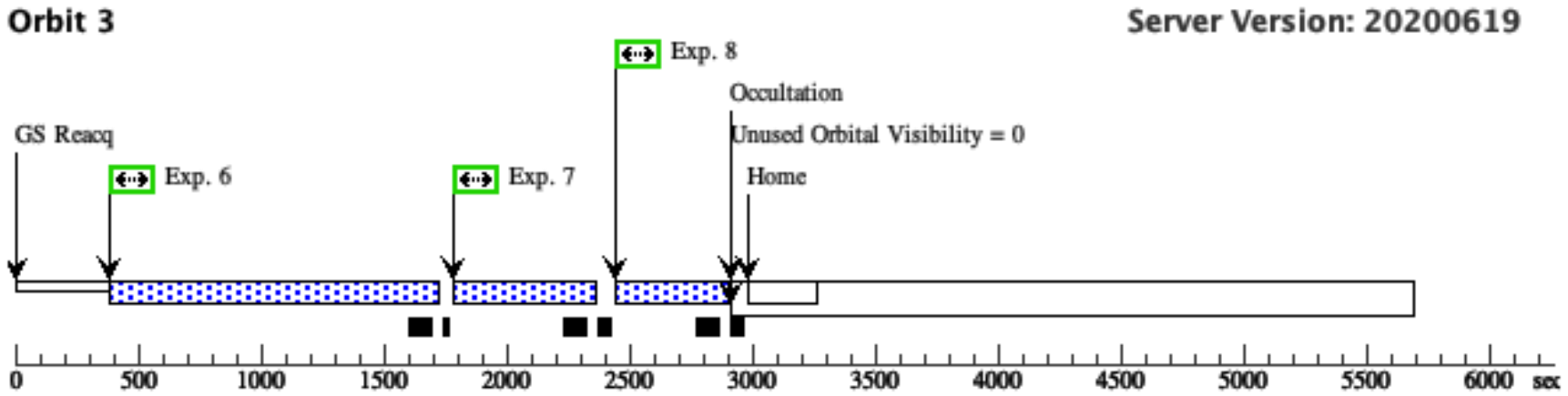
Comments: Baseline ETC COS.sp.1459352 gives B.P.=0.111 or about 6X below limits ... (possibly includes geo-coronal O I in input spectrum as well as ETC)
4x spectrum so518_lya2_x4.00_etc.txt: COS.sp.1459488, B.P. = 0.143 cnts/pixel/s or 4.66X below local limit

so518_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
For exptime=372.2 s, spectral region:
1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel
A factor of 2.0 has been applied to the exptime in each exposure.
global countrate (brightest segment): 652.9 cts/s/segment
brightest pixel: 0.130 cts/s/pix at 1304.8 A
Calculation performed 2020-07-30T14:20:41, v0.9

Orbit Structure







Visit

Proposal 16113, V505-ORI-STIS (3S), completed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:09:40:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:16:40:00; GROUP 3S,3C WITHIN 1D

Comments: vstatus; 3S; V505-ORI; S/STIS Approved for submission; S/CP 28/08/20 ; internal review complete ; S/DW 11/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V505 Ori ; STIS ; CP
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; No
vcheck; M-dwarf check complete and added to box folder?; N/A, K star
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; F28X50LP, S/N=80
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; yes
vcheck; Visual BOT check for stars not in catalog?; Clear
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Group 3S, 3C WITHIN 1D
vcheck; phase constraint for ground based observations added?; Yes
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)	V505-ORI	RA: 05 38 27.2573 (84.6135721d)	Proper Motion RA: 1.128755277 mas/yr	V=14.16	Reference Frame: ICRS
	Alt Name1: SO518	Dec: -02 45 9.72 (-2.75270d)	Proper Motion Dec: -0.6748409870000001 mas/yr	SpT=K6.0; A_V=0.00; V=14.16 ; R=13.54; I=12.85; J=12.0; i_D ENIS=12.847	
	Alt Name2: J05382725-0245096	Equinox: J2000	Parallax: 0.0025163961339999996"		
			Epoch of Position: 2015.5		

Comments: V505 Ori : SO518, J05382725-0245096
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05382725-0245096&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so518_lya2_etc.txt
Calculation performed 2020-07-30T14:20:41, v0.4
---
tstatus; V505-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; OK, also Haro 5-10, Kiso A-0976 328, and [HHM2007] 518
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; good
tcheck; Adopted SED compared to Observations?; V, R, and I in fair agreement, sloane u also appears good
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.1459461)	(3) V505-ORI	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	*[1]*
Comments: S/N=80 for basline flux level requires 0.23 s									
2	G230L/2376 (STIS.sp.1459550)	(3) V505-ORI	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=494			987 Secs (987 Secs) *[==>]*	*[1]*
Comments: Nominal ETC calc STIS.sp.1459465 *4X Source ETC Calc STIS.sp.1459550, B.P. = 5.3 cnts/pixel/s* *Brightest pixel = 1.322* *so518_lya2_etc.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385* *M*: 0.754 ; log(dm/dt): -8.54* *For exptime=61.6 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): 2503.1 cts/s/segment* *brightest pixel: 1.322 cts/s/pix at 2796.8 A* *Calculation performed 2020-07-30T14:20:41, v0.9*									
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.1462916)	(3) V505-ORI	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			200 Secs (200 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
Comments: Normalize K6 Castelli-Kurucz model to observed V=14.06 with S/N=20 at 4000A and double resulting exposure time *Also check case with accretion spectrum so1153_lya2_x4.00_etc.txt: get ETC# STIS.sp.1470335 - 542s to saturation for gain=1 (vs planned 100s exposures), so plenty of margin even with the 4x spectrum* *so518_lya2_etc.txt; stis,ccd,g430l,c4300,52x2,mjd#59305* *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385* *M*: 0.754 ; log(dm/dt): -8.54* *For exptime=40.1 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): 44241.3 cts/s/segment* *brightest pixel: 25.603 cts/s/pix at 4560.5 A* *Calculation performed 2020-07-30T14:20:41, v0.9*									

6	G750L/7751 (3) V505-ORI (STIS.sp.14 62915)	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4	33.4 Secs (33.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	***[1]***

Comments: Normalize K6 Castelli-Kurucz model to observed I= 12.85 with S/N=20 at 5700A and double resulting exposure time
Also check case with accretion spectrum so1153_lya2_x4.00_etc.txt: get ETC# STIS.sp.1470338 - 85s to saturation for gain=1 (vs planned 16.7s exposures), so plenty of margin even with the 4x spectrum

so518_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
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): 73340.7 cts/s/segment
brightest pixel: 127.387 cts/s/pix at 6563.9 A
Calculation performed 2020-07-30T14:20:41, v0.9

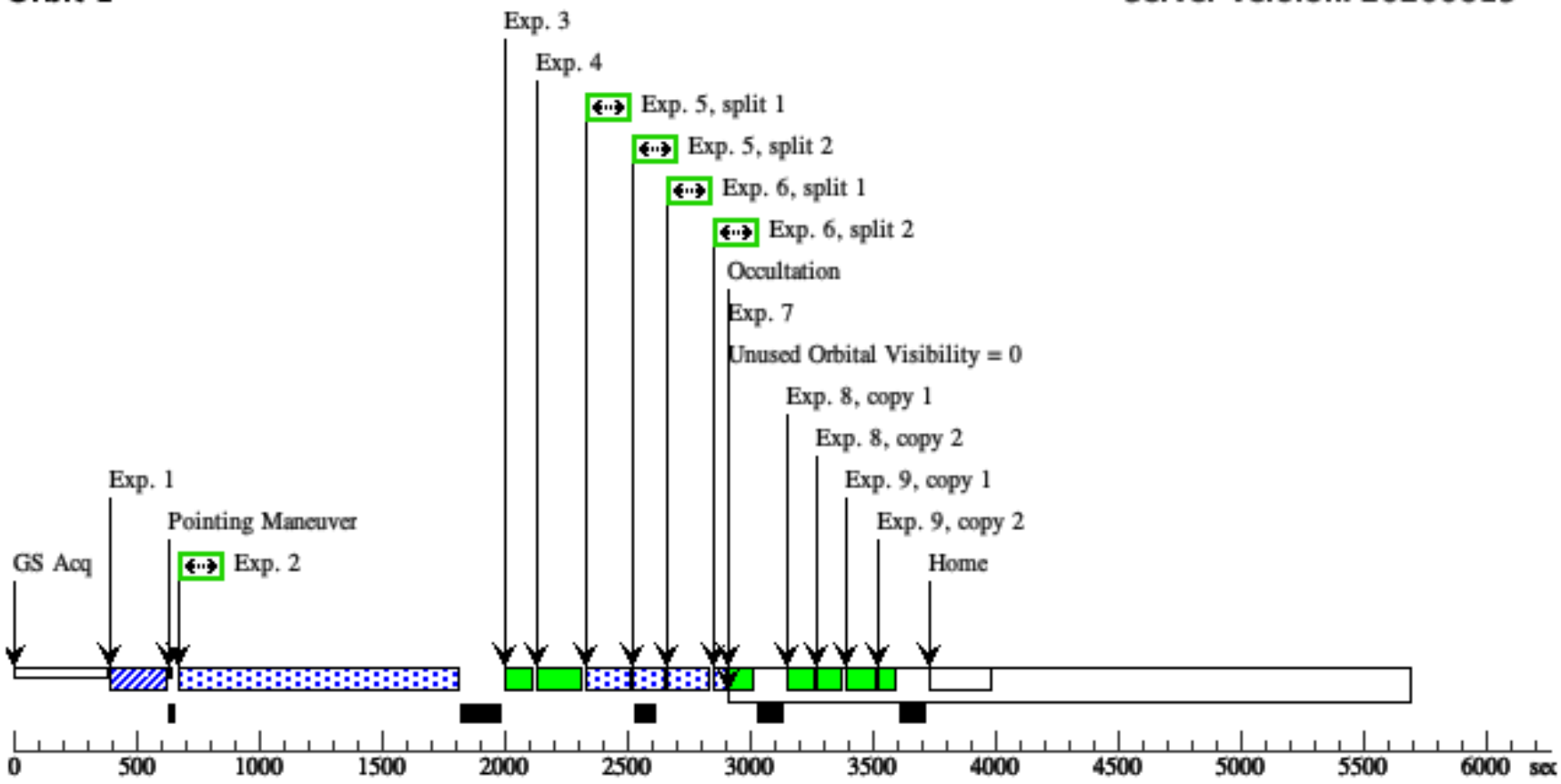
7	G750L/7751 WAVE WAVECAL	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A		*[==>]*	***[1]***
8	G750L/7751 CCDFLAT CCDFLAT 1	STIS/CCD, ACCUM, 0.3X0.09	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Comments: so518_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
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): 73340.7 cts/s/segment
brightest pixel: 127.387 cts/s/pix at 6563.9 A
Calculation performed 2020-07-30T14:20:41, v0.9

9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X2	G750L 7751 A		*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Comments: so518_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K6.0 ; A_V: 0.0 ; Distance (pc): 385
M: 0.754 ; log(dm/dt): -8.54*
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): 73340.7 cts/s/segment
brightest pixel: 127.387 cts/s/pix at 6563.9 A
Calculation performed 2020-07-30T14:20:41, v0.9

Orbit Structure



Visit

Proposal 16113, V510-ORI-COS (4C), failed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:08:05:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:15:05:00

Comments: vstatus; 4C; V510-ORI; P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V510-Ori ; COS ; CP
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, Jet visible in SDSS image??
vcheck; Selected ACQ strategy?; PSA, MIRRORB
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; yes, GSC2 BOT clear
vcheck; Visual BOT check for stars not in catalog?; Good, brighest SDSS star other than target in PSA macroaperture has u,sdss=21.395 abmag
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Group 4S, 4C,4D within 1 DAY added to 4S
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 4

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	V510-ORI Alt Name1: SO1153 Alt Name2: J05393982-0231217	RA: 05 39 39.8280 (84.9159500d) Dec: -02 31 21.87 (-2.52274d) Equinox: J2000	Proper Motion RA: 1.8331142809999998 mas/yr Proper Motion Dec: -0.058937092999999996 mas/yr Parallax: 0.00253283346" Epoch of Position: 2015.5	V=14.30 SpT=K5.5; A_V=0.15; U=14.59 ; V=14.3; J=11.8	Reference Frame: ICRS

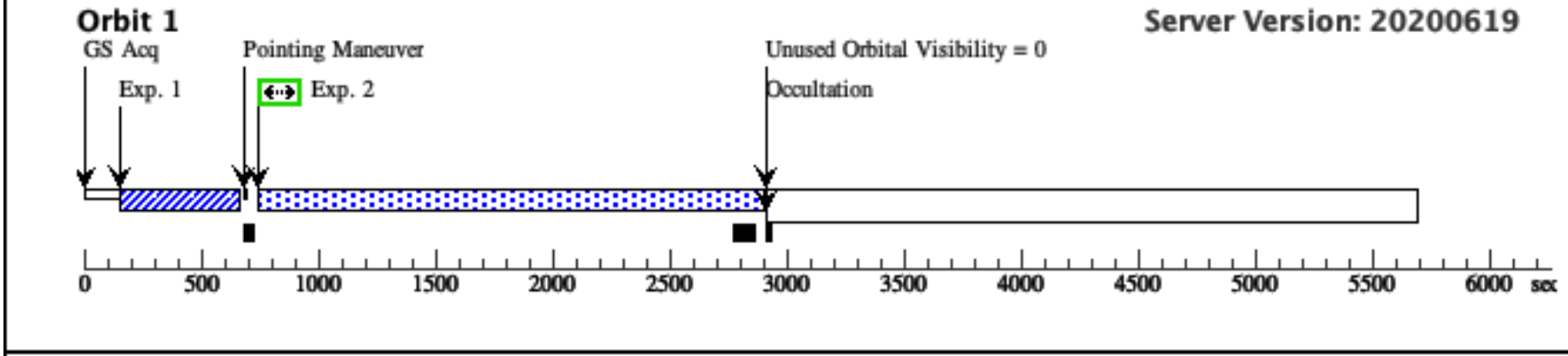
Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide V=13.21, B-V=0.48, U-B=-0.81 and V=13.86, B-V=.60, U-B=-1.04 (U=12.88 and 13.42)

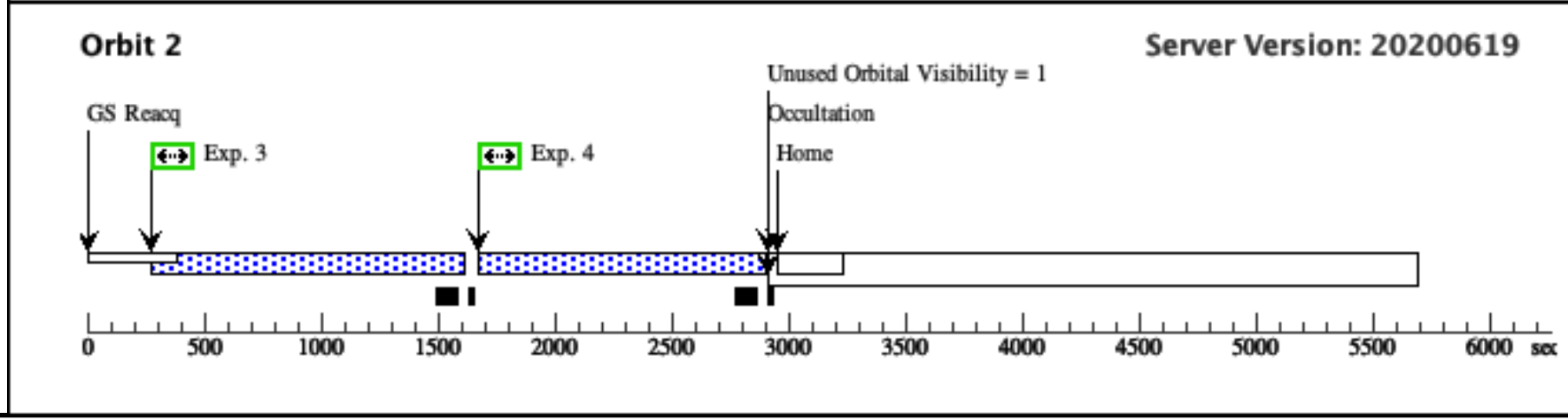
V510 Ori : SO1153, J05393982-0231217
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05393982-0231217&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so1153_lya2_etc.txt
Calculation performed 2020-07-30T14:21:16, v0.4
---
tstatus; V510-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; Haro 5-27, CSV 652, V510-Ori, [HHM2007] 1153
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes
Has STIS F28X50LP ACQ and G750M 6581 52x0.1 observations. Fair agreement between scaled SED and optical photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1459559)	(4) V510-ORI	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				108.4 Secs (108.4 Secs) *[==>]*	***[1]***
	Comments: S/N = 40 with V510_Ori_sed.fits PSA, MIRRORB, peak local = 2.064, COS.ta.1459559 *texp = 108.4 so1153_lya2_x4.00_etc.txt PSA, MIRRORB, peak local = 8.227, COS.ta.1460254*								
2	G130M/1291-3 (COS.sp.1459562)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1885; FP-POS=3			1995 Secs (1995 Secs) *[==>]*	***[1]***
	Comments: BOT ETC calc with so1153_lya2_x4.00_etc.txt, COS.sp.1459562 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459563* *so1153_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1569.4 s, spectral region:* *1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 359.3 cts/s/segment* *brightest pixel: 0.023 cts/s/pix at 1214.2 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
3	G160M/1611-1 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1067; FP-POS=1			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc with so1153_lya2_x4.00_etc.txt: COS.sp.1459565 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								
4	G160M/1611-3 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1067; FP-POS=3			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc with so1153_lya2_x4.00_etc.txt: COS.sp.1459565 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								

Orbit Structure





Visit

Proposal 16113, V510-ORI-COS (4D), failed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:08:05:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:15:05:00

Comments: vstatus; 4C; V510-ORI; P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
***** see visit 4C for completed checklist*
vcheck; Enter targ name & Inst. & Resp. Sci.; ------ ; ------ ; ------
vcheck; ETC numbers entered in APT?; ------
vcheck; Any screening violations?; ------
vcheck; M-dwarf check complete and added to box folder?; N/A
vcheck; S/N ETC calcs done & documented?; ------
vcheck; Field images checked & saved?; Yes, Jet visible in SDSS image??
vcheck; Selected ACQ strategy?; PSA, MIRRORB
vcheck; Possible ACQ or Sci spoilers?; ------
vcheck; Field BOT clear?; yes, GSC2 BOT clear
vcheck; Visual BOT check for stars not in catalog?; Good, brighest SDSS star other than target in PSA macroaperture has u,sdss=21.395 abmag
vcheck; Orbit packing finalized?; ------
vcheck; Buffer times optimized?; ------
vcheck; Verify visit grouping correct; ------
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; -------
vcheck; Is visit ready for int. review?; Yes, see visit 4C for completely filled out checklist
Allocated COS orbits = 4

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	V510-ORI Alt Name1: SO1153 Alt Name2: J05393982-0231217	RA: 05 39 39.8280 (84.9159500d) Dec: -02 31 21.87 (-2.52274d) Equinox: J2000	Proper Motion RA: 1.8331142809999998 mas/yr Proper Motion Dec: -0.058937092999999996 mas/yr Parallax: 0.00253283346" Epoch of Position: 2015.5	V=14.30 SpT=K5.5; A_V=0.15; U=14.59 ; V=14.3; J=11.8	Reference Frame: ICRS

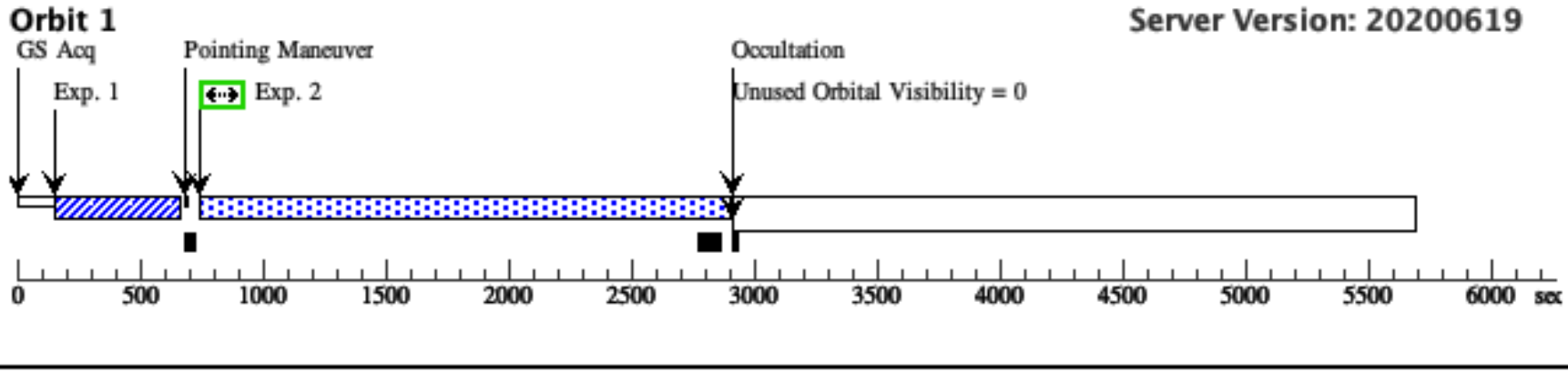
Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide V=13.21, B-V=0.48, U-B=-0.81 and V=13.86, B-V=.60, U-B=-1.04 (U=12.88 and 13.42)

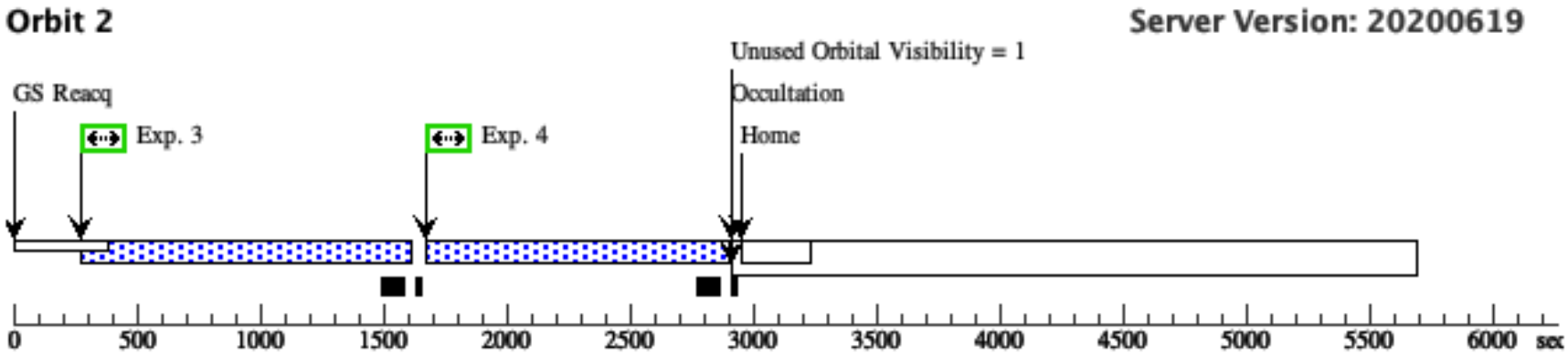
V510 Ori : SO1153, J05393982-0231217
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05393982-0231217&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so1153_lya2_etc.txt
Calculation performed 2020-07-30T14:21:16, v0.4
---
tstatus; V510-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; Haro 5-27, CSV 652, V510-Ori, [HHM2007] 1153
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes
Has STIS F28X50LP ACQ and G750M 6581 52x0.1 observations. Fair agreement between scaled SED and optical photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1459559)	(4) V510-ORI	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				108.4 Secs (108.4 Secs) *[==>]*	***[1]***
	Comments: S/N = 40 with V510_Ori_sed.fits PSA, MIRRORB, peak local = 2.064, COS.ta.1459559 *texp = 108.4 so1153_lya2_x4.00_etc.txt PSA, MIRRORB, peak local = 8.227, COS.ta.1460254*								
2	G130M/1291-4 (COS.sp.1459562)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1885; FP-POS=4			1995 Secs (1995 Secs) *[==>]*	***[1]***
	Comments: BOT ETC calc with so1153_lya2_x4.00_etc.txt, COS.sp.1459562 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459563* *so1153_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1569.4 s, spectral region:* *1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 359.3 cts/s/segment* *brightest pixel: 0.023 cts/s/pix at 1214.2 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
3	G160M/1611-2 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1067; FP-POS=2			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc with so1153_lya2_x4.00_etc.txt, COS.sp.1459565 *S/N ETC calc with V510_Ori_sed.fits, COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								
4	G160M/1611-4 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=1067; FP-POS=4			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc COS.sp.1459565 *S/N ETC calc COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								

Orbit Structure





Visit

Proposal 16113, V510-ORI-STIS (4S), failed Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; BETWEEN 19-NOV-2020:13:40:00 AND 02-DEC-2020:09:40:00; BETWEEN 03-DEC-2020:10:40:00 AND 16-DEC-2020:16:40:00; GROUP 4S,4C,4D WITHIN 1D

Comments: vstatus; 4S; V510-ORI;S/STIS Approved for submission; S/CP 28/08/20 ; internal review complete ; S/DW 11/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V510 Ori ; STIS ; CP
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?; F28X50LP 0.3s S/N=80
vcheck; Possible ACQ or Sci spoilers? No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Other visible sources not in GSC2 are fainter than mag 20 in SDSS or Gaia DR2
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Group 4S,4C,4D within 1D
vcheck; phase constraint for ground based observations added?; Yes
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
(4)	V510-ORI Alt Name1: SO1153 Alt Name2: J05393982-0231217	RA: 05 39 39.8280 (84.9159500d) Dec: -02 31 21.87 (-2.52274d) Equinox: J2000	Proper Motion RA: 1.8331142809999998 mas/yr Proper Motion Dec: -0.058937092999999996 mas/yr Parallax: 0.00253283346" Epoch of Position: 2015.5	V=14.30 SpT=K5.5; A_V=0.15; U=14.59 ; V=14.3; J=11.8	Reference Frame: ICRS

Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide V=13.21, B-V=0.48, U-B=-0.81 and V=13.86, B-V=.60, U-B=-1.04 (U=12.88 and 13.42)

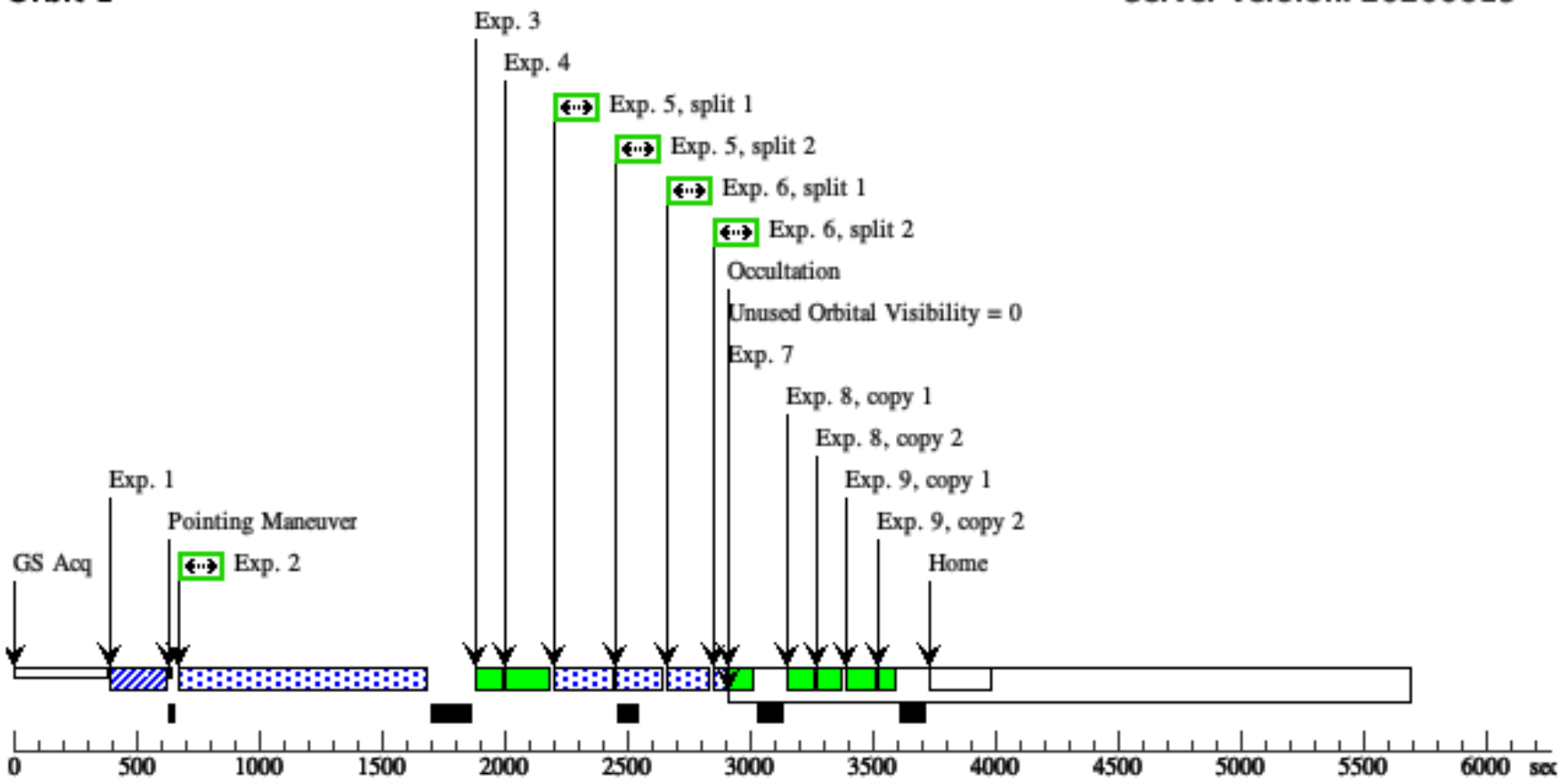
V510 Ori : SO1153, J05393982-0231217
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05393982-0231217&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so1153_lya2_etc.txt
Calculation performed 2020-07-30T14:21:16, v0.4
---
tstatus; V510-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; Haro 5-27, CSV 652, V510-Ori, [HHM2007] 1153
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes
Has STIS F28X50LP ACQ and G750M 6581 52x0.1 observations. Fair agreement between scaled SED and optical photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1459567)	(4) V510-ORI	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	*[1]*
Comments: S/N=80 in 0.3s with V510_Ori_sed.fits									
2	G230L/2376 (STIS.sp.1459551)	(4) V510-ORI	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=431			861 Secs (861 Secs) *[==>]*	*[1]*
Comments: 4X BOP check ETC calc STIS.sp.1459551, B.P = 3 cnts/pixel/s *Nominal ETC Calc V510_Ori_sed.fits: STIS.sp.1459553* *so1153_lya2_etc.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=112.2 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): 2490.4 cts/s/segment* *brightest pixel: 0.731 cts/s/pix at 2790.4 A* *Calculation performed 2020-07-30T14:21:16, v0.9*									
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.1459531)	(4) V510-ORI	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			320.4 Secs (320.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
Comments: so1153_lya2_etc.txt; stis,ccd,g430l,c4300,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=64.9 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): 38774.0 cts/s/segment* *brightest pixel: 15.228 cts/s/pix at 4871.0 A* *Calculation performed 2020-07-30T14:21:16, v0.9*									
6	G750L/7751 (STIS.sp.1459532)	(4) V510-ORI	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=4			37.4 Secs (37.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
Comments: so1153_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=7.9 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): 63030.7 cts/s/segment* *brightest pixel: 99.666 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:21:16, v0.9*									
7	G750L/7751 WAVECAL	WAVE	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]***
		Comments: so1153_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=7.9 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): 63030.7 cts/s/segment* *brightest pixel: 99.666 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:21:16, v0.9*				
	9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X2	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
		Comments: so1153_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=7.9 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): 63030.7 cts/s/segment* *brightest pixel: 99.666 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:21:16, v0.9*				

Orbit Structure



Visit

Proposal 16113, V510-ORI-COS (DC) Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%

Comments: vstatus; 4C; V510-ORI; P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V510-Ori ; COS ; CP
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, Jet visible in SDSS image??
vcheck; Selected ACQ strategy?; PSA, MIRRORB
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; yes, GSC2 BOT clear
vcheck; Visual BOT check for stars not in catalog?; Good, brighest SDSS star other than target in PSA macroaperture has u,sdss=21.395 abmag
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Group 4S, 4C,4D within 1 DAY added to 4S
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; Yes
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 4

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	V510-ORI Alt Name1: SO1153 Alt Name2: J05393982-0231217	RA: 05 39 39.8280 (84.9159500d) Dec: -02 31 21.87 (-2.52274d) Equinox: J2000	Proper Motion RA: 1.8331142809999998 mas/yr Proper Motion Dec: -0.058937092999999996 mas/yr Parallax: 0.00253283346" Epoch of Position: 2015.5	V=14.30 SpT=K5.5; A_V=0.15; U=14.59 ; V=14.3; J=11.8	Reference Frame: ICRS

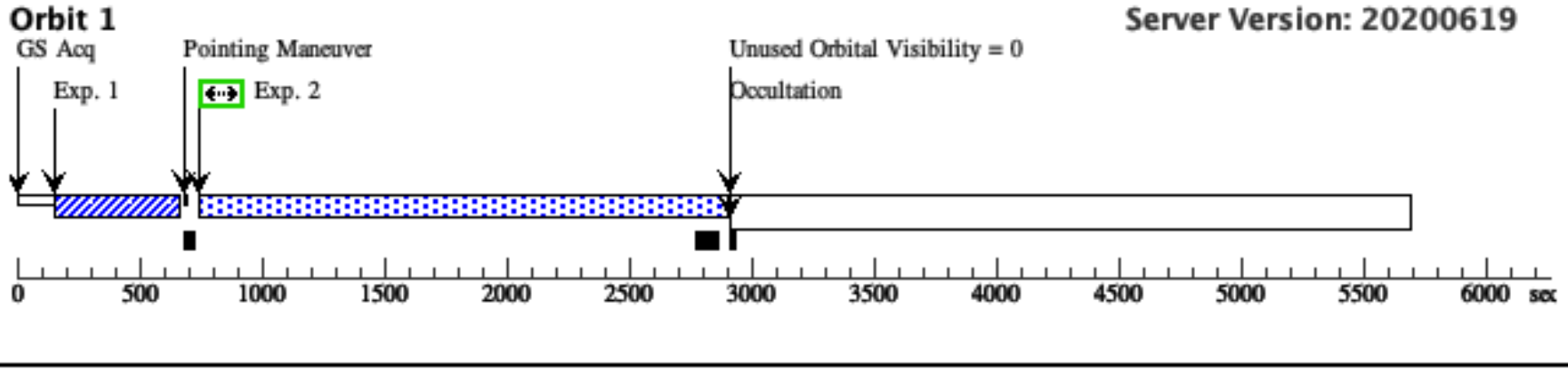
Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide V=13.21, B-V=0.48, U-B=-0.81 and V=13.86, B-V=.60, U-B=-1.04 (U=12.88 and 13.42)

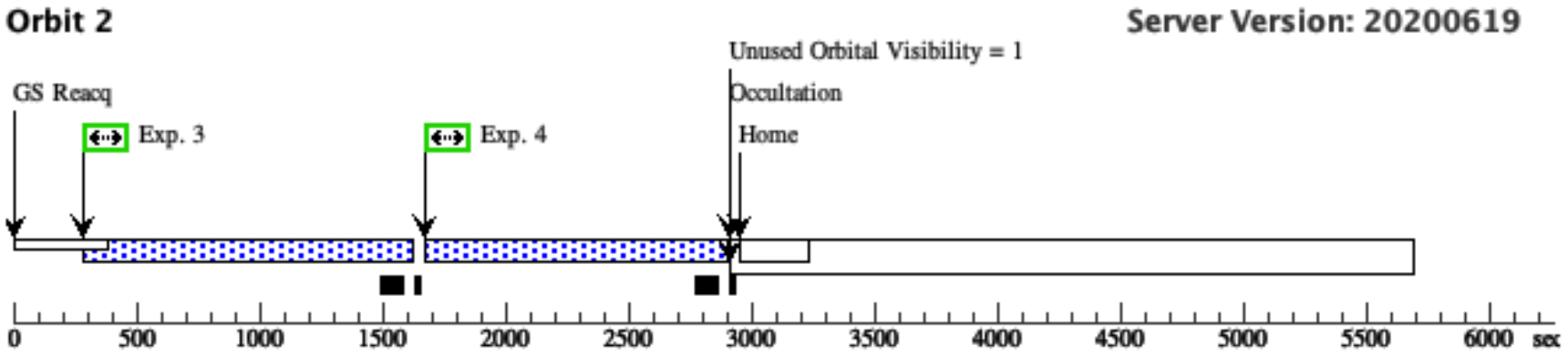
V510 Ori : SO1153, J05393982-0231217
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05393982-0231217&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so1153_lya2_etc.txt
Calculation performed 2020-07-30T14:21:16, v0.4
---
tstatus; V510-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; Haro 5-27, CSV 652, V510-Ori, [HHM2007] 1153
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes
Has STIS F28X50LP ACQ and G750M 6581 52x0.1 observations. Fair agreement between scaled SED and optical photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1459559)	(4) V510-ORI	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				108.4 Secs (108.4 Secs) *[==>]*	***[1]***
	Comments: S/N = 40 with V510_Ori_sed.fits PSA, MIRRORB, peak local = 2.064, COS.ta.1459559 *texp = 108.4 so1153_lya2_x4.00_etc.txt PSA, MIRRORB, peak local = 8.227, COS.ta.1460254*								
2	G130M/1291-3 (COS.sp.1459562)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1885; FP-POS=3			1995 Secs (1995 Secs) *[==>]*	***[1]***
	Comments: BOT ETC calc with so1153_lya2_x4.00_etc.txt, COS.sp.1459562 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459563* *so1153_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1569.4 s, spectral region:* *1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 359.3 cts/s/segment* *brightest pixel: 0.023 cts/s/pix at 1214.2 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
3	G160M/1589-3 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1067; FP-POS=3			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc with so1153_lya2_x4.00_etc.txt: COS.sp.1459565 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								
4	G160M/1589-4 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1067; FP-POS=4			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc with so1153_lya2_x4.00_etc.txt: COS.sp.1459565 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								

Orbit Structure





Visit

Proposal 16113, V510-ORI-COS (DD) Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 100%

Comments: vstatus; 4C; V510-ORI; P/COS Approved for Submission; P/CP 28/09/20 ;internal review complete ; C/DS 16/09/20
***** see visit 4C for completed checklist*
vcheck; Enter targ name & Inst. & Resp. Sci.; ------ ; ------ ; ------
vcheck; ETC numbers entered in APT?; ------
vcheck; Any screening violations?; ------
vcheck; M-dwarf check complete and added to box folder?; N/A
vcheck; S/N ETC calcs done & documented?; ------
vcheck; Field images checked & saved?; Yes, Jet visible in SDSS image??
vcheck; Selected ACQ strategy?; PSA, MIRRORB
vcheck; Possible ACQ or Sci spoilers?; ------
vcheck; Field BOT clear?; yes, GSC2 BOT clear
vcheck; Visual BOT check for stars not in catalog?; Good, brighest SDSS star other than target in PSA macroaperture has u,sdss=21.395 abmag
vcheck; Orbit packing finalized?; ------
vcheck; Buffer times optimized?; ------
vcheck; Verify visit grouping correct; ------
vcheck; phase constraint for ground based observations added?; Yes
vcheck; BETWEENS for coordinated observations added?; -------
vcheck; Is visit ready for int. review?; Yes, see visit 4C for completely filled out checklist
Allocated COS orbits = 4

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	V510-ORI Alt Name1: SO1153 Alt Name2: J05393982-0231217	RA: 05 39 39.8280 (84.9159500d) Dec: -02 31 21.87 (-2.52274d) Equinox: J2000	Proper Motion RA: 1.8331142809999998 mas/yr Proper Motion Dec: -0.058937092999999996 mas/yr Parallax: 0.00253283346" Epoch of Position: 2015.5	V=14.30 SpT=K5.5; A_V=0.15; U=14.59 ; V=14.3; J=11.8	Reference Frame: ICRS

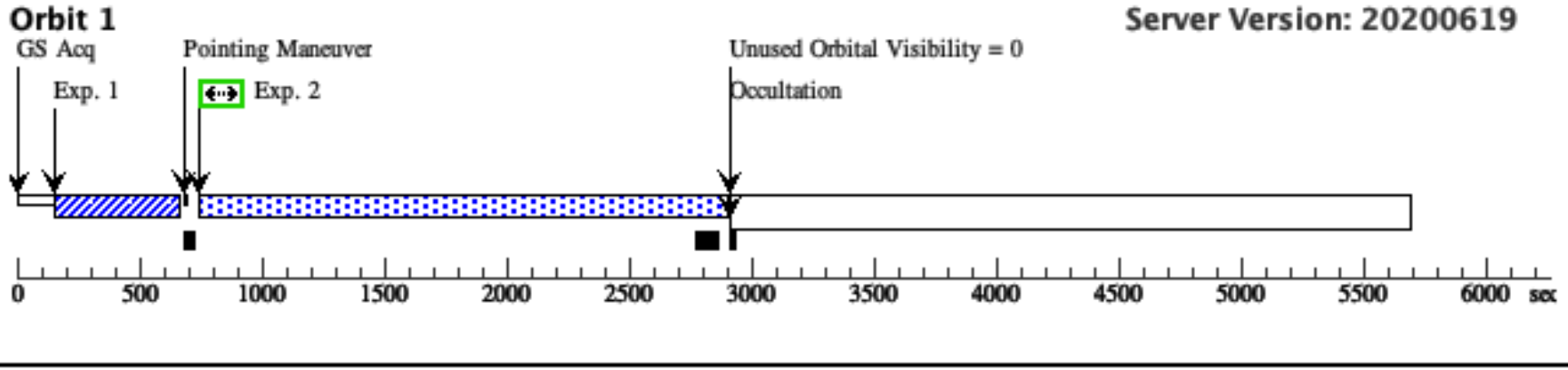
Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide V=13.21, B-V=0.48, U-B=-0.81 and V=13.86, B-V=.60, U-B=-1.04 (U=12.88 and 13.42)

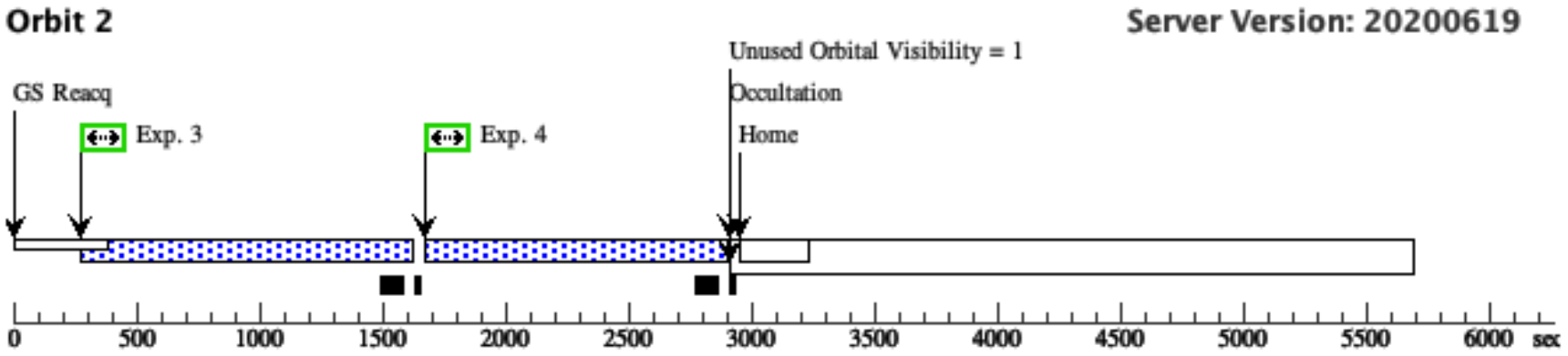
V510 Ori : SO1153, J05393982-0231217
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05393982-0231217&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so1153_lya2_etc.txt
Calculation performed 2020-07-30T14:21:16, v0.4
---
tstatus; V510-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; Haro 5-27, CSV 652, V510-Ori, [HHM2007] 1153
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes
Has STIS F28X50LP ACQ and G750M 6581 52x0.1 observations. Fair agreement between scaled SED and optical photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/Image (COS.ta.1459559)	(4) V510-ORI	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				108.4 Secs (108.4 Secs) *[==>]*	***[1]***
	Comments: S/N = 40 with V510_Ori_sed.fits PSA, MIRRORB, peak local = 2.064, COS.ta.1459559 *texp = 108.4 so1153_lya2_x4.00_etc.txt PSA, MIRRORB, peak local = 8.227, COS.ta.1460254*								
2	G130M/1291-4 (COS.sp.1459562)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1885; FP-POS=4			1995 Secs (1995 Secs) *[==>]*	***[1]***
	Comments: BOT ETC calc with so1153_lya2_x4.00_etc.txt, COS.sp.1459562 *S/N ETC calc with V510_Ori_sed.fits COS.sp.1459563* *so1153_lya2_etc.txt; cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1569.4 s, spectral region:* *1239.0 +- 1.0 A achieves SNR=15.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 359.3 cts/s/segment* *brightest pixel: 0.023 cts/s/pix at 1214.2 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
3	G160M/1623-1 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1067; FP-POS=1			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc with so1153_lya2_x4.00_etc.txt, COS.sp.1459565 *S/N ETC calc with V510_Ori_sed.fits, COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								
4	G160M/1623-2 (COS.sp.1459565)	(4) V510-ORI	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=1067; FP-POS=2			1177 Secs (1177 Secs) *[==>]*	***[2]***
	Comments: BOP ETC calc COS.sp.1459565 *S/N ETC calc COS.sp.1459564* *so1153_lya2_etc.txt; cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=1879.3 s, spectral region:* *1549.0 +- 1.0 A achieves SNR=30.0 / 6-pix-resel* *A factor of 2.0 has been applied to the exptime in each exposure.* *global countrate (brightest segment): 88.6 cts/s/segment* *brightest pixel: 0.012 cts/s/pix at 1548.4 A* *Calculation performed 2020-07-30T14:21:13, v0.9*								

Orbit Structure





Visit

Proposal 16113, V510-ORI-STIS (DS) Thu Jan 14 20:00:37 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%; GROUP DS,DC,DD WITHIN 1D

Comments: vstatus; 4S; V510-ORI;S/STIS Approved for submission; S/CP 28/08/20 ; internal review complete ; S/DW 11/09/20
vcheck; Enter targ name & Inst. & Resp. Sci.; V510 Ori ; STIS ; CP
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?; F28X50LP 0.3s S/N=80
vcheck; Possible ACQ or Sci spoilers? No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; Other visible sources not in GSC2 are fainter than mag 20 in SDSS or Gaia DR2
vcheck; Orbit packing finalized?; Yes
vcheck; Buffer times optimized?; Yes
vcheck; Verify visit grouping correct; Group 4S,4C,4D within 1D
vcheck; phase constraint for ground based observations added?; Yes
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
(4)	V510-ORI Alt Name1: SO1153 Alt Name2: J05393982-0231217	RA: 05 39 39.8280 (84.9159500d) Dec: -02 31 21.87 (-2.52274d) Equinox: J2000	Proper Motion RA: 1.8331142809999998 mas/yr Proper Motion Dec: -0.058937092999999996 mas/yr Parallax: 0.00253283346" Epoch of Position: 2015.5	V=14.30 SpT=K5.5; A_V=0.15; U=14.59 ; V=14.3; J=11.8	Reference Frame: ICRS

Comments: Note that Mundt & Bastian 1980 (A&AS, 39, 245) provide V=13.21, B-V=0.48, U-B=-0.81 and V=13.86, B-V=.60, U-B=-1.04 (U=12.88 and 13.42)

V510 Ori : SO1153, J05393982-0231217
Region: sigma Ori
Simbad: https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2MASS+J05393982-0231217&submit=submit+id
Target coordinates are from Gaia DR2.
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
so1153_lya2_etc.txt
Calculation performed 2020-07-30T14:21:16, v0.4
---
tstatus; V510-ORI; P/COS Approved for submission; S/STIS Approved for submission; P/CP 29/09/20; S/CP 29/09/20
tcheck; APT/SIMBAD target names: ; Haro 5-27, CSV 652, V510-Ori, [HHM2007] 1153
tcheck; Target info verification status?; Good
tcheck; Coordinates & P.M. verified, epoch checked?; Yes
tcheck; Adopted SED compared to Observations?; Yes
Has STIS F28X50LP ACQ and G750M 6581 52x0.1 observations. Fair agreement between scaled SED and optical photometry
Category=STAR
Description=[T TAURI STAR, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1459567)	(4) V510-ORI	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	*[1]*
	Comments: S/N=80 in 0.3s with V510_Ori_sed.fits								
2	G230L/2376 (STIS.sp.1459551)	(4) V510-ORI	STIS/NUV-MAMA, TIME-TAG, 52X2	G230L 2376 A	WAVECAL=NO; BUFFER-TIME=431			861 Secs (861 Secs) *[==>]*	*[1]*
	Comments: 4X BOP check ETC calc STIS.sp.1459551, B.P = 3 cnts/pixel/s *Nominal ETC Calc V510_Ori_sed.fits: STIS.sp.1459553* *so1153_lya2_etc.txt; stis,nuvmama,g230l,c2376,52x2,mjd#59305* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=112.2 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): 2490.4 cts/s/segment* *brightest pixel: 0.731 cts/s/pix at 2790.4 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
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.1459531)	(4) V510-ORI	STIS/CCD, ACCUM, 52X2	G430L 4300 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1			320.4 Secs (320.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
	Comments: so1153_lya2_etc.txt; stis,ccd,g430l,c4300,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=64.9 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): 38774.0 cts/s/segment* *brightest pixel: 15.228 cts/s/pix at 4871.0 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
6	G750L/7751 (STIS.sp.1459532)	(4) V510-ORI	STIS/CCD, ACCUM, 52X2	G750L 7751 A	WAVECAL=NO; CR-SPLIT=2; GAIN=1			37.4 Secs (37.4 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*
	Comments: so1153_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305 *WARNING: operating mode = ACCUM* *Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv* *Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385* *M*: 0.875 ; log(dm/dt): -8.38* *For exptime=7.9 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): 63030.7 cts/s/segment* *brightest pixel: 99.666 cts/s/pix at 6563.9 A* *Calculation performed 2020-07-30T14:21:16, v0.9*								
7	G750L/7751 WAVECAL	WAVE	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]***

Comments: so1153_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
For exptime=7.9 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): 63030.7 cts/s/segment
brightest pixel: 99.666 cts/s/pix at 6563.9 A
Calculation performed 2020-07-30T14:21:16, v0.9

	9	G750L/7751 CCDFLAT CCDFLAT 2	STIS/CCD, ACCUM, 52X2	G750L 7751 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Comments: so1153_lya2_etc.txt; stis,ccd,g750l,c7751,52x2,mjd#59305
WARNING: operating mode = ACCUM
Input file: combined_todo_survey_tess_sort_v2_Gaia_J_CP_edit.csv
Spectral type: K5.5 ; A_V: 0.15 ; Distance (pc): 385
M: 0.875 ; log(dm/dt): -8.38*
For exptime=7.9 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): 63030.7 cts/s/segment
brightest pixel: 99.666 cts/s/pix at 6563.9 A
Calculation performed 2020-07-30T14:21:16, v0.9

Orbit Structure