16097 - ULLYSES LMC B4-5 Supergiants COS+STIS

Cycle: 27, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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

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

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
1C	(1) NGC2004-ELS-3	COS/FUV	2	15-Mar-2021 09:01:18.0	yes
1S	(1) NGC2004-ELS-3 WAVE	STIS/CCD STIS/NUV-MAMA	2	15-Mar-2021 09:01:20.0	yes
2C	(2) SK-68D8	COS/FUV	1	15-Mar-2021 09:01:21.0	yes
2S	(2) SK-68D8 WAVE	STIS/CCD STIS/NUV-MAMA	2	15-Mar-2021 09:01:22.0	yes
BS	(2) SK-68D8 WAVE	STIS/CCD STIS/NUV-MAMA	1	15-Mar-2021 09:01:23.0	yes
GS	(2) SK-68D8 WAVE	STIS/CCD STIS/NUV-MAMA	1	15-Mar-2021 09:01:24.0	yes
3C	(3) SK-69D140	COS/FUV	1	15-Mar-2021 09:01:25.0	yes
CC	(3) SK-69D140	COS/FUV	1	15-Mar-2021 09:01:26.0	yes
3S	(3) SK-69D140 WAVE	STIS/CCD STIS/NUV-MAMA	2	15-Mar-2021 09:01:27.0	yes

13 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 massive ULLYSES stars being observed in the Magellanic clouds.

Depending on target brightness, the main FUV spectral range will generally use either the STIS E140M setting or the combination of the COS c1291 + c1611 settings. Sufficiently bright stars without good FUSE data in the archive will also be observed with the COS c1096 setting to provide coverage at shorter wavelengths. Where time permits, stars of type O9 or later will also be observed with STIS E230M/1978, while for supergiants of spectral type B5 or later E230M/2707 may also be included. Where possible, targets of a given spectral type were selected to span both a range in extinction and in rotation rates to support a variety of stellar and ISM studies.

Signal-to-noise requirements used to determine the desired exposures times were defined as follows:
COS/G130M/c1096: 20 / nine-pixel resel at 1080 A
COS/G130M/c1291: 30 / six-pixel resel at 1150 A
COS/G160M/c1611: 30 / six-pixel resel at 1590 A
COS/G185M/c1953: 30 / three-pixel resel at 1860 A

COS/G185M/c1986: 30 / three-pixel resel at 1980 A
STIS/E140M/c1425: 20 / two-pixel resel at 1200 A
STIS/E230M/c1978: 20 / two-pixel resel at 1800 A
STIS/E230M/c2707: 20 / two-pixel resel at 2800 A
The actual implemented exposure times may be adjusted to efficiently use HST orbits, but should always provide at least 80% of the desired time as defined by the above requirements.

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

Visit

Proposal 16097, NGC2004-ELS-3-COS (1C), completed Mon Mar 15 13:01:28 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 1C; NGC2004-ELS-3; P/COS Approved for submission; P/AF 18/06/20 ; intrev: completed ; COS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; NGC2004-ELS-3; COS ; AF
vcheck; ETC numbers entered in APT?; completed
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes NGC2004-ELS-3_DSS.png & NGC2004-ELS-3_2MASS.png
vcheck; Selected ACQ strategy?; COS dispersed G130M PSA
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; 5 unknowns found & resolved (see Comments)
vcheck; Visual BOT check for stars not in catalog?; No additional targets
vcheck; Orbit packing finalized?; 2 orbits - could not fit in 1 orbit so increased exposure times substantially
vcheck; Buffer times optimized?; Done
vcheck; Verify visit grouping correct; Not applicable
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC2004-ELS-3	RA: 05 30 40.4114 (82.6683808d)		V=12.05	Reference Frame: ICRS
	Alt Name1: RMC-109	Dec: -67 16 8.93 (-67.26915d)		SpT=B5 Ia; E(B-V)=0.29; B=12.14; V=11.9; F1160=2.61e-13; F1360=3.02e-13; F1700=2.57e-13; F2200=1.88e-13; AF reset photometry to (U,	
	Alt Name2: W61-18-8	Equinox: J2000		B,	
				V) = (11.26,	
				11.97,	
				12.05) and E(B-V) = 0.08	

Comments: NGC2004-ELS-3 : NGC 2004-003, NGC2004_3, Cl NGC 2004 ELS 3*
Previous name : NGC 2004-003
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (Cl NGC 2004 ELS 3): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=Cl*+NGC+2004+ELS+3&submit=submit+id*
SpT = B5 Ia
COS/G130M/c1291 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1360 +- 30.0A flux=3e-13 Flam)
COS/G160M/c1611 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1700 +- 5.0A flux=2.6e-13 Flam)
COS/G185M/c1921 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1700 +- 5.0A flux=2.6e-13 Flam)
COS/G185M/c1953 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1700 +- 5.0A flux=2.6e-13 Flam)
COS/G185M/c1986 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam)
STIS/E140M/c1425 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1360 +- 30.0A flux=3e-13 Flam)
STIS/E230M/c1978 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam)
STIS/E230M/c2707 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 33
Calculation performed 2020-02-24T17:52:27, v0.4
---
tstatus; NGC2004-ELS-3; P/COS Approved for submission; S/ins not started; P/AF 30/04/20; S/TS DD/MM/YY
tcheck; APT/SIMBAD target names: ; RMC-109, W61-18-8
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; Verified - Gaia coords -no PM
tcheck; Adopted SED compared to Observations?; Yes ...
Baseline fit was very poor because the reddening was overestimated due to uncertain (B,V) photometry from 2006A&A...456..623E. Replaced with photometry from 1999MNRAS.306..279S, Redid the normalization with E(B-V) = 0.08 to obtain a good fit to the available IUE spectra.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_c1291_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed_vs_IUE.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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/PEAKXD (COS.sa.1448193)	(1) NGC2004-ELS-3	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			0.3 Secs (0.3 Secs) *[==>]*	*[1]*

Comments: SED ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.08), flux1360 +- 30.0A flux=3e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
ETC gives exposure time of 0.2780 s per dwell point. Rounded up to 0.3 s per dwell point.
BOT Check: 8 Safe, 5 Unknown
Used ESA-Sky to obtain additional information about the unknowns:
BOA, S1HD328551 05 30 42.8467 -67 16 23.41 Gaia DR2 4660181078289141632 (G, BP-RP) = (18.94, 1.0). Probably K0.5 V Parallax = -0.22 mas
BOA S1HD328552 05 30 39.8474 -67 16 25.17 Gaia DR2 - no source at this location. Spurious.
BOA S1HD328583 05 30 38.4576 -67 15 56.03 Gaia DR2 4660181151320794240 (G, BP-RP) = (18.91, 1.16) Probably K 2.5 V. Parallax = -0.1 2mas
BOA S1HD328586 05 30 42.7460 -67 16 8.53 Gaia DR2 4660181082601415296 (G, BP-RP) = (18.83, 0.91) Probably G8 V. Parallax = -0.18 mas
PSA S1HD000169 05 30 40.4150 -67 16 8.97 NGC2004-ELS-3 safe via COS.sp.1448320
None of these targets endanger health & safety of COS detector.

2	ACQ/PEAKD (COS.sa.1448193)	(1) NGC2004-ELS-3	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			0.3 Secs (0.3 Secs) *[==>]*	*[1]*

Comments: SED ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.08), flux1360 +- 30.0A flux=3e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
ETC gives exposure time of 0.2780 s per dwell point. Rounded up to 0.3 s per dwell point.
BOT Check: 8 Safe, 5 Unknown
Used ESA-Sky to obtain additional information about the unknowns:
BOA, S1HD328551 05 30 42.8467 -67 16 23.41 Gaia DR2 4660181078289141632 (G, BP-RP) = (18.94, 1.0). Probably K0.5 V Parallax = -0.22 mas
BOA S1HD328552 05 30 39.8474 -67 16 25.17 Gaia DR2 - no source at this location. Spurious.
BOA S1HD328583 05 30 38.4576 -67 15 56.03 Gaia DR2 4660181151320794240 (G, BP-RP) = (18.91, 1.16) Probably K 2.5 V. Parallax = -0.1 2mas
BOA S1HD328586 05 30 42.7460 -67 16 8.53 Gaia DR2 4660181082601415296 (G, BP-RP) = (18.83, 0.91) Probably G8 V. Parallax = -0.18 mas
PSA S1HD000169 05 30 40.4150 -67 16 8.97 NGC2004-ELS-3 safe via COS.sp.1448320
None of these targets endanger health & safety of COS detector.

3	G130M/1291-3 (COS.sp.1448320)	(1) NGC2004-ELS-3	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2118.0; FP-POS=3			1017 Secs (1017 Secs) *[==>]*	*[1]*

Comments: SED ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.08), flux1360 +- 30.0A flux=3e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
For exptime=1098.1 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 1100 s (550 s per FP-POS)
countrate (total, brightest segment) = (7171.8, 4017.0) cts/s
brightest pixel: 0.099 cts/s/pix at 1216.0 A
*BUFFER-TIME = 2/3 * 328 s = 218 s*
Final exptime per FP-POS increased SUBSTANTIALLY during orbit-packing to 1017 s (SNR/resel @ 1150 A = 28.8 per FP-POS; see ETC Request ID COS.sp.1449135)
BOT Check: 5 Safe, 5 Unknown
Used ESA-Sky to obtain additional information about the unknowns:
BOA, S1HD328551 05 30 42.8467 -67 16 23.41 Gaia DR2 4660181078289141632 (G, BP-RP) = (18.94, 1.0). Probably K0.5 V Parallax = -0.22 mas
BOA S1HD328552 05 30 39.8474 -67 16 25.17 Gaia DR2 - no source at this location. Spurious.
BOA S1HD328583 05 30 38.4576 -67 15 56.03 Gaia DR2 4660181151320794240 (G, BP-RP) = (18.91, 1.16) Probably K 2.5 V. Parallax = -0.1 2mas
BOA S1HD328586 05 30 42.7460 -67 16 8.53 Gaia DR2 4660181082601415296 (G, BP-RP) = (18.83, 0.91) Probably G8 V. Parallax = -0.18 mas
PSA S1HD000169 05 30 40.4150 -67 16 8.97 NGC2004-ELS-3 safe via COS.sp.1448320
None of these targets endanger health & safety of COS detector.

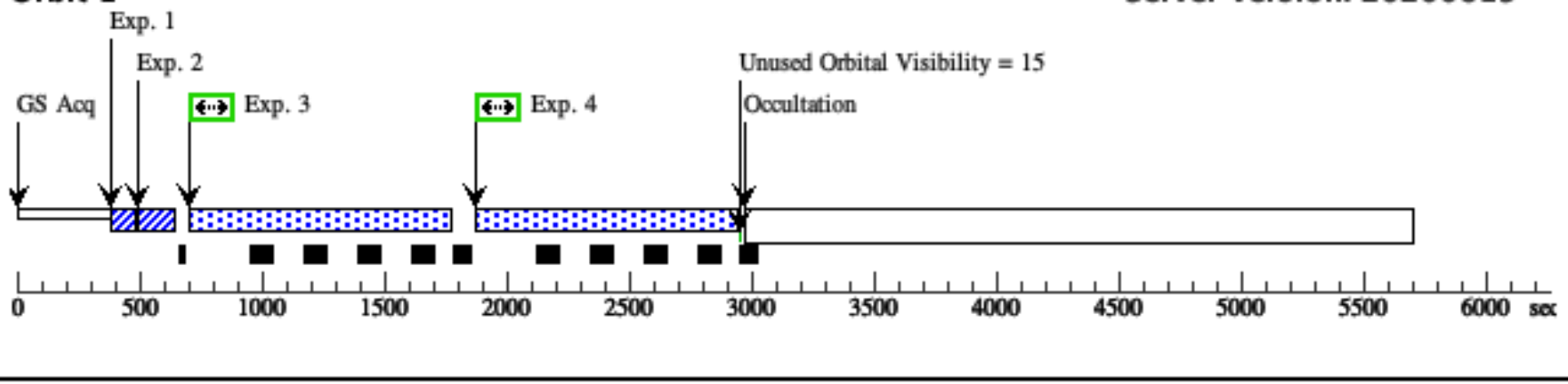
4	G130M/129 1-4 (COS.sp.144 8320)	(1) NGC2004-ELS-3 COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=218.0; FP-POS=4	1017 Secs (1017 Secs) *[==>]*	***[1]***

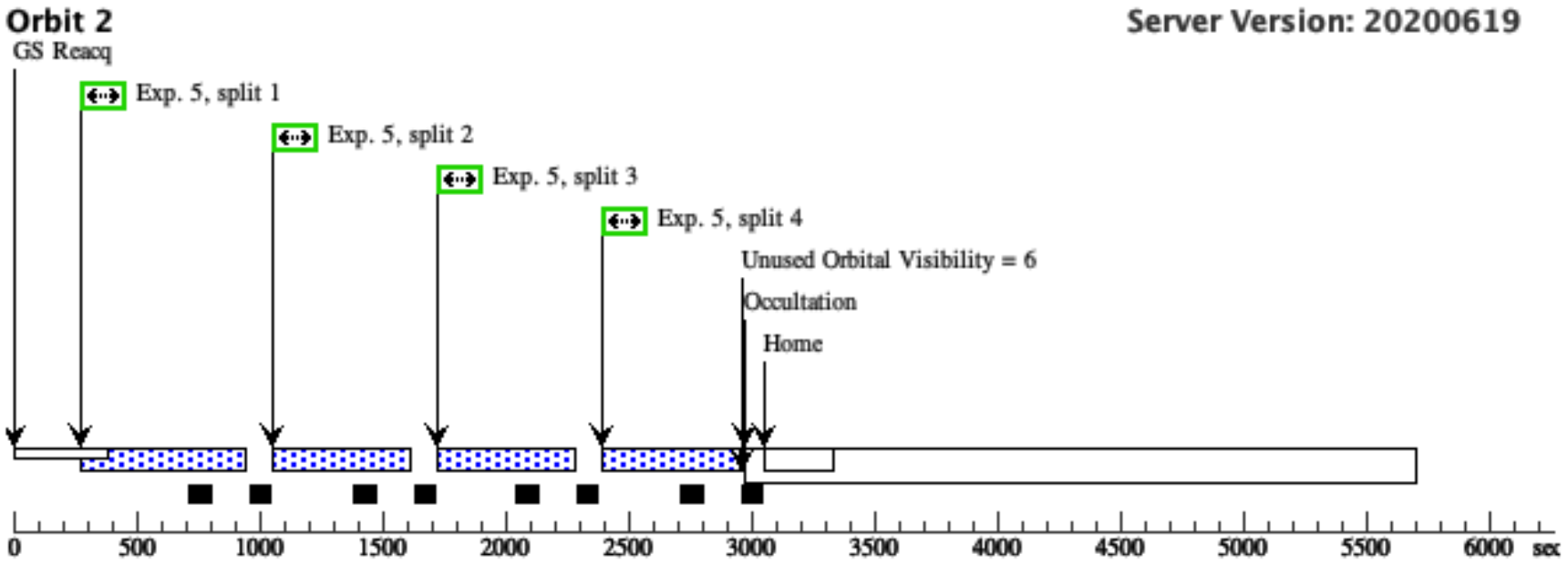
Comments: SED ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.08), flux1360 +- 30.0A flux=3e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
For exptime=1098.1 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 1100 s (550 s per FP-POS)
countrate (total, brightest segment) = (7171.8, 4017.0) cts/s
brightest pixel: 0.099 cts/s/pix at 1216.0 A
*BUFFER-TIME = 2/3 * 328 s = 218 s*
Final exptime per FP-POS increased SUBSTANTIALLY during orbit-packing to 1017 s (SNR/resel @ 1150 A = 28.8 per FP-POS; see ETC Request ID COS.sp.1449135)
BOT Check: 5 Safe, 5 Unknown
Used ESA-Sky to obtain additional information about the unknowns:
BOA, S1HD328551 05 30 42.8467 -67 16 23.41 Gaia DR2 4660181078289141632 (G, BP-RP) = (18.94, 1.0). Probably K0.5 V Parallax = -0.22 mas
BOA S1HD328552 05 30 39.8474 -67 16 25.17 Gaia DR2 - no source at this location. Spurious.
BOA S1HD328583 05 30 38.4576 -67 15 56.03 Gaia DR2 4660181151320794240 (G, BP-RP) = (18.91, 1.16) Probably K 2.5 V. Parallax = -0.1 2mas
BOA S1HD328586 05 30 42.7460 -67 16 8.53 Gaia DR2 4660181082601415296 (G, BP-RP) = (18.83, 0.91) Probably G8 V. Parallax = -0.18 mas
PSA S1HD000169 05 30 40.4150 -67 16 8.97 NGC2004-ELS-3 safe via COS.sp.1448320
None of these targets endanger health & safety of COS detector.

5	G160M/161 1 (COS.sp.144 8380)	(1) NGC2004-ELS-3 COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=286.0; FP-POS=ALL	505 Secs (2020 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[2]***

Comments: SED max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.08), flux1360 +- 30.0A flux=3e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
For exptime=757.1 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 760 s (190 s per FP-POS)
countrate (total, brightest segment) = (5496.6, 4164.4) cts/s
brightest pixel: 0.062cts/s/pix at 1447.0 A
*BUFFER-TIME = 2/3 * 429 S = 286 s*
Final exptime per F-POS increased SUBSTANTIALLY during orbit-packing to 505 s (SNR/resel @ 1590 A = 24.5 per FP-POS; see ETC Request ID COS.sp.1449136)
BOT Check: 5 Safe, 5 Unknown
Used ESA-Sky to obtain additional information about the unknowns:
BOA, S1HD328551 05 30 42.8467 -67 16 23.41 Gaia DR2 4660181078289141632 (G, BP-RP) = (18.94, 1.0). Probably K0.5 V Parallax = -0.22 mas
BOA S1HD328552 05 30 39.8474 -67 16 25.17 Gaia DR2 - no source at this location. Spurious.
BOA S1HD328583 05 30 38.4576 -67 15 56.03 Gaia DR2 4660181151320794240 (G, BP-RP) = (18.91, 1.16) Probably K 2.5 V. Parallax = -0.1 2mas
BOA S1HD328586 05 30 42.7460 -67 16 8.53 Gaia DR2 4660181082601415296 (G, BP-RP) = (18.83, 0.91) Probably G8 V. Parallax = -0.18 mas
PSA S1HD000169 05 30 40.4150 -67 16 8.97 NGC2004-ELS-3 safe via COS.sp.1448320
None of these targets endanger health & safety of COS detector.

Orbit Structure





Visit

Proposal 16097, NGC2004-ELS-3-STIS (1S), completed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 1S; NGC2004-ELS-3; S/STIS Approved for submission; S/TS 25/06/20 ; intrev: complte ; S/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; NGC2004-ELS-3 ; STIS ; TS
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; YES ...
ETC # STIS.sp.1450531 gives S/N~15.5, but plot (STIS_E230M_c1978_SN.png) shows actual S/N is closer to 17.5.
ETC # STIS.sp.1450530 gives S/N~17.6, but plot (STIS_E230M_c2707_SN.png) shows actual S/N is closer to 18.
vcheck; Field images checked & saved?; YES
vcheck; Selected ACQ strategy?; STIS F28X50LP, 0.2 sec gives S/N~130
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; 5 unknowns found & resolved (see Comments)
vcheck; Visual BOT check for stars not in catalog?; No additional stars
vcheck; Orbit packing finalized?; 2 orbits ...
E230M/c2707 required7 00 sec to reach S/N~18 at 2800 angstrom. Rest of the second orbit, and the first orbit was filled with E230M/c1978 which resulted in S/N~18 at 1800 angstrom. For the second orbit, WAVECAL was placed in front of the science exposure for E230M/c1978.
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 2

Fixed Targets

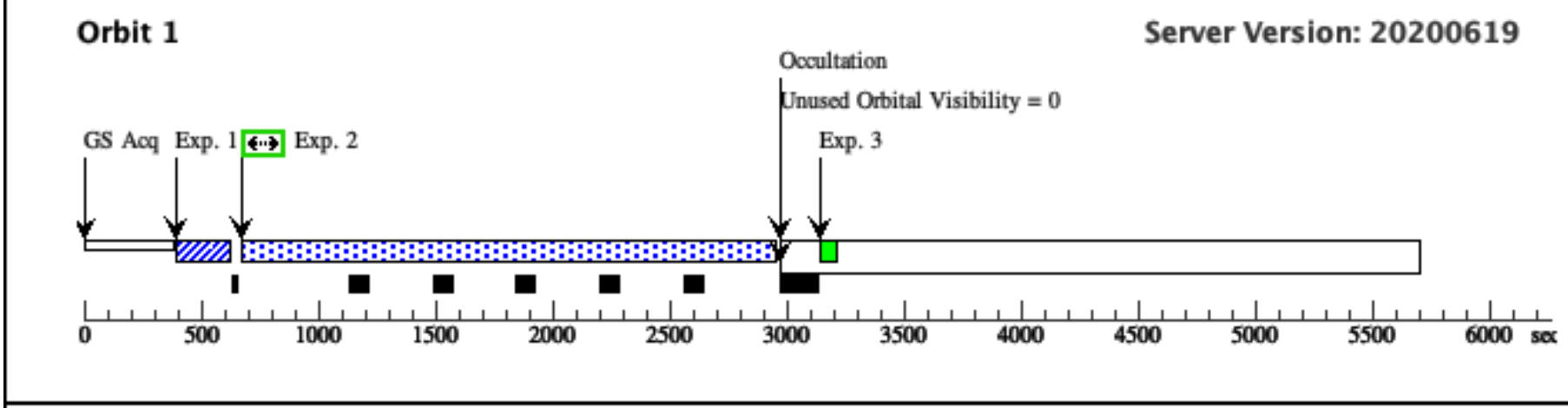
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC2004-ELS-3	RA: 05 30 40.4114 (82.6683808d)		V=12.05	Reference Frame: ICRS
	Alt Name1: RMC-109	Dec: -67 16 8.93 (-67.26915d)		SpT=B5 Ia; E(B-V)=0.29; B=12.14; V=11.9; F1160=2.61e-13; F1360=3.02e-13; F1700=2.57e-13; F2200=1.88e-13; AF reset photometry to (U, B, V) = (11.26, 11.97, 12.05) and E(B-V) = 0.08	
	Alt Name2: W61-18-8	Equinox: J2000			

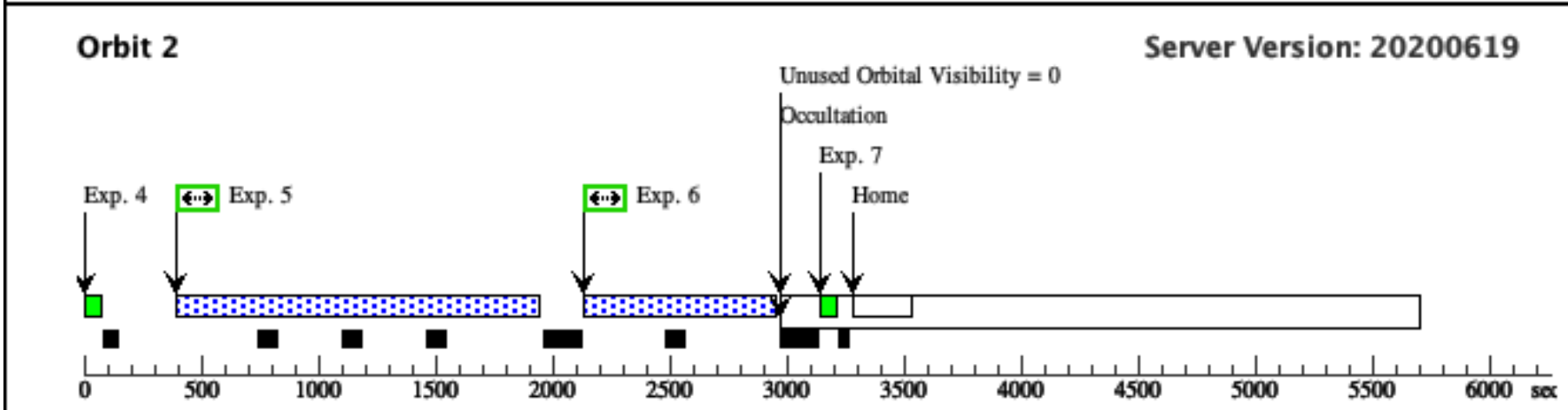
Comments: NGC2004-ELS-3 : NGC 2004-003, NGC2004_3, Cl NGC 2004 ELS 3*
Previous name : NGC 2004-003
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (Cl NGC 2004 ELS 3): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=Cl*+NGC+2004+ELS+3&submit=submit+id*
SpT = B5 Ia
COS/G130M/c1291 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1360 +- 30.0A flux=3e-13 Flam)
COS/G160M/c1611 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1700 +- 5.0A flux=2.6e-13 Flam)
COS/G185M/c1921 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1700 +- 5.0A flux=2.6e-13 Flam)
COS/G185M/c1953 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1700 +- 5.0A flux=2.6e-13 Flam)
COS/G185M/c1986 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam)
STIS/E140M/c1425 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux1360 +- 30.0A flux=3e-13 Flam)
STIS/E230M/c1978 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam)
STIS/E230M/c2707 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 33
Calculation performed 2020-02-24T17:52:27, v0.4
---
tstatus; NGC2004-ELS-3; P/COS Approved for submission; S/ins not started; P/AF 30/04/20; S/TS DD/MM/YY
tcheck; APT/SIMBAD target names: ; RMC-109, W61-18-8
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; Verified - Gaia coords -no PM
tcheck; Adopted SED compared to Observations?; Yes ...
Baseline fit was very poor because the reddening was overestimated due to uncertain (B,V) photometry from 2006A&A...456..623E. Replaced with photometry from 1999MNRAS.306..279S, Redid the normalization with E(B-V) = 0.08 to obtain a good fit to the available IUE spectra.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_c1291_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed_vs_IUE.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/NGC2004-ELS-3/NGC2004-ELS-3_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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.1449641)	(1) NGC2004-ELS-3	STIS/CCD, ACQ, F28X50LP	MIRROR				0.2 Secs (0.2 Secs) *[==>]*	***[1]***
2	E230M/1978 (STIS.sp.1450531)	(1) NGC2004-ELS-3	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=357.0			2166 Secs (2166 Secs) *[==>]*	***[1]***
	Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B5 Ia --> B5 I* *SED = NGC2004-ELS-3_STIS_E230M_c1978_sed.fits* *For exptime=4041.7 s, spectral region:* *1800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4789.7 cts/s/segment* *brightest pixel: 0.080 cts/s/pix at 2292.5 A* *Calculation performed 2020-02-24T17:52:39, v0.4*								
3	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[1]***
4	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[2]***
5	E230M/1978 (STIS.sp.1450531)	(1) NGC2004-ELS-3	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=357.0			1539 Secs (1539 Secs) *[==>]*	***[2]***
	Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B5 Ia --> B5 I* *SED = NGC2004-ELS-3_STIS_E230M_c1978_sed.fits* *For exptime=4041.7 s, spectral region:* *1800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4789.7 cts/s/segment* *brightest pixel: 0.080 cts/s/pix at 2292.5 A* *Calculation performed 2020-02-24T17:52:39, v0.4*								
6	E230M/2707 (STIS.sp.1450530)	(1) NGC2004-ELS-3	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	WAVECAL=NO; BUFFER-TIME=242.0			700 Secs (700 Secs) *[==>]*	***[2]***
	Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.290), flux2200 +- 5.0A flux=1.9e-13 Flam); stis,nuvmama,e230m,c2707,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B5 Ia --> B5 I* *SED = NGC2004-ELS-3_STIS_E230M_c2707_sed.fits* *For exptime=427.9 s, spectral region:* *2800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 10078.2 cts/s/segment* *brightest pixel: 0.198 cts/s/pix at 2648.5 A* *Calculation performed 2020-02-24T17:52:40, v0.4*								
7	E230M/2707 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2707 A				*[==>]*	***[2]***

Orbit Structure





Visit

Proposal 16097, SK-68D8-COS (2C), completed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 2C; SK-68D8; P/COS Approved for submission; P/AF 20/06/20 ; intrev: completed ; COS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-68D8 ; COS ; AF
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes, SK-68D8_DSS.png & SK-68D8_2MASS.png
vcheck; Selected ACQ strategy?; COS dispersed G130M PSA
vcheck; Possible ACQ or Sci spoilers?; 2MASS J04534207-6842558 unlikely to be a problem due to its low UV flux
vcheck; Field BOT clear?; 1 unknown found & resolved
vcheck; Visual BOT check for stars not in catalog?; Additional targets checked; see Comments
vcheck; Orbit packing finalized?; 1 orbit - reduced exposure times by ~20%
vcheck; Buffer times optimized?; Done
vcheck; Verify visit grouping correct; Not applicable
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SK-68D8	RA: 04 53 43.2321 (73.4301337d)		V=10.99	Reference Frame: ICRS
	Alt Name1: HD268729	Dec: -68 42 53.29 (-68.71480d)		SpT=B5 Ia+; E(B-V)=0.14; U=10.2; B=11.0; V=11.0; F1160=1.31e-13; F1360=3.91e-13; F1700=3.74e-13; F2200=2.69e-13	
	Alt Name2: RMC-58	Equinox: J2000			

Comments: SK-68D8 : Sk -68 8, Sk_-688, SK -68 8
Previous name : Sk -68 8
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -68 8): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-68+8&submit=submit+id
SpT = B5 Ia+
COS/G130M/c1291 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
COS/G160M/c1611 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1921 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1953 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1986 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E140M/c1425 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
STIS/E230M/c1978 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E230M/c2707 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:14, v0.4
---
tstatus; SK-68D8; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; HD268729, RMC-58
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; Verified - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes...
Baseline fit for c1291 is good for SWP and most of LWP, but deviates (increases) at wavelengths longer 2600 A, possibly due to contamination from the cool star that is 7 arcsec to the southwest.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_c1291_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed_vs_IUE.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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/PEAKXD (COS.sa.1449154)	(2) SK-68D8	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			0.3 Secs (0.3 Secs) *[==>]*	***[1]***

Comments: SED rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
ETC gives exposure time of 0.2156 s per dwell point. Rounded up to 0.3 s per dwell point.
BOT Check: 8 Safe, 1 Health/Safety Warning, 1 Unknown
The Health/Safety warning refers to the primary target, and results from the assumption that it has a spectral type of O5 V. The ETC calculation confirms that the global{A,B} rate count rate limit is not exceeded.
The unknown target is
BOA, S1Y154658 4 53 44.4 -68 42 42.59 Gaia DR2 4655511521124621184 (G, BP-RP) =(18.92, 0.66) Probably F7 V. Parallax = 0.07 mas.
Other objects in the field not identified by the BOT
(1) Bright object 7 arcsec to the southwest is 2MASS J04534207-6842558 = Gaia DR2 4655510043661581312
(J, H, K, G, GP-RP) = (12.084, 11.660, 11.615, 3.56, 1.14). Gaia GP-RP suggests a spectral type of K2-K2.5. Gaia DR2 parallax is 2.74 mas (364 pc), so this is probably a foreground object.
This target is unlikely to cause issues with the target acq, because it is faint in the UV. There are no health & safety issues, though flaring is a (remote?) possiblity.
(2) Other faint objects in the DSS image but not identified by the BOT:
GAIA DR2 4655511456726824064 04 53 46.01 -68 42 45.4 (G, BP-RP) = (17.87, 1.36). Probably K 4V. Parallax = 0.08 mas
GAIA DR2 4655511456706771072 04 52 46.59 -68 42 50.2 (G, BP-RP) = (18.84, 0.08). Probably A3 V. Parallax = 0.25 mas
GAIA DR2 4655511456706771072 04 53 45.49 -68 42 54.9 (G, BP-RP) = (18.87, 0.11). Probably A4 V. Parallax = -0.39 mas
GAIA DR2 4655509979238016000 04 53 44.77 -68 42 56.2 (G, BP-RP) = (19.21, 1.29). Probably K4 V. Parallax = -0.06 mas
None of these targets endanger health & safety of COS detector.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	ACQ/PEAKD (COS.sa.1449154)	(2) SK-68D8	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			0.3 Secs (0.3 Secs) *[==>]*	***[1]***

Comments: SED rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
ETC gives exposure time of 0.2156 s per dwell point. Rounded up to 0.3 s per dwell point.
BOT Check: 8 Safe, 1 Health/Safety Warning, 1 Unknown
The Health/Safety warning refers to the primary target, and results from the assumption that it has a spectral type of O5 V. The ETC calculation confirms that the global{A,B} rate count rate limit is not exceeded.
The unknown target is
BOA, S1Y154658 4 53 44.4 -68 42 42.59 Gaia DR2 4655511521124621184 (G, BP-RP) =(18.92, 0.66) Probably F7 V. Parallax = 0.07 mas.
Other objects in the field not identified by the BOT
(1) Bright object 7 arcsec to the southwest is 2MASS J04534207-6842558 = Gaia DR2 4655510043661581312
(J, H, K, G, GP-RP) = (12.084, 11.660, 11.615, 3.56, 1.14). Gaia GP-RP suggests a spectral type of K2-K2.5. Gaia DR2 parallax is 2.74 mas (364 pc), so this is probably a foreground object.
This target is unlikely to cause issues with the target acq, because it is faint in the UV. There are no health & safety issues, though flaring is a (remote?) possiblity.
(2) Other faint objects in the DSS image but not identified by the BOT:
GAIA DR2 4655511456726824064 04 53 46.01 -68 42 45.4 (G, BP-RP) = (17.87, 1.36). Probably K 4V. Parallax = 0.08 mas
GAIA DR2 4655511456706771072 04 52 46.59 -68 42 50.2 (G, BP-RP) = (18.84, 0.08). Probably A3 V. Parallax = 0.25 mas
GAIA DR2 4655511456706771072 04 53 45.49 -68 42 54.9 (G, BP-RP) = (18.87, 0.11). Probably A4 V. Parallax = -0.39 mas
GAIA DR2 4655509979238016000 04 53 44.77 -68 42 56.2 (G, BP-RP) = (19.21, 1.29). Probably K4 V. Parallax = -0.06 mas
None of these targets endanger health & safety of COS detector.

3	G130M/129 (2) SK-68D8 1-3 (COS.sp.144 9155)	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=17 0.0; FP-POS=3	377 Secs (377 Secs) *[==>]*		***[1]***

Comments: SED rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
For exptime= 961.3 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 964 s (482 s per FP-POS)
countrate (total, brightest segment) = (9188.6, 5376.1) cts/s
brightest pixel: 0.100 cts/s/pix at 1216.2 A
*BUFFER-TIME = 2/3 * 256 S = 170 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 377 s; SNR/resel @ 1150 A = 26.6 for 2 FP-PPOS (total exptime = 754 s); see ETC Request ID COS.sp.1449288
BOT Check: 8 Safe, 1 Health/Safety Warning, 1 Unknown
The Health/Safety warning refers to the primary target, and results from the assumption that it has a spectral type of O5 V. The ETC calculation confirms that the global{A,B} rate count rate limit is not exceeded.
The unknown target is
BOA, S1Y154658 4 53 44.4 -68 42 42.59 Gaia DR2 4655511521124621184 (G, BP-RP) =(18.92, 0.66) Probably F7 V. Parallax = 0.07 mas.
Other objects in the field not identified by the BOT
(1) Bright object 7 arcsec to the southwest is 2MASS J04534207-6842558 = Gaia DR2 4655510043661581312
(J, H, K, G, GP-RP) = (12.084, 11.660, 11.615, 3.56, 1.14). Gaia GP-RP suggests a spectral type of K2-K2.5. Gaia DR2 parallax is 2.74 mas (364 pc), so this is probably a foreground object.
This target is unlikely to cause issues with the target acq, because it is faint in the UV. There are no health & safety issues, though flaring is a (remote?) possiblity.
(2) Other faint objects in the DSS image but not identified by the BOT:
GAIA DR2 4655511456726824064 04 53 46.01 -68 42 45.4 (G, BP-RP) = (17.87, 1.36). Probably K 4V. Parallax = 0.08 mas
GAIA DR2 4655511456706771072 04 52 46.59 -68 42 50.2 (G, BP-RP) = (18.84, 0.08). Probably A3 V. Parallax = 0.25 mas
GAIA DR2 4655511456706771072 04 53 45.49 -68 42 54.9 (G, BP-RP) = (18.87, 0.11). Probably A4 V. Parallax = -0.39 mas
GAIA DR2 4655509979238016000 04 53 44.77 -68 42 56.2 (G, BP-RP) = (19.21, 1.29). Probably K4 V. Parallax = -0.06 mas
None of these targets endanger health & safety of COS detector.

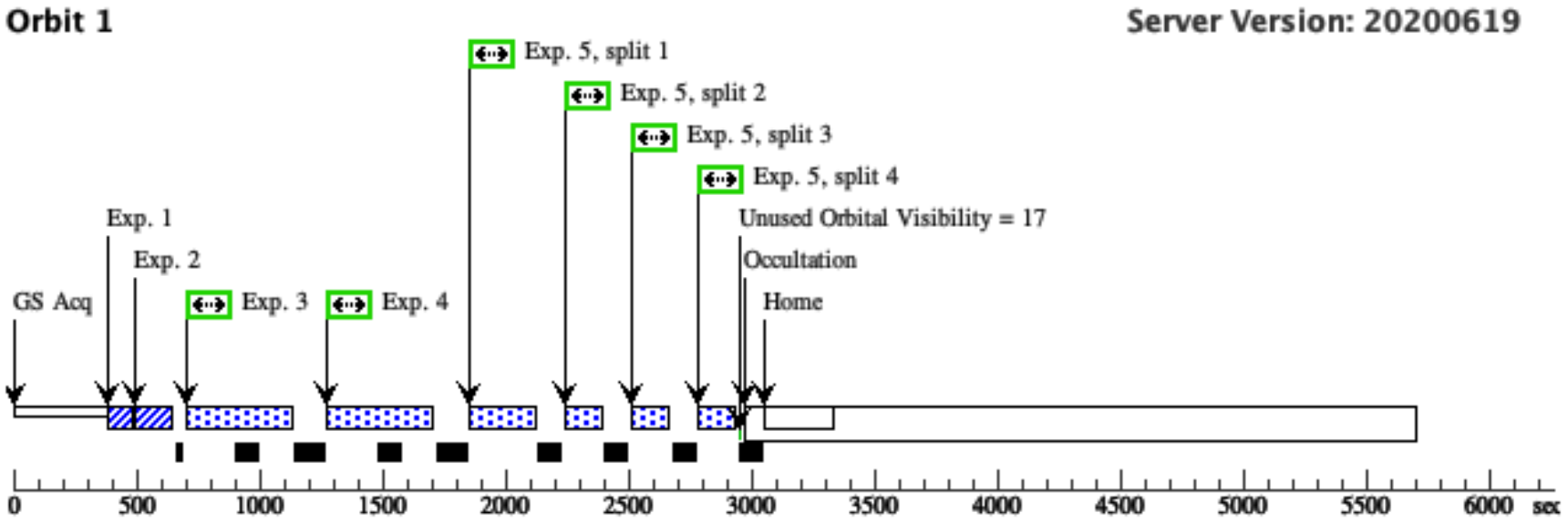
4	G130M/129 (2) SK-68D8 1-4 (COS.sp.144 9155)	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=17 0.0; FP-POS=4	377 Secs (377 Secs) *[==>]*		***[1]***

Comments: SED rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
For exptime= 961.3 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 964 s (482 s per FP-POS)
countrate (total, brightest segment) = (9188.6, 5376.1) cts/s
brightest pixel: 0.100 cts/s/pix at 1216.2 A
*BUFFER-TIME = 2/3 * 256 S = 170 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 377 s; SNR/resel @ 1150 A = 26.6 for 2 FP-PPOS (total exptime = 754 s); see ETC Request ID COS.sp.1449288
BOT Check: 8Safe, 1 Health/Safety Warning, 1 Unknown
The Health/Safety warning refers to the primary target, and results from the assumption that it has a spectral type of O5 V. The ETC calculation confirms that the global{A,B} rate count rate limit is not exceeded.
The unknown target is
BOA, S1Y154658 4 53 44.4 -68 42 42.59 Gaia DR2 4655511521124621184 (G, BP-RP) =(18.92, 0.66) Probably F7 V. Parallax = 0.07 mas.
Other objects in the field not identified by the BOT
(1) Bright object 7 arcsec to the southwest is 2MASS J04534207-6842558 = Gaia DR2 4655510043661581312
(J, H, K, G, GP-RP) = (12.084, 11.660, 11.615, 3.56, 1.14). Gaia GP-RP suggests a spectral type of K2-K2.5. Gaia DR2 parallax is 2.74 mas (364 pc), so this is probably a foreground object.
This target is unlikely to cause issues with the target acq, because it is faint in the UV. There are no health & safety issues, though flaring is a (remote?) possiblity.
(2) Other faint objects in the DSS image but not identified by the BOT:
GAIA DR2 4655511456726824064 04 53 46.01 -68 42 45.4 (G, BP-RP) = (17.87, 1.36). Probably K 4V. Parallax = 0.08 mas
GAIA DR2 4655511456706771072 04 52 46.59 -68 42 50.2 (G, BP-RP) = (18.84, 0.08). Probably A3 V. Parallax = 0.25 mas
GAIA DR2 4655511456706771072 04 53 45.49 -68 42 54.9 (G, BP-RP) = (18.87, 0.11). Probably A4 V. Parallax = -0.39 mas
GAIA DR2 4655509979238016000 04 53 44.77 -68 42 56.2 (G, BP-RP) = (19.21, 1.29). Probably K4 V. Parallax = -0.06 mas
None of these targets endanger health & safety of COS detector.

5	G160M/161 1 (COS.sp.1449156)	(2) SK-68D8	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=113; FP-POS=ALL	100 Secs (400 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*

Comments: SED rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
For exptime=521.8 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 524 s (131 s per FP-POS)
countrate (total, brightest segment) = (7820.1, 5877.1) cts/s
brightest pixel: 0.086 cts/s/pix at 1447 A
*BUFFER-TIME = 2/3 * 301 s = 113 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 100 s; SNR/resel @ 1590 A = 26.2 for 4 FP-PPOS (total exptime = 400 s), see ETC Request ID COS.sp.1449290
BOT Check: 8Safe, 1 Health/Safety Warning, 1 Unknown
The Health/Safety warning refers to the primary target, and results from the assumption that it has a spectral type of O5 V. The ETC calculation confirms that the global{A,B} rate count rate limit is not exceeded.
The unknown target is
BOA, S1Y154658 4 53 44.4 -68 42 42.59 Gaia DR2 4655511521124621184 (G, BP-RP) =(18.92, 0.66) Probably F7 V. Parallax = 0.07 mas.
Other objects in the field not identified by the BOT
(1) Bright object 7 arcsec to the southwest is 2MASS J04534207-6842558 = Gaia DR2 4655510043661581312
(J, H, K, G, GP-RP) = (12.084, 11.660, 11.615, 3.56, 1.14). Gaia GP-RP suggests a spectral type of K2-K2.5. Gaia DR2 parallax is 2.74 mas (364 pc), so this is probably a foreground object.
This target is unlikely to cause issues with the target acq, because it is faint in the UV. There are no health & safety issues, though flaring is a (remote?) possiblity.
(2) Other faint objects in the DSS image but not identified by the BOT:
GAIA DR2 4655511456726824064 04 53 46.01 -68 42 45.4 (G, BP-RP) = (17.87, 1.36). Probably K 4V. Parallax = 0.08 mas
GAIA DR2 4655511456706771072 04 52 46.59 -68 42 50.2 (G, BP-RP) = (18.84, 0.08). Probably A3 V. Parallax = 0.25 mas
GAIA DR2 4655511456706771072 04 53 45.49 -68 42 54.9 (G, BP-RP) = (18.87, 0.11). Probably A4 V. Parallax = -0.39 mas
GAIA DR2 4655509979238016000 04 53 44.77 -68 42 56.2 (G, BP-RP) = (19.21, 1.29). Probably K4 V. Parallax = -0.06 mas
None of these targets endanger health & safety of COS detector.

Orbit Structure



Visit

Proposal 16097, SK-68D8-STIS (2S), failed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; SK-68D8; S/STIS Approved for submission; S/TS 25/06/20 ; intrev: completed ; STIS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-68D8 ; STIS ; TS
vcheck; ETC numbers entered in APT?; Complete
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; YES ...
ETC # STIS.sp.1450531 gives S/N~20 (STIS_E230M_c1978_SN.png).
ETC # STIS.sp.1450530 gives S/N~20 (STIS_E230M_c2707_SN.png).
vcheck; Field images checked & saved?; YES
vcheck; Selected ACQ strategy?; STIS F28X50LP, 0.1 sec gives S/N~130
vcheck; Possible ACQ or Sci spoilers?; 2MASS J04534207-6842558 unlikely to be a problem due to its low UV flux
vcheck; Field BOT clear?; YES
vcheck; Visual BOT check for stars not in catalog?; Done
vcheck; Orbit packing finalized?; 2 orbits ...
E230M/c2707 only required 500 sec to reach S/N~20 at 2800 angstrom. Rest of the second orbit, and the first orbit was filled with E230M/c1978 which resulted in S/N~20 at 1800 angstrom. For the second orbit, WAVECAL was placed in front of the science exposure for E230M/c1978.
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 2

Fixed Targets

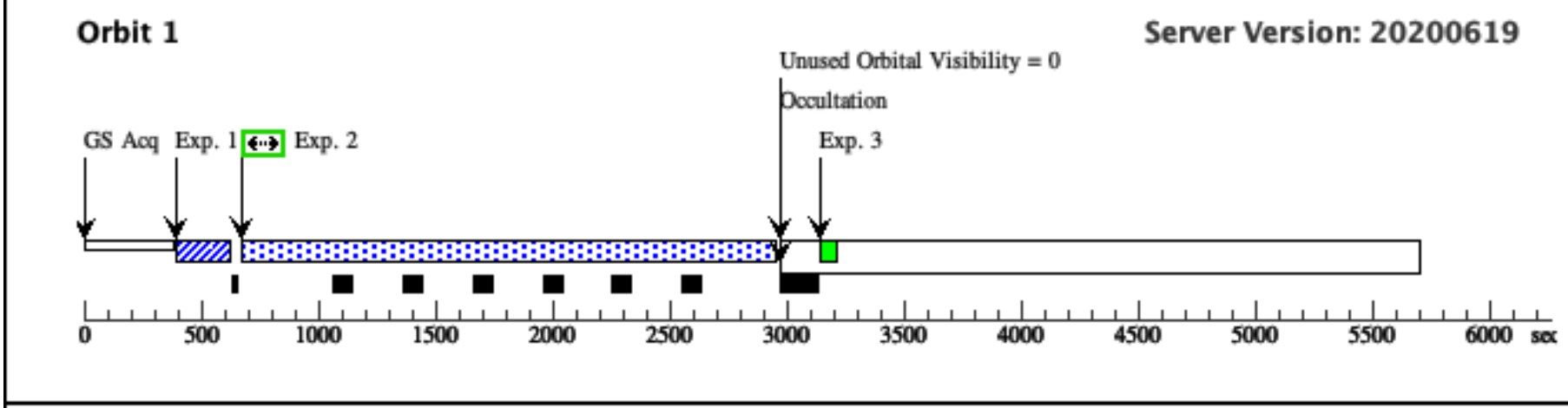
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SK-68D8	RA: 04 53 43.2321 (73.4301337d)		V=10.99	Reference Frame: ICRS
	Alt Name1: HD268729	Dec: -68 42 53.29 (-68.71480d)		SpT=B5 Ia+; E(B-V)=0.14; U=10.2; B=11.0; V=11.0; F1160=1.31e-13; F1360=3.91e-13; F1700=3.74e-13; F2200=2.69e-13	
	Alt Name2: RMC-58	Equinox: J2000			

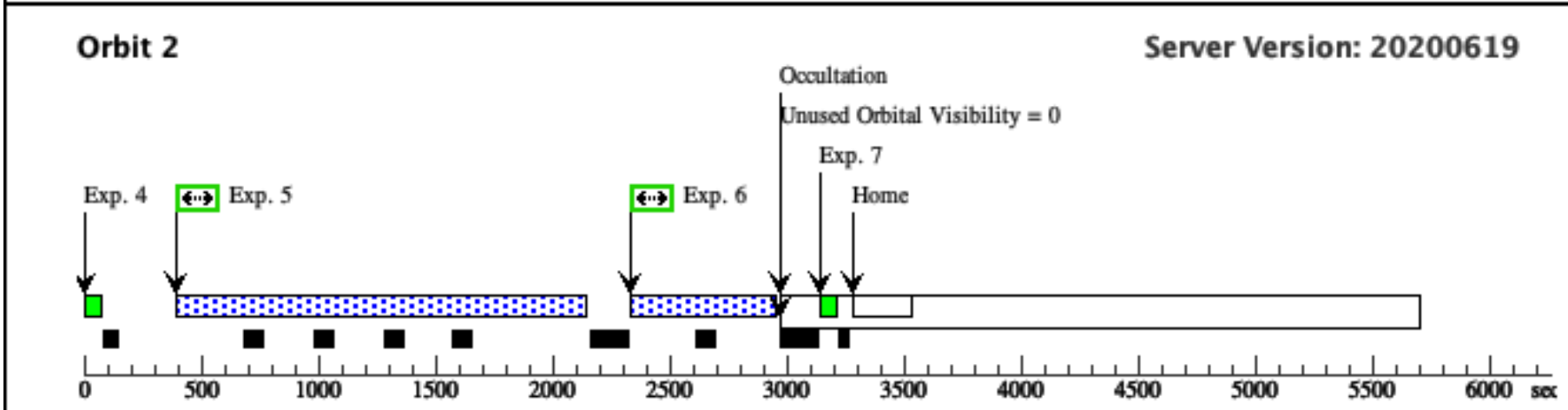
Comments: SK-68D8 : Sk -68 8, Sk_-688, SK -68 8
Previous name : Sk -68 8
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -68 8): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-68+8&submit=submit+id
SpT = B5 Ia+
COS/G130M/c1291 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
COS/G160M/c1611 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1921 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1953 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1986 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E140M/c1425 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
STIS/E230M/c1978 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E230M/c2707 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:14, v0.4
---
tstatus; SK-68D8; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; HD268729, RMC-58
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; Verified - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes...
Baseline fit for c1291 is good for SWP and most of LWP, but deviates (increases) at wavelengths longer 2600 A, possibly due to contamination from the cool star that is 7 arcsec to the southwest.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_c1291_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed_vs_IUE.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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.1449652)	(2) SK-68D8	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
2	E230M/1978 (STIS.sp.1449662)	(2) SK-68D8	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=296.0			2166 Secs (2166 Secs) *[==>]*	***[1]***
	Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B5 Ia+ --> B5 I* *SED = SK-68D8_STIS_E230M_c1978_sed.fits* *For exptime=3329.7 s, spectral region:* *1800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 5515.8 cts/s/segment* *brightest pixel: 0.102 cts/s/pix at 2292.5 A* *Calculation performed 2020-02-24T17:52:26, v0.4*								
3	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[1]***
4	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[2]***
5	E230M/1978 (STIS.sp.1449662)	(2) SK-68D8	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=296.0			1739 Secs (1739 Secs) *[==>]*	***[2]***
	Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B5 Ia+ --> B5 I* *SED = SK-68D8_STIS_E230M_c1978_sed.fits* *For exptime=3329.7 s, spectral region:* *1800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 5515.8 cts/s/segment* *brightest pixel: 0.102 cts/s/pix at 2292.5 A* *Calculation performed 2020-02-24T17:52:26, v0.4*								
6	E230M/2707 (STIS.sp.1449659)	(2) SK-68D8	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	WAVECAL=NO; BUFFER-TIME=172.0			500.0 Secs (500 Secs) *[==>]*	***[2]***
	Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam); stis,nuvmama,e230m,c2707,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B5 Ia+ --> B5 I* *SED = SK-68D8_STIS_E230M_c2707_sed.fits* *For exptime=495.7 s, spectral region:* *2800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 9523.7 cts/s/segment* *brightest pixel: 0.183 cts/s/pix at 2648.0 A* *Calculation performed 2020-02-24T17:52:27, v0.4*								
7	E230M/2707 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2707 A				*[==>]*	***[2]***

Orbit Structure





Visit

Proposal 16097, SK-68D8-STIS (BS), failed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; SK-68D8; S/STIS Approved for submission; S/TS 25/06/20 ; intrev: completed ; STIS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-68D8 ; STIS ; TS
vcheck; ETC numbers entered in APT?; Complete
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; YES ...
ETC # STIS.sp.1450531 gives S/N~20 (STIS_E230M_c1978_SN.png).
ETC # STIS.sp.1450530 gives S/N~20 (STIS_E230M_c2707_SN.png).
vcheck; Field images checked & saved?; YES
vcheck; Selected ACQ strategy?; STIS F28X50LP, 0.1 sec gives S/N~130
vcheck; Possible ACQ or Sci spoilers?; 2MASS J04534207-6842558 unlikely to be a problem due to its low UV flux
vcheck; Field BOT clear?; YES
vcheck; Visual BOT check for stars not in catalog?; Done
vcheck; Orbit packing finalized?; 2 orbits ...
E230M/c2707 only required 500 sec to reach S/N~20 at 2800 angstrom. Rest of the second orbit, and the first orbit was filled with E230M/c1978 which resulted in S/N~20 at 1800 angstrom. For the second orbit, WAVECAL was placed in front of the science exposure for E230M/c1978.
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SK-68D8	RA: 04 53 43.2321 (73.4301337d)		V=10.99	Reference Frame: ICRS
	Alt Name1: HD268729	Dec: -68 42 53.29 (-68.71480d)		SpT=B5 Ia+; E(B-V)=0.14; U=10.2; B=11.0; V=11.0; F1160=1.31e-13; F1360=3.91e-13; F1700=3.74e-13; F2200=2.69e-13	
	Alt Name2: RMC-58	Equinox: J2000			

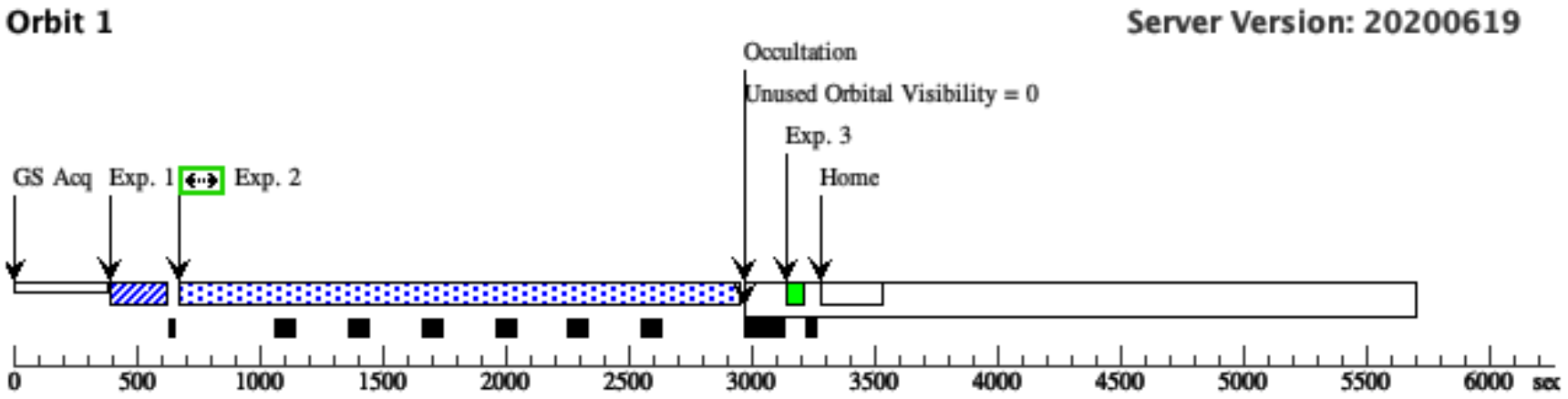
Comments: SK-68D8 : Sk -68 8, Sk_-688, SK -68 8
Previous name : Sk -68 8
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -68 8): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-68+8&submit=submit+id
SpT = B5 Ia+
COS/G130M/c1291 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
COS/G160M/c1611 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1921 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1953 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1986 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E140M/c1425 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
STIS/E230M/c1978 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E230M/c2707 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:14, v0.4
---
tstatus; SK-68D8; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; HD268729, RMC-58
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; Verified - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes...
Baseline fit for c1291 is good for SWP and most of LWP, but deviates (increases) at wavelengths longer 2600 A, possibly due to contamination from the cool star that is 7 arcsec to the southwest.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_c1291_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed_vs_IUE.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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.1449652)	(2) SK-68D8	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	E230M/1978 (STIS.sp.1449662)	(2) SK-68D8	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=296.0			2166 Secs (2166 Secs) *[==>]*	*[1]*
3	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	*[1]*

Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305
From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
Spectral type: B5 Ia+ --> B5 I
SED = SK-68D8_STIS_E230M_c1978_sed.fits
For exptime=3329.7 s, spectral region:
1800.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 5515.8 cts/s/segment
brightest pixel: 0.102 cts/s/pix at 2292.5 A
Calculation performed 2020-02-24T17:52:26, v0.4

Orbit Structure



Visit

Proposal 16097, SK-68D8-STIS (GS) Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; SK-68D8; S/STIS Approved for submission; S/TS 25/06/20 ; intrev: completed ; STIS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-68D8 ; STIS ; TS
vcheck; ETC numbers entered in APT?; Complete
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; YES ...
ETC # STIS.sp.1450531 gives S/N~20 (STIS_E230M_c1978_SN.png).
ETC # STIS.sp.1450530 gives S/N~20 (STIS_E230M_c2707_SN.png).
vcheck; Field images checked & saved?; YES
vcheck; Selected ACQ strategy?; STIS F28X50LP, 0.1 sec gives S/N~130
vcheck; Possible ACQ or Sci spoilers?; 2MASS J04534207-6842558 unlikely to be a problem due to its low UV flux
vcheck; Field BOT clear?; YES
vcheck; Visual BOT check for stars not in catalog?; Done
vcheck; Orbit packing finalized?; 2 orbits ...
E230M/c2707 only required 500 sec to reach S/N~20 at 2800 angstrom. Rest of the second orbit, and the first orbit was filled with E230M/c1978 which resulted in S/N~20 at 1800 angstrom. For the second orbit, WAVECAL was placed in front of the science exposure for E230M/c1978.
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 2

re-do failed visit BS (approved HOPR 91966) as visit GS

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SK-68D8	RA: 04 53 43.2321 (73.4301337d)		V=10.99	Reference Frame: ICRS
	Alt Name1: HD268729	Dec: -68 42 53.29 (-68.71480d)		SpT=B5 Ia+; E(B-V)=0.14; U=10.2; B=11.0; V=11.0; F1160=1.31e-13; F1360=3.91e-13; F1700=3.74e-13; F2200=2.69e-13	
	Alt Name2: RMC-58	Equinox: J2000			

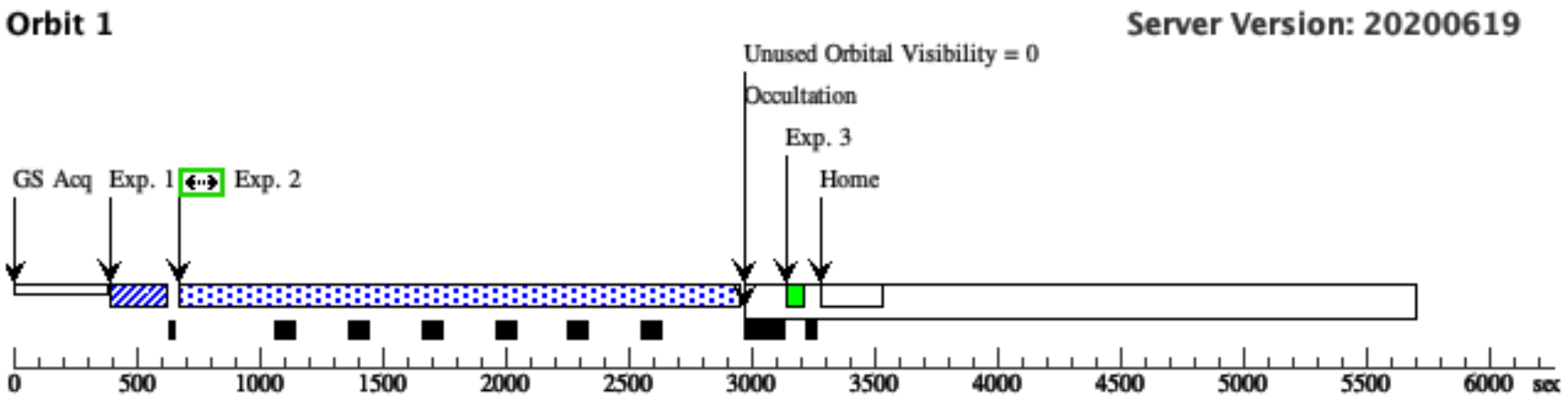
Comments: SK-68D8 : Sk -68 8, Sk_-688, SK -68 8
Previous name : Sk -68 8
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -68 8): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-68+8&submit=submit+id
SpT = B5 Ia+
COS/G130M/c1291 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
COS/G160M/c1611 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1921 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1953 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1700 +- 5.0A flux=3.7e-13 Flam)
COS/G185M/c1986 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E140M/c1425 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux1360 +- 30.0A flux=3.9e-13 Flam)
STIS/E230M/c1978 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
STIS/E230M/c2707 : rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:14, v0.4
---
tstatus; SK-68D8; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; HD268729, RMC-58
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; Verified - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes...
Baseline fit for c1291 is good for SWP and most of LWP, but deviates (increases) at wavelengths longer 2600 A, possibly due to contamination from the cool star that is 7 arcsec to the southwest.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_c1291_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed_vs_IUE.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-68D8/SK-68D8_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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.1449652)	(2) SK-68D8	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	 ***[1]***
2	E230M/1978 (STIS.sp.1449662)	(2) SK-68D8	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=296.0			2166 Secs (2166 Secs) *[==>]*	 ***[1]***
3	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[1]***

Comments: rn-max(ck04models(B5I,Teff=13600,metallicity=0.008,logG=2.5) (extinction lmcavg=0.140), flux2200 +- 5.0A flux=2.7e-13 Flam); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305
From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
Spectral type: B5 Ia+ --> B5 I
SED = SK-68D8_STIS_E230M_c1978_sed.fits
For exptime=3329.7 s, spectral region:
1800.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 5515.8 cts/s/segment
brightest pixel: 0.102 cts/s/pix at 2292.5 A
Calculation performed 2020-02-24T17:52:26, v0.4

Orbit Structure



Visit

Proposal 16097, SK-69D140-COS (3C), failed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 3C; SK-69D140; P/COS Approved for submission; P/AF 21/06/20 ; intrev: completed ; COS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-69D140 ; COS; AF
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes, SK-69D140_DSS.png & SK-69D140_2MASS.png
vcheck; Selected ACQ strategy?; COS dispersed G130M PSA
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; 1 unknown found and resolved
vcheck; Visual BOT check for stars not in catalog?; No additional targets
vcheck; Orbit packing finalized?; 1 orbit - reduced exposure times by ~20% (G130M) and ~10% (G160M)
vcheck; Buffer times optimized?; Done
vcheck; Verify visit grouping correct; Not applicable
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SK-69D140	RA: 05 27 39.3932 (81.9141383d)		V=12.71	Reference Frame: ICRS
	Alt Name1: M2002-LMC-139017	Dec: -69 12 41.85 (-69.21163d) Equinox: J2000		SpT=B4 I; E(B-V)=0.03; U=11.7; B=12.6; V=12.7	

Comments: SK-69D140 : [M2002]_139017, Sk -69 140, SK -69 140
Previous name : Sk -69 140
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -69 140): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-69+140&submit=submit+id
SpT = B4 I
COS/G130M/c1291 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G160M/c1611 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1921 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1953 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1986 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E140M/c1425 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E230M/c1978 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E230M/c2707 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:01, v0.4
---
tstatus; SK-69D140; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; M2002-LMC-139017
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes ...
Only UBV photometry is available for this star. Extrapolating UV fluxes from optical photometry is inherently risky!
The baseline fit for the U-band was replaced with a fit to the B-band to avoid inaccuracies due to the U-band spanning the Balmer jump.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_U_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed_vs_UBV.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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/PEAK XD (COS.sa.1449323)	(3) SK-69D140	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			0.2 Secs (0.2 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
ETC gives exposure time of 0.1885 s per dwell point. Rounded up to 0.2 s per dwell point.
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	ACQ/PEAK D (COS.sa.1449323)	(3) SK-69D140	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			0.2 Secs (0.2 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
ETC gives exposure time of 0.1885 s per dwell point. Rounded up to 0.2 s per dwell.
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

#	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.1449315)	(3) SK-69D140	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=150; FP-POS=3			220 Secs (220 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
For exptime=551.4 s, spectral region:
1150 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 552 s (276 s per FP-POS)
countrate (total, brightest segment) = (10412.1, 5504.6) cts/s
brightest pixel: 0.116 cts/s/pix at 1216.2 A
*BUFFER-TIME = 2/3 * 226 S = 150 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 220 s; SNR/resel @ 1150 A = 26.8 for 2 FP-PPOS (total exptime = 440 s); see ETC Request ID COS.sp.1449336
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

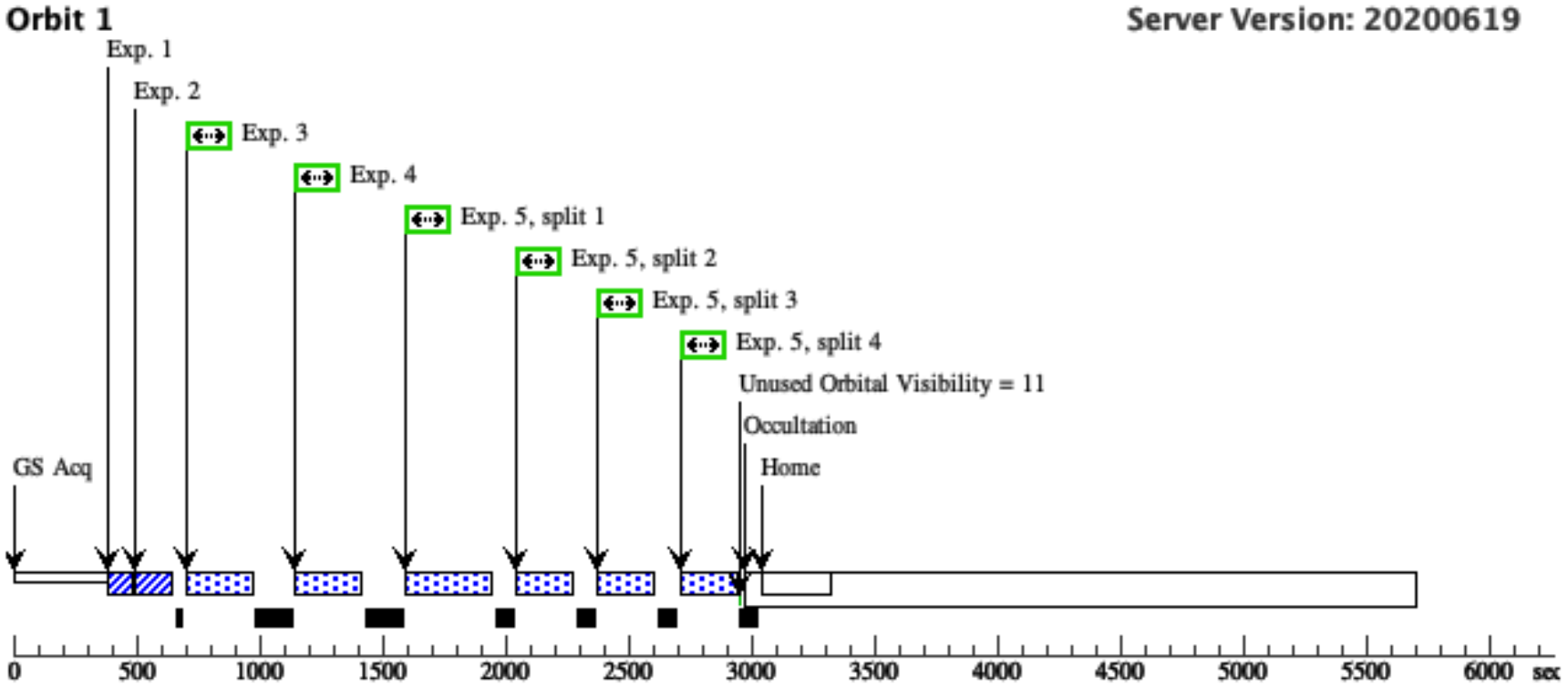
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
4	G130M/1291-4 (COS.sp.1449315)	(3) SK-69D140	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=150; FP-POS=4			220 Secs (220 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
For exptime=551.4 s, spectral region:
1150 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 552 s (276 s per FP-POS)
countrate (total, brightest segment) = (10412.1, 5504.6) cts/s
brightest pixel: 0.116 cts/s/pix at 1216.2 A
*BUFFER-TIME = 2/3 * 226 S = 150 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 220 s; SNR/resel @ 1150 A = 26.8 for 2 FP-PPOS (total exptime = 440 s); see ETC Request ID COS.sp.144933
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

5	G160M/1611 (COS.sp.1449318)	(3) SK-69D140	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=278; FP-POS=ALL	180 Secs (720 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
For exptime=785.8 s, spectral region:
1590 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 788 s (197 s per FP-POS)
countrate (total, brightest segment) = (5639.6, 4308.6) cts/s
brightest pixel: 0.068 cts/s/pix at 1442 A
*BUFFER-TIME = 2/3 * 418 S = 278 s*
Final exptime per FP-POS decreased by ~10% during orbit-packing to 180 s; SNR/resel @ 1590 A = 28.7 for 4 FP-PPOS (total exptime = 720 s), see ETC Request ID COS.sp.1449337
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

Orbit Structure



Visit

Proposal 16097, SK-69D140-COS-REPEAT (CC), completed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 3C; SK-69D140; P/COS Approved for submission; P/AF 21/06/20 ; intrev: completed ; COS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-69D140 ; COS; AF
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; Yes
vcheck; Field images checked & saved?; Yes, SK-69D140_DSS.png & SK-69D140_2MASS.png
vcheck; Selected ACQ strategy?; COS dispersed G130M PSA
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; 1 unknown found and resolved
vcheck; Visual BOT check for stars not in catalog?; No additional targets
vcheck; Orbit packing finalized?; 1 orbit - reduced exposure times by ~20% (G130M) and ~10% (G160M)
vcheck; Buffer times optimized?; Done
vcheck; Verify visit grouping correct; Not applicable
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SK-69D140	RA: 05 27 39.3932 (81.9141383d)		V=12.71	Reference Frame: ICRS
	Alt Name1: M2002-LMC-139017	Dec: -69 12 41.85 (-69.21163d) Equinox: J2000		SpT=B4 I; E(B-V)=0.03; U=11.7; B=12.6; V=12.7	

Comments: SK-69D140 : [M2002]_139017, Sk -69 140, SK -69 140
Previous name : Sk -69 140
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -69 140): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-69+140&submit=submit+id
SpT = B4 I
COS/G130M/c1291 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G160M/c1611 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1921 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1953 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1986 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E140M/c1425 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E230M/c1978 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E230M/c2707 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:01, v0.4
---
tstatus; SK-69D140; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; M2002-LMC-139017
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes ...
Only UBV photometry is available for this star. Extrapolating UV fluxes from optical photometry is inherently risky!
The baseline fit for the U-band was replaced with a fit to the B-band to avoid inaccuracies due to the U-band spanning the Balmer jump.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_U_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed_vs_UBV.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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/PEAKXD (COS.sa.1449323)	(3) SK-69D140	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			0.2 Secs (0.2 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag) ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
ETC gives exposure time of 0.1885 s per dwell point. Rounded up to 0.2 s per dwell point.
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	ACQ/PEAKD (COS.sa.1449323)	(3) SK-69D140	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			0.2 Secs (0.2 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag) ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
ETC gives exposure time of 0.1885 s per dwell point. Rounded up to 0.2 s per dwell.
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

#	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.1449315)	(3) SK-69D140	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=150; FP-POS=3			220 Secs (220 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag) ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
For exptime=551.4 s, spectral region:
1150 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 552 s (276 s per FP-POS)
countrate (total, brightest segment) = (10412.1, 5504.6) cts/s
brightest pixel: 0.116 cts/s/pix at 1216.2 A
*BUFFER-TIME = 2/3 * 226 S = 150 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 220 s; SNR/resel @ 1150 A = 26.8 for 2 FP-PPOS (total exptime = 440 s); see ETC Request ID COS.sp.1449336
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

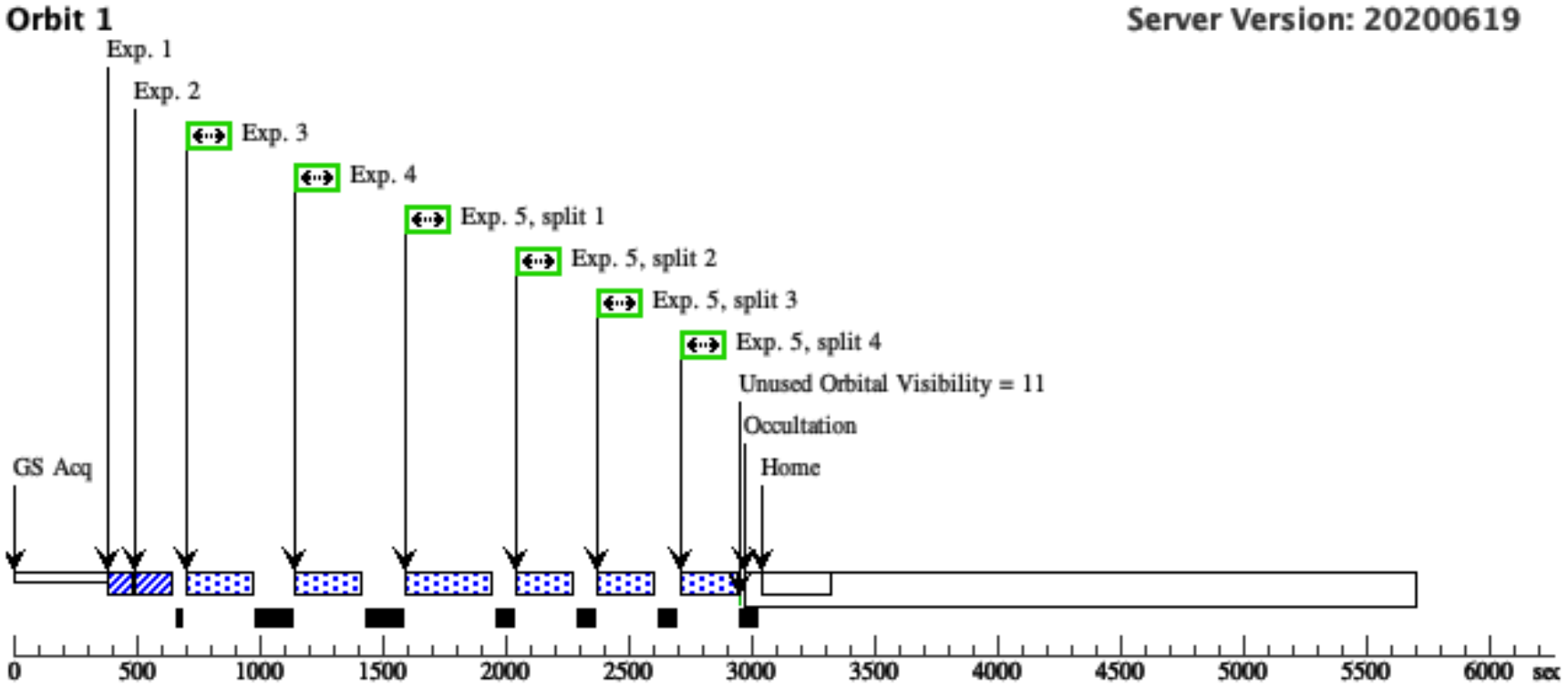
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
4	G130M/1291-4 (COS.sp.1449315)	(3) SK-69D140	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=150; FP-POS=4			220 Secs (220 Secs) [==>]	[1]

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag) ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
For exptime=551.4 s, spectral region:
1150 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 552 s (276 s per FP-POS)
countrate (total, brightest segment) = (10412.1, 5504.6) cts/s
brightest pixel: 0.116 cts/s/pix at 1216.2 A
*BUFFER-TIME = 2/3 * 226 S = 150 s*
Final exptime per FP-POS decreased by ~20% during orbit-packing to 220 s; SNR/resel @ 1150 A = 26.8 for 2 FP-PPOS (total exptime = 440 s); see ETC Request ID COS.sp.144933
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

5	G160M/1611 (COS.sp.1449318)	(3) SK-69D140	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=278; FP-POS=ALL	180 Secs (720 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***

Comments: SED rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson B mag=12.60 vegamag)
~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
For exptime=785.8 s, spectral region:
1590 +- 0.5 A achieves SNR=30.0/resel
Baseline exptime rounded to 788 s (197 s per FP-POS)
countrate (total, brightest segment) = (5639.6, 4308.6) cts/s
brightest pixel: 0.068 cts/s/pix at 1442 A
*BUFFER-TIME = 2/3 * 418 S = 278 s*
Final exptime per FP-POS decreased by ~10% during orbit-packing to 180 s; SNR/resel @ 1590 A = 28.7 for 4 FP-PPOS (total exptime = 720 s), see ETC Request ID COS.sp.1449337
BOT Check: 6 Safe, 1 Unknown
The unknown object is the primary science target in the PSA, which the ETC calculation shows to be safe.

Orbit Structure



Visit

Proposal 16097, SK-69D140-STIS (3S), completed Mon Mar 15 13:01:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 3S; SK-69D140; S/STIS Approved for submission; S/TS 22/06/20 ; intrev: completed ; STIS/CP 13/07/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK69D140 ; STIS ; TS
vcheck; ETC numbers entered in APT?; Complete
vcheck; Any screening violations?; None
vcheck; S/N ETC calcs done & documented?; YES ...
ETC ID# STIS.sp.1449675 gives S/N~17, but plot (STIS_E230M_c1978_SN.png) shows actual S/N is closer to 20.
vcheck; Field images checked & saved?; YES (see COS visit)
vcheck; Selected ACQ strategy?; STIS F28X50LP 0.3 sec fives S/N~100
vcheck; Possible ACQ or Sci spoilers?; None
vcheck; Field BOT clear?; YES
vcheck; Visual BOT check for stars not in catalog?; Done
vcheck; Orbit packing finalized?; 2 orbits
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SK-69D140	RA: 05 27 39.3932 (81.9141383d)		V=12.71	Reference Frame: ICRS
	Alt Name1: M2002-LMC-139017	Dec: -69 12 41.85 (-69.21163d)		SpT=B4 I; E(B-V)=0.03; U=11.7; B=12.6; V=12.7	
		Equinox: J2000			

Comments: SK-69D140 : [M2002]_139017, Sk -69 140, SK -69 140
Previous name : Sk -69 140
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -69 140): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-69+140&submit=submit+id
SpT = B4 I
COS/G130M/c1291 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G160M/c1611 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1921 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1953 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
COS/G185M/c1986 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E140M/c1425 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E230M/c1978 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
STIS/E230M/c2707 : rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T17:52:01, v0.4
---
tstatus; SK-69D140; P/COS Approved for submission; S/ins not started; P/AF 6/5/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; M2002-LMC-139017
tcheck; Target info verification status?; Complete
tcheck; Coordinates & P.M. updated?; - Gaia coords -PM set to 0
tcheck; Adopted SED compared to Observations?; Yes ...
Only UBV photometry is available for this star. Extrapolating UV fluxes from optical photometry is inherently risky!
The baseline fit for the U-band was replaced with a fit to the B-band to avoid inaccuracies due to the U-band spanning the Balmer jump.
Baseline illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_U_auto_sed.png
Adopted illustrated: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed_vs_UBV.png
Adopted SED: ~/box/ullyses_tech/ullyses_proposals/c27_mc/16097/SK-69D140/SK-69D140_adopted_sed.fits
Category=EXT-STAR
Description=[B3-B5 III-I]
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.1449674)	(3) SK-69D140	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	***[1]***
2	E230M/1978 (STIS.sp.1449675)	(3) SK-69D140	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=358.0			2166 Secs (2166 Secs) *[==>]*	***[1]***
	Comments: rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B4 I --> B4 I* *SED = SK-69D140_STIS_E230M_c1978_sed.fits* *For exptime=5175.9 s, spectral region:* *1800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4669.3 cts/s/segment* *brightest pixel: 0.075 cts/s/pix at 2292.0 A* *Calculation performed 2020-02-24T17:52:13, v0.4*								
3	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[1]***
4	E230M/1978 (STIS.sp.1449675)	(3) SK-69D140	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	WAVECAL=NO; BUFFER-TIME=358.0			2548 Secs (2548 Secs) *[==>]*	***[2]***
	Comments: rn(ck04models(B4I,Teff=16080,metallicity=0.008,logG=2.52) (extinction lmcavg=0.030), johnson U mag=11.660 vegamag); stis,nuvmama,e230m,c1978,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: B4 I --> B4 I* *SED = SK-69D140_STIS_E230M_c1978_sed.fits* *For exptime=5175.9 s, spectral region:* *1800.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4669.3 cts/s/segment* *brightest pixel: 0.075 cts/s/pix at 2292.0 A* *Calculation performed 2020-02-24T17:52:13, v0.4*								
5	E230M/1978 WAVECAL	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				*[==>]*	***[2]***

Orbit Structure