16091 - ULLYSES LMC O7/O8 stars STIS

Cycle: 27, 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?*
1S	(1) BI272 WAVE	STIS/CCD STIS/FUV-MAMA	3	15-Mar-2021 09:00:51.0	yes
2S	(2) LH9-34 WAVE	STIS/CCD STIS/FUV-MAMA	3	15-Mar-2021 09:00:53.0	yes
BS	(2) LH9-34 WAVE	STIS/CCD STIS/FUV-MAMA	3	15-Mar-2021 09:00:55.0	yes
GS	(2) LH9-34 WAVE	STIS/CCD STIS/FUV-MAMA	1	15-Mar-2021 09:00:56.0	yes
3S	(3) SK-67D118 WAVE	STIS/CCD STIS/FUV-MAMA	2	15-Mar-2021 09:00:57.0	yes
4S	(4) SK-68D16 WAVE	STIS/CCD STIS/FUV-MAMA	2	15-Mar-2021 09:00:58.0	yes
4T	(4) SK-68D16 WAVE	STIS/CCD STIS/FUV-MAMA	2	15-Mar-2021 09:00:59.0	yes

16 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 16091, BI272-STIS (1S), completed Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: SCHED 100%

Comments: vstatus; 1S; BI272; P/STIS Approved for Submission; P/TS 26/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; BI272 ; 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.1443863 gives S/N=19.4 at 1200 angstroms. S/N plot shows actual S/N is >20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES, BI272_DSS.png, BI272_2MASS.png
vcheck; Selected ACQ strategy?; STIS F28X50LP 1 sec gives S/N~100 ...
Even if the optical fluxes are indeed higher by x2 as previous observations suggest, exptime=1 sec will still be far from saturation.
vcheck; Possible ACQ or Sci spoilers?; NO
vcheck; Field BOT clear?; YES - 1 safe GSC2 source which is the target itself
vcheck; Visual BOT check for stars not in catalog?; YES
vcheck; Orbit packing finalized?; YES - 3 orbits as assigned
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 3

Diagnostics

(BI272-STIS (1S)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(BI272-STIS (1S)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BI272	RA: 05 44 23.1130 (86.0963042d)		V=13.28	Reference Frame: ICRS
	Alt Name1: BI-272	Dec: -67 14 29.20 (-67.24144d)		SpT=O7:III-II:; E(B-V)=0.05; B =13.1; V=13.3; F1160=1.13e-12 ; F1360=7.06e-13	
		Equinox: J2000			

Comments: BI272 : BI_272, BI 272
Previous name : BI272
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (BI 272): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=BI+272&submit=submit+id
SpT = O7:III-II:
COS/G130M/c1096 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1160 +- 30.0A flux=1.1e-12 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 212
Calculation performed 2020-02-24T18:05:31, v0.4
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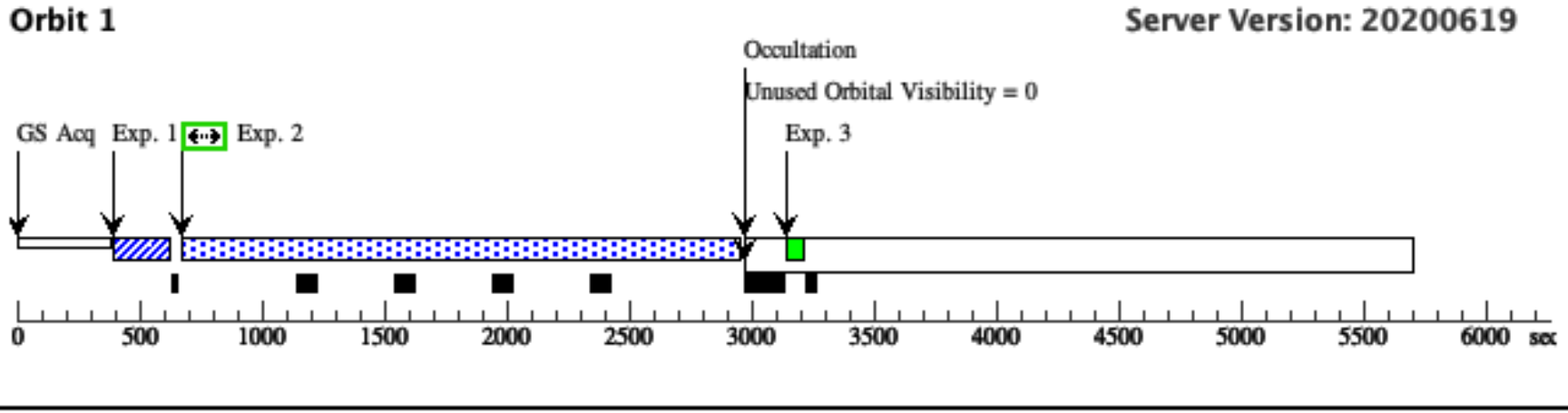
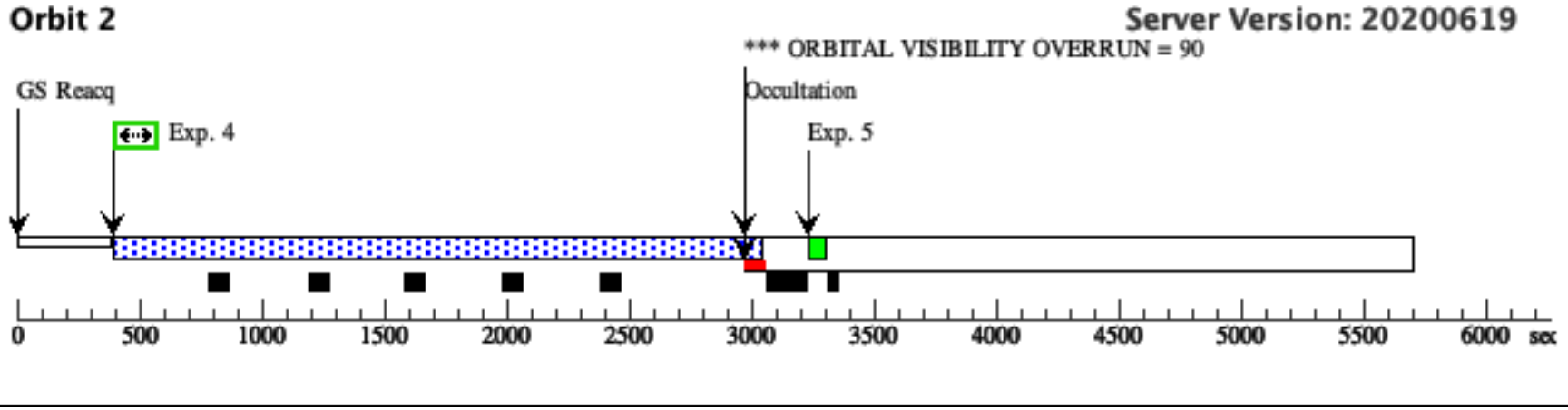
tstatus; BI272; P/STIS ready for internal review; S/ins not started; P/TS 21/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; BI272, 'BI 272'
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; Coordinates accurate, no changes made
tcheck; Adopted SED compared to Observations?; OK - SED scaled to FOS data ...
FOS observation y25u1001t was used for SED normalization. E(B-V) decreased from 0.05 to 0.03. New SED is named BI272_newsed.fits. The new SED underestimates optical bands by a factor of ~2, but flux at relevant levels match.
Category=EXT-STAR
Description=[GIANT O]
Extended=NO

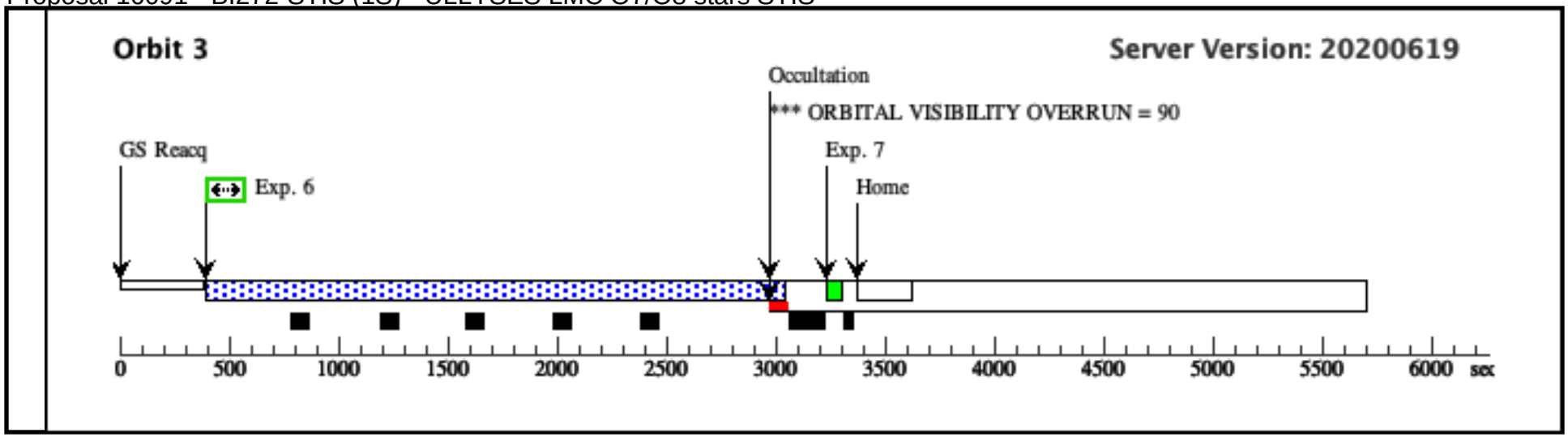
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443861)	(1) BI272	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	*[1]*
2	E140M/1425 (STIS.sp.1443863)	(1) BI272	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=398			2192 Secs (2192 Secs) *[==>]*	*[1]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7:III-II: --> O7.5 III* *SED = BI272_STIS_E140M_c1425_sed.fits* *For exptime=5470.9 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4023.3 cts/s/segment* *brightest pixel: 0.041 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:41, v0.4*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[1]*
4	E140M/1425 (STIS.sp.1443863)	(1) BI272	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=398			2638 Secs (2638 Secs) *[==>]*	*[2]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7:III-II: --> O7.5 III* *SED = BI272_STIS_E140M_c1425_sed.fits* *For exptime=5470.9 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4023.3 cts/s/segment* *brightest pixel: 0.041 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:41, v0.4*								
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[2]*
6	E140M/1425 (STIS.sp.1443863)	(1) BI272	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=398			2638 Secs (2638 Secs) *[==>]*	*[3]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.050), flux1360 +- 30.0A flux=7.1e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7:III-II: --> O7.5 III* *SED = BI272_STIS_E140M_c1425_sed.fits* *For exptime=5470.9 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4023.3 cts/s/segment* *brightest pixel: 0.041 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:41, v0.4*								
7	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20200619
Occultation
*** ORBITAL VISIBILITY OVERRUN = 90
GS Reacq
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16091, LH9-34-STIS (2S), failed Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; LH9-34; P/STIS Approved for Submission; P/TS 22/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; LH9-34 ; 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.1443493 gives S/N=18.3 at 1200 angstroms. S/N plot shows actual S/N is close to >20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES - LH9-34_DSS.png, LH9-34_2MASS.png
vcheck; Selected ACQ strategy?; STIS F28X50LP 0.3 sec gives S/N~110
vcheck; Possible ACQ or Sci spoilers?; NO
vcheck; Field BOT clear?; YES - 1 unknown GSC2 source which is the target itself.
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; YES - 3 orbits as assigned
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 3

Diagnostics

(LH9-34-STIS (2S)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LH9-34-STIS (2S)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LH9-34	RA: 04 56 45.2887 (74.1887029d)		V=12.66	Reference Frame: ICRS
	Alt Name1: PGMW-1363	Dec: -66 29 37.01 (-66.49361d)		SpT=O8.5 Iaf; E(B-V)=0.17; U=11.6; B=12.6; V=12.7	
		Equinox: J2000			

Comments: LH9-34 : [PGMW]-1363, [PGMW]_1363, PGMW 1363
Previous name : [PGMW]-1363
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (PGMW 1363): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=PGMW+1363&submit=submit+id
SpT = O8.5 Iaf
COS/G130M/c1096 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G130M/c1291 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G160M/c1611 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1921 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1953 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1986 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E140M/c1425 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E230M/c1978 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E230M/c2707 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:07:17, v0.4
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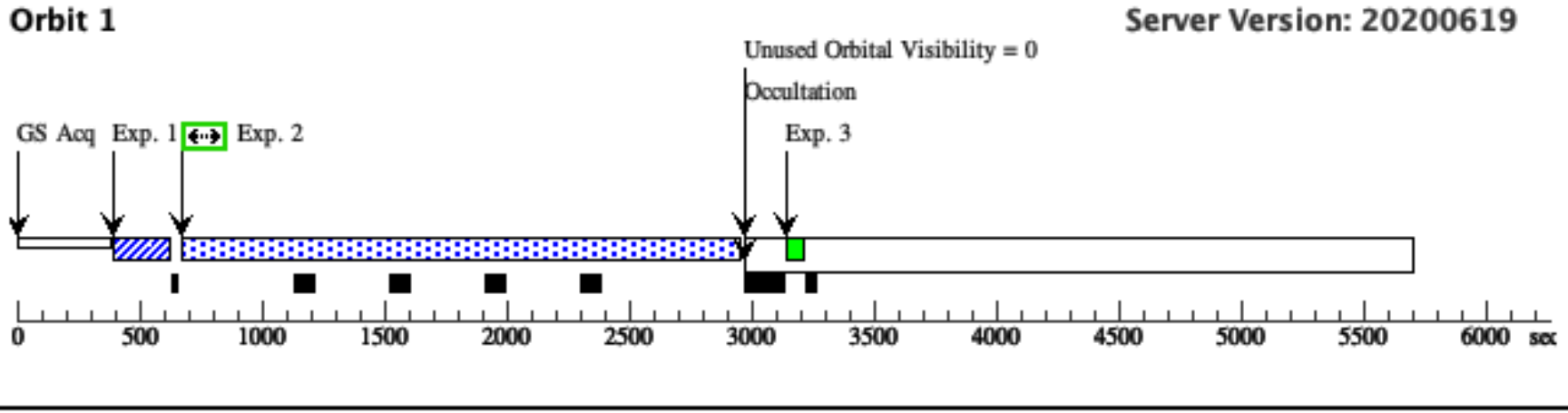
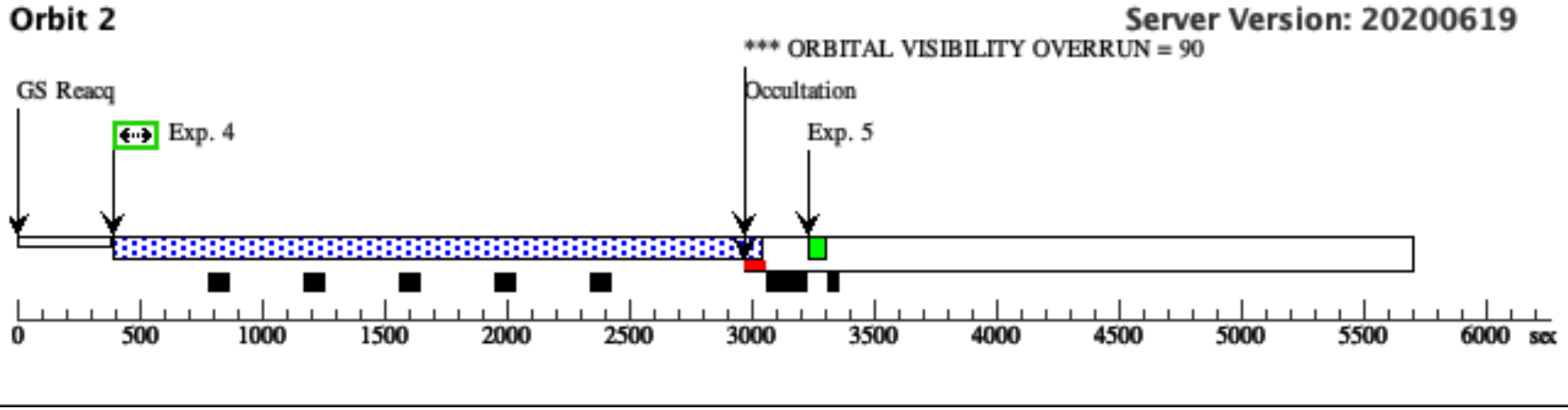
tstatus; LH9-34; P/STIS Approved for Submission; S/ins not started; P/TS 22/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; LH9-34, 'BI 37' ...
Other names: 'PGMW 1363'
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; No
tcheck; Adopted SED compared to Observations?; OK ...
No previous UV observations, so the SED is normalized in the shortest available band (U band).
Category=EXT-STAR
Description=[SUPERGIANT O, OF]
Extended=NO

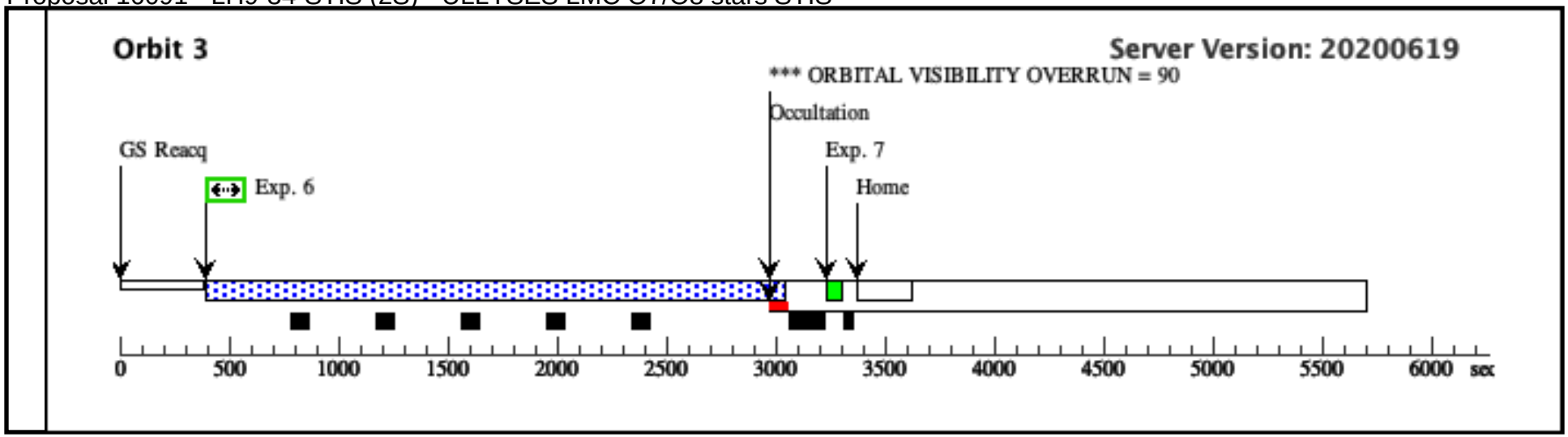
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443494)	(2) LH9-34	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	*[1]*
2	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2196 Secs (2196 Secs) *[==>]*	*[1]*
	Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O8.5 Iaf --> O8.5 I* *SED = LH9-34_STIS_E140M_c1425_sed.fits* *For exptime=5871.5 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4136.4 cts/s/segment* *brightest pixel: 0.040 cts/s/pix at 1297.9 A* *Calculation performed 2020-02-24T18:07:27, v0.4*									
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[1]*
4	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2638 Secs (2638 Secs) *[==>]*	*[2]*
	Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O8.5 Iaf --> O8.5 I* *SED = LH9-34_STIS_E140M_c1425_sed.fits* *For exptime=5871.5 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4136.4 cts/s/segment* *brightest pixel: 0.040 cts/s/pix at 1297.9 A* *Calculation performed 2020-02-24T18:07:27, v0.4*									
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[2]*
6	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2638 Secs (2638 Secs) *[==>]*	*[3]*
	Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O8.5 Iaf --> O8.5 I* *SED = LH9-34_STIS_E140M_c1425_sed.fits* *For exptime=5871.5 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4136.4 cts/s/segment* *brightest pixel: 0.040 cts/s/pix at 1297.9 A* *Calculation performed 2020-02-24T18:07:27, v0.4*									
7	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20200619
*** ORBITAL VISIBILITY OVERRUN = 90
Occultation
GS Reacq
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16091, LH9-34-STIS (BS), failed Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; LH9-34; P/STIS Approved for Submission; P/TS 22/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; LH9-34 ; 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.1443493 gives S/N=18.3 at 1200 angstroms. S/N plot shows actual S/N is close to >20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES - LH9-34_DSS.png, LH9-34_2MASS.png
vcheck; Selected ACQ strategy?; STIS F28X50LP 0.3 sec gives S/N~110
vcheck; Possible ACQ or Sci spoilers?; NO
vcheck; Field BOT clear?; YES - 1 unknown GSC2 source which is the target itself.
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; YES - 3 orbits as assigned
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 3
re-observation of LH9-34 (original visit 2S had failed acq, so no useful data were obtained)

Diagnostics

(LH9-34-STIS (BS)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LH9-34-STIS (BS)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

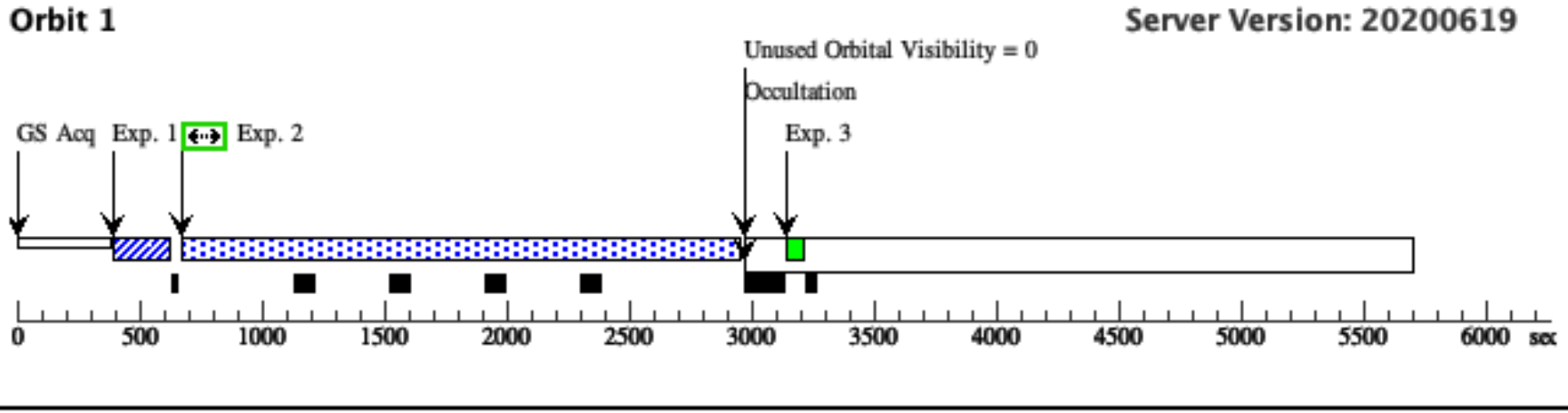
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LH9-34	RA: 04 56 45.2887 (74.1887029d)		V=12.66	Reference Frame: ICRS
	Alt Name1: PGMW-1363	Dec: -66 29 37.01 (-66.49361d)		SpT=O8.5 Iaf; E(B-V)=0.17; U= 11.6; B=12.6; V=12.7	
		Equinox: J2000			

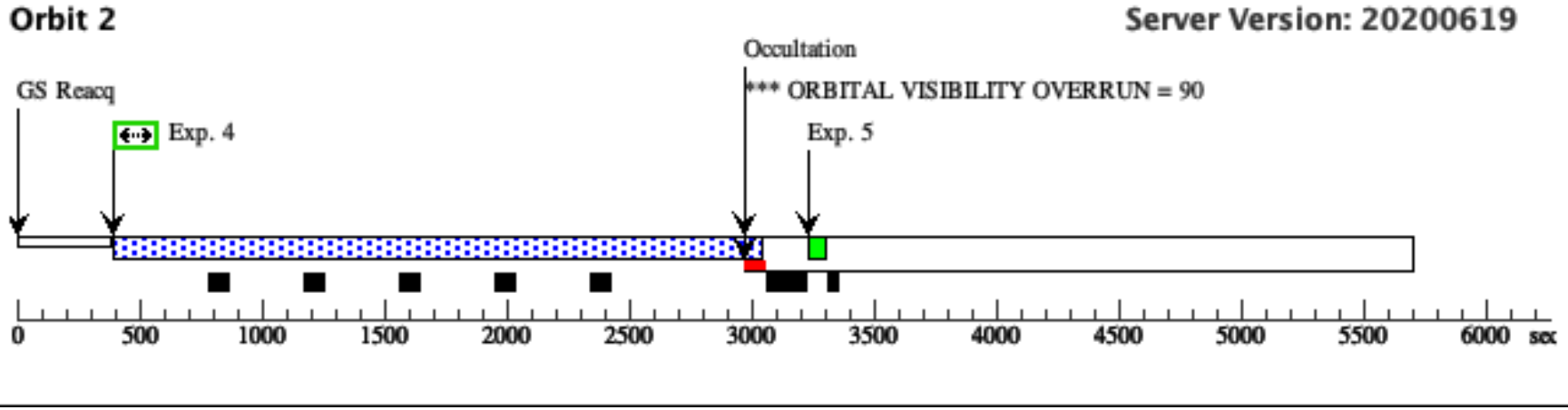
Comments: LH9-34 : [PGMW]-1363, [PGMW]_1363, PGMW 1363
Previous name : [PGMW]-1363
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (PGMW 1363): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=PGMW+1363&submit=submit+id
SpT = O8.5 Iaf
COS/G130M/c1096 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G130M/c1291 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G160M/c1611 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1921 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1953 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1986 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E140M/c1425 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E230M/c1978 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E230M/c2707 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:07:17, v0.4
---
tstatus; LH9-34; P/STIS Approved for Submission; S/ins not started; P/TS 22/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; LH9-34, 'BI 37' ...
Other names: 'PGMW 1363'
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; No
tcheck; Adopted SED compared to Observations?; OK ...
No previous UV observations, so the SED is normalized in the shortest available band (U band).
Category=EXT-STAR
Description=[SUPERGIANT O, OF]
Extended=NO

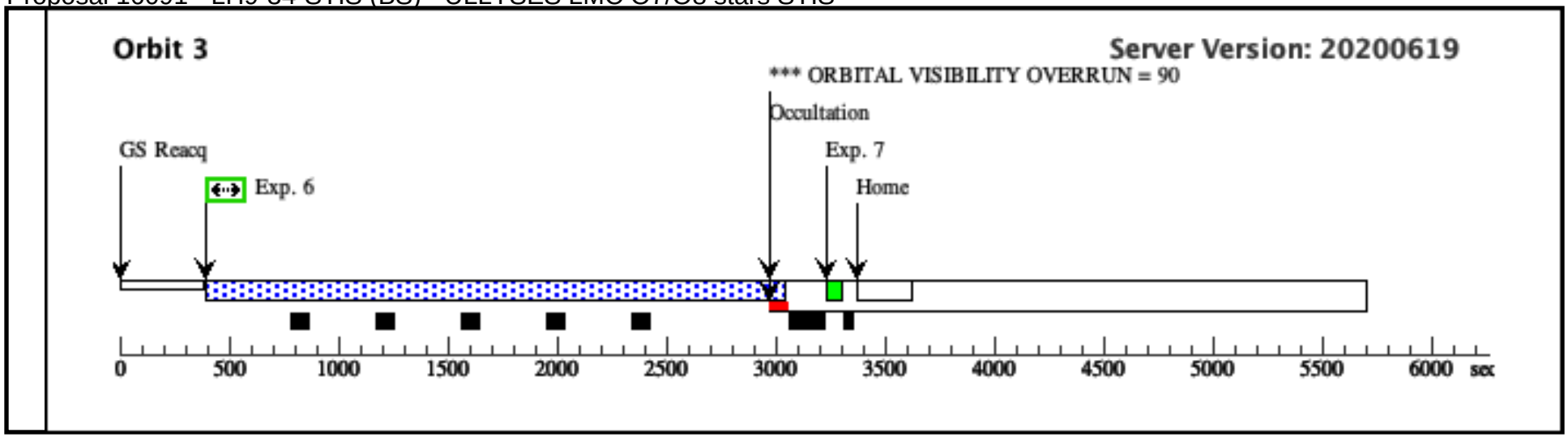
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443494)	(2) LH9-34	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	***[1]***
2	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2196 Secs (2196 Secs) *[==>]*	***[1]***
	Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O8.5 Iaf --> O8.5 I* *SED = LH9-34_STIS_E140M_c1425_sed.fits* *For exptime=5871.5 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4136.4 cts/s/segment* *brightest pixel: 0.040 cts/s/pix at 1297.9 A* *Calculation performed 2020-02-24T18:07:27, v0.4*									
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	***[1]***
4	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2638 Secs (2638 Secs) *[==>]*	***[2]***
	Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O8.5 Iaf --> O8.5 I* *SED = LH9-34_STIS_E140M_c1425_sed.fits* *For exptime=5871.5 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4136.4 cts/s/segment* *brightest pixel: 0.040 cts/s/pix at 1297.9 A* *Calculation performed 2020-02-24T18:07:27, v0.4*									
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	***[2]***
6	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2638 Secs (2638 Secs) *[==>]*	***[3]***
	Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O8.5 Iaf --> O8.5 I* *SED = LH9-34_STIS_E140M_c1425_sed.fits* *For exptime=5871.5 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 4136.4 cts/s/segment* *brightest pixel: 0.040 cts/s/pix at 1297.9 A* *Calculation performed 2020-02-24T18:07:27, v0.4*									
7	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20200619
*** ORBITAL VISIBILITY OVERRUN = 90
Occultation
GS Reacq
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16091, LH9-34-STIS (GS) Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; LH9-34; P/STIS Approved for Submission; P/TS 22/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; LH9-34 ; 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.1443493 gives S/N=18.3 at 1200 angstroms. S/N plot shows actual S/N is close to >20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES - LH9-34_DSS.png, LH9-34_2MASS.png
vcheck; Selected ACQ strategy?; STIS F28X50LP 0.3 sec gives S/N~110
vcheck; Possible ACQ or Sci spoilers?; NO
vcheck; Field BOT clear?; YES - 1 unknown GSC2 source which is the target itself.
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; YES - 3 orbits as assigned
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 3
re-observation of LH9-34 (original visit 2S had failed acq, so no useful data were obtained)
re-observation (orbit 2 of visit BS -- guide star re-acq failed) -- so repeat 1 orbit (HOPR 91965 approved)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	LH9-34	RA: 04 56 45.2887 (74.1887029d)		V=12.66	Reference Frame: ICRS
	Alt Name1: PGMW-1363	Dec: -66 29 37.01 (-66.49361d)		SpT=O8.5 Iaf; E(B-V)=0.17; U= 11.6; B=12.6; V=12.7	
		Equinox: J2000			

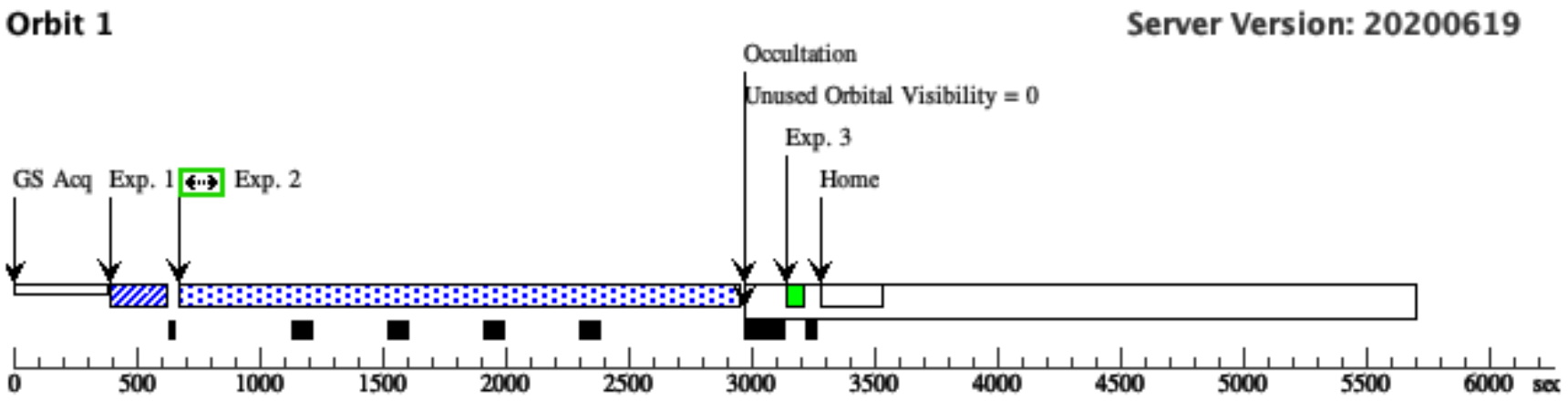
Comments: LH9-34 : [PGMW]-1363, [PGMW]_1363, PGMW 1363
Previous name : [PGMW]-1363
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (PGMW 1363): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=PGMW+1363&submit=submit+id
SpT = O8.5 Iaf
COS/G130M/c1096 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G130M/c1291 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G160M/c1611 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1921 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1953 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
COS/G185M/c1986 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E140M/c1425 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E230M/c1978 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
STIS/E230M/c2707 : rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:07:17, v0.4
---
tstatus; LH9-34; P/STIS Approved for Submission; S/ins not started; P/TS 22/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; LH9-34, 'BI 37' ...
Other names: 'PGMW 1363'
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; No
tcheck; Adopted SED compared to Observations?; OK ...
No previous UV observations, so the SED is normalized in the shortest available band (U band).
Category=EXT-STAR
Description=[SUPERGIANT O, OF]
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.1443494)	(2) LH9-34	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs (0.3 Secs) *[==>]*	*[1]*
2	E140M/1425 (STIS.sp.1443493)	(2) LH9-34	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=390			2196 Secs (2196 Secs) *[==>]*	*[1]*
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[1]*

Comments: rn(WM-Basic(O8.5 I, Z=0.008, Teff=34674, log_lum=5.89, log_g=3.29) (extinction lmcavg=0.170), johnson U mag=11.550 vegamag); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305
From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
Spectral type: O8.5 Iaf --> O8.5 I
SED = LH9-34_STIS_E140M_c1425_sed.fits
For exptime=5871.5 s, spectral region:
1200.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 4136.4 cts/s/segment
brightest pixel: 0.040 cts/s/pix at 1297.9 A
Calculation performed 2020-02-24T18:07:27, v0.4

Orbit Structure



Visit

Proposal 16091, SK-67D118-STIS (3S), completed Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: SCHED 100%

Comments: vstatus; 3S; SK-67D118; P/STIS Approved for Submission; P/TS 22/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-67D118 ; 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.1443500 gives S/N=18.0 at 1200 angstroms. S/N plot shows actual S/N is close to 20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES - SK-67D118_DSS.png, SK-67D118_2MASS.png
vcheck; Selected ACQ strategy?; F28X50LP 0.5 sec gives S/N~110
vcheck; Possible ACQ or Sci spoilers?; NO
vcheck; Field BOT clear?; YES - 1 safe GSC2 star reported, which is the target itself.
vcheck; Visual BOT check for stars not in catalog?; NONE
vcheck; Orbit packing finalized?; YES - 2 orbits as assigned
vcheck; Buffer times optimized?; YES
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 2

Diagnostics

(SK-67D118-STIS (3S)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

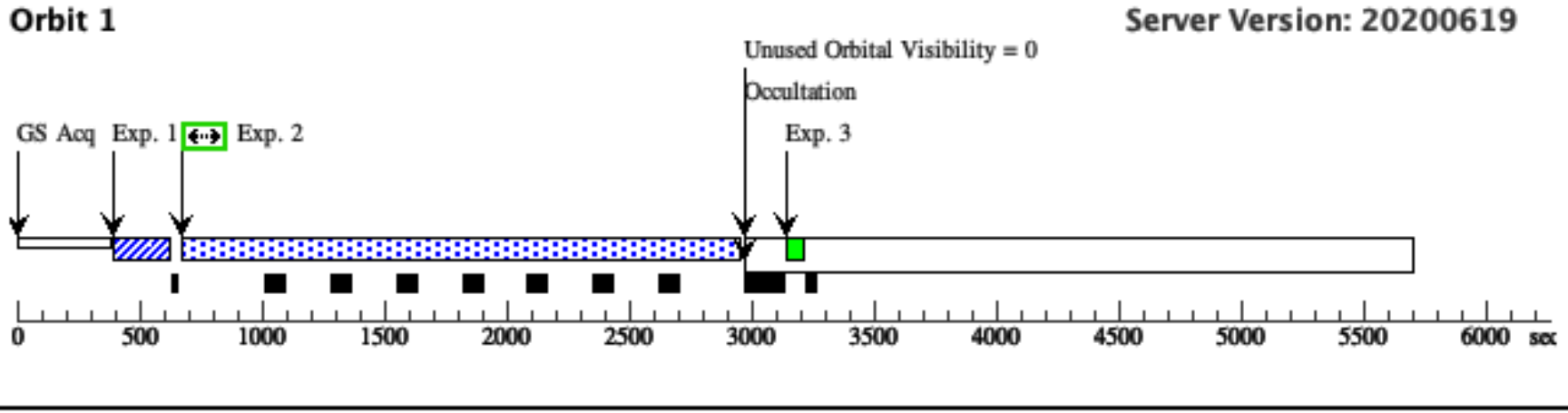
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SK-67D118 Alt Name1: M2002-138717 Alt Name2: SK-67-118	RA: 05 27 33.3016 (81.8887567d) Dec: -67 17 30.32 (-67.29176d) Equinox: J2000		V=12.98 SpT=O7 V; E(B-V)=0.08; U=11.8; B=12.8; V=13.0; F1160=1.19e-12	Reference Frame: ICRS

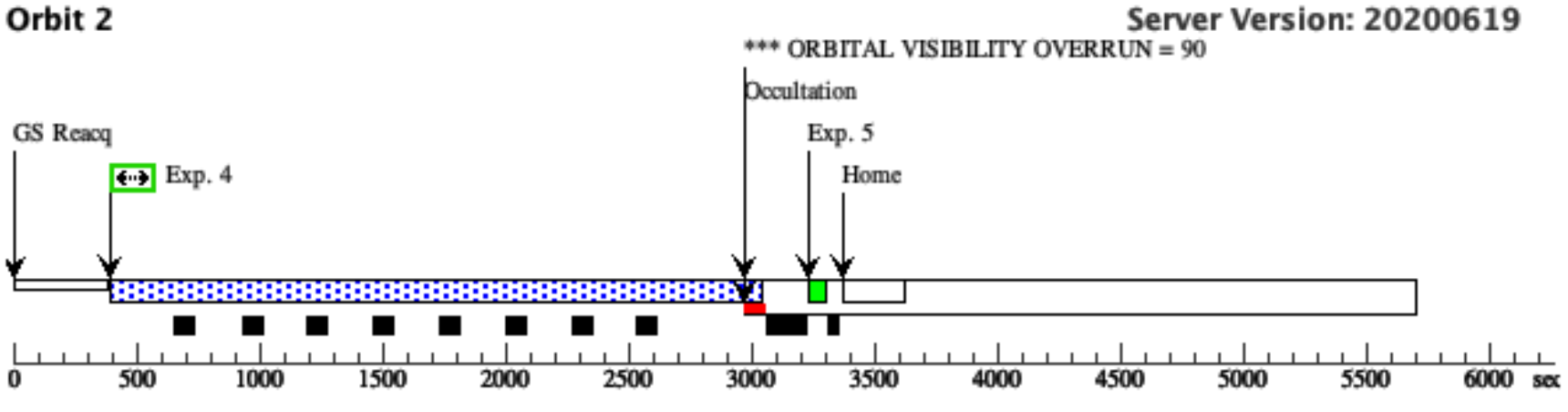
Comments: SK-67D118 : [M2002]_138717, Sk -67 118, SK -67 118
Previous name : Sk -67 118
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -67 118): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-67+118&submit=submit+id
SpT = O7 V
COS/G130M/c1096 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam)
Coordinate pedigree: Gaia
v sin i = 61
Calculation performed 2020-02-24T18:05:54, v0.4
---
tstatus; SK-67D118; P/STIS Approved for Submission; S/ins not started; P/TS 22/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; SK-67D118, 'SK -67 118' (SIMBAD name)
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; NO
tcheck; Adopted SED compared to Observations?; OK after changing reddening ...
The original SED had issues fitting observed data especially for the UBV bands. Increasing the E(B-V) from 0.08 to 0.11 mostly solved the problem. The old SED underestimated the flux in the UBV bands by about 50%, but the new SED is now consistent with observed mags within 10%. The match vs. FUSE spectrum in the FUV region is also improved, although not as significantly as in the UBV bands. Old and new SEDs are save in the Box directory.
Category=EXT-STAR
Description=[MAIN SEQUENCE O]
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.1443497)	(3) SK-67D118	STIS/CCD, ACQ, F28X50LP	MIRROR				0.5 Secs (0.5 Secs) *[==>]*	*[1]*
2	E140M/1425 (STIS.sp.1443500)	(3) SK-67D118	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=268			2194 Secs (2194 Secs) *[==>]*	*[1]*
	Comments: rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7 V --> O7 V* *SED = SK-67D118_STIS_E140M_c1425_sed.fits* *For exptime=4045.8 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 5548.6 cts/s/segment* *brightest pixel: 0.056 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:06:04, v0.4*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[1]*
4	E140M/1425 (STIS.sp.1443500)	(3) SK-67D118	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=268			2638 Secs (2638 Secs) *[==>]*	*[2]*
	Comments: rn-max(WM-Basic(O7 V, Z=0.008, Teff=39811, log_lum=5.42, log_g=4.00) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=1.2e-12 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7 V --> O7 V* *SED = SK-67D118_STIS_E140M_c1425_sed.fits* *For exptime=4045.8 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 5548.6 cts/s/segment* *brightest pixel: 0.056 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:06:04, v0.4*								
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[2]*

Orbit Structure





Visit

Proposal 16091, SK-68D16-STIS (4S), completed Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: SCHED 100%

Comments: vstatus; 4S; SK-68D16; P/STIS Approved for Submission; P/TS 28/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-68D16 ; 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.1444202 gives S/N=16.9 at 1200 angstroms. S/N plot shows actual S/N is ~20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES, SK-68D16_DSS.png, SK-68D16_2MASS.png
vcheck; Selected ACQ strategy?; STIS F28X50LP 0.7 sec gives S/N~100
vcheck; Possible ACQ or Sci spoilers?; NO ...
Bright star present at about 7.5 arcsec to the East of target, but fainter by ~1.5 mag, so even in an extreme case, our target will be properly acquired.
vcheck; Field BOT clear?; YES - GSC2 reports 1 safe star which is the target itself.
vcheck; Visual BOT check for stars not in catalog?; YES
vcheck; Orbit packing finalized?; YES, 4 orbits split into 2 orbits x 2 visits.
vcheck; Buffer times optimized?; YES ...
Just in case the optical band fluxes are correct, we adopted the buffer time for the brighter SED normalized at the V band.
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 4

Diagnostics

(SK-68D16-STIS (4S)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

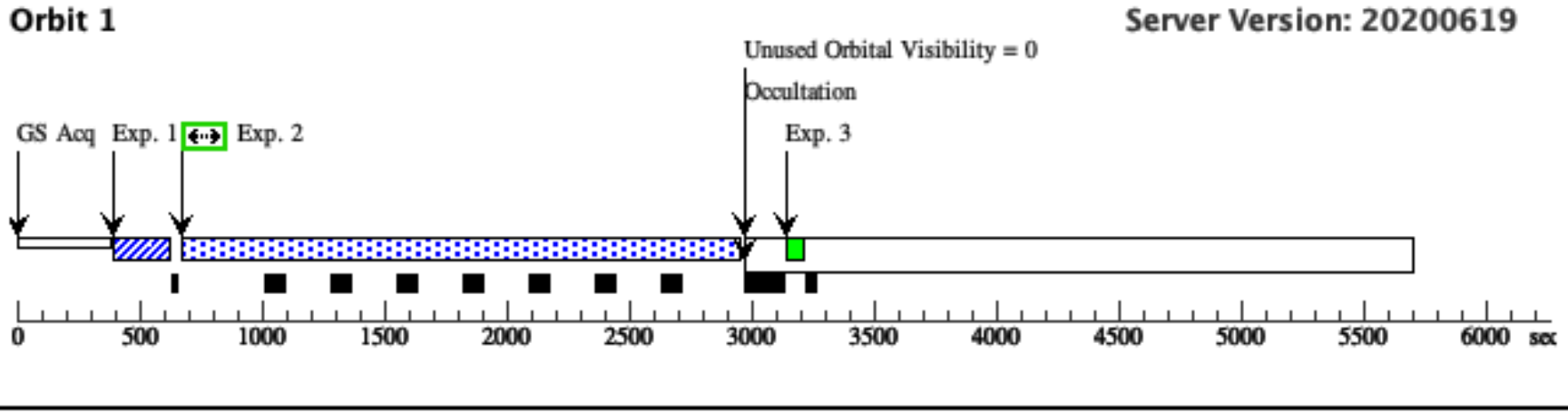
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SK-68D16	RA: 04 57 37.7954 (74.4074808d)		V=12.85	Reference Frame: ICRS
	Alt Name1: SK-68-16	Dec: -68 24 35.92 (-68.40998d)		SpT=O7 III; E(B-V)=0.08; U=11.7; B=12.7; V=12.8; F1160=5.33e-13	
	Alt Name2: M2002-34847	Equinox: J2000			

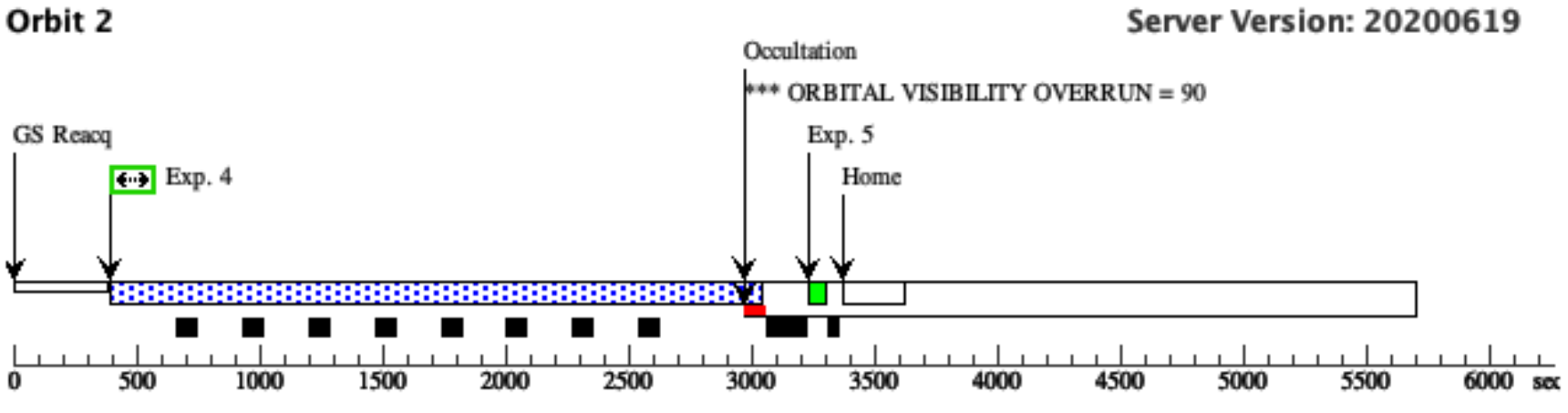
Comments: SK-68D16 : [M2002]_34847, Sk -68 16, SK -68 16
Previous name : Sk -68 16
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -68 16): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-68+16&submit=submit+id
SpT = O7 III
COS/G130M/c1096 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 100
Calculation performed 2020-02-24T18:05:42, v0.4
---
tstatus; SK-68D16; P/STIS Approved for Submission; S/ins not started; P/TS 28/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; SK-68D16, 'SK -68 16' (SIMBAD name) ...
Other names: '[L72] LH 12-43', '[M2002] LMC 34847'
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; NO
tcheck; Adopted SED compared to Observations?; Okay ...
After a lengthy email exchange between several members of the technical implementation team (email thread saved as EmailThread.pdf in the folder), we decided to change E(B-V) from 0.08 to 0.12 and use the re-saved SED for the exposure time calculations. The SED significnatly underestimated the flux compared to observations in the UBV wavelengths, but the nearby star likely affected the photometry. The SED adopted for ETC calculation is saved as SK-68D16_newsed.fits, while the SED used for buffer time calculations (in the unlikely case that the optical flux measurements were correct but FUSE flux were not) is saved as SK-68D16_newsed_vnormalized.fits.
Category=EXT-STAR
Description=[GIANT O]
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.1444201)	(4) SK-68D16	STIS/CCD, ACQ, F28X50LP	MIRROR				0.7 Secs (0.7 Secs) *[==>]*	*[1]*
2	E140M/1425 (STIS.sp.1444202)	(4) SK-68D16	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=269			2194 Secs (2194 Secs) *[==>]*	*[1]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7 III --> O7.5 III* *SED = SK-68D16_STIS_E140M_c1425_sed.fits* *For exptime=9120.1 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2647.8 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:53, v0.4*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[1]*
4	E140M/1425 (STIS.sp.1444202)	(4) SK-68D16	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=269			2638 Secs (2638 Secs) *[==>]*	*[2]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7 III --> O7.5 III* *SED = SK-68D16_STIS_E140M_c1425_sed.fits* *For exptime=9120.1 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2647.8 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:53, v0.4*								
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[2]*

Orbit Structure





Visit

Proposal 16091, SK-68D16-STIS (4T), completed Mon Mar 15 13:01:00 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: SCHED 100%

Comments: vstatus; 4S; SK-68D16; P/STIS Approved for Submission; P/TS 28/05/20 ; intrev: complete ; P/CP 29/05/20
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-68D16 ; 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.1444202 gives S/N=16.9 at 1200 angstroms. S/N plot shows actual S/N is ~20 in that region. S/N plot saved as E140M_SN.png.
vcheck; Field images checked & saved?; YES, SK-68D16_DSS.png, SK-68D16_2MASS.png
vcheck; Selected ACQ strategy?; STIS F28X50LP 0.7 sec gives S/N~100
vcheck; Possible ACQ or Sci spoilers?; NO ...
Bright star present at about 7.5 arcsec to the East of target, but fainter by ~1.5 mag, so even in an extreme case, our target will be properly acquired.
vcheck; Field BOT clear?; YES - GSC2 reports 1 safe star which is the target itself.
vcheck; Visual BOT check for stars not in catalog?; YES
vcheck; Orbit packing finalized?; YES, 4 orbits split into 2 orbits x 2 visits.
vcheck; Buffer times optimized?; YES ...
Just in case the optical band fluxes are correct, we adopted the buffer time for the brighter SED normalized at the V band.
vcheck; Verify visit grouping correct; N/A
vcheck; Is visit ready for int. review?; YES
Allocated STIS orbits = 4

Diagnostics

(SK-68D16-STIS (4T)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SK-68D16	RA: 04 57 37.7954 (74.4074808d)		V=12.85	Reference Frame: ICRS
	Alt Name1: SK-68-16	Dec: -68 24 35.92 (-68.40998d)		SpT=O7 III; E(B-V)=0.08; U=11.7; B=12.7; V=12.8; F1160=5.33e-13	
	Alt Name2: M2002-34847	Equinox: J2000			

Comments: SK-68D16 : [M2002]_34847, Sk -68 16, SK -68 16
Previous name : Sk -68 16
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (SK -68 16): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=SK+-68+16&submit=submit+id
SpT = O7 III
COS/G130M/c1096 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 100
Calculation performed 2020-02-24T18:05:42, v0.4
---
tstatus; SK-68D16; P/STIS Approved for Submission; S/ins not started; P/TS 28/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; SK-68D16, 'SK -68 16' (SIMBAD name) ...
Other names: '[L72] LH 12-43', '[M2002] LMC 34847'
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; NO
tcheck; Adopted SED compared to Observations?; Okay ...
After a lengthy email exchange between several members of the technical implementation team (email thread saved as EmailThread.pdf in the folder), we decided to change E(B-V) from 0.08 to 0.12 and use the re-saved SED for the exposure time calculations. The SED significnatly underestimated the flux compared to observations in the UBV wavelengths, but the nearby star likely affected the photometry. The SED adopted for ETC calculation is saved as SK-68D16_newsed.fits, while the SED used for buffer time calculations (in the unlikely case that the optical flux measurements were correct but FUSE flux were not) is saved as SK-68D16_newsed_vnormalized.fits.
Category=EXT-STAR
Description=[GIANT O]
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.1444201)	(4) SK-68D16	STIS/CCD, ACQ, F28X50LP	MIRROR				0.7 Secs (0.7 Secs) *[==>]*	*[1]*
2	E140M/1425 (STIS.sp.1444202)	(4) SK-68D16	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=269			2194 Secs (2194 Secs) *[==>]*	*[1]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7 III --> O7.5 III* *SED = SK-68D16_STIS_E140M_c1425_sed.fits* *For exptime=9120.1 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2647.8 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:53, v0.4*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[1]*
4	E140M/1425 (STIS.sp.1444202)	(4) SK-68D16	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=269			2638 Secs (2638 Secs) *[==>]*	*[2]*
	Comments: rn-max(WM-Basic(O7.5 III, Z=0.008, Teff=37154, log_lum=5.64, log_g=3.70) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=5.3e-13 Flam); stis,fuvmama,e140m,c1425,0.2x0.2,mjd#59305 *From file LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv* *Spectral type: O7 III --> O7.5 III* *SED = SK-68D16_STIS_E140M_c1425_sed.fits* *For exptime=9120.1 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2647.8 cts/s/segment* *brightest pixel: 0.026 cts/s/pix at 1308.9 A* *Calculation performed 2020-02-24T18:05:53, v0.4*								
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	*[2]*

Orbit Structure