16367 - ULLYSES LMC WN Stars STIS

Cycle: 28, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
1S	(1) HD269927C WAVE	STIS/CCD STIS/FUV-MAMA	2	20-May-2021 14:06:25.0	yes
2S	(2) SK-65D55 WAVE	STIS/CCD STIS/FUV-MAMA	2	20-May-2021 14:06:26.0	yes
3S	(3) SK-67D266 WAVE	STIS/CCD STIS/FUV-MAMA	1	20-May-2021 14:06:27.0	yes
4S	(4) SK-71D21 WAVE	STIS/CCD STIS/FUV-MAMA	1	20-May-2021 14:06:28.0	yes

6 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 16367, HD269927C-STIS (1S), scheduling Thu May 20 18:06:28 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 1S; HD269927C; P/STIS approved for submission; P/DW 16/03/21 ; intrev: complete; P/CP 22/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; HD269927C ; STIS ; DW
vcheck; ETC numbers entered in APT?; yes
vcheck; Any screening violations?; no
vcheck; S/N ETC calcs done & documented?; yes ...
IUE spectrum: brightest 0.029 cts/s (1311.5 A), entire 2823 cts/s, BT=709s x 0.8 = 567s (1483321), S/N~12 at 1200 A
FOS spectrum: brightest 0.050 cts/s (1396.3 A), entire 3220 cts/s, BT=621s x 0.8 = 497s (1484113), S/N~17 at 1200 A
new sed: brightest 0.041 cts/s (1308.4 A), entire 3362 cts/s, BT=595s x 0.8 = 476s (1484118), S/N~17 at 1200 A
vcheck; Field images checked & saved?; 2MASS, WFC3/F225W, WFPC2/F656N
vcheck; Selected ACQ strategy?; direct acq, F28x50LP, 1 sec yields S/N~185 (1483319)
vcheck; Possible ACQ or Sci spoilers?; no
vcheck; Field BOT clear?; yes ...
HD269927A (V=12.02) at 4.8", brightest 0.081 cts/s, entire 7509 cts/s (1484114)
HD269927B (V=12.23) at 5.7", brightest 0.037 cts/s, entire 3578 cts/s (1484115)
vcheck; Visual BOT check for stars not in catalog?; several very faint stars within 4"
vcheck; Orbit packing finalized?; yes
vcheck; Buffer times optimized?; yes
vcheck; Verify visit grouping correct; n/a
vcheck; Is visit ready for int. review?; yes
Allocated STIS orbits = 2 (constrained in input CSV)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD269927C	RA: 05 38 58.1018 (84.7420908d)	Proper Motion RA: 0.0 sec of time/yr	V=12.63	Reference Frame: ICRS
	Alt Name1: ST92-5-68	Dec: -69 29 19.55 (-69.48876d)	Proper Motion Dec: 0.0 arcsec/yr	V= nan,	
		Equinox: J2000		SpT=WN9h; E(B-V)=0.18; F1160=1.30e-12; F1360=4.50e-13; F1700=4.31e-13; F2200=2.46e-13	

Comments: HD269927C : [ST92] 5-68
Previous name : [ST92] 5-68
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link ([ST92] 5-68): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=[ST92]+5-68&submit=submit+id
SpT = WN9h
COS/G130M/c1096 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1160 +- 30.0A flux=1.3e-12 Flam)
COS/G130M/c1291 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1360 +- 30.0A flux=4.5e-13 Flam)
COS/G160M/c1611 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1700 +- 5.0A flux=4.3e-13 Flam)
COS/G185M/c1921 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1700 +- 5.0A flux=4.3e-13 Flam)
COS/G185M/c1953 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1700 +- 5.0A flux=4.3e-13 Flam)
COS/G185M/c1986 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux2200 +- 5.0A flux=2.5e-13 Flam)
STIS/E140M/c1425 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1360 +- 30.0A flux=4.5e-13 Flam)
STIS/E230M/c1978 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux2200 +- 5.0A flux=2.5e-13 Flam)
STIS/E230M/c2707 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux2200 +- 5.0A flux=2.5e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:09:37, v0.4
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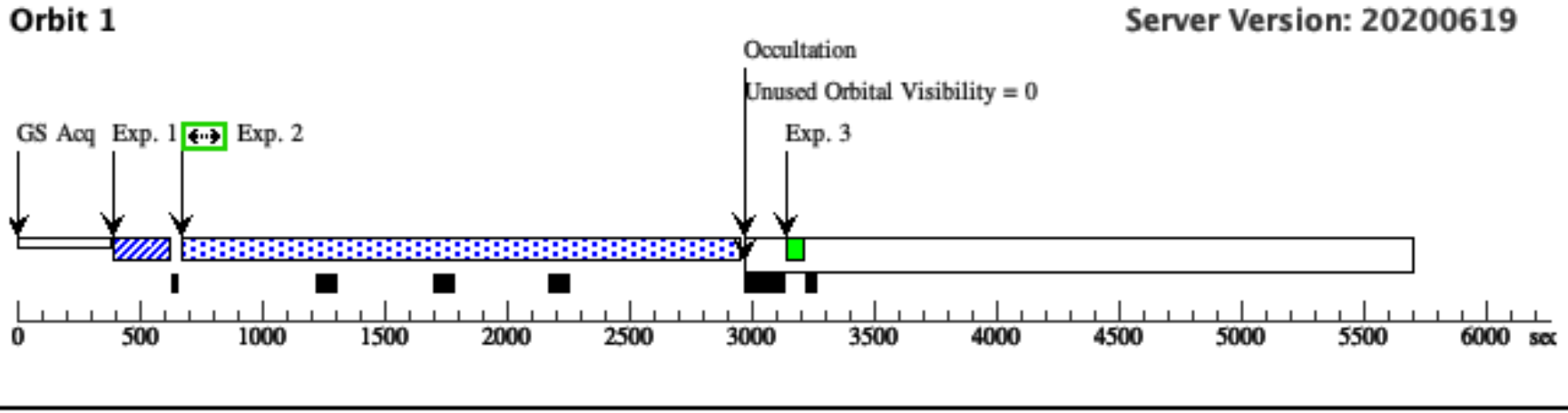
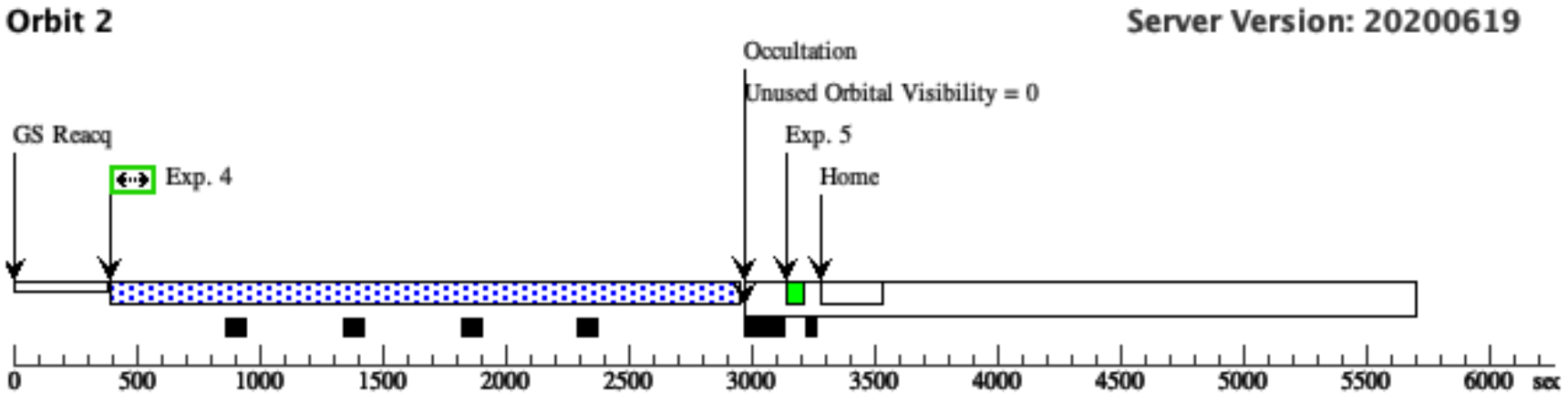
tstatus; HD269927C; P/STIS approved for submission; S/ins not started; P/DW 15/03/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; HD269927C 'HD 269927C' ...
aka BAT99 120, Brey 91, W61 3-8, [ST92] 5-68
tcheck; Coordinates & P.M. updated?; coordinates ok, proper motions set to zero
tcheck; Adopted SED compared to Observations?; yes (cmfgen model WN9 not give a good fit to observed FOS/IUE spectra)
Category=EXT-STAR
Description=[WOLF RAYET - WN]
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 (1483319)	(1) HD269927C	STIS/CCD, ACQ, F28X50LP	MIRROR				1.0 Secs (1 Secs) *[==>]*	***[1]***
2	E140M/1425 (1484113)	(1) HD269927C	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=475.0		Sequence 2-3 Non-Int in HD269927C-STIS (1S)	2192 Secs (2192 Secs) *[==>]*	***[1]***
	Comments: rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1360 +- 30.0A flux=4.5e-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: WN9h --> WN #1* *SED = HD269927C_STIS_E140M_c1425_sed.fits* *For exptime=12287.1 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2481.1 cts/s/segment* *brightest pixel: 0.029 cts/s/pix at 1308.4 A* *Calculation performed 2020-02-24T18:09:47, v0.4* *FOS (1484113), new sed (1484118) yield similar predictions -- both slightly higher than for IUE (1483321)* *brightest 0.041-0.050 cts/s, entire 3200-3400 cts/s, S/N~28-30 (1250) and 17-18 (1200) in 4700s*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 2-3 Non-Int in HD269927C-STIS (1S)	*[==>]*	***[1]***
4	E140M/1425 (1484113)	(1) HD269927C	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=475.0		Sequence 4-5 Non-Int in HD269927C-STIS (1S)	2548 Secs (2548 Secs) *[==>]*	***[2]***
	Comments: rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.180), flux1360 +- 30.0A flux=4.5e-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: WN9h --> WN #1* *SED = HD269927C_STIS_E140M_c1425_sed.fits* *For exptime=12287.1 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2481.1 cts/s/segment* *brightest pixel: 0.029 cts/s/pix at 1308.4 A* *Calculation performed 2020-02-24T18:09:47, v0.4* *FOS (1484113), new sed (1484118) yield similar predictions -- both slightly higher than for IUE (1483321)* *brightest 0.041-0.050 cts/s, entire 3200-3400 cts/s, S/N~28-30 (1250) and 17-18 (1200) in 4700s*								
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 4-5 Non-Int in HD269927C-STIS (1S)	*[==>]*	***[2]***

Orbit Structure





Visit

Proposal 16367, SK-65D55-STIS (2S), scheduling Thu May 20 18:06:28 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 2S; SK-65D55; P/STIS approved for submission; P/DW 17/03/21 ; intrev: complete; P/CP 22/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-65D55 ; STIS ; DW
vcheck; ETC numbers entered in APT?; yes
vcheck; Any screening violations?; no
vcheck; S/N ETC calcs done & documented?; yes ...
for E140M/1425/0.2x0.2/4700s
IUE spectrum yields brightest 0.047 cts/s (1246.1 A), entire 3651 cts/s, BT=548s x 0.8 = 438s (1484378)
new sed yields brightest 0.056 cts/s (1245.0 A), entire 3955 cts/s, BT=506s x 0.8 = 405s (1484379)
predicted S/N ~26-30 at 1250A, ~18-20 at 1200A
vcheck; Field images checked & saved?; yes -- DSS, 2MASS
vcheck; Selected ACQ strategy?; yes -- direct, F28x50LP, 1s -- yields S/N~140, saturation in 14-15s
vcheck; Possible ACQ or Sci spoilers?; no -- target appears single in DSS, 2MASS -- no HST images available
vcheck; Field BOT clear?; yes -- nothing else within clearance region in DSS, 2MASS
vcheck; Visual BOT check for stars not in catalog?; n/a
vcheck; Orbit packing finalized?; yes
vcheck; Buffer times optimized?; yes -- 405s
vcheck; Verify visit grouping correct; n/a
vcheck; Is visit ready for int. review?; yes
Allocated STIS orbits = 2 (constrained in input CSV)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SK-65D55 Alt Name1: LHA-120-S-28 Alt Name2: BAT99-30	RA: 05 21 57.6988 (80.4904117d) Dec: -65 49 0.22 (-65.81673d) Equinox: J2000	Proper Motion RA: 0.0 sec of time/yr Proper Motion Dec: 0.0 arcsec/yr	V=13.32 SpT=WN6h; E(B-V)=0.08; U=12.4; B=13.1; V=13.3; F1160=9.13e-13	Reference Frame: ICRS

Comments: SK-65D55 : LHA 120-S 28, BAT99 30
Previous name : LHA 120-S 28
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (BAT99 30): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=BAT99+30&submit=submit+id
SpT = WN6h
COS/G130M/c1096 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
COS/G130M/c1291 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
COS/G160M/c1611 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
COS/G185M/c1921 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
COS/G185M/c1953 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
COS/G185M/c1986 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
STIS/E140M/c1425 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
STIS/E230M/c1978 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
STIS/E230M/c2707 : rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:09:49, v0.4
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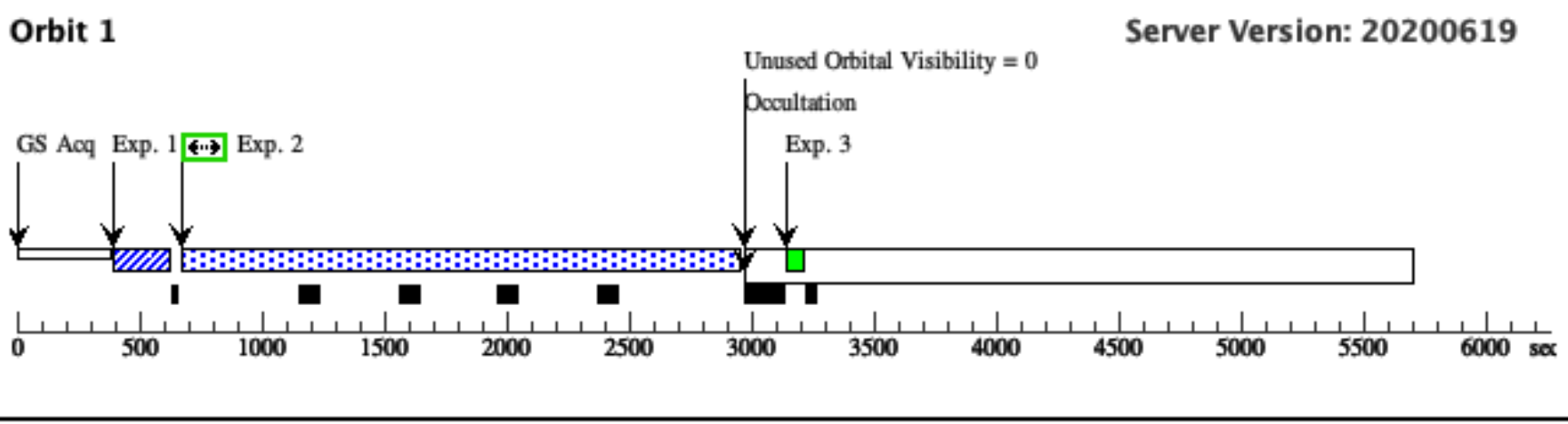
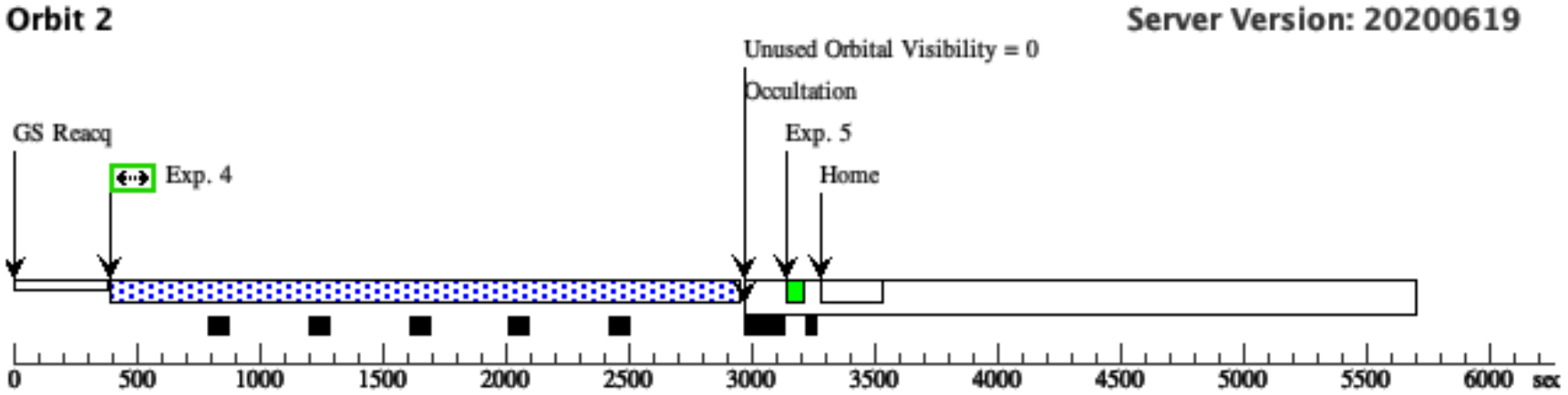
tstatus; SK-65D55; P/STIS approved for submission; S/ins not started; P/DW 17/03/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; SK-65D55 'SK-65 55' ...
aka Brey 24, AL150, BAT99 30, LHA 120-S 28
tcheck; Target info verification status?; yes
tcheck; Coordinates & P.M. updated?; coords ok, pm set to zero
tcheck; Adopted SED compared to Observations?; yes -- ok in NUV, underestimates 1250-1350, overestimates 1450-1850
Category=EXT-STAR
Description=[WOLF RAYET - WN]
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 (1484377)	(2) SK-65D55	STIS/CCD, ACQ, F28X50LP	MIRROR				1.0 Secs (1 Secs) *[==>]*	***[1]***
	Comments: ETC run is for new sed; Kurucz O5V normalized to V=13.3, EBV=0.08 yields very similar results (1484373); S/N expected ~140 in 1s (saturation in 14-15s)								
2	E140M/1425 (1484379)	(2) SK-65D55	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=405.0		Sequence 2-3 Non-Int in SK-65D55-STIS (2S)	2192 Secs (2192 Secs) *[==>]*	***[1]***
	Comments: rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-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: WN6h --> WN #7* *SED = SK-65D55_STIS_E140M_c1425_sed.fits* *For exptime=5509.6 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 3866.3 cts/s/segment* *brightest pixel: 0.054 cts/s/pix at 1245.0 A* *Calculation performed 2020-02-24T18:09:59, v0.4* *IUE (1484378), new sed (1484379) yield similar predictions* *brightest 0.047-0.056 cts/s (1245 A), entire 3650-3950 cts/s, S/N~26-30 (1250) and 18-20 (1200) in 4700s*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 2-3 Non-Int in SK-65D55-STIS (2S)	*[==>]*	***[1]***
4	E140M/1425 (1484379)	(2) SK-65D55	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=405.0		Sequence 4-5 Non-Int in SK-65D55-STIS (2S)	2548 Secs (2548 Secs) *[==>]*	***[2]***
	Comments: rn-max(CMFGEN-WN(model=7, Z=0.008, Teff=60000) (extinction lmcavg=0.080), flux1160 +- 30.0A flux=9.1e-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: WN6h --> WN #7* *SED = SK-65D55_STIS_E140M_c1425_sed.fits* *For exptime=5509.6 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 3866.3 cts/s/segment* *brightest pixel: 0.054 cts/s/pix at 1245.0 A* *Calculation performed 2020-02-24T18:09:59, v0.4* *IUE (1484378), new sed (1484379) yield similar predictions* *brightest 0.047-0.056 cts/s (1245 A), entire 3650-3950 cts/s, S/N~26-30 (1250) and 18-20 (1200) in 4700s*								
5	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 4-5 Non-Int in SK-65D55-STIS (2S)	*[==>]*	***[2]***

Orbit Structure





Visit

Proposal 16367, SK-67D266-STIS (3S), scheduling Thu May 20 18:06:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 3S; SK-67D266; P/STIS approved for submission; P/DW 17/03/21 ; intrev: complete; P/CP 22/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-67D266 ; STIS ; DW
vcheck; ETC numbers entered in APT?; yes
vcheck; Any screening violations?; no
vcheck; S/N ETC calcs done & documented?; yes ...
for E140M/1425/0.2x0.2/2200s
IUE spectrum -- brightest 0.069 cts/s (1311.5 A), entire 6151 cts/s, BT=325s x 0.8 = 260s, S/N~25 (1250), 14 (1200)
FOS spectrum -- brightest 0.089 cts/s (1396.6 A), entire 6085 cts/s, BT=329s x 0.8 = 263s, S/N~27 (1250), 20 (1200)
new sed -- brightest 0.079 cts/s (1308.4 A), entire 6334 cts/s, BT=316s x 0.8 = 253s, S/N~28 (1250), 19 (1200)
old sed -- brightest 0.076 cts/s (1308.4 A), entire 6148 cts/s, BT=325s x 0.8 = 260s, S/N~28 (1250), 18(1200)
vcheck; Field images checked & saved?; yes -- DSS, 2MASS, GALEX, WFPC2/F656N
vcheck; Selected ACQ strategy?; yes -- direct, F28x50LP, 0.5s -- predict S/N~180 (saturate in 4-5s)
vcheck; Possible ACQ or Sci spoilers?; no
vcheck; Field BOT clear?; yes -- target appears single in all images, no other objects within clearance circle
vcheck; Visual BOT check for stars not in catalog?; n/a
vcheck; Orbit packing finalized?; yes
vcheck; Buffer times optimized?; yes -- 257s is ok
vcheck; Verify visit grouping correct; n/a
vcheck; Is visit ready for int. review?; yes
Allocated STIS orbits = 1 (constrained in input CSV)

Fixed Targets

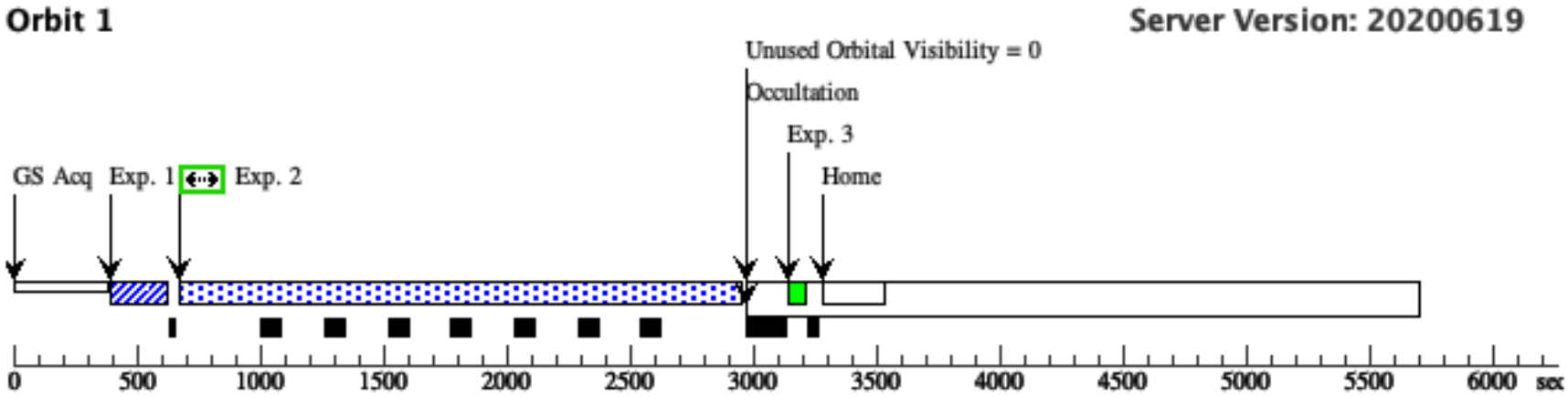
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SK-67D266 Alt Name1: LHA-120-S-61 Alt Name2: BAT99-133	RA: 05 45 51.9440 (86.4664333d) Dec: -67 14 25.93 (-67.24054d) Equinox: J2000	Proper Motion RA: 0.0 sec of time/yr Proper Motion Dec: 0.0 arcsec/yr	V=11.95 SpT=WN11h; E(B-V)=0.13; U=10.9; B=11.9; V=11.9; F1160=1.52e-12; F1360=1.17e-12; F1700=7.22e-13; F2200=5.13e-13	Reference Frame: ICRS

Comments: SK-67D266 : LHA 120-S 61, BAT99 133
Previous name : LHA 120-S 61
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (BAT99 133): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=BAT99+133&submit=submit+id
SpT = WN11h
COS/G130M/c1096 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1160 +- 30.0A flux=1.5e-12 Flam)
COS/G130M/c1291 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1360 +- 30.0A flux=1.2e-12 Flam)
COS/G160M/c1611 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1700 +- 5.0A flux=7.2e-13 Flam)
COS/G185M/c1921 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1700 +- 5.0A flux=7.2e-13 Flam)
COS/G185M/c1953 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1700 +- 5.0A flux=7.2e-13 Flam)
COS/G185M/c1986 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux2200 +- 5.0A flux=5.1e-13 Flam)
STIS/E140M/c1425 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1360 +- 30.0A flux=1.2e-12 Flam)
STIS/E230M/c1978 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux2200 +- 5.0A flux=5.1e-13 Flam)
STIS/E230M/c2707 : rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux2200 +- 5.0A flux=5.1e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:10:11, v0.4
---
tstatus; SK-67D266; P/STIS approved for submission; S/ins not started; P/DW 17/03/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; SK-67D266 'Sk-67 266' ...
aka BAT99 133, AL418, BE153, LHA 120-S 61
tcheck; Target info verification status?; yes
tcheck; Coordinates & P.M. updated?; coords ok, set PM to zero
tcheck; Adopted SED compared to Observations?; yes ...
can get a decent fit to the observed data for slightly adjusted flux and E(B-V) --
there is no apparent 2175 A extinction in the data, the 1550-1750 A absorption is stronger in the model, and
the model is slightly higher than the data from about 1100-1300 A
Category=EXT-STAR
Description=[WOLF RAYET - WN]
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 (1484424)	(3) SK-67D266	STIS/CCD, ACQ, F28X50LP	MIRROR				0.5 Secs (0.5 Secs) *[==>]*	 ***[1]***
	Comments: ETC run is for new sed -- Kurucz O5 V, normalized to V=11.95 and EBV=0.1, and old sed give similar results -- expect S/N~180 for 0.5s (saturation in 4-5s)								
2	E140M/1425 (1484435)	(3) SK-67D266	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=257.0			2194 Secs (2194 Secs) *[==>]*	 ***[1]***
	Comments: rn-max(CMFGEN-WN(model=1, Z=0.008, Teff=30000) (extinction lmcavg=0.130), flux1360 +- 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: WN11h --> WN #1* *SED = SK-67D266_STIS_E140M_c1425_sed.fits* *For exptime=4145.2 s, spectral region:* *1200.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 6219.8 cts/s/segment* *brightest pixel: 0.077 cts/s/pix at 1308.4 A* *Calculation performed 2020-02-24T18:10:22, v0.4* *old sed (1484436), new sed (1484435), IUE (1484433), FOS (1484434) all give similar predictions* *brightest 0.069-0.089 cts/s (usually near 1310 A), entire 6100-6300 cts/s, S/N~25-28 (1250) and 14-20 (1200) in 2200s*								
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16367, SK-71D21-STIS (4S), scheduling Thu May 20 18:06:29 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: vstatus; 4S; SK-71D21; P/STIS approved for submission; P/DW 18/03/21 ; intrev: intrev: complete; P/CP 22/03/21
vcheck; Enter targ name & Inst. & Resp. Sci.; SK-71D21 ; STIS ; DW
vcheck; ETC numbers entered in APT?; yes
vcheck; Any screening violations?; no -- safe for GALEX, cleared via ETC
vcheck; S/N ETC calcs done & documented?; yes ...
for E140M/1425/0.2x0.2/2200s
IUE spectrum -- brightest 0.089 cts/s (1246.1 A), entire 6734 cts/s, BT=297s x 0.8 = 238s, S/N~26 (1250), 16 (1200)
new sed -- brightest 0.064 cts/s (1245.0 A), entire 5661 cts/s, BT=353s x 0.8 = 282s, S/N~25 (1250), 18 (1200)
vcheck; Field images checked & saved?; yes -- DSS, 2MASS, GALEX (no HST available)
vcheck; Selected ACQ strategy?; yes -- direct, F28x50LP, 1s -- yields predicted S/N~190
vcheck; Possible ACQ or Sci spoilers?; no -- target appears isolated -- very weak object ~5" ESE
vcheck; Field BOT clear?; yes -- nothing significant within clearance region
vcheck; Visual BOT check for stars not in catalog?; n/a
vcheck; Orbit packing finalized?; yes
vcheck; Buffer times optimized?; yes
vcheck; Verify visit grouping correct; n/a
vcheck; Is visit ready for int. review?; yes
Allocated STIS orbits = 1 (constrained in input CSV)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SK-71D21	RA: 05 22 22.5369 (80.5939037d)	Proper Motion RA: 0.0 sec of time/yr	V=12.66	Reference Frame: ICRS
	Alt Name1: HD-36063	Dec: -71 35 58.15 (-71.59949d)	Proper Motion Dec: 0.0 arcsec/yr	SpT=WN7; E(B-V)=0.10; U=11 .6; B=12.4; V=12.7; F1160=1.40 e-12; F1360=1.20e-12; F1700=7 .70e-13; F2200=3.70e-13	
	Alt Name2: BAT99-32	Equinox: J2000			

Comments: SK-71D21 : HD 36063, BAT99 32
Previous name : HD 36063
Input file: LMC_2020Feb20/input/LMC_all_do1_fixed_wr_NewCoords_pids.csv
SIMBAD link (BAT99 32): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=BAT99+32&submit=submit+id
SpT = WN7
COS/G130M/c1096 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1160 +- 30.0A flux=1.4e-12 Flam)
COS/G130M/c1291 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1360 +- 30.0A flux=1.2e-12 Flam)
COS/G160M/c1611 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1700 +- 5.0A flux=7.7e-13 Flam)
COS/G185M/c1921 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1700 +- 5.0A flux=7.7e-13 Flam)
COS/G185M/c1953 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1700 +- 5.0A flux=7.7e-13 Flam)
COS/G185M/c1986 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux2200 +- 5.0A flux=3.7e-13 Flam)
STIS/E140M/c1425 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1360 +- 30.0A flux=1.2e-12 Flam)
STIS/E230M/c1978 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux2200 +- 5.0A flux=3.7e-13 Flam)
STIS/E230M/c2707 : rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux2200 +- 5.0A flux=3.7e-13 Flam)
Coordinate pedigree: Gaia
Calculation performed 2020-02-24T18:09:26, v0.4
---
tstatus; SK-71D21; P/STIS approved for submission; S/ins not started; P/DW 18/03/21; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; SK-71D21 'Sk-71 21' ...
aka HD 36063, LHSA 120-S 161, BAT99 32, Brey 26
tcheck; Target info verification status?; yes
tcheck; Coordinates & P.M. updated?; yes -- coords ok, PM set to zero
tcheck; Adopted SED compared to Observations?; yes ...
original sed was too high over most of range
new sed fits continuum near 1160 A, and (mostly) beyond 1500 A -- but 2175 A extinction overestimated and absorption from 1250-1450 A much too strong
Category=EXT-STAR
Description=[WOLF RAYET - WN]
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	(4) SK-71D21	STIS/CCD, ACQ, F28X50LP	MIRROR				1.0 Secs (1 Secs) *[==>]*	 ***[1]***
2	E140M/1425 (1484592)	(4) SK-71D21	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	WAVECAL=NO; BUFFER-TIME=230.0			2211 Secs (2211 Secs) *[==>]*	 ***[1]***
3	E140M/1425 WAVECAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				*[==>]*	***[1]***

Comments: rn-max(CMFGEN-WN(model=6, Z=0.008, Teff=50000) (extinction lmcavg=0.100), flux1360 +- 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: WN7 --> WN #6
SED = SK-71D21_STIS_E140M_c1425_sed.fits
For exptime=2347.1 s, spectral region:
1200.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 7922.0 cts/s/segment
brightest pixel: 0.090 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T18:09:36, v0.4

old sed flux much too high, new sed underestimates flux from 1250-1450A (but otherwise agrees with IUE, FUSE)
new sed, IUE -- brightest 0.064-0.089 cts/s (1245 A), entire 5661-6734 cts/s, S/N~25-26 (1250), 16-18 (1200) in 2200s
ETC runs 1484592 (IUE), 1484593 (new sed)

Orbit Structure