16100 - ULLYSES SMC O7-O9 Giants COS

Cycle: 27, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
1C	(1) 2DFS-163	COS/FUV	3	08-Sep-2020 16:00:26.0	yes
AC	(1) 2DFS-163	COS/FUV	3	08-Sep-2020 16:00:28.0	yes
2C	(2) AV207	COS/FUV	2	08-Sep-2020 16:00:29.0	yes
3C	(3) AV440	COS/FUV	2	08-Sep-2020 16:00:31.0	yes
4C	(4) AV6	COS/FUV	1	08-Sep-2020 16:00:32.0	yes

11 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 16100, 2DFS-163-COS (1C), failed Tue Sep 08 20:00:32 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 1C; 2DFS-163; P/COS approved for submission; P/RS 06/05/20 ; intrev: not started ; ?/rr DD/MM/YY
vcheck; Enter targ name & Inst. & Resp. Sci.; 2DFS-163 ; COS ; RS
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; No
vcheck; S/N ETC calcs done & documented?; N/A
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; COS G130M/1291 PSA Spectroscopic ACQ 2 s ...
Imaging ACQ would need BOA, and be complicated by bright star in the field violating PSA health and safety.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; None unknown resolved ...
Zaritsky (2002) check V=20.159 next brightest in PSA macro-aperture and V=16.322 at outer edge of BOA macro-aperture and V=17.347 within BOA macro-aperture
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; 3 orbits - packed
vcheck; Buffer times optimized?; DONE ... adjusted to maximize exposure times
vcheck; Verify visit grouping correct; None needed
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	2DFS-163	RA: 00 36 58.2384 (9.2426600d)	Proper Motion RA: 0.448 mas/yr	V=15.11	Reference Frame: ICRS
	Alt Name1: OGLE-SMC-SC1-14829	Dec: -73 23 33.17 (-73.39255d)	Proper Motion Dec: -1.266 mas/yr	SpT=O8 Ib(f); E(B-V)=0.11; B=14.9; V=15.1	
		Equinox: J2000	Epoch of Position: 2000		

Comments: 2DFS-163 : [2dFS]-163, [2dFS]_163, 2dFS 163
Previous name : [2dFS]-163
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (2dFS 163): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2dFS+163&submit=submit+id
SpT = O8 Ib(f)
COS/G130M/c1096 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G130M/c1291 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G160M/c1611 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G185M/c1921 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G185M/c1953 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G185M/c1986 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
STIS/E140M/c1425 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
STIS/E230M/c1978 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
STIS/E230M/c2707 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
Coordinate pedigree: Gaia
v sin i = -99
Calculation performed 2020-02-24T18:00:48, v0.4
---
tstatus; 2DFS-163; P/COS approved for submission; S/NA not started; P/RS 27/04/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; 2DFS-163, OGLE SMC-SC1 14829
tcheck; Target info verification status?; Verified
tcheck; Coordinates & P.M. updated?; Updated, GAIA DR2
tcheck; Adopted SED compared to Observations?; OK - No FUV data, matches V, B photometry
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/PEAKXD (COS.sa.1445409)	(1) 2DFS-163	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			2.0 Secs (2 Secs) *[==>]*	***[1]***
2	ACQ/PEAKD (COS.sa.1445409)	(1) 2DFS-163	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			2.0 Secs (2 Secs) *[==>]*	***[1]***
3	G130M/1291-3 (COS.sp.1445543)	(1) 2DFS-163	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=470; FP-POS=3			1042 Secs (1042 Secs) *[==>]*	***[1]***

Comments: rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O8 Ib(f) --> O8.5 I
SED = 2DFS-163_COS_G130M_c1291_sed.fits
For exptime=3178.4 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 1296.9 cts/s/segment
brightest pixel: 0.018 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T18:00:52, v0.4

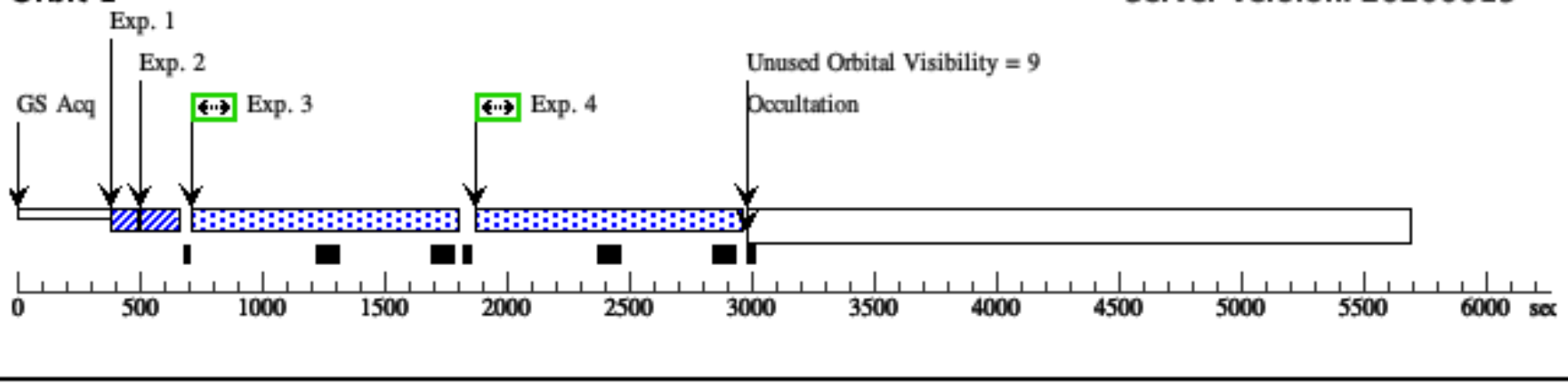
4	G130M/1291-4 (COS.sp.1445543)	(1) 2DFS-163	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=470; FP-POS=4			1042 Secs (1042 Secs) *[==>]*	***[1]***

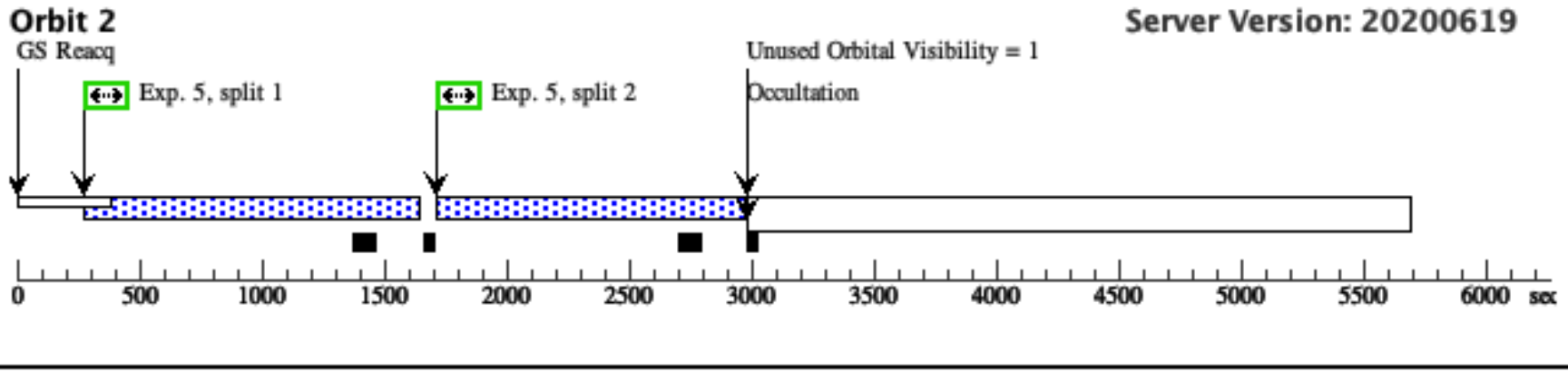
Comments: rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O8 Ib(f) --> O8.5 I
SED = 2DFS-163_COS_G130M_c1291_sed.fits
For exptime=3178.4 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 1296.9 cts/s/segment
brightest pixel: 0.018 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T18:00:52, v0.4

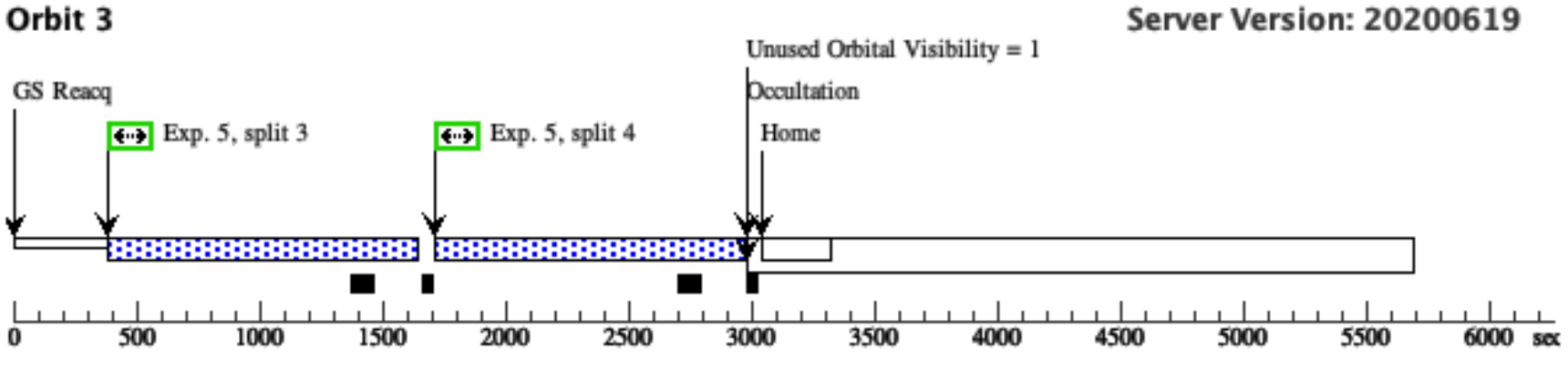
5	G160M/1611 (COS.sp.1445544)	(1) 2DFS-163	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=950; FP-POS=ALL			1025 Secs (4814 Secs) *[==>1203.0 Secs (Split 1)]* *[==>1203.0 Secs (Split 2)]*	***[2]***
								[==>1204.0 Secs (Split 3)] *[==>1204.0 Secs (Split 4)]*	***[3]***

Comments: rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag); cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O8 Ib(f) --> O8.5 I
SED = 2DFS-163_COS_G160M_c1611_sed.fits
For exptime=4100.3 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 859.7 cts/s/segment
brightest pixel: 0.013 cts/s/pix at 1420.0 A
Calculation performed 2020-02-24T18:00:55, v0.4

Orbit Structure







Visit

Proposal 16100, 2DFS-163-COS-REPEAT (AC) Tue Sep 08 20:00:32 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 1C; 2DFS-163; P/COS approved for submission; P/RS 06/05/20 ; intrev: not started ; ?/rr DD/MM/YY
vcheck; Enter targ name & Inst. & Resp. Sci.; 2DFS-163 ; COS ; RS
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; No
vcheck; S/N ETC calcs done & documented?; N/A
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; COS G130M/1291 PSA Spectroscopic ACQ 2 s ...
Imaging ACQ would need BOA, and be complicated by bright star in the field violating PSA health and safety.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; None unknown resolved ...
Zaritsky (2002) check V=20.159 next brightest in PSA macro-aperture and V=16.322 at outer edge of BOA macro-aperture and V=17.347 within BOA macro-aperture
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; 3 orbits - packed
vcheck; Buffer times optimized?; DONE ... adjusted to maximize exposure times
vcheck; Verify visit grouping correct; None needed
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 3

Fixed Targets

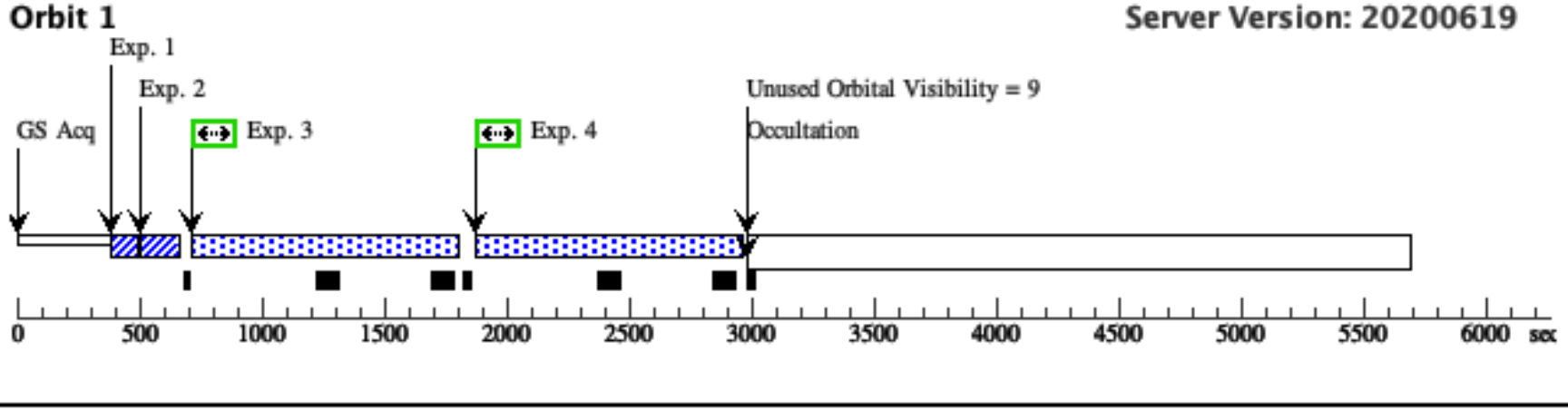
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	2DFS-163	RA: 00 36 58.2384 (9.2426600d)	Proper Motion RA: 0.448 mas/yr	V=15.11	Reference Frame: ICRS
	Alt Name1: OGLE-SMC-SC1-14829	Dec: -73 23 33.17 (-73.39255d)	Proper Motion Dec: -1.266 mas/yr	SpT=O8 Ib(f); E(B-V)=0.11; B=14.9; V=15.1	
		Equinox: J2000	Epoch of Position: 2000		

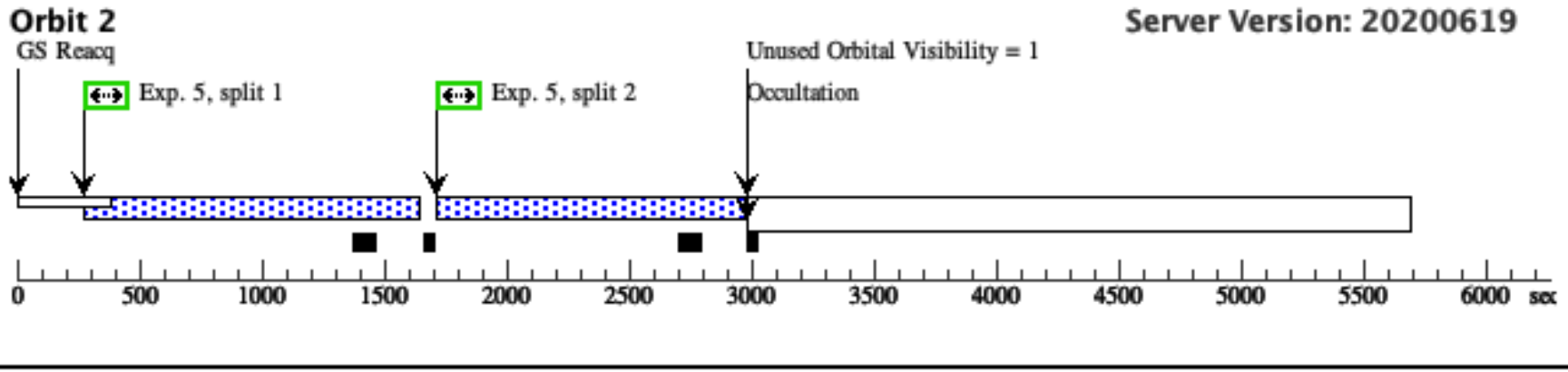
Comments: 2DFS-163 : [2dFS]-163, [2dFS]_163, 2dFS 163
Previous name : [2dFS]-163
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (2dFS 163): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=2dFS+163&submit=submit+id
SpT = O8 Ib(f)
COS/G130M/c1096 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G130M/c1291 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G160M/c1611 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G185M/c1921 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G185M/c1953 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
COS/G185M/c1986 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
STIS/E140M/c1425 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
STIS/E230M/c1978 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
STIS/E230M/c2707 : rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag)
Coordinate pedigree: Gaia
v sin i = -99
Calculation performed 2020-02-24T18:00:48, v0.4
---
tstatus; 2DFS-163; P/COS approved for submission; S/NA not started; P/RS 27/04/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; 2DFS-163, OGLE SMC-SC1 14829
tcheck; Target info verification status?; Verified
tcheck; Coordinates & P.M. updated?; Updated, GAIA DR2
tcheck; Adopted SED compared to Observations?; OK - No FUV data, matches V, B photometry
Category=EXT-STAR
Description=[SUPERGIANT O, OF]
Extended=NO

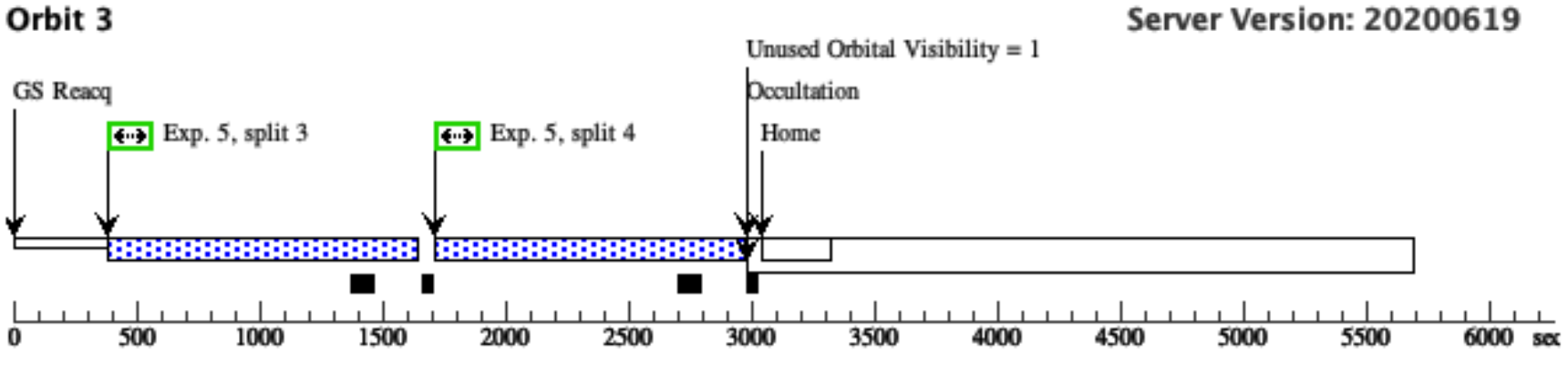
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/PEAKXD (COS.sa.1445409)	(1) 2DFS-163	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			2.0 Secs (2 Secs) *[==>]*	***[1]***
2	ACQ/PEAKD (COS.sa.1445409)	(1) 2DFS-163	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			2.0 Secs (2 Secs) *[==>]*	***[1]***
3	G130M/1291-3 (COS.sp.1445543)	(1) 2DFS-163	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=470; FP-POS=3			1042 Secs (1042 Secs) *[==>]*	***[1]***
	Comments: rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O8 Ib(f) --> O8.5 I* *SED = 2DFS-163_COS_G130M_c1291_sed.fits* *For exptime=3178.4 s, spectral region:* *1150.0 +- 0.5 A achieves SNR=30.0/resel* *global countrate (brightest segment): 1296.9 cts/s/segment* *brightest pixel: 0.018 cts/s/pix at 1245.0 A* *Calculation performed 2020-02-24T18:00:52, v0.4*								
4	G130M/1291-4 (COS.sp.1445543)	(1) 2DFS-163	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=470; FP-POS=4			1042 Secs (1042 Secs) *[==>]*	***[1]***
	Comments: rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O8 Ib(f) --> O8.5 I* *SED = 2DFS-163_COS_G130M_c1291_sed.fits* *For exptime=3178.4 s, spectral region:* *1150.0 +- 0.5 A achieves SNR=30.0/resel* *global countrate (brightest segment): 1296.9 cts/s/segment* *brightest pixel: 0.018 cts/s/pix at 1245.0 A* *Calculation performed 2020-02-24T18:00:52, v0.4*								
5	G160M/1611 (COS.sp.1445544)	(1) 2DFS-163	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=950; FP-POS=ALL			1025 Secs (4814 Secs) *[==>1203.0 Secs (Split 1)]* *[==>1203.0 Secs (Split 2)]* *[==>1204.0 Secs (Split 3)]* *[==>1204.0 Secs (Split 4)]*	***[2]*** ***[3]***
	Comments: rn(WM-Basic(O8.5 I, Z=0.004, Teff=34674, log_lum=5.89, log_g=3.29) (extinction smcbar=0.110), johnson B mag=14.950 vegamag); cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O8 Ib(f) --> O8.5 I* *SED = 2DFS-163_COS_G160M_c1611_sed.fits* *For exptime=4100.3 s, spectral region:* *1590.0 +- 0.5 A achieves SNR=30.0/resel* *global countrate (brightest segment): 859.7 cts/s/segment* *brightest pixel: 0.013 cts/s/pix at 1420.0 A* *Calculation performed 2020-02-24T18:00:55, v0.4*								

Orbit Structure







Visit

Proposal 16100, AV207-COS (2C), completed Tue Sep 08 20:00:33 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 2C; AV207; P/COS approved for submission; P/RS 03/06/20 ; intrev: not started ; ?/rr DD/MM/YY
vcheck; Enter targ name & Inst. & Resp. Sci.; AV207 ; COS ; RS
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; No
vcheck; S/N ETC calcs done & documented?; N/A
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; COS G130M/1291 PSA Spectroscopic ACQ 1 s ...
Imaging ACQ would need BOA, and be complicated by bright star in the field violating PSA health and safety.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; 2 unknown for G130M/1291 and 1 unknown for G160M/1611 exposures resolved ...
Zaritsky (2002) check V=17.671 next brightest in PSA macro-aperture and V=15.472 in BOA macro-aperture.
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; 2 orbits - retaining default exposure times
vcheck; Buffer times optimized?; DONE ... used default COS IHB suggested values
vcheck; Verify visit grouping correct; None needed
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	AV207	RA: 00 58 33.1898 (14.6382908d)	Proper Motion RA: .606 mas/yr	V=14.25	Reference Frame: ICRS
	Alt Name1: AV-207	Dec: -71 55 46.72 (-71.92964d)	Proper Motion Dec: -1.090 mas/yr	SpT=O7 III((f)); E(B-V)=0.07; U=13.0; B=14.1; V=14.2; F1160 =3.56e-13; F1360=2.31e-13; F1 700=1.54e-13; F2200=8.93e-14	
	Alt Name2: M2002-43724	Equinox: J2000	Epoch of Position: 2000		

Comments: AV207 : [M2002]_43724, AV 207, AzV 207
Previous name : AV 207
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (AzV 207): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=AzV+207&submit=submit+id
SpT = O7 III((f))
COS/G130M/c1096 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.6e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1360 +- 30.0A flux=2.3e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.5e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.5e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.5e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux2200 +- 5.0A flux=8.9e-14 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1360 +- 30.0A flux=2.3e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux2200 +- 5.0A flux=8.9e-14 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux2200 +- 5.0A flux=8.9e-14 Flam)
Coordinate pedigree: Gaia
v sin i = 75
Calculation performed 2020-02-24T17:58:14, v0.4
---
tstatus; AV207; P/COS approved for submission; S/NA not started; P/RS 07/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; AV207, AzV 207
tcheck; Target info verification status?; OK ...
ULLYSES target list gives SpT O7 III(f), V-Mag 14.25 but SIMBAD gives O7Vz(f) and 14.35 but name and co-ordinates match
tcheck; Coordinates & P.M. updated?; Updated, GAIA DR2
tcheck; Adopted SED compared to Observations?; OK - match is good in FUV range ... model flux lower by about 5% around 1750A, and lower also at the photometric points, however adequate for ETC calculations
Category=EXT-STAR
Description=[GIANT 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/PEAKXD (COS.sa.1445154)	(2) AV207	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			1 Secs (1 Secs) *[==>]*	***[1]***
2	ACQ/PEAKD (COS.sa.1445154)	(2) AV207	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			1 Secs (1 Secs) *[==>]*	***[1]***
3	G130M/1291-3 (COS.sp.1445157)	(2) AV207	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=196; FP-POS=3			700.0 Secs (700 Secs) *[==>]*	***[1]***

Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1360 +- 30.0A flux=2.3e-13 Flam); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 III((f)) --> O7.5 III
SED = AV207_COS_G130M_c1291_sed.fits
For exptime=691.9 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 4367.1 cts/s/segment
brightest pixel: 0.069 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T17:58:17, v0.4

#	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.1445157)	(2) AV207	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=196; FP-POS=4			700.0 Secs (700 Secs) *[==>]*	***[1]***

Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1360 +- 30.0A flux=2.3e-13 Flam); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 III((f)) --> O7.5 III
SED = AV207_COS_G130M_c1291_sed.fits
For exptime=691.9 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 4367.1 cts/s/segment
brightest pixel: 0.069 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T17:58:17, v0.4

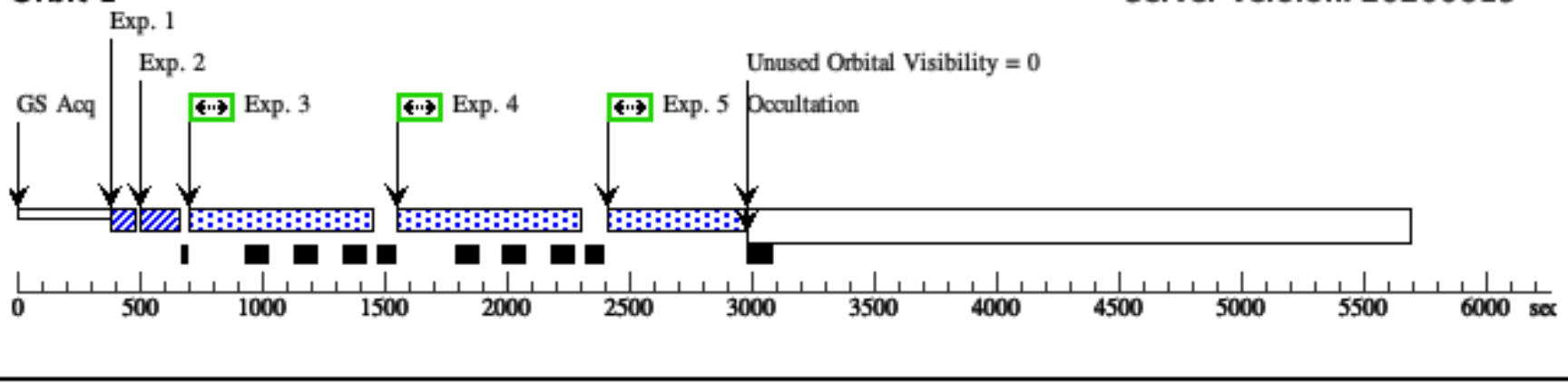
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
5	G160M/1611 (COS.sp.1445166)	(2) AV207	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=440.0; FP-POS=1			395.0 Secs (395 Secs) *[==>]*	***[1]***

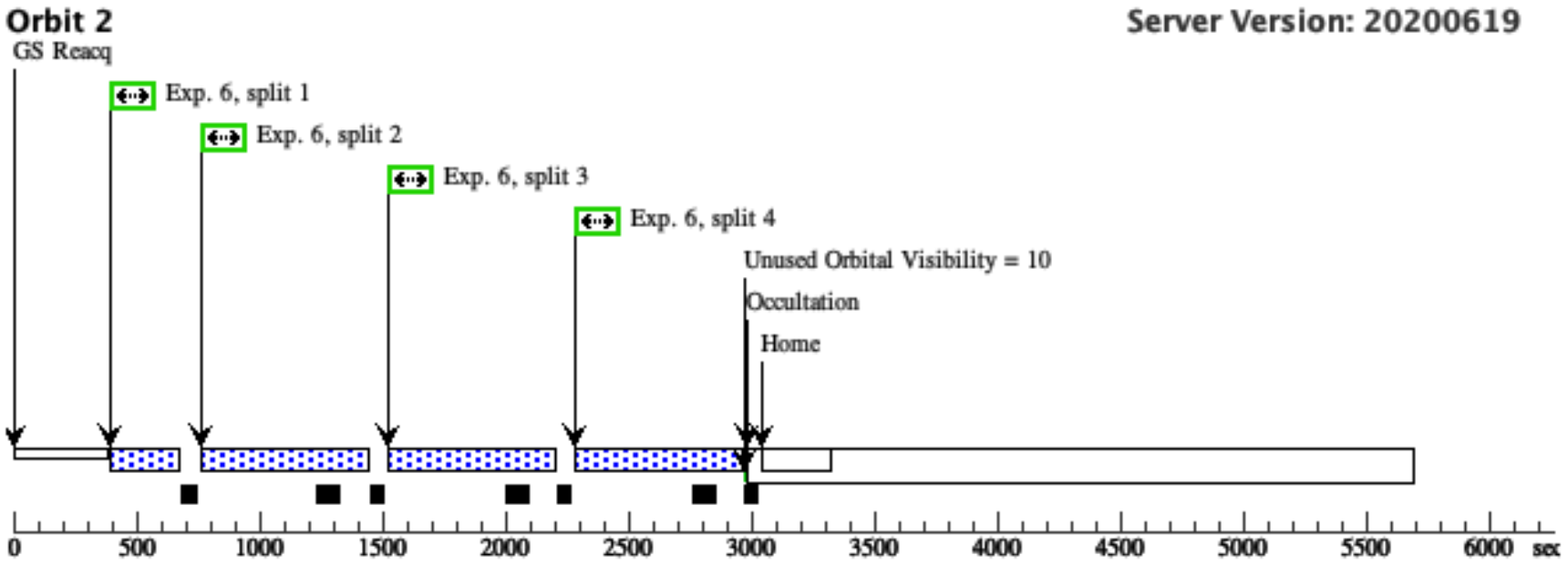
Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.5e-13 Flam); cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 III((f)) --> O7.5 III
SED = AV207_COS_G160M_c1611_sed.fits
For exptime=1296.9 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 2747.0 cts/s/segment
brightest pixel: 0.042 cts/s/pix at 1420.0 A
Calculation performed 2020-02-24T17:58:20, v0.4

	6	G160M/1611 (COS.sp.1445166)	(2) AV207 1	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=440; FP-POS=ALL	627 Secs (2112 Secs) *[==>231.0 Secs (Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[2]***

Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.5e-13 Flam); cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 III((f)) --> O7.5 III
SED = AV207_COS_G160M_c1611_sed.fits
For exptime=1296.9 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 2747.0 cts/s/segment
brightest pixel: 0.042 cts/s/pix at 1420.0 A
Calculation performed 2020-02-24T17:58:20, v0.4

Orbit Structure





Visit

Proposal 16100, AV440-COS (3C), completed Tue Sep 08 20:00:33 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 3C; AV440; P/COS approved for submission; P/RS 04/06/20 ; intrev: not started ; ?/rr DD/MM/YY
vcheck; Enter targ name & Inst. & Resp. Sci.; AV440 ; COS ; RS
vcheck; ETC numbers entered in APT?; Completed
vcheck; Any screening violations?; No
vcheck; S/N ETC calcs done & documented?; N/A
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; G130M/1291/ PSA Spectroscopic ACQ 1 s ...
Imaging ACQ would need BOA, and if using MIRROR A then bright star in field violates PSA health and safety
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; 1 unknown for G130M/1291 resolved ...
Zaritsky (2002) check V=17.879 is next brightest source after target on edge of PSA/BOA macro-apertures
vcheck; Visual BOT check for stars not in catalog?; OK
vcheck; Orbit packing finalized?; 2 orbits - retaining default exposure times
vcheck; Buffer times optimized?; DONE ... used default COS IHB suggested values
vcheck; Verify visit grouping correct; None needed
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 2

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	AV440	RA: 01 08 56.0210 (17.2334208d)	Proper Motion RA: .749 mas/yr	V=14.48	Reference Frame: ICRS
	Alt Name1: AV-440	Dec: -71 52 46.70 (-71.87964d)	Proper Motion Dec: -1.138 mas/yr	SpT=O7.5 III:; E(B-V)=0.09; U =13.3; B=14.3; V=14.5; F1160= 3.19e-13; F1360=2.46e-13; F17 00=1.56e-13	
	Alt Name2: AZV-440	Equinox: J2000	Epoch of Position: 2000		

Comments: AV440 : [M2002]_68756, AV 440, AzV 440
Previous name : AV 440
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (AzV 440): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=AzV+440&submit=submit+id
SpT = O7.5 III:
COS/G130M/c1096 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1160 +- 30.0A flux=3.2e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1360 +- 30.0A flux=2.5e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1360 +- 30.0A flux=2.5e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 62
Calculation performed 2020-02-24T17:58:00, v0.4
---
tstatus; AV440; P/COS approved for submission; S/NA not started; P/RS 07/05/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; AV440 AzV 440
tcheck; Target info verification status?; Okay ...
ULLYSES target list gives V-mag 14.48 and SIMBAD gives 14.58
tcheck; Coordinates & P.M. updated?; Updated, GAIA DR2
tcheck; Adopted SED compared to Observations?; OK - match is good in range of observations ... model flux uses E(B-V)=0.04 and scaled to match the 1160A flux, deviates at shorter wavelengths, but is adequate for ETC calculations
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/PEAKXD (COS.sa.1445360)	(3) AV440	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			1.0 Secs (1 Secs) *[==>]*	***[1]***
2	ACQ/PEAKD (COS.sa.1445360)	(3) AV440	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			1.0 Secs (1 Secs) *[==>]*	***[1]***
3	G130M/1291-3 (COS.sp.1445361)	(3) AV440	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=148; FP-POS=3			700.0 Secs (700 Secs) *[==>]*	***[1]***

Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1360 +- 30.0A flux=2.5e-13 Flam); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7.5 III: --> O7.5 III
SED = AV440_COS_G130M_c1291_sed.fits
For exptime=711.5 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 4389.6 cts/s/segment
brightest pixel: 0.071 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T17:58:04, v0.4

4	G130M/1291-4 (COS.sp.1445361)	(3) AV440	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=148; FP-POS=4			700.0 Secs (700 Secs) *[==>]*	***[1]***

Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1360 +- 30.0A flux=2.5e-13 Flam); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7.5 III: --> O7.5 III
SED = AV440_COS_G130M_c1291_sed.fits
For exptime=711.5 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 4389.6 cts/s/segment
brightest pixel: 0.071 cts/s/pix at 1245.0 A
Calculation performed 2020-02-24T17:58:04, v0.4

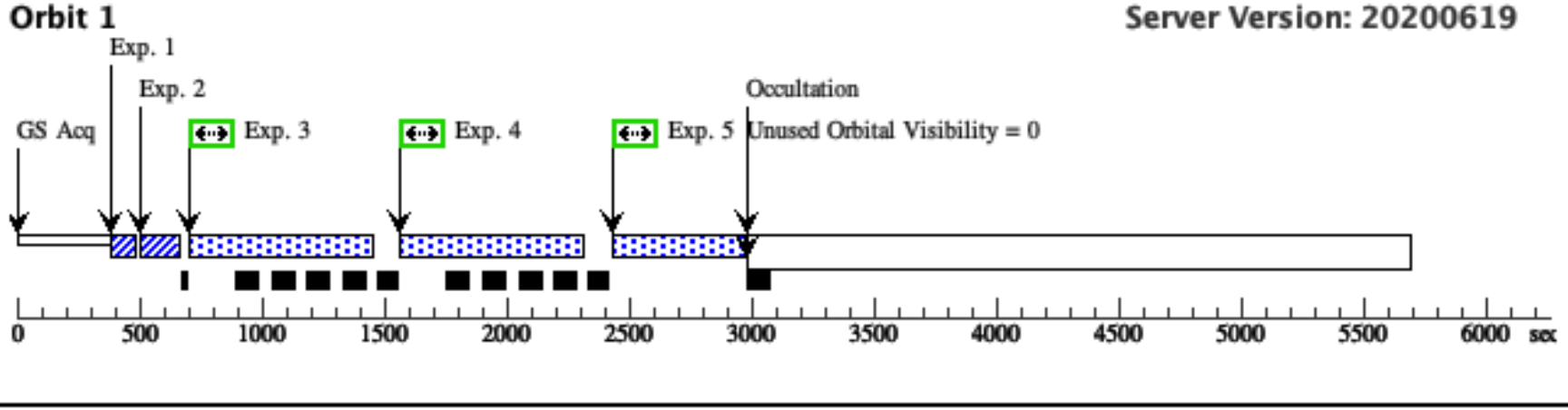
5	G160M/1611 (COS.sp.1445362)	(3) AV440	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=430; FP-POS=1			350 Secs (377 Secs) *[==>377.0 Secs]*	***[1]***

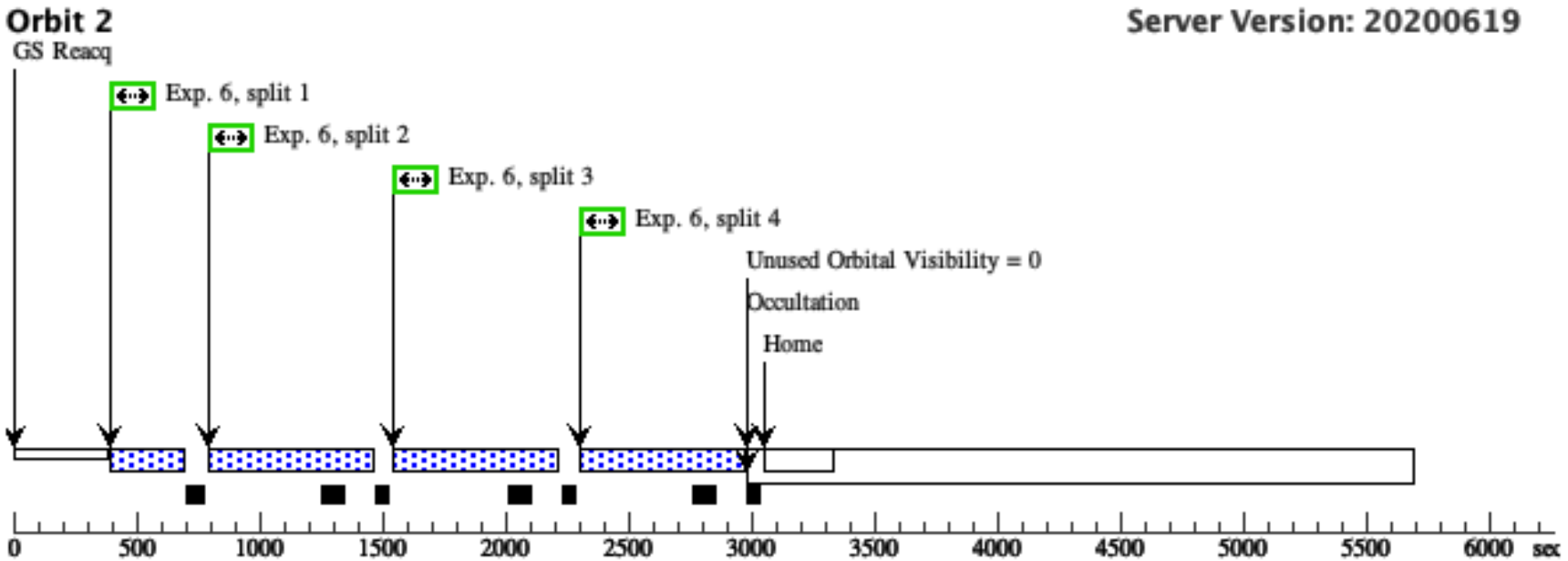
Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam); cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7.5 III: --> O7.5 III
SED = AV440_COS_G160M_c1611_sed.fits
For exptime=1302.7 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 2682.4 cts/s/segment
brightest pixel: 0.041 cts/s/pix at 1420.0 A
Calculation performed 2020-02-24T17:58:06, v0.4

	6	G160M/1611 (3) AV4401 (COS.sp.1445362)	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=430; FP-POS=ALL	621 Secs (2112 Secs) *[==>249.0 Secs (Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[2]***

Comments: rn-max(WM-Basic(O7.5 III, Z=0.004, Teff=37154, log_lum=5.64, log_g=3.70) (extinction smcbar=0.090), flux1700 +- 5.0A flux=1.6e-13 Flam); cos,fuv,g160m,c1611,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7.5 III: --> O7.5 III
SED = AV440_COS_G160M_c1611_sed.fits
For exptime=1302.7 s, spectral region:
1590.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 2682.4 cts/s/segment
brightest pixel: 0.041 cts/s/pix at 1420.0 A
Calculation performed 2020-02-24T17:58:06, v0.4

Orbit Structure





Visit

Proposal 16100, AV6-COS (4C), completed Tue Sep 08 20:00:33 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 4C; AV6; P/COS approved for submission; P/CP 11/03/20 ; intrev: not started ; ?/rr DD/MM/YY
vcheck; Enter targ name & Inst. & Resp. Sci.; AV6 ; COS ; RS
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; no
vcheck; S/N ETC calcs done & documented?; yes ...
S/N=59 @ 1160 (>60 everywhere else)
vcheck; Field images checked & saved?; yes
vcheck; Selected ACQ strategy?; dispersed c1291
vcheck; Possible ACQ or Sci spoilers?; none
vcheck; Field BOT clear?; yes ...
IUE spectra must include all the UV flux within the PSA macro-aperture, and is consistent with only the expected target contributing. So the bright red star at 2" cannot be a safety hazard for the same c1291 mode used for both the ACQ and science exposures.
The next brighest star in the macro-aperture has, according to Zaritsky, U= 15.651, B= 16.511, well under the limits for an unredded O-star with c1291/PSA or c1291/BOA
vcheck; Visual BOT check for stars not in catalog?; done none found
vcheck; Orbit packing finalized?; yes ...
obtained 2040 s with c1291, ~ 1.5x the requested time
vcheck; Buffer times optimized?; yes
vcheck; Verify visit grouping correct; NA
vcheck; Is visit ready for int. review?; Yes
Allocated COS orbits = 1 used = 1

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AV6	RA: 00 45 18.2072 (11.3258633d)		V=13.763	Reference Frame: ICRS
	Alt Name1: 2DFS-5002	Dec: -73 15 22.99 (-73.25639d)		SpT=O9III; E(B-V)=0.06; B=13.56; V=13.763; I=13.930; F1160=4.91e-13; F1360=4.01e-13; F1700=2.74e-13; F2200=1.43e-13	
	Alt Name2: OGLE-SMC-SC3-202715	Equinox: J2000			

Comments: AV6 : [2dFS]_5002, AV 6, AzV 6
Previous name : AV 6
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (AzV 6): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=AzV+6&submit=submit+id
SpT = O9III
COS/G130M/c1096 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1160 +- 30.0A flux=4.9e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1360 +- 30.0A flux=4e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1700 +- 5.0A flux=2.7e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1700 +- 5.0A flux=2.7e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1700 +- 5.0A flux=2.7e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux2200 +- 5.0A flux=1.4e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1360 +- 30.0A flux=4e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux2200 +- 5.0A flux=1.4e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux2200 +- 5.0A flux=1.4e-13 Flam)
Coordinate pedigree: InputCatalog
Calculation performed 2020-02-24T18:01:02, v0.4
---
tstatus; AV6; P/COS approved for submission; S/NA not started; P/CP 10/03/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ;
There are actually two stars very close together here, separated by about 2", but most catalogs don't recognize this and end up closer to the red star
tcheck; Target info verification status?; Yes ...
This target, AzV 6, SpT=O9III, is a little complicated, because in Gaia we see that there are actually two stars of similar brightness, one red, one blue, about 2.1" apart with the blue one almost exactly due north of the red one.
The SIMBAD entry doesn't seem to realize this is a double, but it does list the separate OGLE ID's for both components.
Most catalogs seem give some intermediate value for the coordinates, often closer to the red componenet, and much of the photometry may be contaminated. Only Gaia and Ogle seem to recognize that there are actually two stars here.
Existing HST/COS observations had used 2MASS coordinates, which correspond to the red star, but the ACQ apparently pulled it by about 1.3" towards the blue one, so it seems likely that it was the blue star that was actually observed.
Blue star is also an eclipsing binary (algol type according to SIMBAD), but OGLE amplitude is less than 0.1 mags
Gaia DR2 4685852102139246976 G=13.7703, Bp-Rp=-0.2273
OGLE SMC-SC3 202715 B-V=-0.203, V-I=-0.167, I=13.930, B, V, I = 13.56, 13.763, 13.930
eclipsing binary (algol type), but OGLE amplitude is less than 0.1 mags
Red star details are as follows:
Gaia DR2 4685852102125010944, G=14.3561, Bp-Rp=1.2915
OGLE SMC-SC3 202707, B-V=1.153, V-I=1.382, I=13.376
If we assume we want the blue star, and update the photometry to the OGLE BVI values, then all of the existing UV observations - FUSE, IUE, & COS G160M seem to make sense with a relatively small reddening; E(B-V)=0.05 rather than the previous estimate of 0.3.

tcheck; Coordinates & P.M. updated?; yes ...
Original coordinates from source catalog: 00 45 18.1800 -73 15 24.70
Update to Gaia DR2 4685852102139246976 coordinates. This is the blue object hidden in double image in GSC2:: 00 45 18.207226 -73 15 22.993055
tcheck; Adopted SED compared to Observations?; done ...
in ~/Box/ullyses_tech/proposals/c27_mc/16100/av6 compare av6_original_auto_sed_vs_data.png to av6_revised_sed_vs_data_oglebvi.png. The latter updates the E(B-V) and also updates the photometry to the values for OGLE SMC-SC3 202715
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/PEAKXD (COS.sa.1431643)	(4) AV6	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]***
2	ACQ/PEAKD (COS.sa.1431643)	(4) AV6	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]***
3	G130M/1291-3 (COS.sp.1445675)	(4) AV6	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=115; FP-POS=3			1000 Secs (1020 Secs) *[==>1020.0 Secs]*	***[1]***

Comments: rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1360 +- 30.0A flux=4e-13 Flam); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9III --> O9 III
SED = AV6_COS_G130M_c1291_sed.fits
For exptime=1376.7 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 6040.9 cts/s/segment
brightest pixel: 0.084 cts/s/pix at 1405.0 A
Calculation performed 2020-02-24T18:01:06, v0.4

#	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.1445675)	(4) AV6	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=115; FP-POS=4			1000 Secs (1020 Secs) *[==>1020.0 Secs]*	***[1]***

Comments: rn-max(WM-Basic(O9 III, Z=0.004, Teff=32359, log_lum=5.41, log_g=3.61) (extinction smcbar=0.310), flux1360 +- 30.0A flux=4e-13 Flam); cos,fuv,g130m,c1291,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9III --> O9 III
SED = AV6_COS_G130M_c1291_sed.fits
For exptime=1376.7 s, spectral region:
1150.0 +- 0.5 A achieves SNR=30.0/resel
global countrate (brightest segment): 6040.9 cts/s/segment
brightest pixel: 0.084 cts/s/pix at 1405.0 A
Calculation performed 2020-02-24T18:01:06, v0.4

Orbit Structure