16372 - ULLYSES SMC O7 to O9 Stars COS

Cycle: 28, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
1C	(1) AV148	COS/FUV	3	10-Mar-2022 10:00:21.0	yes
2C	(2) AV468	COS/FUV	3	10-Mar-2022 10:00:22.0	yes
3C	(3) NGC346-ELS-31	COS/FUV	5	10-Mar-2022 10:00:24.0	yes
4C	(4) NGC346-ELS-46	COS/FUV	4	10-Mar-2022 10:00:25.0	yes
DC	(4) NGC346-ELS-46	COS/FUV	3	10-Mar-2022 10:00:26.0	yes

18 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 16372, AV148-COS (1C), scheduling Thu Mar 10 15:00:27 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 1C; AV148; P/COS approved for submission ; P/RS 23/10/20 ; intrev: completed ; P/CP 03/12/20
vcheck; Enter targ name & Inst. & Resp. Sci.; AV148 ; COS ; RS
vcheck; ETC numbers entered in APT?; Yes
vcheck; Any screening violations?; None but ...
with the original model SED the spectroscopic ACQ with c1291 violates count rate for irregularly variable sources. This is not an issue.
vcheck; S/N ETC calcs done & documented?; The original model spectrum was scaled by a factor of 0.8 to match the existing COS data and was used to check for the screening limit. The scaled spectrum was used in the ETC calculations. The buffer times used are less than 2/3 the value for the brighter case.
vcheck; Field images checked & saved?; Yes
vcheck; Selected ACQ strategy?; COS G130M/1291 PSA 1.0 sec ...
There is one relatively bright star in the field that would pose a safety issue for the PSA in the case of ACQ/IM with the BOA.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; There is one unknown source reported by GSCII for the spectroscopic ACQ. However an inspection of the DSS, 2MASS and Galex images along with the stars in the Zaritsky catalog showed they were no bright stars that would pose a problem.
vcheck; Visual BOT check for stars not in catalog?; OK
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 COS orbits = 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	AV148 Alt Name1: M2002-27731 Alt Name2: AZV-148	RA: 00 53 42.2325 (13.4259687d) Dec: -72 42 35.28 (-72.70980d) Equinox: J2000	Proper Motion RA: 0.672 mas/yr Proper Motion Dec: -1.328 mas/yr Epoch of Position: 2000	V=14.12 SpT=O8.5 V; E(B-V)=0.07; U=12.9; B=13.9; V=14.1; F1160=3.13e-13; F1360=2.76e-13; F1700=1.71e-13	Reference Frame: ICRS

Comments: AV148 : [M2002]_27731, AV 148, AzV 148
Previous name : AV 148
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (AzV 148): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=AzV+148&submit=submit+id
SpT = O8.5 V
COS/G130M/c1096 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1360 +- 30.0A flux=2.8e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.7e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.7e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.7e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.7e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1360 +- 30.0A flux=2.8e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.7e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1700 +- 5.0A flux=1.7e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 60
Calculation performed 2020-02-24T18:00:06, v0.4
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tstatus; AV148; P/COS approved for submission ; S/ins not started; P/RS 23/10/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names:; AV148, 'AzV 148'
tcheck; Target info verification status?; OK ...
spectral type in SIMBAD is B0, but accuracy D, and co-ordinates and names are fine.
tcheck; Coordinates & P.M. updated?; Yes - GAIA DR2
tcheck; Adopted SED compared to Observations?; OK ...
COS c1291 data exist and therefore the model was scaled by a factor of about 0.8 to match the FUV data, retaining E(B-V)=0.07
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/PEAKXD (COS.sa.1470891)	(1) AV148	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.1470891)	(1) AV148	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/1096-FPPOS1 (COS.sp.1470893)	(1) AV148	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=523; FP-POS=1			1680 Secs (1680 Secs) *[==>]*	***[1]***
	Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O8.5 V --> O9 V* *SED = AV148_COS_G130M_c1096_sed.fits* *For exptime=5538.8 s, spectral region:* *1080.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2801.5 cts/s/segment* *brightest pixel: 0.053 cts/s/pix at 1235.0 A* *Calculation performed 2020-02-24T18:00:15, v0.4*								
4	G130M/1096-FPPOS2i (COS.sp.1470893)	(1) AV148	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=200; FP-POS=2			200 Secs (298 Secs) *[==>298.0 Secs]*	***[1]***
	Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O8.5 V --> O9 V* *SED = AV148_COS_G130M_c1096_sed.fits* *For exptime=5538.8 s, spectral region:* *1080.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2801.5 cts/s/segment* *brightest pixel: 0.053 cts/s/pix at 1235.0 A* *Calculation performed 2020-02-24T18:00:15, v0.4*								
5	G130M/1096-FPPOS2ii (COS.sp.1470893)	(1) AV148	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=436; FP-POS=2			1420 Secs (1420 Secs) *[==>]*	***[2]***
	Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O8.5 V --> O9 V* *SED = AV148_COS_G130M_c1096_sed.fits* *For exptime=5538.8 s, spectral region:* *1080.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 2801.5 cts/s/segment* *brightest pixel: 0.053 cts/s/pix at 1235.0 A* *Calculation performed 2020-02-24T18:00:15, v0.4*								

6	G130M/109 (1) AV148 6-FPPOS3i (COS.sp.147 0893)	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=490; FP-POS=3	600 Secs (989 Secs) *[==>989.0 Secs]*	***[2]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O8.5 V --> O9 V
SED = AV148_COS_G130M_c1096_sed.fits
For exptime=5538.8 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2801.5 cts/s/segment
brightest pixel: 0.053 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:00:15, v0.4

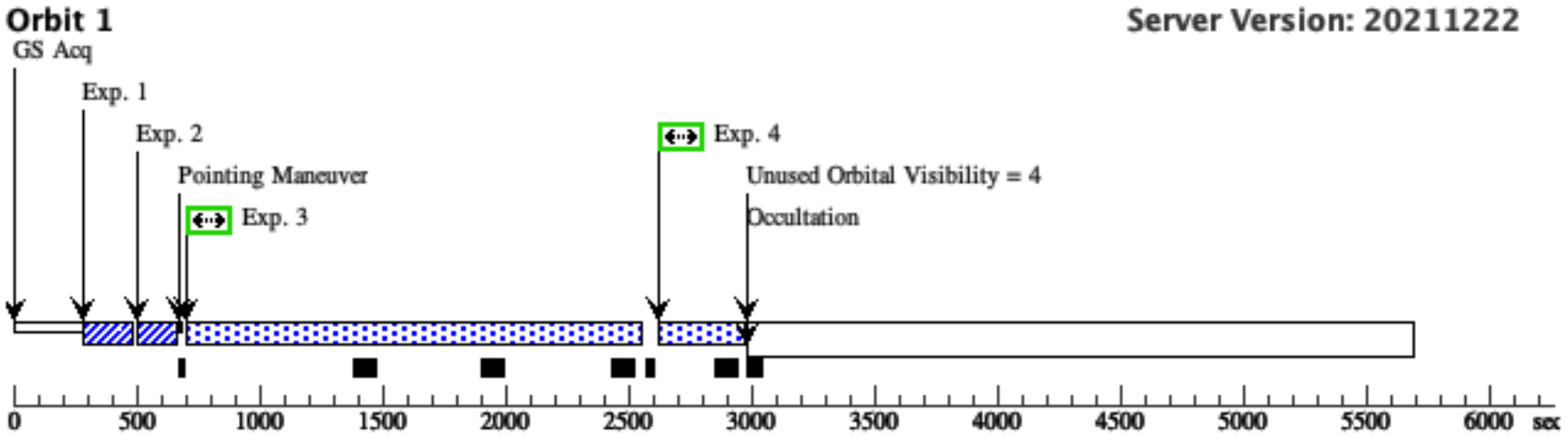
7	G130M/109 (1) AV148 6-FPPOS3ii (COS.sp.147 0893)	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=600; FP-POS=3	710 Secs (710 Secs) *[==>]*	***[3]***

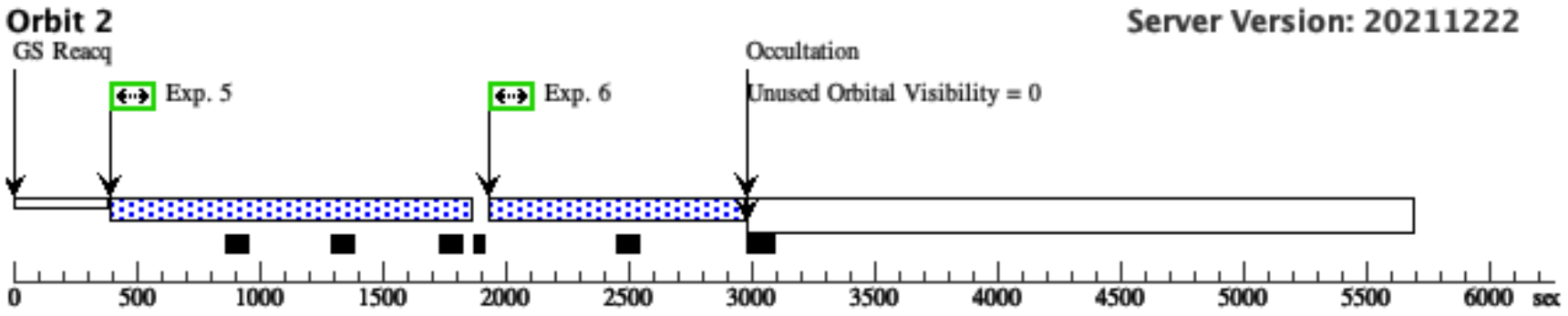
Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O8.5 V --> O9 V
SED = AV148_COS_G130M_c1096_sed.fits
For exptime=5538.8 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2801.5 cts/s/segment
brightest pixel: 0.053 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:00:15, v0.4

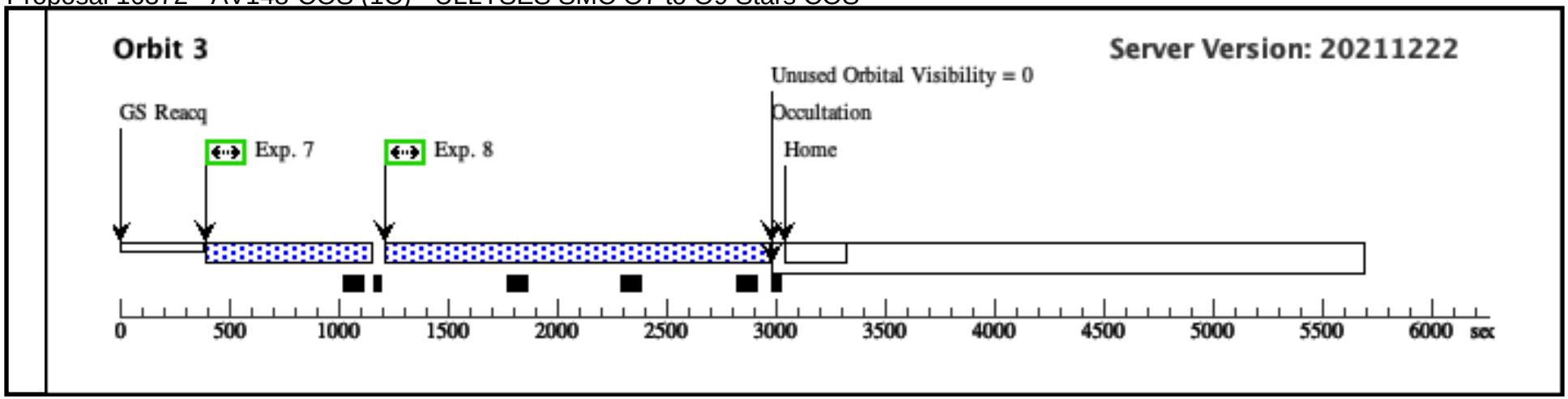
8	G130M/109 (1) AV148 6-FPPOS4 (COS.sp.147 0893)	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=523; FP-POS=4	1680 Secs (1708 Secs) *[==>1708.0 Secs]*	***[3]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.070), flux1160 +- 30.0A flux=3.1e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O8.5 V --> O9 V
SED = AV148_COS_G130M_c1096_sed.fits
For exptime=5538.8 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2801.5 cts/s/segment
brightest pixel: 0.053 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:00:15, v0.4

Orbit Structure






Orbit 3
Server Version: 20211222
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 7
Exp. 8
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16372, AV468-COS (2C), scheduling Thu Mar 10 15:00:27 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 2C; AV468; P/COS approved for submission ; P/RS 23/10/20 ; intrev: completed ; P/CP 03/12/20
vcheck; Enter targ name & Inst. & Resp. Sci.; AV468 ; COS ; RS
vcheck; ETC numbers entered in APT?; Yes
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 1.0 sec ...
There is one relatively bright star in the field that would pose a safety issue for the PSA in the case of ACQ/IM with the BOA. Also the target is too bright for MIRROR_B/PSA ACQ/IM.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; OK
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 COS orbits = 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	AV468	RA: 01 12 5.8752 (18.0244800d)	Proper Motion RA: 1.096 mas/yr	V=15.11	Reference Frame: ICRS
	Alt Name1: AV-468	Dec: -72 40 56.60 (-72.68239d)	Proper Motion Dec: -1.248 mas/yr	SpT=O9 V; E(B-V)=0.02; U=13.8; B=14.9; V=15.1; F1160=2.91e-13; F1360=2.09e-13; F1700=1.12e-13	
	Alt Name2: M2002-72941	Equinox: J2000	Epoch of Position: 2000		

Comments: AV468 : [M2002]_72941, AV 468, AzV 468
Previous name : AV 468
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (AzV 468): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=AzV+468&submit=submit+id
SpT = O9 V
COS/G130M/c1096 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1360 +- 30.0A flux=2.1e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1700 +- 5.0A flux=1.1e-13 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1700 +- 5.0A flux=1.1e-13 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1700 +- 5.0A flux=1.1e-13 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1700 +- 5.0A flux=1.1e-13 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1360 +- 30.0A flux=2.1e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1700 +- 5.0A flux=1.1e-13 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1700 +- 5.0A flux=1.1e-13 Flam)
Coordinate pedigree: Gaia
v sin i = 50
Calculation performed 2020-02-24T18:01:58, v0.4
---
tstatus; AV468; P/COS approved for submission ; S/ins not started; P/RS 23/10/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; AV468, 'AzV 468'
tcheck; Target info verification status?; OK ...
spectral type is O8.5V in SIMBAD
tcheck; Coordinates & P.M. updated?; Yes - GAIA DR2
tcheck; Adopted SED compared to Observations?; OK ...
COS c1291 data exist and therefore the model was scaled by a factor of about 0.8 to match the FUV data, retaining E(B-V)=0.02
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/PEAKXD (COS.sa.1470904)	(2) AV468	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.1470904)	(2) AV468	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/1096-FPPOS1 (COS.sp.1470906)	(2) AV468	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=523; FP-POS=1			1680 Secs (1680 Secs) *[==>]*	***[1]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9 V --> O9 V
SED = AV468_COS_G130M_c1096_sed.fits
For exptime=5229.9 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2542.3 cts/s/segment
brightest pixel: 0.045 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:02:07, v0.4

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
4	G130M/1096-FPPOS2i (COS.sp.1470906)	(2) AV468	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=200; FP-POS=2			200.0 Secs (298 Secs) *[==>298.0 Secs]*	***[1]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9 V --> O9 V
SED = AV468_COS_G130M_c1096_sed.fits
For exptime=5229.9 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2542.3 cts/s/segment
brightest pixel: 0.045 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:02:07, v0.4

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
5	G130M/1096-FPPOS2ii (COS.sp.1470906)	(2) AV468	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=436; FP-POS=2			1420 Secs (1420 Secs) *[==>]*	***[2]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9 V --> O9 V
SED = AV468_COS_G130M_c1096_sed.fits
For exptime=5229.9 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2542.3 cts/s/segment
brightest pixel: 0.045 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:02:07, v0.4

6	G130M/109 (2) AV468 6-FPPOS3i (COS.sp.147 0906)	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=490; FP-POS=3	600.0 Secs (989 Secs) *[==>989.0 Secs]*	***[2]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9 V --> O9 V
SED = AV468_COS_G130M_c1096_sed.fits
For exptime=5229.9 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2542.3 cts/s/segment
brightest pixel: 0.045 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:02:07, v0.4

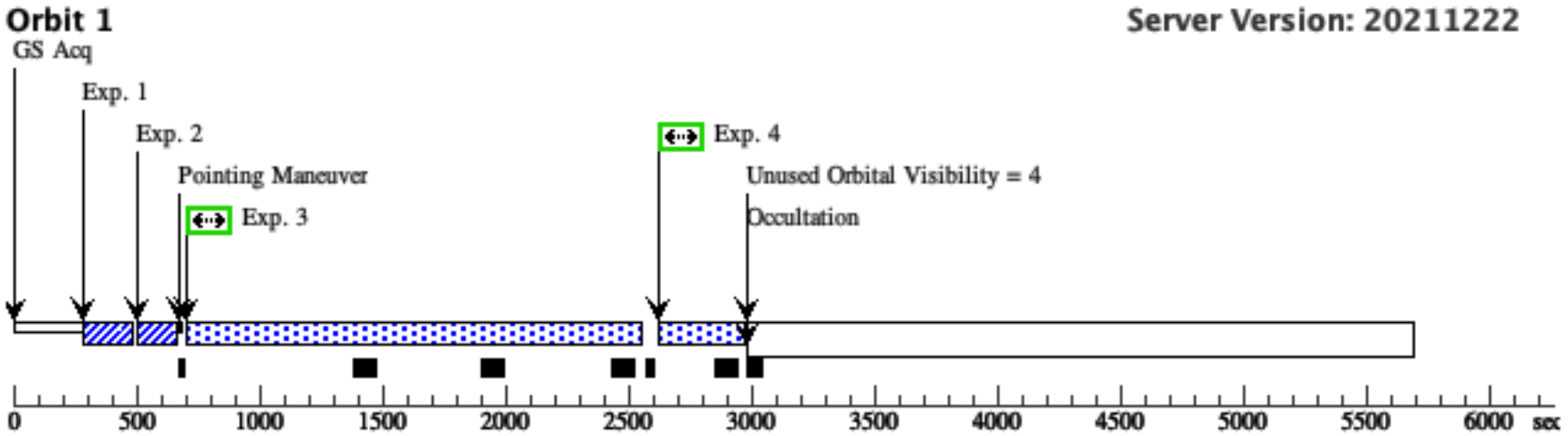
7	G130M/109 (2) AV468 6-FPPOS3ii (COS.sp.147 0906)	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=600; FP-POS=3	710.0 Secs (710 Secs) *[==>]*	***[3]***

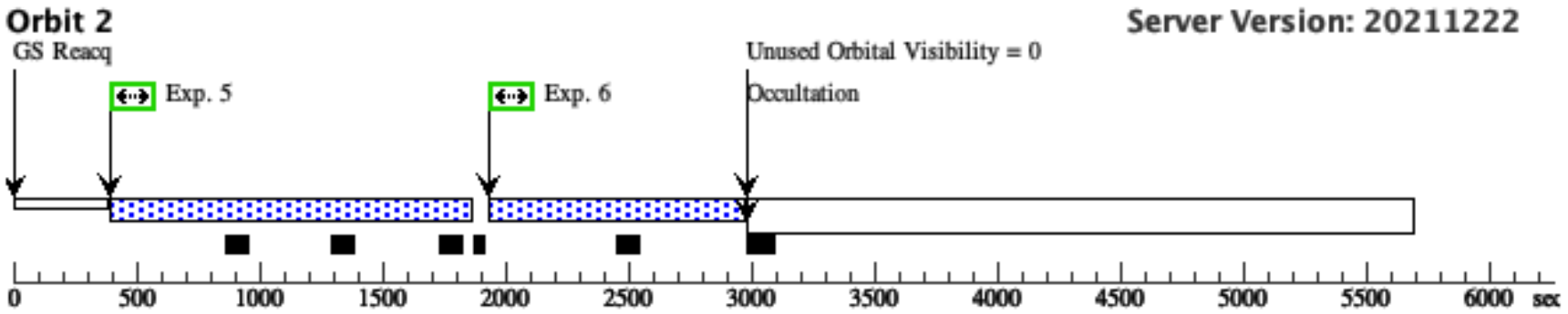
Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9 V --> O9 V
SED = AV468_COS_G130M_c1096_sed.fits
For exptime=5229.9 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2542.3 cts/s/segment
brightest pixel: 0.045 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:02:07, v0.4

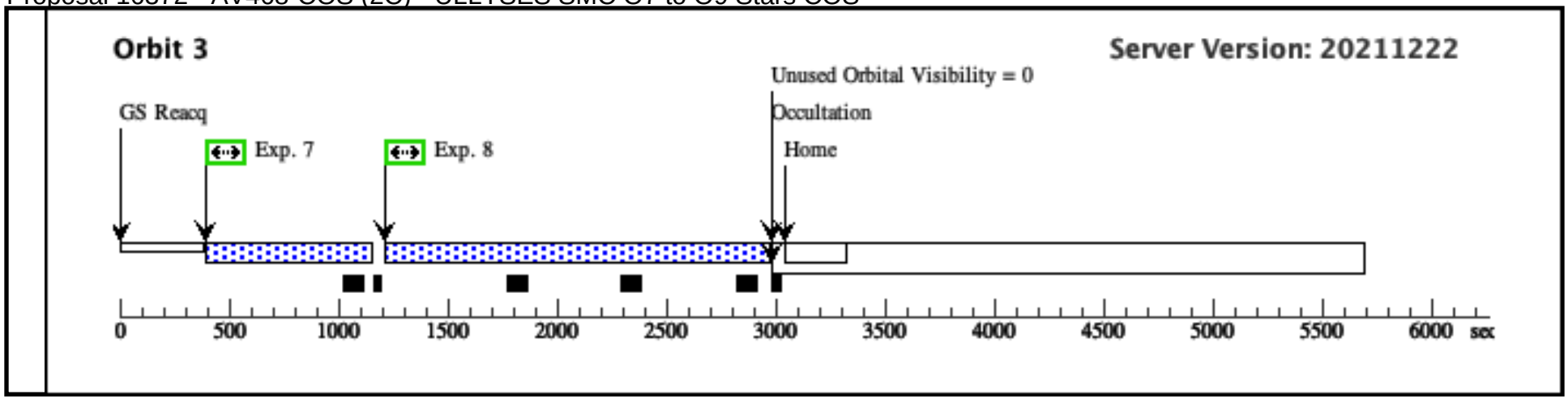
8	G130M/109 (2) AV468 6-FPPOS4 (COS.sp.147 0906)	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=523; FP-POS=4	1680.0 Secs (1708 Secs) *[==>1708.0 Secs]*	***[3]***

Comments: rn-max(WM-Basic(O9 V, Z=0.004, Teff=32359, log_lum=5.00, log_g=4.00) (extinction smcbar=0.020), flux1160 +- 30.0A flux=2.9e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O9 V --> O9 V
SED = AV468_COS_G130M_c1096_sed.fits
For exptime=5229.9 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 2542.3 cts/s/segment
brightest pixel: 0.045 cts/s/pix at 1235.0 A
Calculation performed 2020-02-24T18:02:07, v0.4

Orbit Structure






Orbit 3
Server Version: 20211222
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 7
Exp. 8
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16372, NGC346-ELS-31-COS (3C), completed Thu Mar 10 15:00:27 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 3C; NGC346-ELS-31; P/COS approved for submission ; P/RS 23/10/20 ; intrev: completed ; P/CP 03/12/20
vcheck; Enter targ name & Inst. & Resp. Sci.; NGC346-ELS-31 ; COS ; RS
vcheck; ETC numbers entered in APT?; Yes
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 1.2 sec conservatively based on single detector ...
There are two relatively bright stars in the field that would pose a safety issue for the PSA in the case of ACQ/IM with the BOA. Also the target is too bright for MIRROR_B/PSA ACQ/IM.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; OK
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 COS orbits = 5

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	NGC346-ELS-31	RA: 00 59 54.0610 (14.9752542d)	Proper Motion RA: 0.867 mas/yr	V=15.02	Reference Frame: ICRS
	Alt Name1: NGC346-31	Dec: -72 04 31.42 (-72.07539d)	Proper Motion Dec: -1.111 mas/yr	SpT=O7 V; E(B-V)=0.01; B=14.8; V=15.0; F1160=1.53e-13; F1360=1.29e-13; F1700=8.89e-14	
	Alt Name2: NGC-346-031	Equinox: J2000	Epoch of Position: 2000		

Comments: NGC346-ELS-31 : NGC 346-031, NGC346_31, Cl NGC 346 ELS 031*
Previous name : NGC 346-031
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (Cl NGC 346 ELS 031): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=Cl*+NGC+346+ELS+031&submit=submit+id*
SpT = O7 V
COS/G130M/c1096 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1360 +- 30.0A flux=1.3e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1700 +- 5.0A flux=8.9e-14 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1700 +- 5.0A flux=8.9e-14 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1700 +- 5.0A flux=8.9e-14 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1700 +- 5.0A flux=8.9e-14 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1360 +- 30.0A flux=1.3e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1700 +- 5.0A flux=8.9e-14 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1700 +- 5.0A flux=8.9e-14 Flam)
Coordinate pedigree: Gaia
v sin i = 18
Calculation performed 2020-02-24T17:58:42, v0.4
---
tstatus; NGC346-ELS-31; P/COS approved for submission ; S/ins not started; P/RS 23/10/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; NGC346-ELS-31, '[M2002] SMC 47478'
tcheck; Target info verification status?; OK ...
spectral type is O8Vz in SIMBAD
tcheck; Coordinates & P.M. updated?; Yes - GAIA DR2
tcheck; Adopted SED compared to Observations?; OK ...
COS c1291 data exist, and changing E(B-V) to 0.05 provided a sufficient match to the FUV data
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/PEAKXD (COS.sa.1470927)	(3) NGC346-ELS-31	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			1.2 Secs (1.2 Secs) *[==>]*	***[1]***
2	ACQ/PEAKD (COS.sa.1470927)	(3) NGC346-ELS-31	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			1.2 Secs (1.2 Secs) *[==>]*	***[1]***
3	G130M/1096-FPPOS1i (COS.sp.1470928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=990; FP-POS=1			2000.0 Secs (2091 Secs) *[==>2091.0 Secs]*	***[1]***

Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
4	G130M/1096-FPPOS1ii (COS.sp.1470928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=790; FP-POS=1			900.0 Secs (900 Secs) *[==>]*	***[2]***

Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
5	G130M/1096-FPPOS2i (COS.sp.1470928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=990; FP-POS=2			1400.0 Secs (1518 Secs) *[==>1518.0 Secs]*	***[2]***

Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

6	G130M/109 6-FPPOS2ii (COS.sp.147 0928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=645; FP-POS=2	1400.0 Secs (1400 Secs) *[==>]*

[3]

Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

7	G130M/109 6-FPPOS3i (COS.sp.147 0928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=690; FP-POS=3	500.0 Secs (1018 Secs) *[==>1018.0 Secs]*

[3]

Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

8	G130M/109 6-FPPOS3ii (COS.sp.147 0928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=920; FP-POS=3	1950 Secs (1950 Secs) *[==>]*

[4]

Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

9	G130M/109 6-FPPOS4i (COS.sp.147 0928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=990; FP-POS=4	200.0 Secs (468 Secs) *[==>468.0 Secs]*

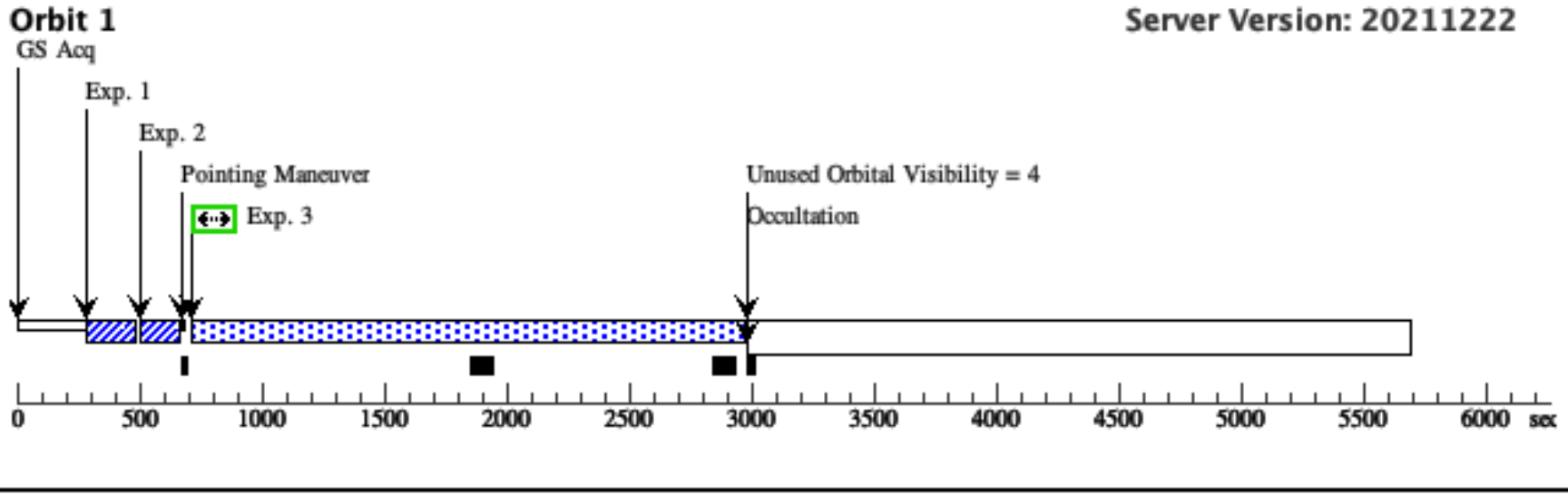
[4]

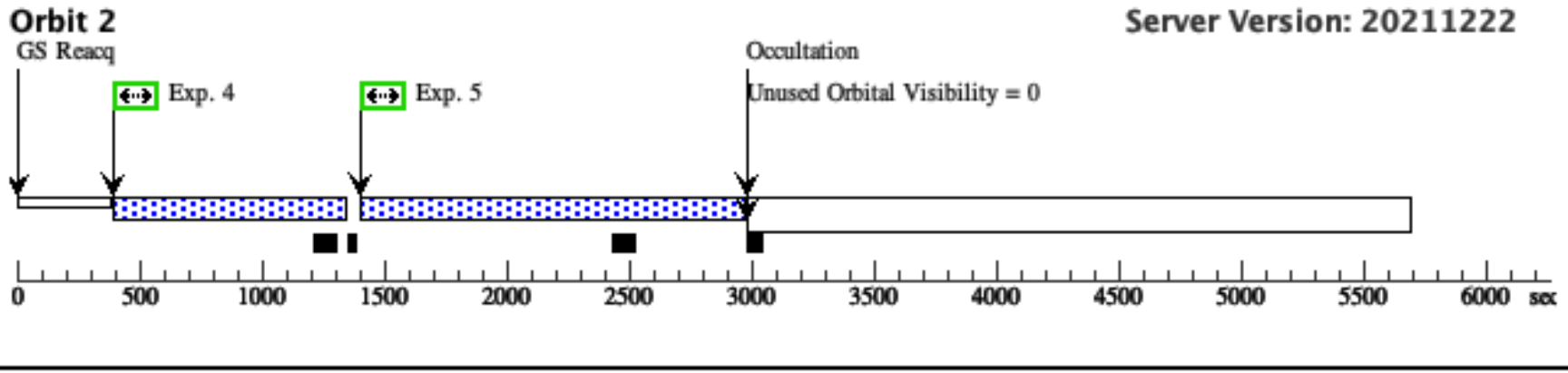
Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

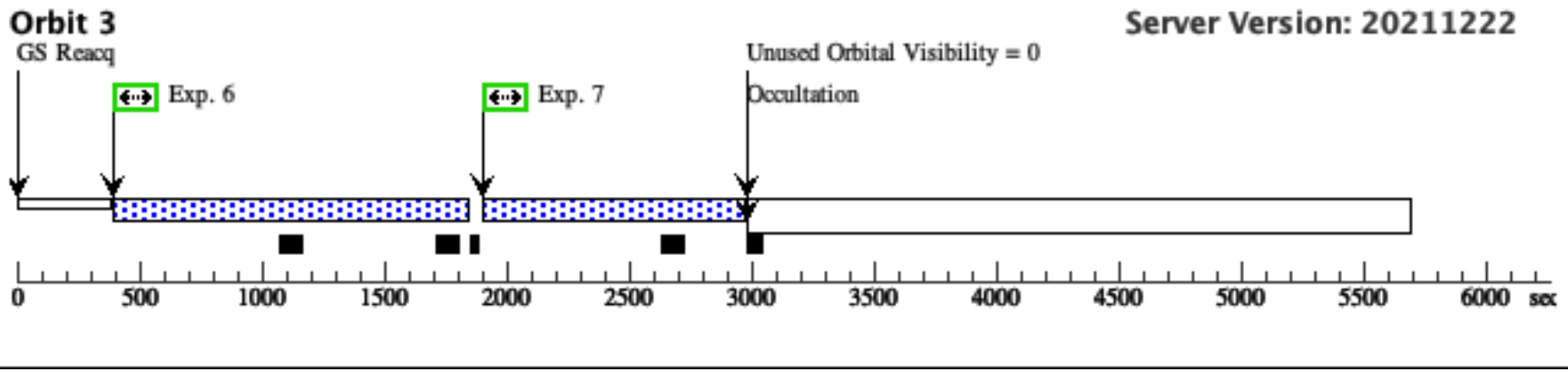
	10	G130M/1096-FPPOS4ii (COS.sp.1470928)	(3) NGC346-ELS-31	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=990; FP-POS=4	2500 Secs (2533 Secs) *[==>2533.0 Secs]*	***[5]***

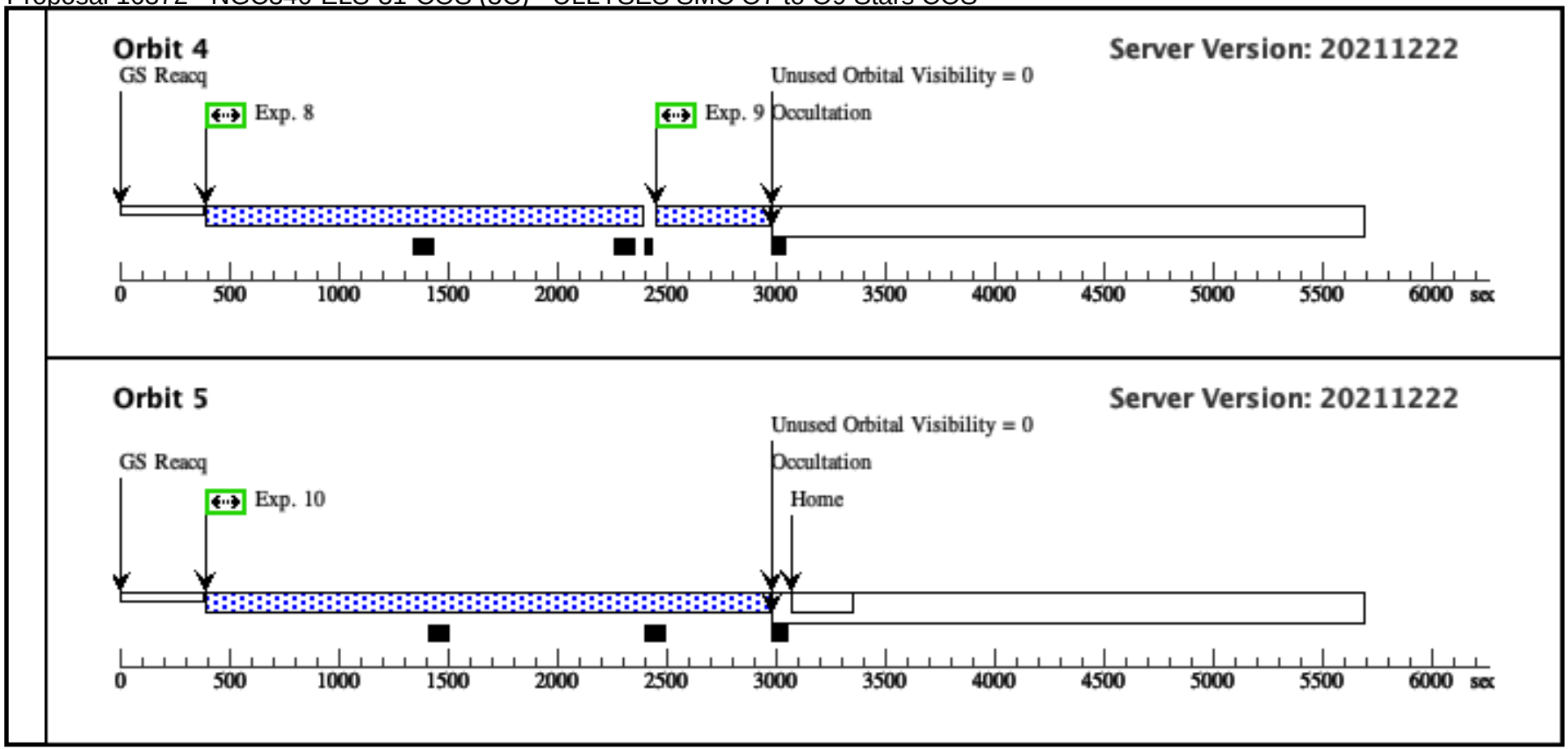
Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00) (extinction smcbar=0.010), flux1160 +- 30.0A flux=1.5e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 V --> O7 V
SED = NGC346-ELS-31_COS_G130M_c1096_sed.fits
For exptime=10629.0 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1309.1 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:50, v0.4

Orbit Structure








Orbit 4
Server Version: 20211222
GS Reacq
Exp. 8
Exp. 9
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec
Orbit 5
Server Version: 20211222
GS Reacq
Exp. 10
Unused Orbital Visibility = 0
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16372, NGC346-ELS-46-COS (4C), completed Thu Mar 10 15:00:27 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 4C; NGC346-ELS-46; P/COS approved for submission ; P/RS 23/10/20 ; intrev: completed ; P/CP 03/12/20
vcheck; Enter targ name & Inst. & Resp. Sci.; NGC346-ELS-46 ; COS ; RS
vcheck; ETC numbers entered in APT?; Yes
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 1.2 sec conservatively based on single detector ...
There is one relatively bright star in the field that would pose a safety issue for the PSA in the case of ACQ/IM with the BOA. Also the target is too bright for MIRROR_B/PSA ACQ/IM.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; OK
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 COS orbits = 4

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	NGC346-ELS-46 Alt Name1: CL-NGC-346-ELS-046 Alt Name2: NGC346-46	RA: 00 59 31.8673 (14.8827804d) Dec: -72 13 35.23 (-72.22645d) Equinox: J2000	Proper Motion RA: 0.797 mas/yr Proper Motion Dec: -1.219 mas/yr Epoch of Position: 2000	V=15.44 SpT=O7 Vn; E(B-V)=-0.01; B=15.2; V=15.4; F1160=1.71e-13; F1360=1.27e-13; F1700=7.51e-14	Reference Frame: ICRS

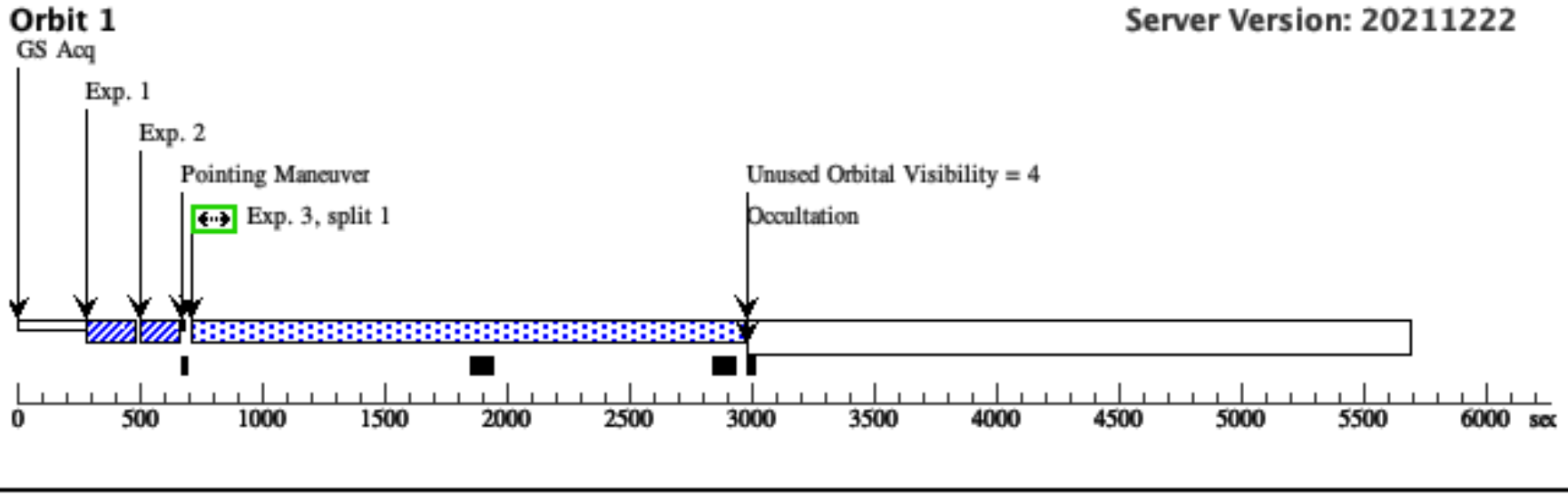
Comments: NGC346-ELS-46 : NGC 346-046, NGC346_46, Cl NGC 346 ELS 046*
Previous name : NGC 346-046
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (Cl NGC 346 ELS 046): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=Cl*+NGC+346+ELS+046&submit=submit+id*
SpT = O7 Vn
COS/G130M/c1096 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1160 +- 30.0A flux=1.7e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1360 +- 30.0A flux=1.3e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1360 +- 30.0A flux=1.3e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
Coordinate pedigree: Gaia
v sin i = 340
Calculation performed 2020-02-24T17:58:28, v0.4
---
tstatus; NGC346-ELS-46; P/COS approved for submission ; S/ins not started; P/RS 23/10/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; NGC346-ELS-46, 'Cl NGC 346 ELS 46'*
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; Yes - GAIA DR2
tcheck; Adopted SED compared to Observations?; OK ...
COS c1291 data exist, and changing E(B-V) to 0.05 provided a sufficient match to the FUV data
Category=EXT-STAR
Description=[MAIN SEQUENCE O]
Extended=NO

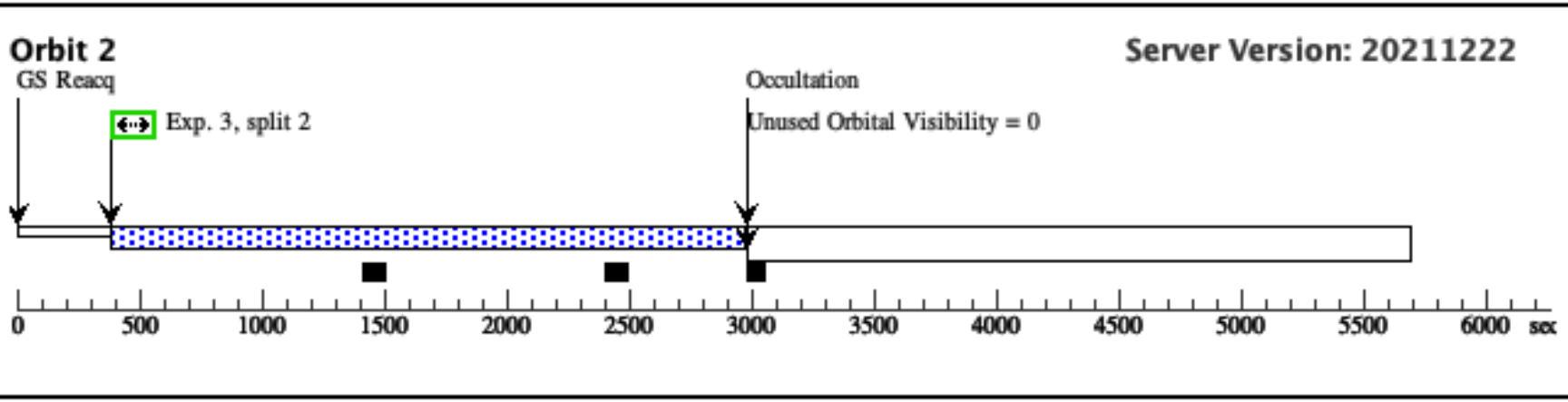
Exposures

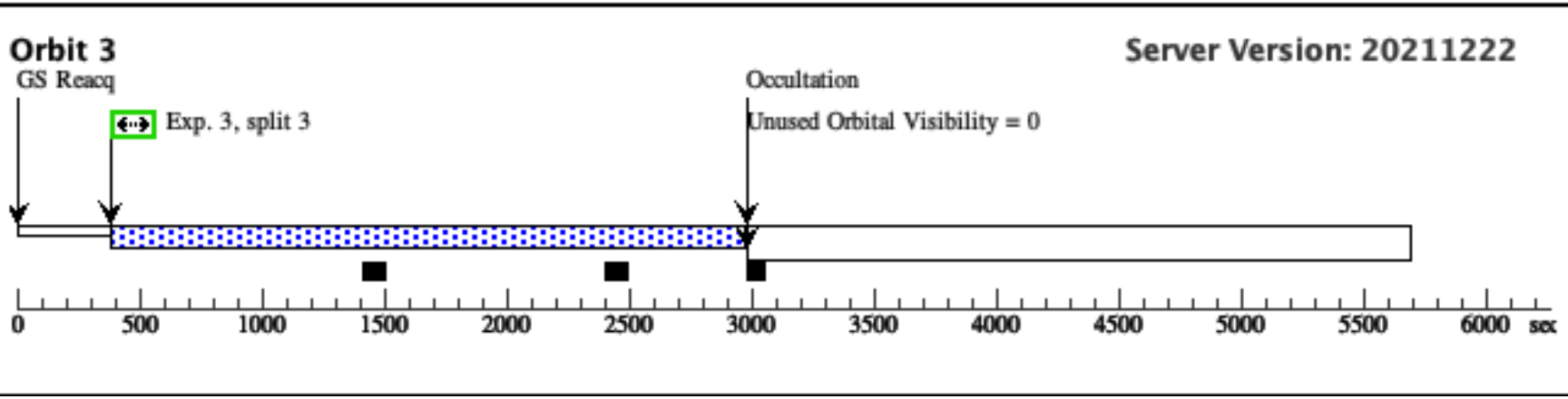
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/PEAKXD (COS.sa.1470964)	(4) NGC346-ELS-46	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			1.2 Secs (1.2 Secs) *[==>]*	 ***[1]***
2	ACQ/PEAKD (COS.sa.1470964)	(4) NGC346-ELS-46	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			1.2 Secs (1.2 Secs) *[==>]*	 ***[1]***
3	G130M/1096 (COS.sp.1470966)	(4) NGC346-ELS-46	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=9900; FP-POS=ALL			2000 Secs (9690 Secs) *[==>2091.0 Secs (Split 1)]* *[==>2533.0 Secs (Split 2)]* *[==>2533.0 Secs (Split 3)]* *[==>2533.0 Secs (Split 4)]*	 ***[1]*** ***[2]*** ***[3]*** ***[4]***

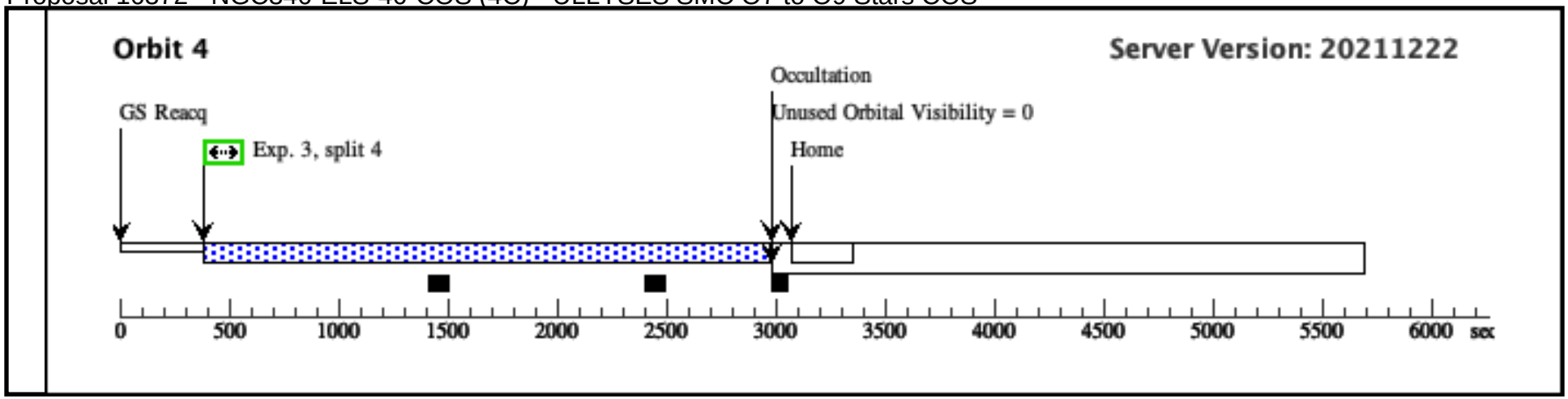
Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1160 +- 30.0A flux=1.7e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None)
From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
Spectral type: O7 Vn --> O7 V
SED = NGC346-ELS-46_COS_G130M_c1096_sed.fits
For exptime=10120.5 s, spectral region:
1080.0 +- 0.5 A achieves SNR=20.0/resel
global countrate (brightest segment): 1328.9 cts/s/segment
brightest pixel: 0.019 cts/s/pix at 1205.0 A
Calculation performed 2020-02-24T17:58:36, v0.4

Orbit Structure








Orbit 4
Server Version: 20211222
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 3, split 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16372, NGC346-ELS-46-COS (DC) Thu Mar 10 15:00:27 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%

Comments: vstatus; 4C; NGC346-ELS-46; P/COS approved for submission ; P/RS 23/10/20 ; intrev: completed ; P/CP 03/12/20
vcheck; Enter targ name & Inst. & Resp. Sci.; NGC346-ELS-46 ; COS ; RS
vcheck; ETC numbers entered in APT?; Yes
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 1.2 sec conservatively based on single detector ...
There is one relatively bright star in the field that would pose a safety issue for the PSA in the case of ACQ/IM with the BOA. Also the target is too bright for MIRROR_B/PSA ACQ/IM.
vcheck; Possible ACQ or Sci spoilers?; No
vcheck; Field BOT clear?; Yes
vcheck; Visual BOT check for stars not in catalog?; OK
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 COS orbits = 4

Fixed Targets

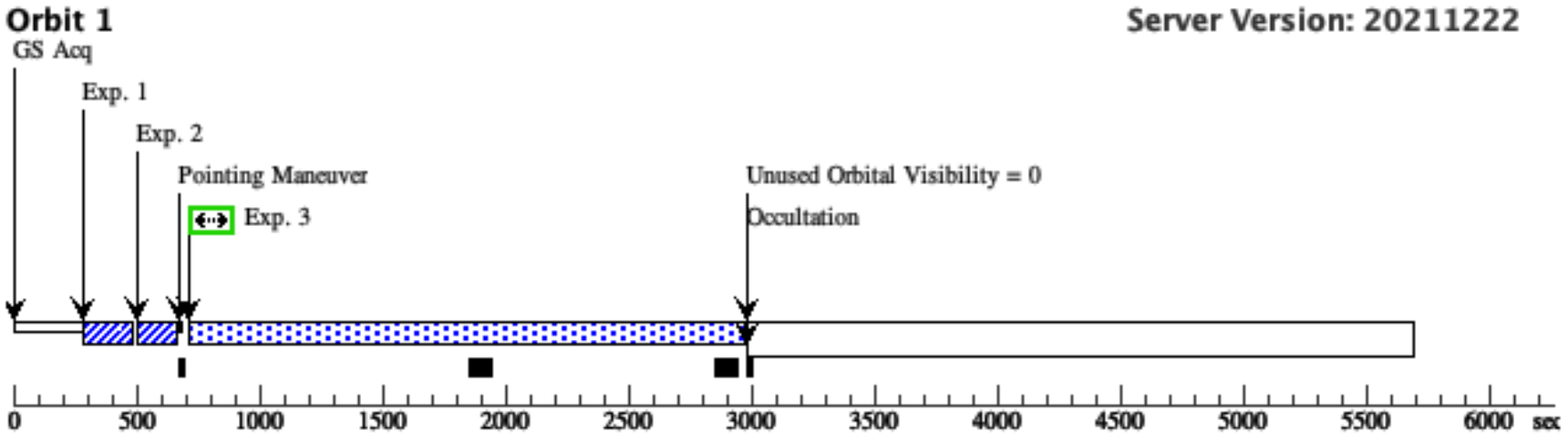
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	NGC346-ELS-46 Alt Name1: CL-NGC-346-ELS-046 Alt Name2: NGC346-46	RA: 00 59 31.8673 (14.8827804d) Dec: -72 13 35.23 (-72.22645d) Equinox: J2000	Proper Motion RA: 0.797 mas/yr Proper Motion Dec: -1.219 mas/yr Epoch of Position: 2000	V=15.44 SpT=O7 Vn; E(B-V)=-0.01; B=15.2; V=15.4; F1160=1.71e-13; F1360=1.27e-13; F1700=7.51e-14	Reference Frame: ICRS

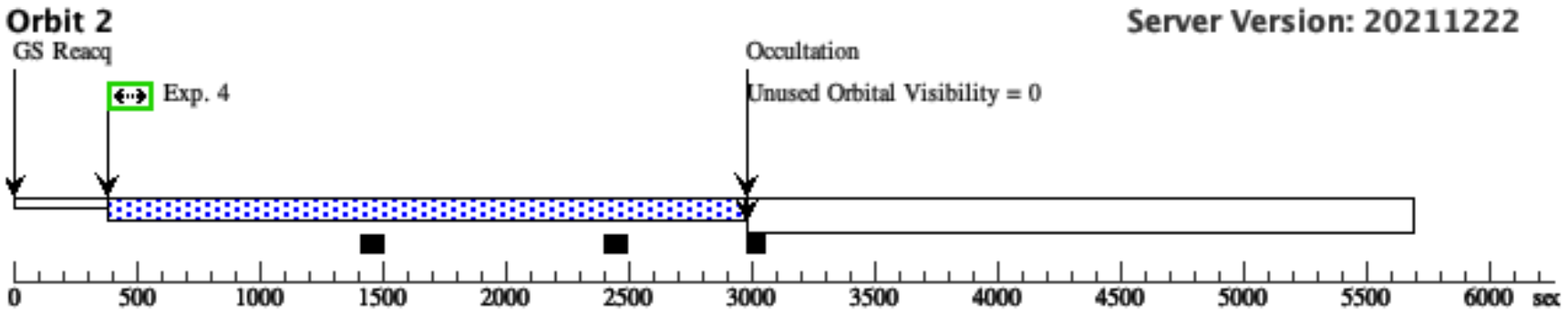
Comments: NGC346-ELS-46 : NGC 346-046, NGC346_46, Cl NGC 346 ELS 046*
Previous name : NGC 346-046
Input file: SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv
SIMBAD link (Cl NGC 346 ELS 046): https://simbad.u-strasbg.fr/simbad/sim-id?Ident=Cl*+NGC+346+ELS+046&submit=submit+id*
SpT = O7 Vn
COS/G130M/c1096 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1160 +- 30.0A flux=1.7e-13 Flam)
COS/G130M/c1291 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1360 +- 30.0A flux=1.3e-13 Flam)
COS/G160M/c1611 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
COS/G185M/c1921 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
COS/G185M/c1953 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
COS/G185M/c1986 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
STIS/E140M/c1425 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1360 +- 30.0A flux=1.3e-13 Flam)
STIS/E230M/c1978 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
STIS/E230M/c2707 : rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1700 +- 5.0A flux=7.5e-14 Flam)
Coordinate pedigree: Gaia
v sin i = 340
Calculation performed 2020-02-24T17:58:28, v0.4
---
tstatus; NGC346-ELS-46; P/COS approved for submission ; S/ins not started; P/RS 23/10/20; S/xx DD/MM/YY
tcheck; APT/SIMBAD target names: ; NGC346-ELS-46, 'Cl NGC 346 ELS 46'*
tcheck; Target info verification status?; OK
tcheck; Coordinates & P.M. updated?; Yes - GAIA DR2
tcheck; Adopted SED compared to Observations?; OK ...
COS c1291 data exist, and changing E(B-V) to 0.05 provided a sufficient match to the FUV data
Category=EXT-STAR
Description=[MAIN SEQUENCE O]
Extended=NO

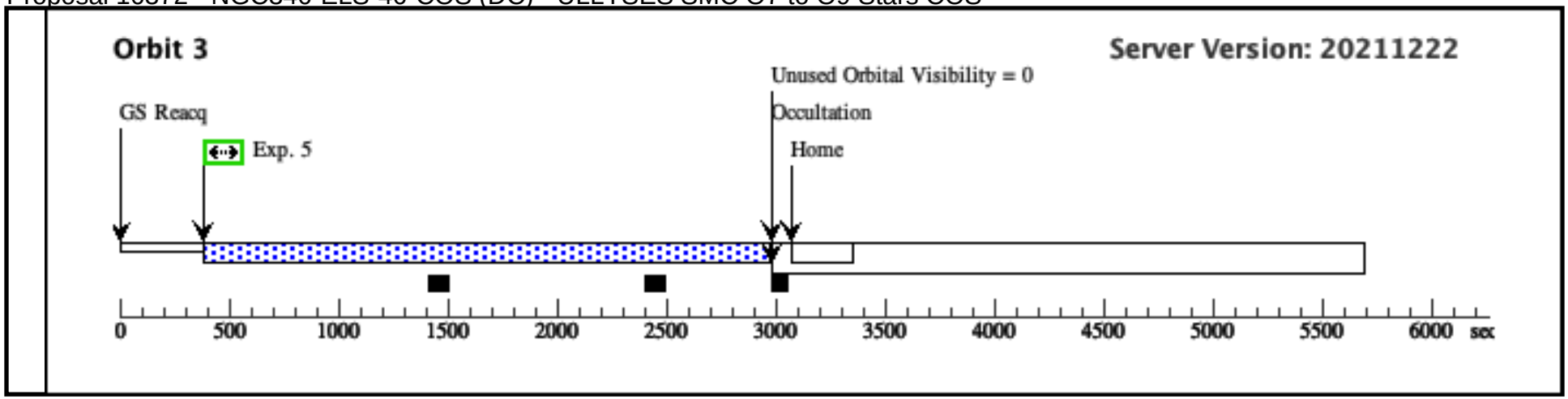
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/PEAKXD (COS.sa.1470964)	(4) NGC346-ELS-46	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	CENTER=FLUX-WT; NUM-POS=3; STEP-SIZE=1.3; SEGMENT=BOTH			1.2 Secs (1.2 Secs) *[==>]*	***[1]***
2	ACQ/PEAKD (COS.sa.1470964)	(4) NGC346-ELS-46	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT-FLR; NUM-POS=5; STEP-SIZE=0.9; SEGMENT=BOTH			1.2 Secs (1.2 Secs) *[==>]*	***[1]***
3	G130M/1096 (COS.sp.1470966)	(4) NGC346-ELS-46	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=993; FP-POS=2			2095 Secs (2095 Secs) *[==>]*	***[1]***
	Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1160 +- 30.0A flux=1.7e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O7 Vn --> O7 V* *SED = NGC346-ELS-46_COS_G130M_c1096_sed.fits* *For exptime=10120.5 s, spectral region:* *1080.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 1328.9 cts/s/segment* *brightest pixel: 0.019 cts/s/pix at 1205.0 A* *Calculation performed 2020-02-24T17:58:36, v0.4*									
4	G130M/1096 (COS.sp.1470966)	(4) NGC346-ELS-46	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=990; FP-POS=3			2533 Secs (2533 Secs) *[==>]*	***[2]***
	Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1160 +- 30.0A flux=1.7e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O7 Vn --> O7 V* *SED = NGC346-ELS-46_COS_G130M_c1096_sed.fits* *For exptime=10120.5 s, spectral region:* *1080.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 1328.9 cts/s/segment* *brightest pixel: 0.019 cts/s/pix at 1205.0 A* *Calculation performed 2020-02-24T17:58:36, v0.4*									
5	G130M/1096 (COS.sp.1470966)	(4) NGC346-ELS-46	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=990; FP-POS=4			2533 Secs (2533 Secs) *[==>]*	***[3]***
	Comments: rn-max(WM-Basic(O7 V, Z=0.004, Teff=39811, log_lum=5.42, log_g=4.00), flux1160 +- 30.0A flux=1.7e-13 Flam); cos,fuv,g130m,c1096,psa,mjd#59305; fp-pos=None, segment=None) *From file SMC_2020Feb20/input/SMC_all_do1_NewCoords_pids.csv* *Spectral type: O7 Vn --> O7 V* *SED = NGC346-ELS-46_COS_G130M_c1096_sed.fits* *For exptime=10120.5 s, spectral region:* *1080.0 +- 0.5 A achieves SNR=20.0/resel* *global countrate (brightest segment): 1328.9 cts/s/segment* *brightest pixel: 0.019 cts/s/pix at 1205.0 A* *Calculation performed 2020-02-24T17:58:36, v0.4*									

Orbit Structure






Orbit 3
Server Version: 20211222
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec