



17105 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Cycle: 30, Proposal Category: GO

(UV Initiative)

(Availability Mode: AVAILABLE)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:26.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
02	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:27.0	yes
03	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:28.0	yes
04	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:29.0	yes
05	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:30.0	yes
06	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:32.0	yes
07	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:33.0	yes
08	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:34.0	yes
58	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:35.0	yes
09	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:36.0	yes
10	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:37.0	yes
11	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:38.0	yes
12	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:39.0	yes
13	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:40.0	yes
14	(1) MRK-817	COS/FUV COS/NUV	1	29-Nov-2023 13:00:41.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
15	(1) MRK-817 NONE	COS/FUV COS/NUV STIS STIS/CCD STIS/NUV-MAMA	4	29-Nov-2023 13:00:44.0	yes

19 Total Orbits Used

ABSTRACT

Characterizing the structure and kinematics of the gas surrounding supermassive black holes at the centers of galaxies is crucial for understanding accretion and black-hole growth, as well as outflows and associated feedback for host-galaxy evolution. Intensive, successful reverberation mapping campaigns with HST on the active galactic nuclei (AGN) of NGC 5548 (Cycle 20) and Mrk 817 (Cycle 28) have revealed a wealth of information on the structure of their broad-emission-line regions (BLR), their accretion disks, and the new, unexpected obscuring outflows visible in their X-ray and far-UV spectra. The BLR of these AGN are dominated by virial motions, and the obscuring outflows play a significant role in regulating the ionizing flux reaching the BLR gas. Although HST observations of Mrk 817 are complete, continued monitoring in X-ray, UV, and optical with Swift (2 years, every other day), NICER (1 year, every other day), and ground-based observatories have been approved and are ongoing (private communication). To take advantage of these multi-wavelength programs, we propose to continue observing Mrk 817 with COS, with a cadence of one orbit per month throughout Cycle 30. Our primary science goal is to monitor the continued evolution of the obscuring outflow, perhaps even watching as it dissipates; measure its continued impact on the characteristics of the BLR; and, via a triggered observation, do a comprehensive broad-band evaluation of the state of Mrk 817's accretion disk and broad emission-line properties once the obscuration has melted away.

OBSERVING DESCRIPTION

Observing Description for Cycle 30 Proposal, 17105

The primary science goal of this proposal is to monitor the broad line region (BLR) of the Seyfert 1 galaxy Mrk 817 and the outflowing obscuring wind in conjunction with ongoing Swift and NICER X-ray, NUV, and optical monitoring. Swift and NICER will observe Mrk 817 on a 2-day cadence. We will observe Mrk 817 on a monthly basis for all active months of Cycle 30, a total of 14 in all, from October 2022 to November 2023. This program uses the same instrumental setups as GO-16196, a Cycle 28 (2020-2022) monitoring program on Mrk 817, and known as the Space

Proposal 17105 (STScI Edit Number: 7, Created: Wednesday, November 29, 2023 at 1:00:45 PM Eastern Standard Time) - Overview

Telescope and Optical Reverberation Mapping 2 (STORM 2) program (Kara et al. 2021). The STORM 2 program obtained COS spectra on a 2-day cadence for 155 months with 165 observations. Our current program will not do reverberation mapping, but will place the broad line emission and strength of the obscuring outflow in the context provided by the more extensive Swift and NICER monitoring programs.

Data Quality Requirements: Spectral Coverage, Resolution, and Signal-to-Noise Ratios:

For HST/COS, obtaining suitable data (in terms of S/N and spectral resolution) in a single orbit on a bright target is not a challenge. We will use the same instrumental setup as in GO-16196, which used the G130M/1222 setting plus G160M/1533 and G160M/1577 to observe the 1100-1750 Å wavelength range in a single orbit covering all the emission and absorption features of interest at once (Ly α, NV, Si IV, CIV, and He II in emission; P V, C III*, Ly α, N V, Si IV, and C IV in absorption). As described in our proposal, minimizing overheads to fit all required exposures into a single orbit and for compatibility with the observations in GO-16196, we request that all COS observations be done at Lifetime Position 4.

To obtain adequate S/N in absorption-line troughs and the emission-line profiles, we require $S/N \sim 10$ in the continuum per resolution element. For program 16196, the S/N in the continuum at 1180 Å ranged from 9 to 15 over the full range of brightness in Mrk 817, which was from 4.4×10^{-14} to 10.5×10^{-14} erg/sec/cm²/Å, with variations on timescales of days to weeks. For this proposal, we base our ETC simulations (v30.2) on the HST spectra from STORM 2, for which the median flux at 1390 Å in the FUV is $F(1390\text{Å}) = 7.3 \times 10^{-14}$ erg/s/cm²/Å.

Mrk 817 is a bright AGN, so imaging target acquisitions with either MIRRORA or MIRRORB can result in unacceptably high count rates. However, spectroscopic target acquisitions take too long, leaving little time for science. We find that the best safe compromise is an imaging target acquisition using the Bright Object Aperture (BOA) on COS and MIRRORA. To allow for successful acquisition even if the target becomes fainter than usual, we plan our exposure time for the historical minimum flux of 1×10^{-14} erg/s/cm²/Å.

Mrk 817 was observed safely with COS on during the whole of STORM 2, well below any bright object flux limits. There are no bright objects in the field, and it was safely acquired during all months of the year over the full range of scheduled position angles.

Program Duration: Because it is near the ecliptic pole, Mrk 817 is continuously visible to HST throughout the year. This allows for monthly visits during all twelve months.

Schedulability: There are no ORIENT restrictions for our target and it is continuously accessible throughout the year for 365 days on account of its high ecliptic latitude, aside from possible intervals due to OBAD-shortened orbits. (Once these are known, we should schedule our single-orbit visits

Proposal 17105 (STScI Edit Number: 7, Created: Wednesday, November 29, 2023 at 1:00:45 PM Eastern Standard Time) - Overview to avoid them.) Ideally, our observations should be made approximately 1 month apart, similar to the COS flux calibration programs, with windows of ± 1 week around each observation. Successive observations should be at least two weeks apart. We emphasize that evenly spaced intervals are not required, and there can be some leeway in the "at least two weeks apart" requirement.

The continuous visibility allows great freedom in scheduling the campaign. However, we wish to maximise our overlap with the Swift and NICER campaigns, so observations should start immediately at the beginning of Cycle 30 and continue for its entirety. Guide-star availability may show that only single guide stars are available during some time intervals. This is acceptable, and it had no impact on data quality during GO-16196. Our observations are short enough that roll is not critical, and COS transmission is not strongly dependent on precise centering, so the slight drift associated with single-guide-star guiding does not have a deleterious impact on our data quality. We can't specify the single-guide-star acquisition mode ourselves, so any visits likely to be affected by this issue should be handled by the PC at the appropriate time.

One-gyro Impacts. In the event of a necessary change to 1-gyro mode for HST, Mrk 817 is still visible year round. Scheduling may be more limited, but it is possible in all months. We believe that we can still conduct a successful program in such circumstances since there are still long intervals of regular schedulability.

Requirements for Target of Opportunity triggering and observation: Another goal of our proposal is to see Mrk 817 emerge from its current state dominated by a strong obscuring outflow. When soft X-ray absorption as measured by NICER and Swift has diminished to levels consistent with only foreground Milky Way absorption (hardness ratio < -0.3 for a full month), or if HST/COS spectra show that the UV absorption lines have disappeared, we will trigger a non-disruptive TOO observation that will use four additional orbits to obtain a view of the full UV portion of the spectrum from the Lyman limit in Mrk 817 (940 Å observed) to 3200 Å. When combined with ground-based spectra, we will cover the full wavelength range in Mrk 817 from the Lyman limit (912 Å) to 10,000 Å (past the Paschen edge at 8206 Å), allowing us to fit the continuum shape to accretion disk models, and search for contribution from diffuse continuum emission associated with Balmer and Paschen recombination spectra. The four HST orbits will consist of four 500 s exposures using all four FP-POS positions with G130M/1096; four 250 s exposures using all four FP-POS positions with G130M/1222; four 200 s exposures using all four FP-POS with G160M/1533; four 200 s exposures using all four FP-POS with G160M/1577; and a 1700 s exposure with STIS NUV-MAMA/G230L. To obtain an accurate measure of the spectral energy distribution of Mrk 817 when the COS, STIS, and ground-based spectra are combined, we request the use of the MSMOFF option for the NUV-MAMA observation in order to obtain the best absolute flux calibration.

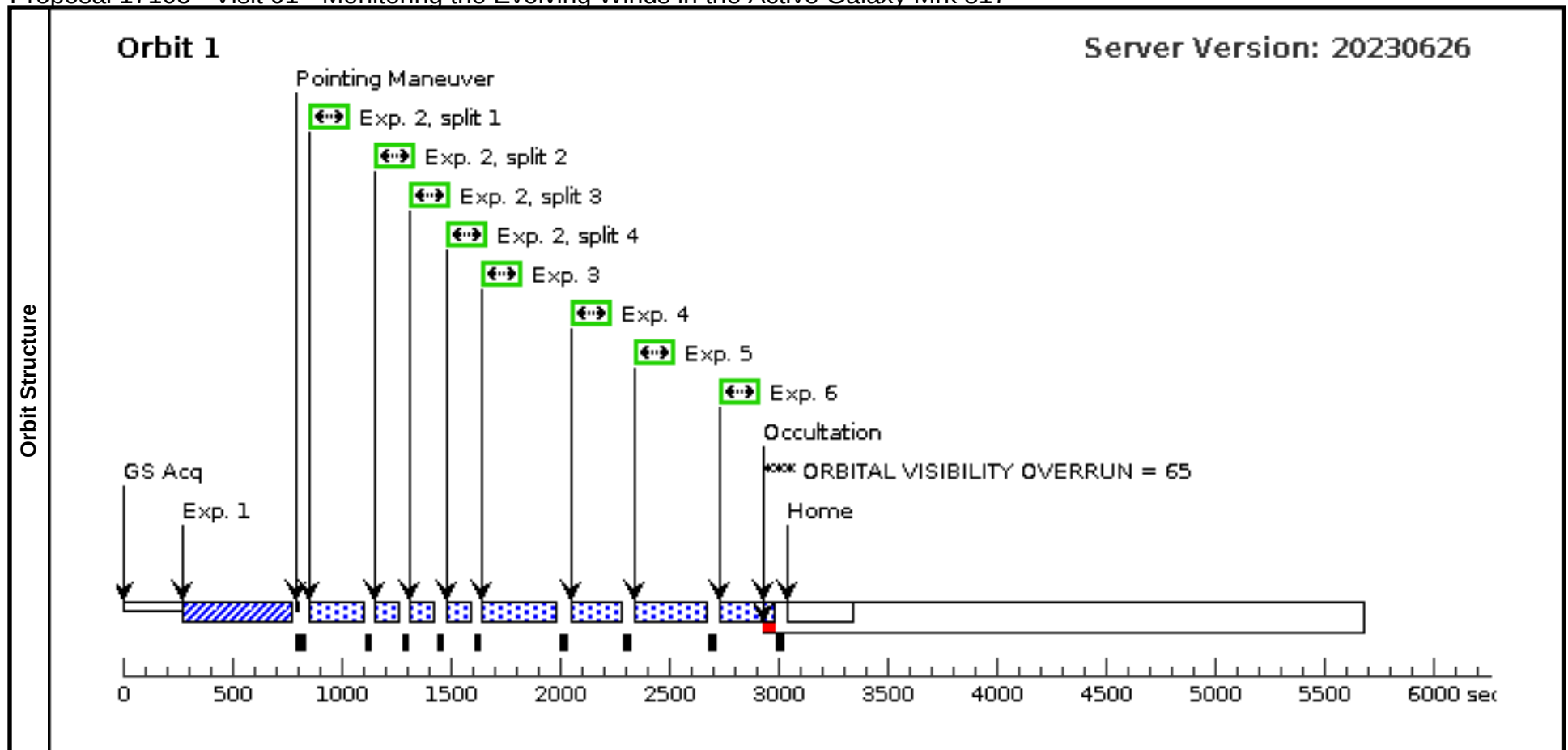
This is a long-term ToO that should persist into Cycle 31 if not triggered during Cycle 30.

Proposal 17105 - Visit 01 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 01, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 15-SEP-2022:00:00:00 AND 22-OCT-2022:00:00:00					
Diagnostics	(Visit 01) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 01) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 01 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

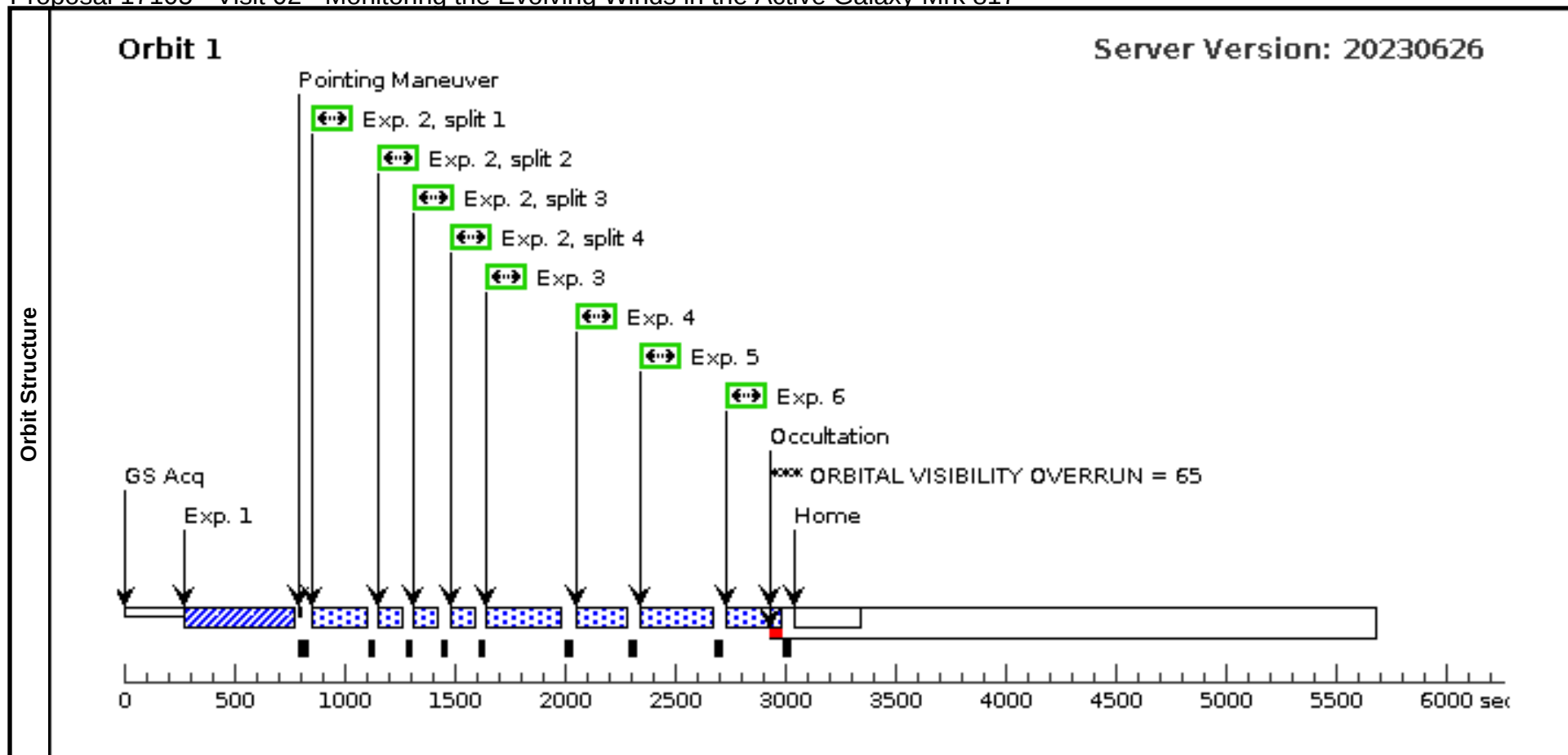


Proposal 17105 - Visit 02 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 02, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 06-NOV-2022:00:00:00 AND 20-NOV-2022:00:00:00					
Diagnostics	(Visit 02) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 02) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 02 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

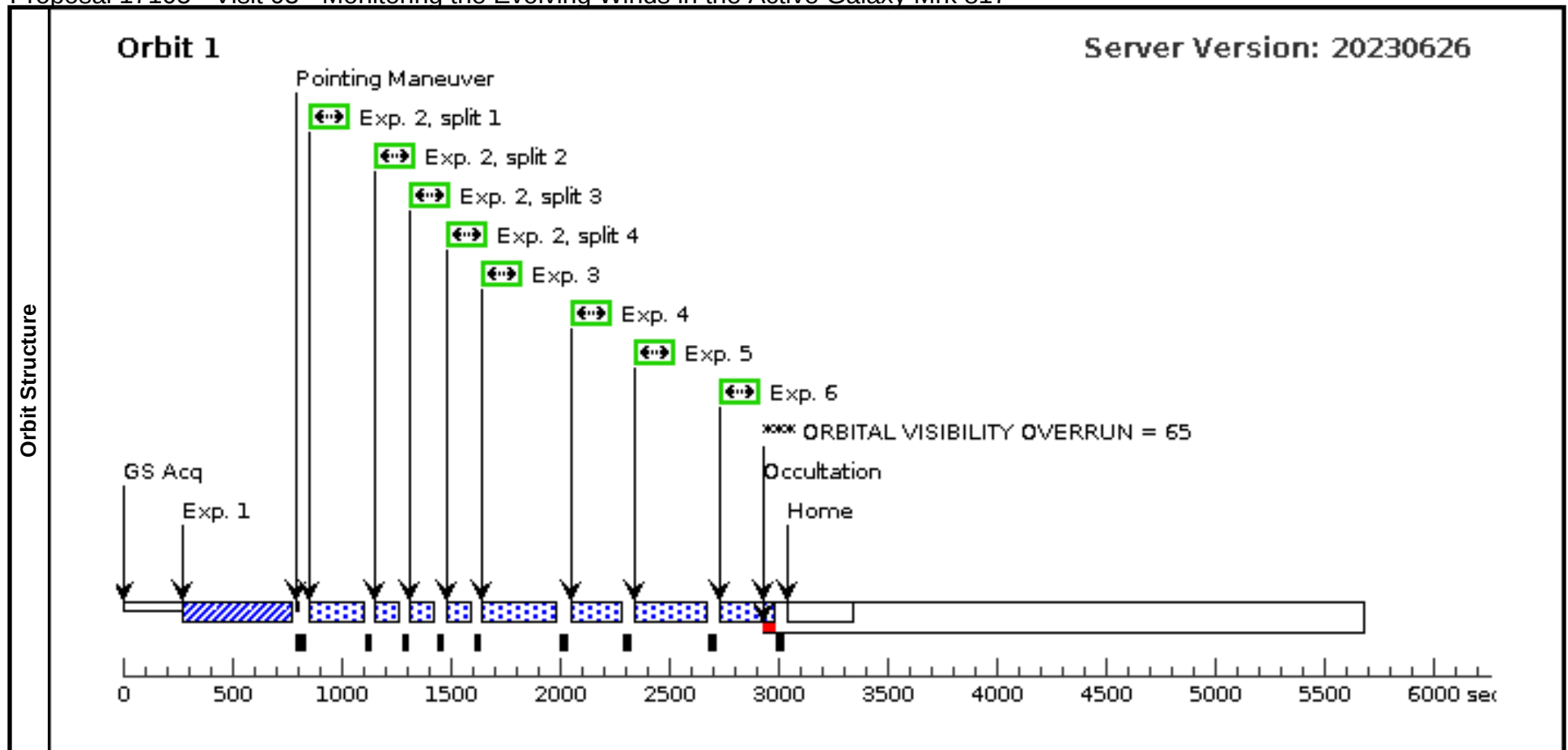


Proposal 17105 - Visit 03 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 03, completed Wed Nov 29 18:00:45 GMT 2023				
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 04-DEC-2022:00:00:00 AND 18-DEC-2022:00:00:00				
Diagnostics	(Visit 03) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 03) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO				

Proposal 17105 - Visit 03 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

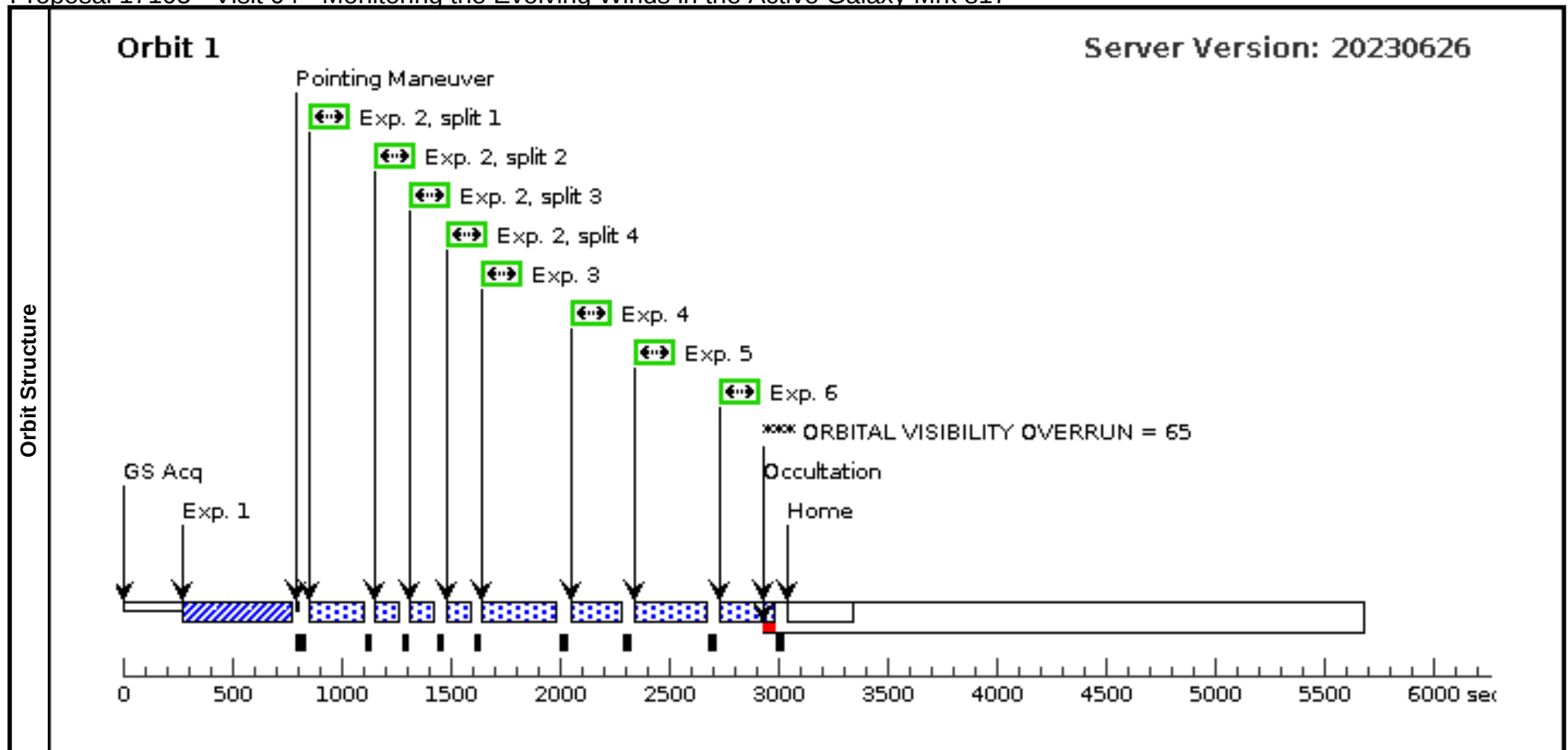


Proposal 17105 - Visit 04 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 04, completed					Wed Nov 29 18:00:45 GMT 2023
	Diagnostic Status: Warning					
Diagnostics	Scientific Instruments: COS/FUV, COS/NUV					
	Special Requirements: SCHED 100%; BETWEEN 08-JAN-2023:00:00:00 AND 22-JAN-2023:00:00:00					
Fixed Targets	(Visit 04) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave.					
	(Visit 04) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets						
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
Fixed Targets	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d)	Proper Motion RA: 2.3160994962315615E-6	V=13.79+/-0.5	Reference Frame: ICRS
			Dec: +58 47 39.39 (58.79427d)	sec of time/yr	F(1180) = 7e-14 erg/cm2/s/A	
Fixed Targets			Equinox: J2000	Proper Motion Dec: -3.600002855819184E-5		
				arcsec/yr		
Fixed Targets				Epoch of Position: 2015.5		
				Redshift: 0.031455		
Fixed Targets	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.					
	Category=GALAXY					
Fixed Targets	Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND]					
	Extended=NO					

Proposal 17105 - Visit 04 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

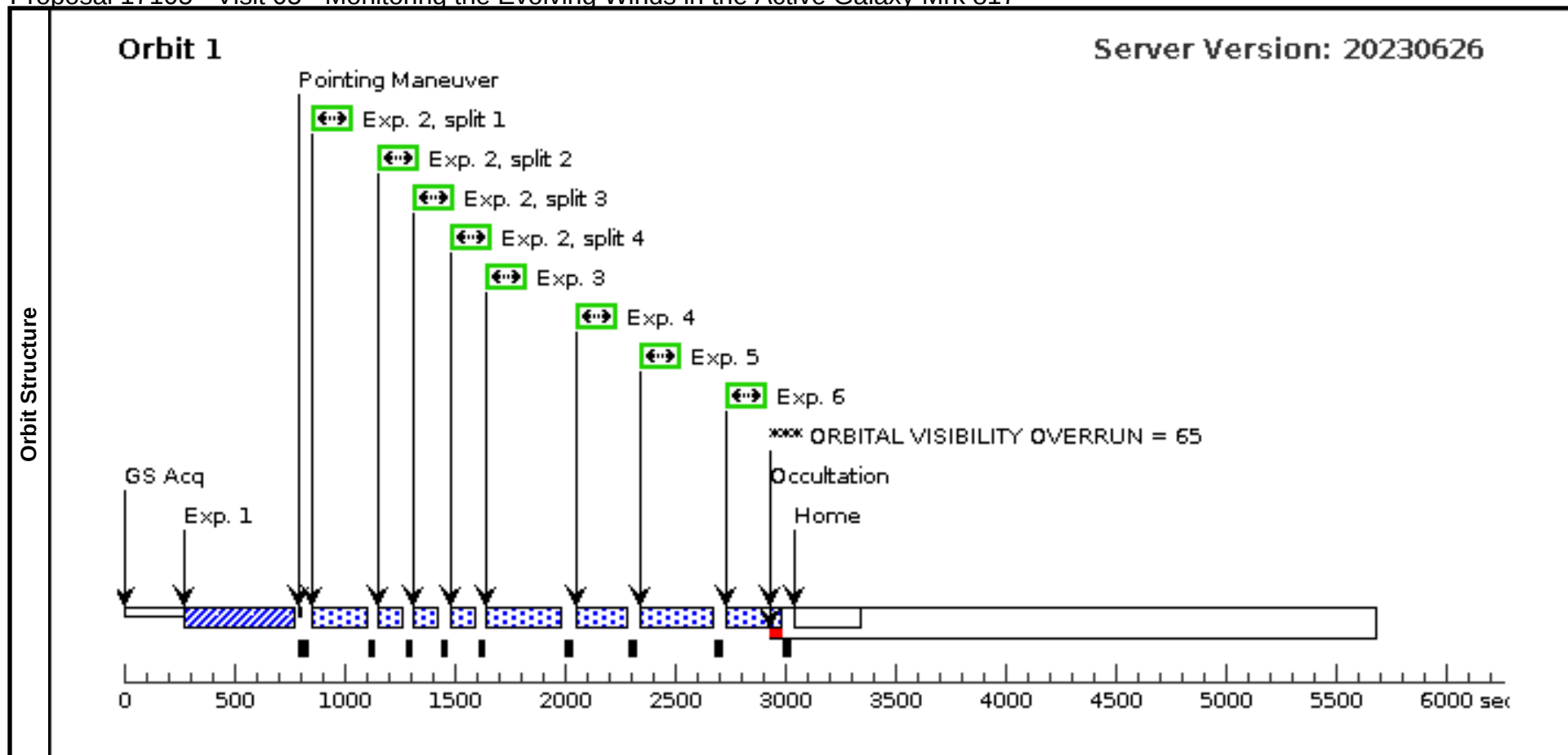


Proposal 17105 - Visit 05 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 05, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 05-FEB-2023:00:00:00 AND 19-FEB-2023:00:00:00					
Diagnostics	(Visit 05) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 05) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 05 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

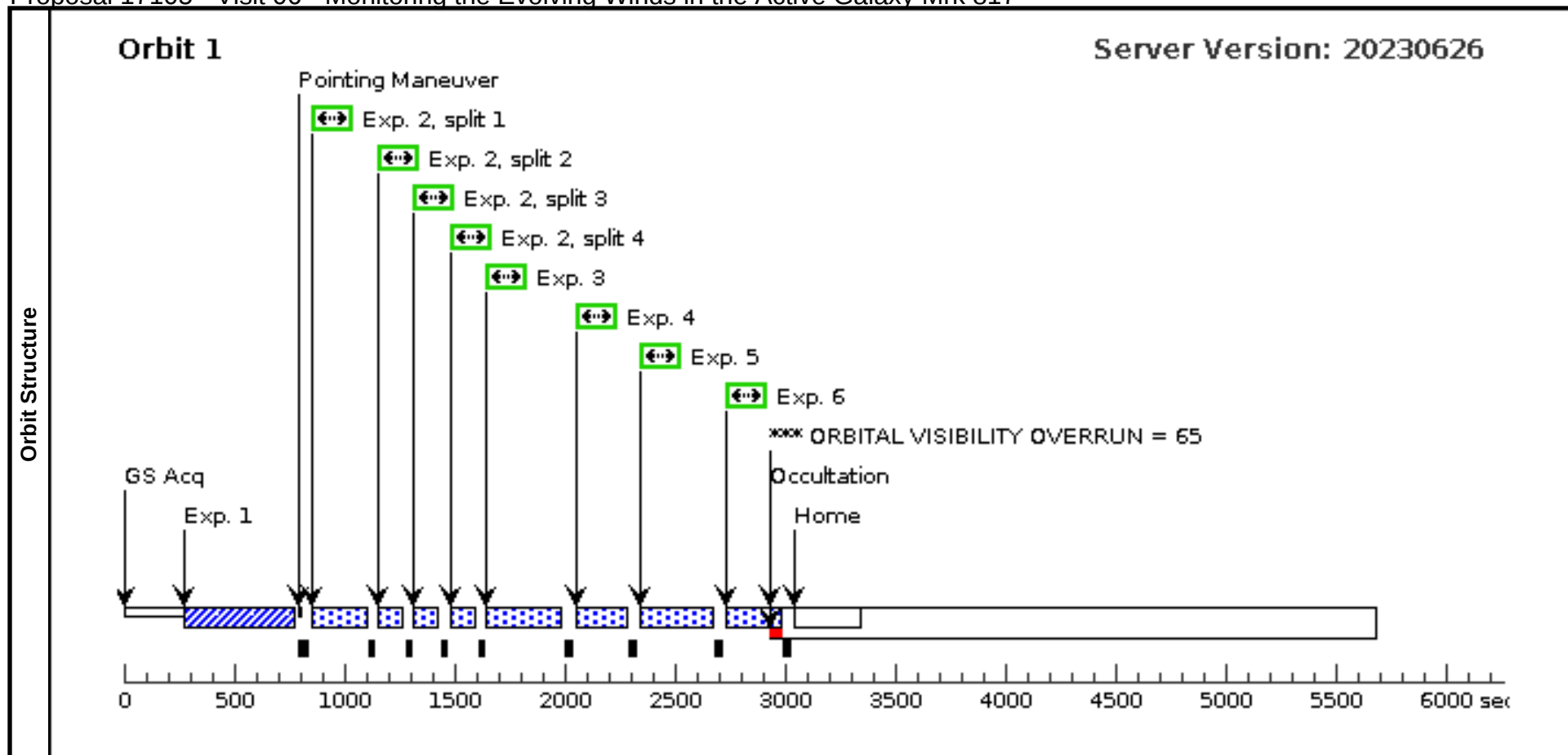


Proposal 17105 - Visit 06 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 06, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 05-MAR-2023:00:00:00 AND 19-MAR-2023:00:00:00					
Diagnostics	(Visit 06) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 06 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

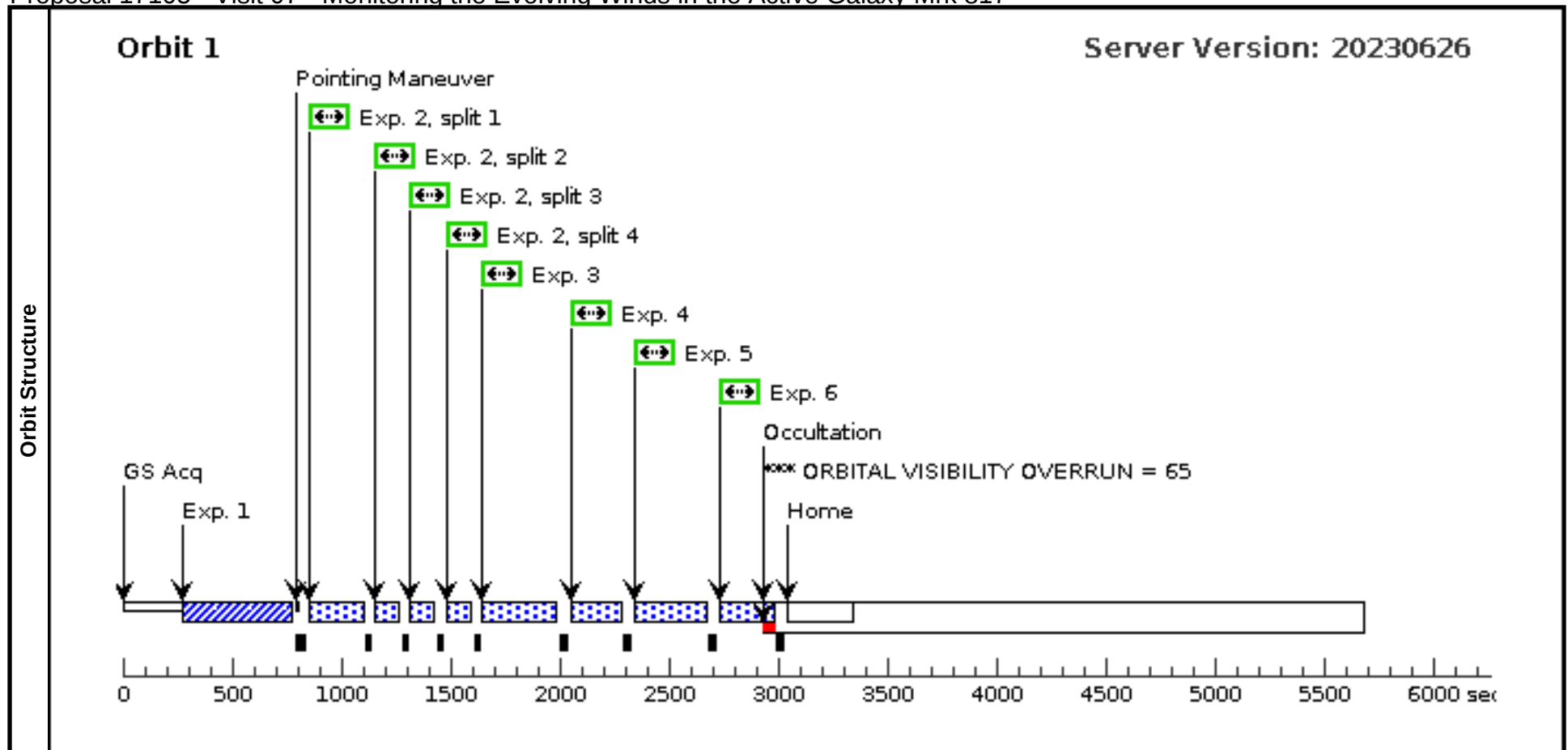


Proposal 17105 - Visit 07 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 07, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 09-APR-2023:00:00:00 AND 23-APR-2023:00:00:00					
Diagnostics	(Visit 07) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 07) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 07 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

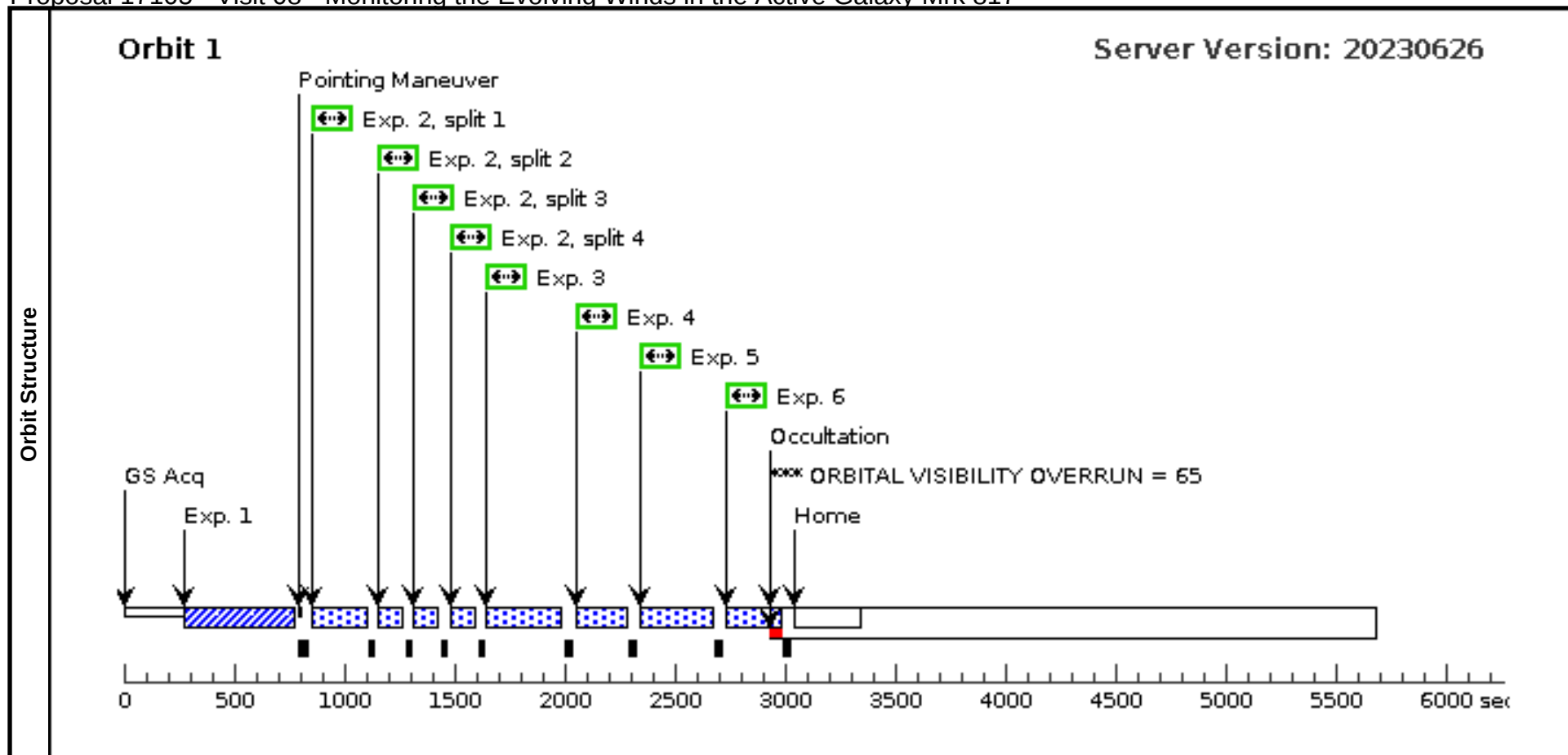


Proposal 17105 - Visit 08 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 08, failed					Wed Nov 29 18:00:45 GMT 2023
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 07-MAY-2023:00:00:00 AND 21-MAY-2023:00:00:00					
Diagnostics	(Visit 08) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave.					
	(Visit 08) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.					
	Category=GALAXY					
	Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 08 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

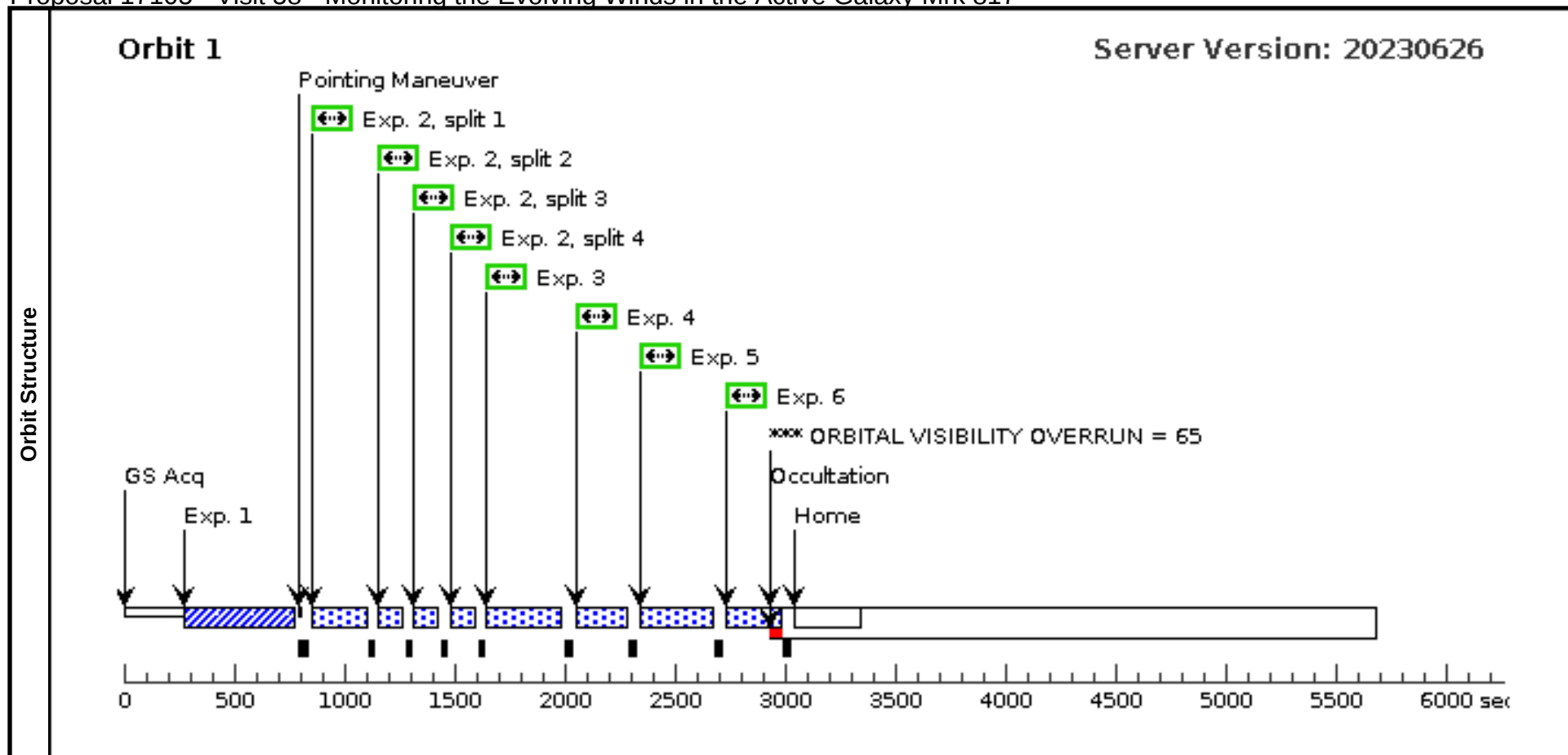


Proposal 17105 - Visit 58 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 58, completed Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: HOPR repeat of visit 8</i>						Wed Nov 29 18:00:45 GMT 2023
	(Visit 58) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 58) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
Diagnostics							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS	
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO						

Proposal 17105 - Visit 58 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

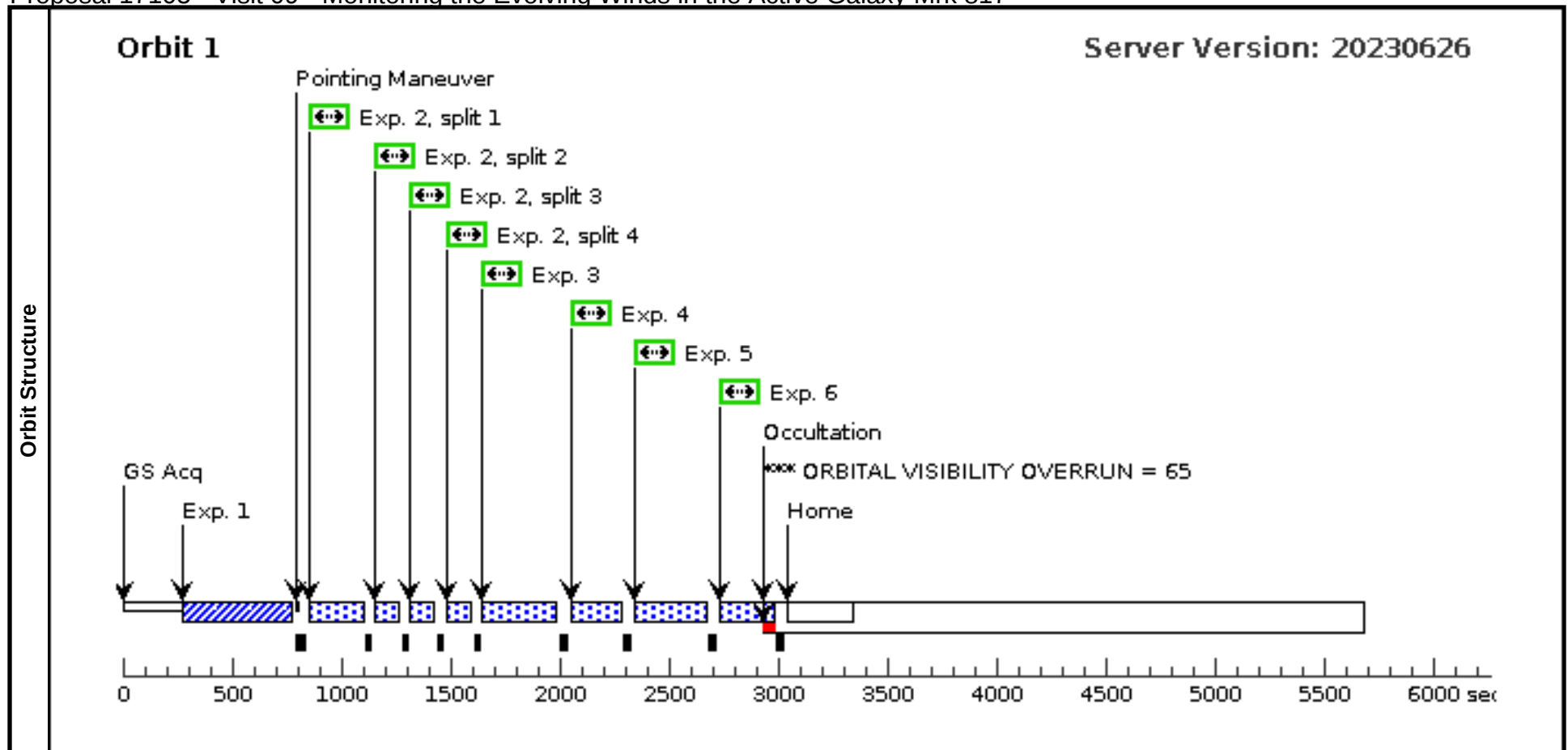


Proposal 17105 - Visit 09 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 09, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 04-JUN-2023:00:00:00 AND 18-JUN-2023:00:00:00					
Diagnostics	(Visit 09) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 09) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 09 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

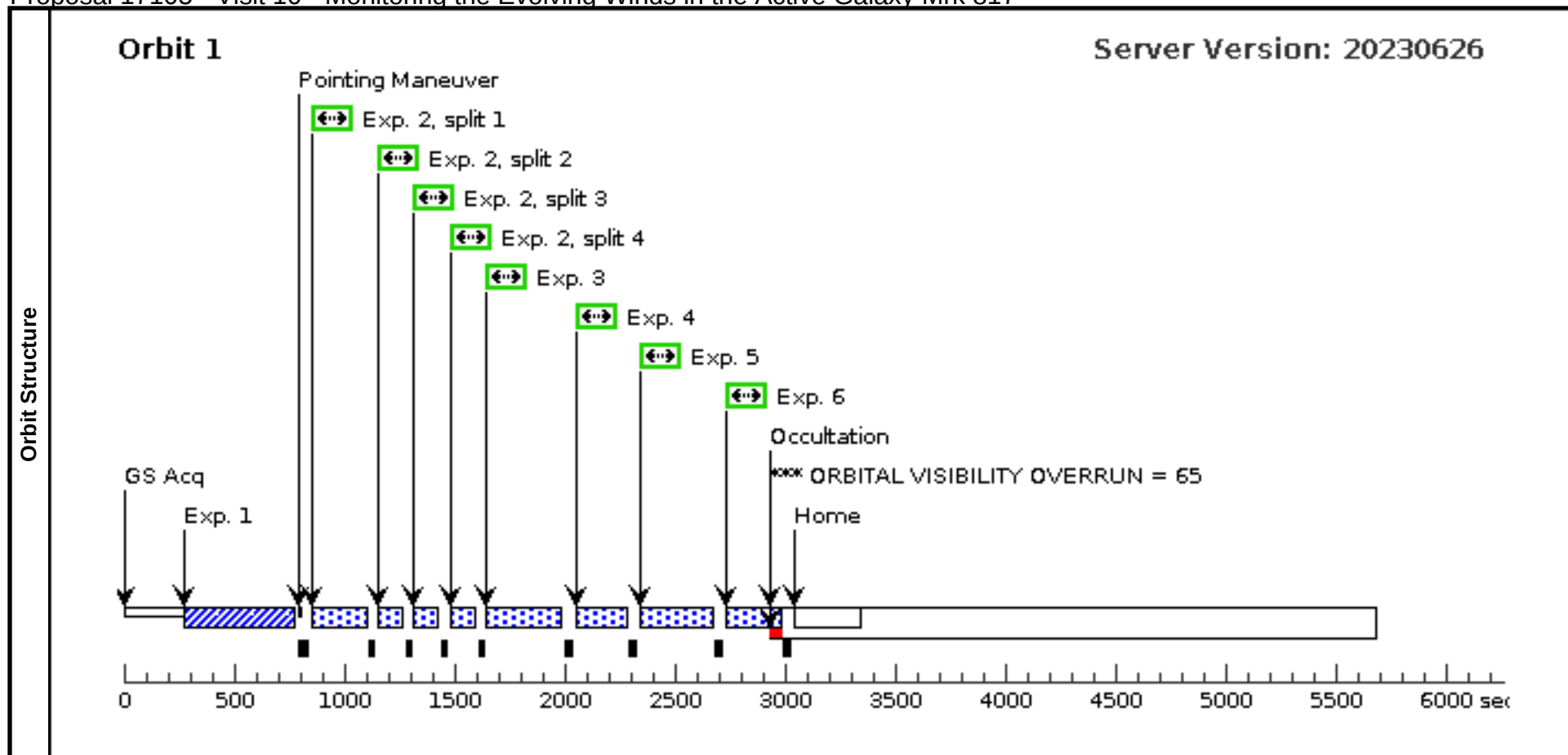


Proposal 17105 - Visit 10 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 10, completed Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 09-JUL-2023:00:00:00 AND 23-JUL-2023:00:00:00						Wed Nov 29 18:00:45 GMT 2023
	(Visit 10) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 10) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
Diagnostics							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO						

Proposal 17105 - Visit 10 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6.	ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.								
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

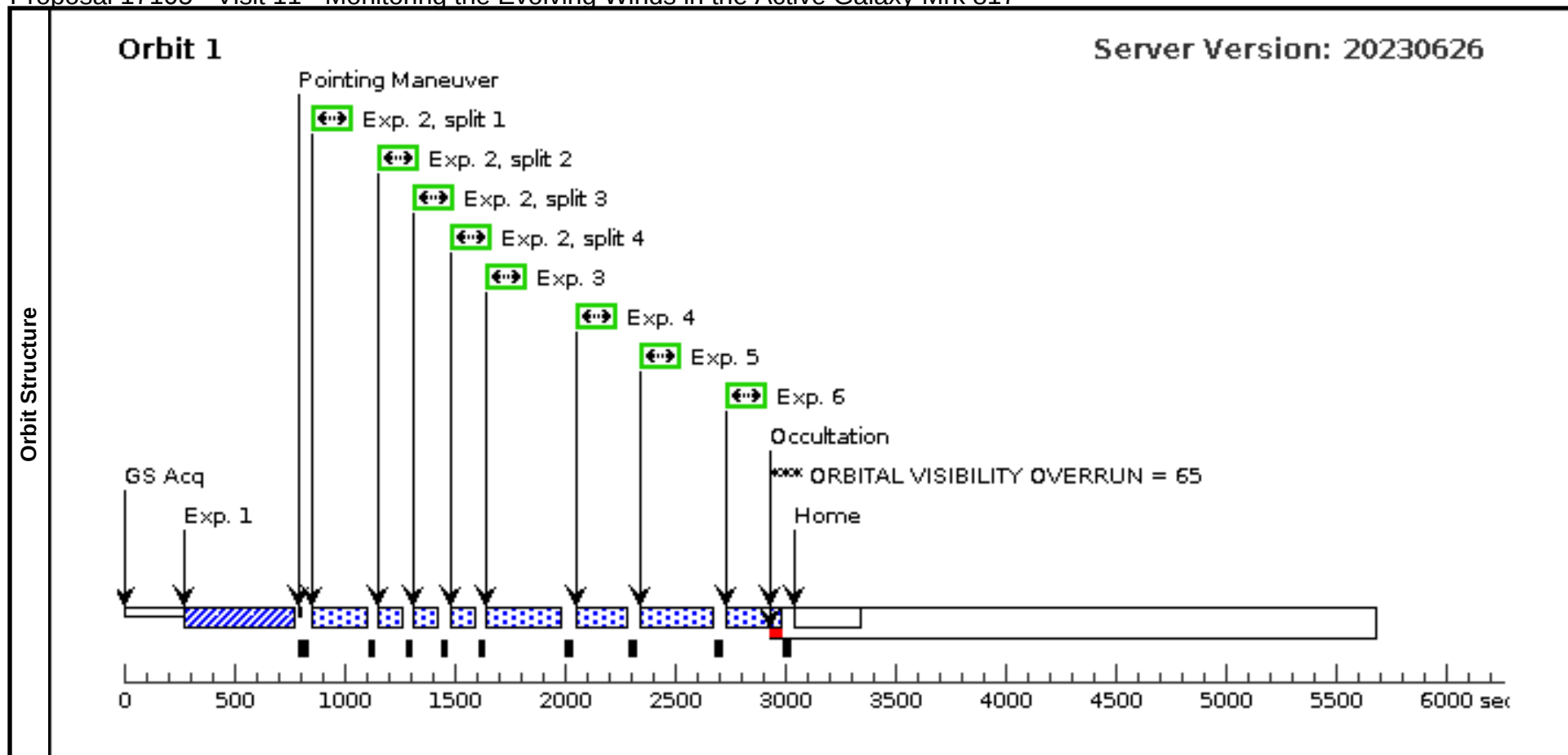


Proposal 17105 - Visit 11 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 11, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 30-JUL-2023:00:00:00 AND 27-AUG-2023:00:00:00					
Diagnostics	(Visit 11) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 11) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 11 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

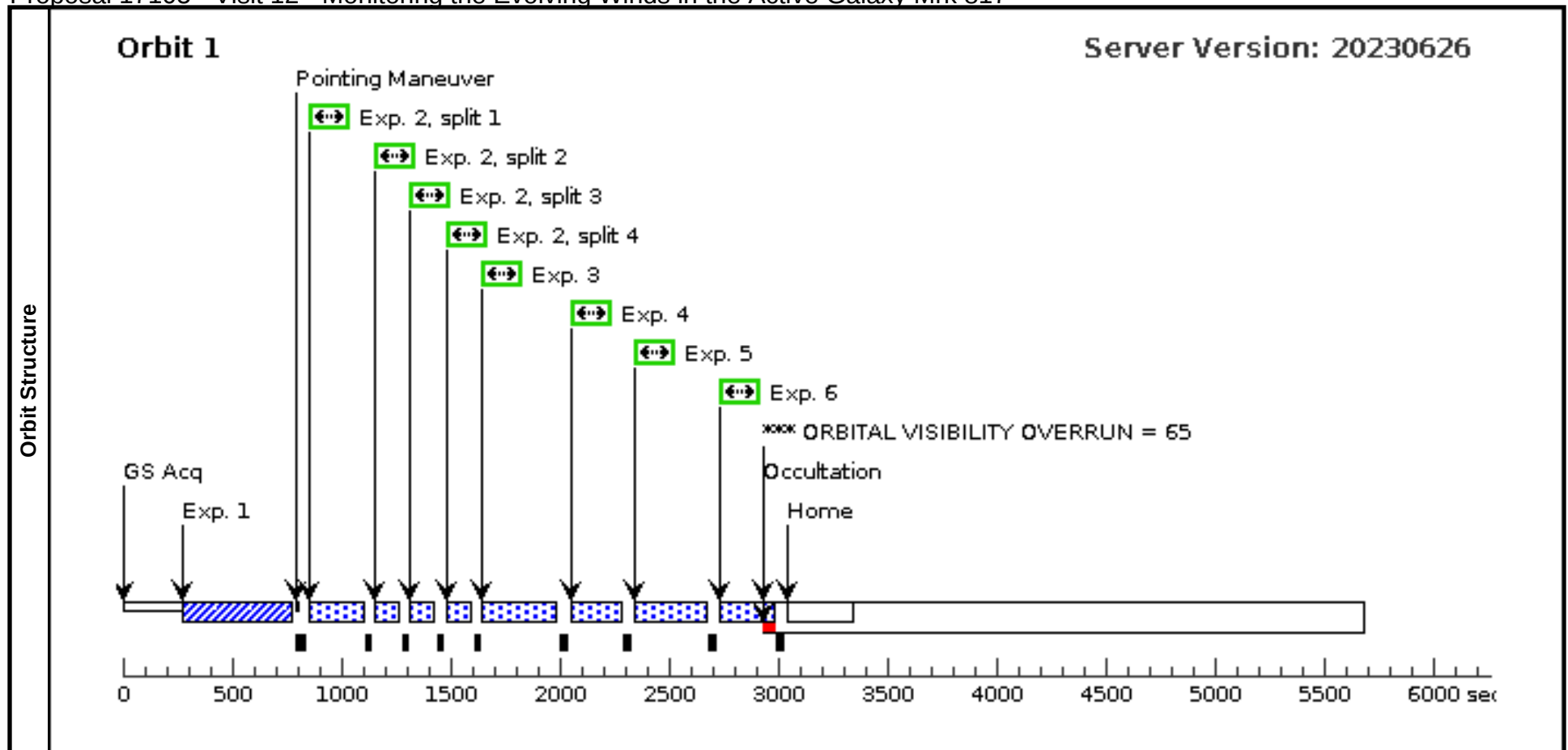


Proposal 17105 - Visit 12 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 12, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 10-SEP-2023:00:00:00 AND 24-SEP-2023:00:00:00					
Diagnostics	(Visit 12) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 12) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 12 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

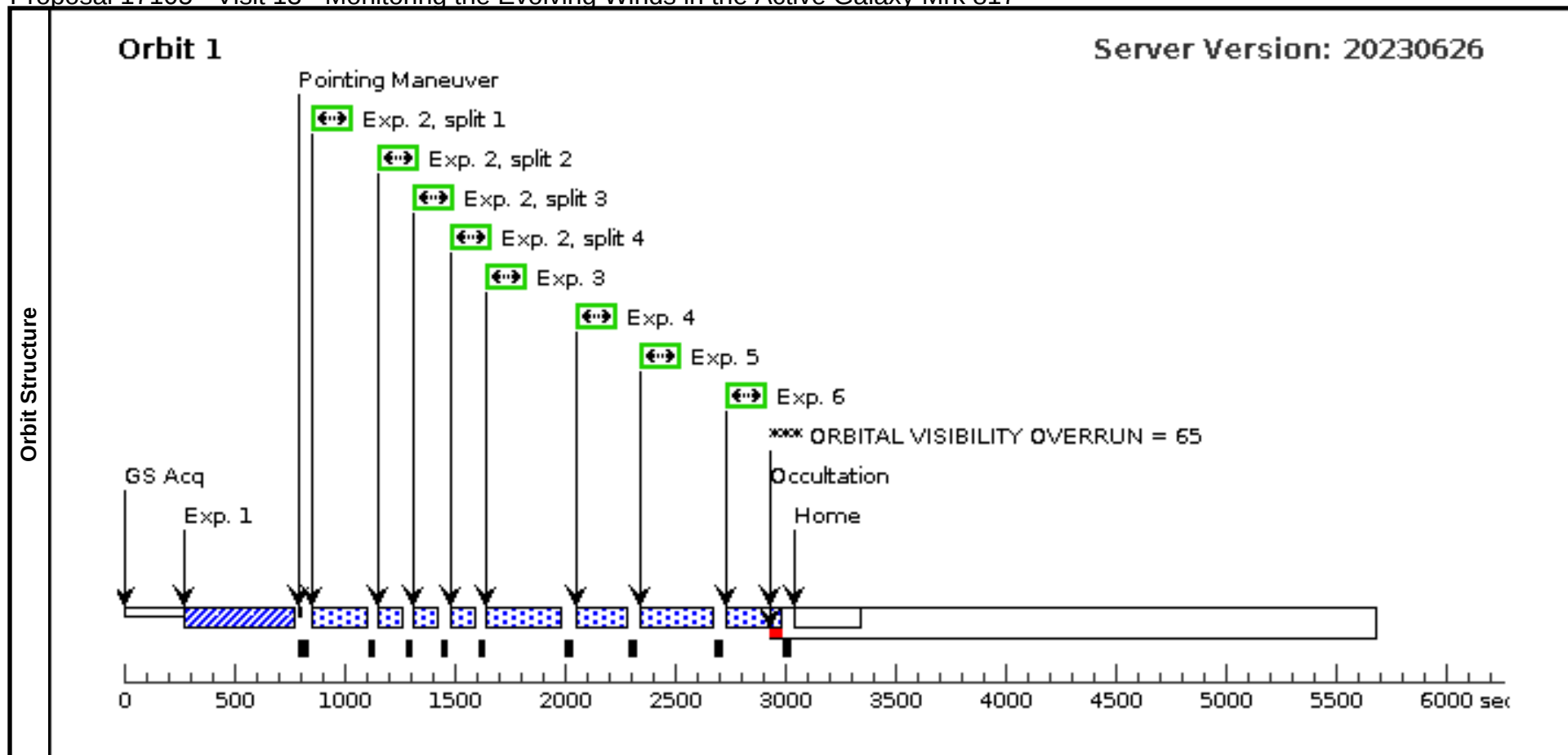


Proposal 17105 - Visit 13 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 13, completed Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 08-OCT-2023:00:00:00 AND 22-OCT-2023:00:00:00						Wed Nov 29 18:00:45 GMT 2023
	(Visit 13) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 13) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
Diagnostics							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO						

Proposal 17105 - Visit 13 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619									
	6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]

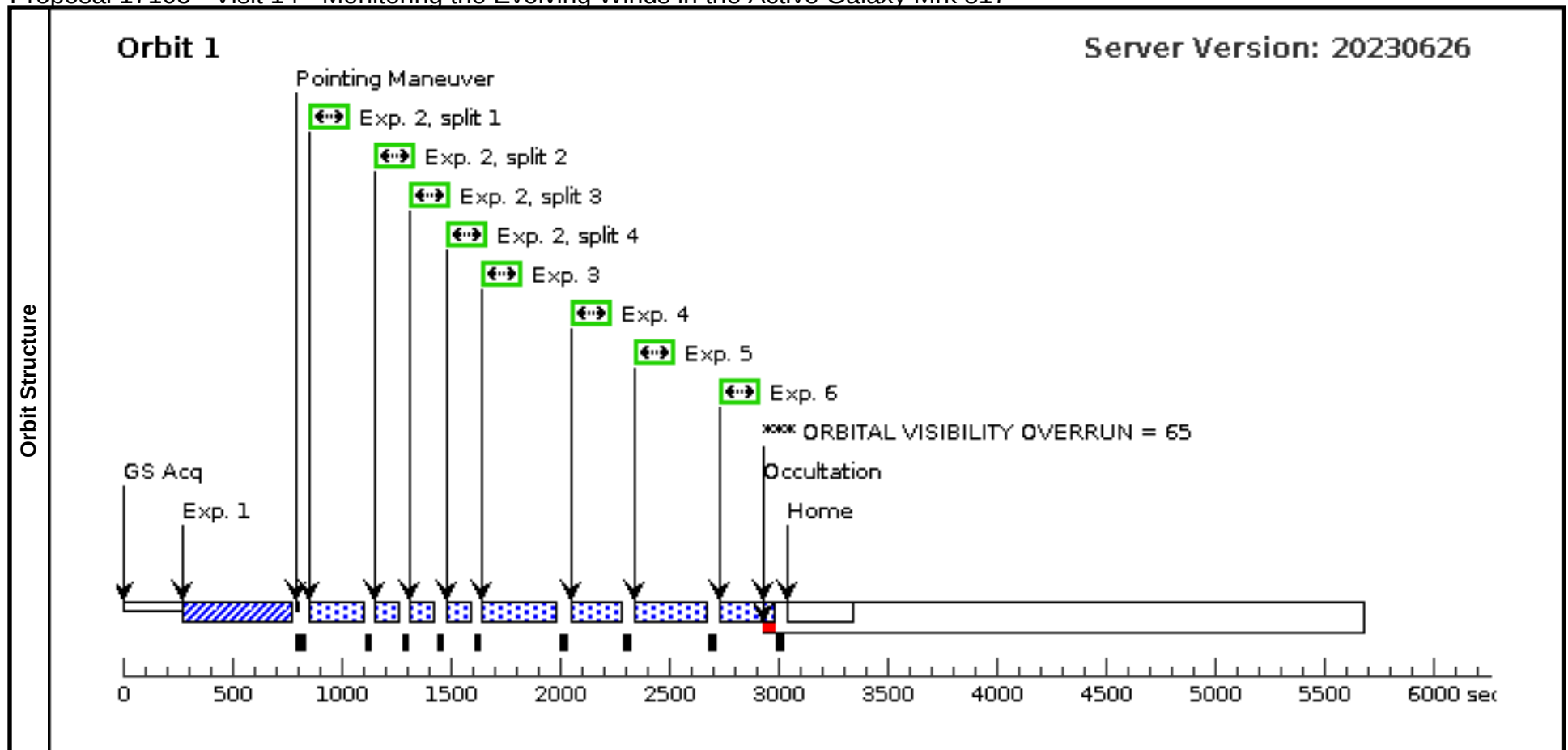


Proposal 17105 - Visit 14 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Visit	Proposal 17105, Visit 14, implementation Wed Nov 29 18:00:45 GMT 2023				
	Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 20-DEC-2023:00:00:00 AND 31-DEC-2023:00:00:00				
Diagnostics	(Visit 14) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. (Visit 14) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A
	Miscellaneous Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO				

Proposal 17105 - Visit 14 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[1]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.031455$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 1619 6. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	2	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=82 0; FP-POS=ALL; LIFETIME-POS=L P4			60. Secs (240 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
	3	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60.; FP-POS=1; LIFETIME-POS=L P4			175. Secs (175 Secs)	
									[==>]	[1]
	4	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=12 60; FP-POS=2; LIFETIME-POS=L P4			180. Secs (180 Secs)	
									[==>]	[1]
	5	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=3; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]
	6	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=15 00; FP-POS=4; LIFETIME-POS=L P4			195. Secs (195 Secs)	
									[==>]	[1]



Proposal 17105 - Visit 15 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

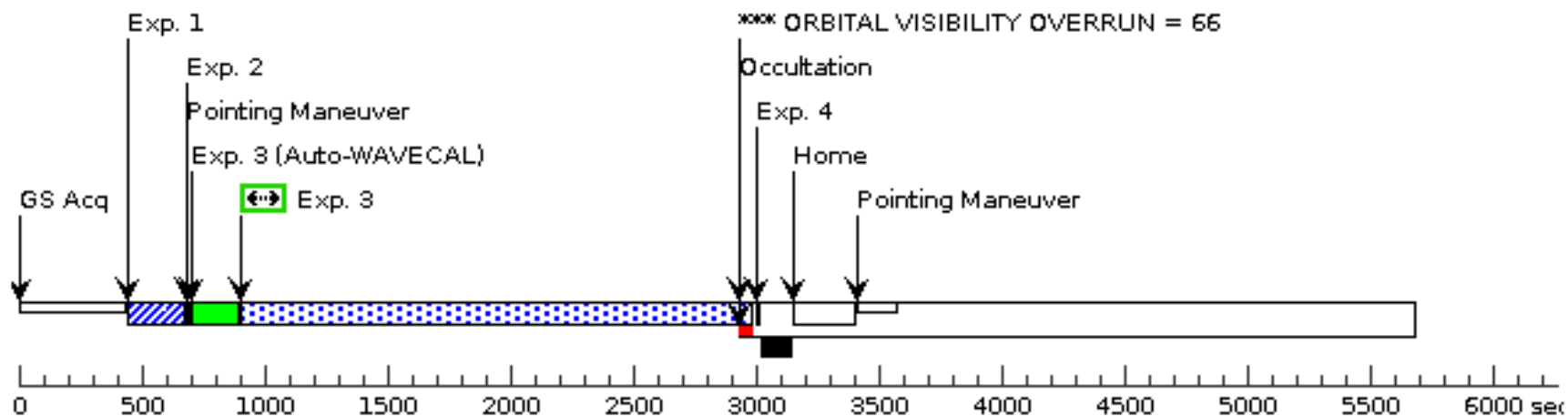
Visit	Proposal 17105, Visit 15, completed Wed Nov 29 18:00:45 GMT 2023					
	Diagnostic Status: Warning Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, COS/FUV, STIS, COS/NUV Special Requirements: SCHED 100%; TOO RESPONSE TIME 21.0D <i>Comments: This visit is for a target of opportunity observation to be triggered when the obscuring outflow in Mrk 817 has dissipated as indicated by Swift and NICER hardness ratios indicative of only Milky Way foreground absorption (HR < -0.3 for 1 month), or absence of broad UV absorption in the HST/COS spectrum. The minimum time after triggering is 21 days so as to be non-disruptive. This is a long-term ToO that should persist into Cycle 31 if not triggered during Cycle 30.</i>					
Diagnostics	(Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031455	V=13.79+/-0.5 F(1180) = 7e-14 erg/cm2/s/A	Reference Frame: ICRS
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[ACCRETION DISK, BLR, NUCLEUS, SEYFERT, WIND] Extended=NO					

Proposal 17105 - Visit 15 - Monitoring the Evolving Winds in the Active Galaxy Mrk 817

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(STIS.ta.180 9341)	(1) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs)	
									[==>]	[1]
	2	MSOFF ZE RO	NONE	STIS, MSMOFF		SETOFFSET=ZERO; GRATING1=ALL			[==>]	[1]
	3	(STIS.sp.18 09342)	(1) MRK-817	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				2064 Secs (2064 Secs)	
									[==>]	[1]
	4	MSOFF RE STORE	NONE	STIS, MSMOFF		SETOFFSET=RESTORE; GRATING1=ALL			[==>]	[1]
	5	(COS.ta.180 9302)	(1) MRK-817	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				140 Secs (140 Secs)	
									[==>]	[2]
	Comments: Target Acq assumes an FOS-based QSO spectrum at $z=0.0314555$, $E(B-V)=0.02$, and $F(1390)=1.0e-14$, less than half the lowest flux observed in the 2020-2022 reverberation-mapping campaign, PID 16196. ETC run COS.ta.1809303 uses $F(1390)=2.e-13$, twice the brightet level in 2021, and shows that the observation is safe.									
	6	(COS.sp.180 9337)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=820; FP-POS=ALL; LIFETIME-POS=L P4			375. Secs (1500 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[2]
	7	(COS.sp.180 9338)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=1260.; FP-POS=ALL; LIFETIME-POS=L P4			200. Secs (800 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[3]
	8	(COS.sp.180 9339)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=1500; FP-POS=ALL; LIFETIME-POS=L P4			200. Secs (800 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[3]
	9	(COS.sp.180 9340)	(1) MRK-817	COS/FUV, TIME-TAG, PSA	G130M 1096 A	BUFFER-TIME=1500; FP-POS=ALL; LIFETIME-POS=L P2			520. Secs (2080 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[4]

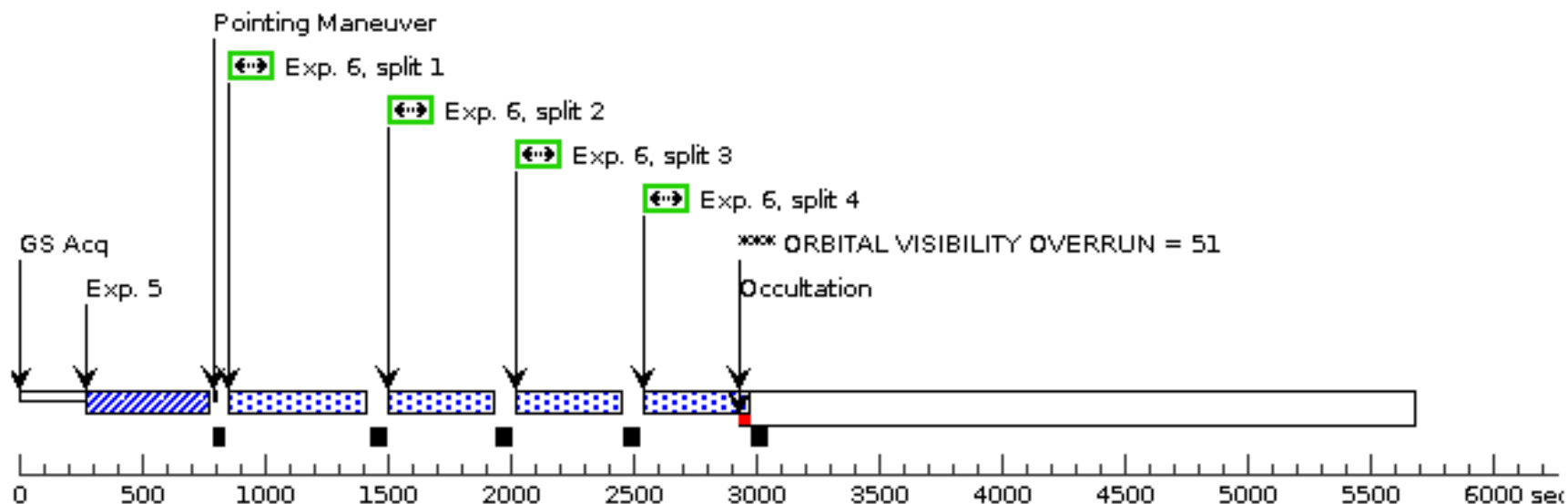
Orbit 1

Server Version: 20230626



Orbit 2

Server Version: 20230626



Server Version: 20230626

Orbit 3

