14481 - Shining light on obscured AGN outflows

Cycle: 24, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Jelle Kaastra (PI) (ESA Member) (Contact)	**Space Research Organization Netherlands**	**j.kaastra@sron.nl**
Dr. Gerard A. Kriss (CoI) (AdminUSPI)	Space Telescope Science Institute	gak@stsci.edu
Dr. Massimo Cappi (CoI) (ESA Member)	INAF - IASF Bologna	cappi@iasfbo.inaf.it
Dr. Nahum Arav (CoI)	Virginia Polytechnic Institute and State University	arav@vt.edu
Dr. Ehud Behar (CoI)	Technion-Israel Institute of Technology	behar@physics.technion.ac.il
Dr. Stefano Bianchi (CoI) (ESA Member)	Universita' degli Studi Roma Tre	bianchi@fis.uniroma3.it
Dr. Graziella Branduardi-Raymont (CoI) (ESA Member)	University College London	gbr@mssl.ucl.ac.uk
Dr. Elisa Costantini (CoI) (ESA Member)	Space Research Organization Netherlands	e.costantini@sron.nl
Dr. Barbara De Marco (CoI) (ESA Member)	Max-Planck-Institut fur extraterrestrische Physik	bdemarco@mpe.mpg.de
Dr. Jacobo Ebrero (CoI) (ESA Member)	ESA-European Space Astronomy Centre	jebrero@sciops.esa.int
Dr. Matteo Guainazzi (CoI) (ESA Member)	ESA-European Space Astronomy Centre	matteo.guainazzi@sciops.esa.int
Dr. Shai Kaspi (CoI)	Tel Aviv University - Wise Observatory	shai@wise1.tau.ac.il
Prof. Giorgio Matt (CoI) (ESA Member)	Universita' degli Studi Roma Tre	matt@fis.uniroma3.it
Missagh Mehdipour (CoI) (ESA Member)	Space Research Organization Netherlands	m.mehdipour@sron.nl
Dr. Stephane Paltani (CoI) (ESA Member)	Observatoire de Geneve	stephane.paltani@unige.ch
Dr. Pierre-Olivier Petrucci (CoI) (ESA Member)	Institut de Planetologie et d'Astrophysique de Grenoble	pierre-olivier.petrucci@obs.ujf-grenoble.fr
Dr. Gabriele Ponti (CoI) (ESA Member)	Max-Planck-Institut fur extraterrestrische Physik	ponti@mpe.mpg.de
Dr. Katrien Christine Steenbrugge (CoI) (ESA Member)	University of Oxford	katrien.steenbrugge@gmail.com
Dr. Francesco Ursini (CoI) (ESA Member)	Institut de Planetologie et d'Astrophysique de Grenoble	francesco.ursini@obs.ujf-grenoble.fr

Name	*Institution*	*E-Mail*
Mr. Dominic Walton (CoI)	California Institute of Technology	dwalton@srl.caltech.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) MRK-335	COS/FUV	2	15-Mar-2016 21:05:55.0	yes
02	(1) MRK-335	COS/FUV	2	15-Mar-2016 21:05:58.0	yes
03	(2) NGC-3783	COS/FUV	2	15-Mar-2016 21:06:01.0	yes
04	(2) NGC-3783	COS/FUV	2	15-Mar-2016 21:06:04.0	yes
05	(3) NGC-4593	COS/FUV	2	15-Mar-2016 21:06:07.0	yes
06	(3) NGC-4593	COS/FUV	2	15-Mar-2016 21:06:09.0	yes
07	(4) MRK-841	COS/FUV	2	15-Mar-2016 21:06:13.0	yes
08	(4) MRK-841	COS/FUV	2	15-Mar-2016 21:06:15.0	yes
09	(5) MRK-509	COS/FUV	2	15-Mar-2016 21:06:18.0	yes
10	(5) MRK-509	COS/FUV	2	15-Mar-2016 21:06:21.0	yes
11	(6) ARK-564	COS/FUV	2	15-Mar-2016 21:06:23.0	yes
12	(6) ARK-564	COS/FUV	2	15-Mar-2016 21:06:26.0	yes
13	(7) MR-2251-178	COS/FUV	2	15-Mar-2016 21:06:28.0	yes
14	(7) MR-2251-178	COS/FUV	2	15-Mar-2016 21:06:31.0	yes
15	(8) NGC-7469	COS/FUV	2	15-Mar-2016 21:06:34.0	yes
16	(8) NGC-7469	COS/FUV	2	15-Mar-2016 21:06:36.0	yes

32 Total Orbits Used

ABSTRACT

AGN can be obscured by gas streams close to the black hole that shield remote regions from ionising radiation. We witnessed such an event in NGC 5548 where 90% of the soft X-rays are blocked by a dense gas stream close to the BLR. Our joint observations with XMM-Newton, NuSTAR and HST/COS showed UV BAL lines associated with the X-ray absorption and allowed us to characterise this unique obscuration event completely. We

propose to investigate a similar event in another Seyfert 1 using the same instruments. Swift monitoring will be used to find the event, which will be characterised by joint ToO observations with XMM-Newton (150 ks), HST/COS (4 orbits) and NuSTAR (50 ks).

OBSERVING DESCRIPTION

We will observe a Seyfert 1 galaxy that has entered an obscured phase similar to NGC 5548, NGC 985, or Mrk 335 in order to use simultaneous XMM-Newton, NuSTAR, and HST/COS observations to measure the physical characteristics of the outflow causing the obscuration. Our observations will be triggered via a monitoring program conducted on 8 bright Seyfert 1 galaxies with Swift. The first XMM-Newton observation will be as soon as possible after the trigger and 100 ks in duration in order to have well-determined obscurer parameters. An additional observation of 50 ks following the first observation but before the end of the XMM visibility window will enable us to study the variability of the obscurer. As nearly simultaneous with each XMM visit as possible, we will observe for 25 ks with NuSTAR and for 2 orbits with HST/COS.

Our COS observations will use gratings G130M and G160M in order to observe the main absorption line transitions in C III* 1176, Ly alpha, N V, Si IV, and C IV. Our previous observational campaigns on Mrk 279, Mrk 509, NGC 5548, and NGC 985 all achieved good results with a signal-to-noise ratio of 20 per resolution element in the continuum for these objects. To achieve a 4-fold diversity of grating settings for each grating, we use multiple central wavelengths for G130M and G160M to make sure we span the gap between segments A and B, and we use different FPPOS positions for each of those.

To outline the ETC calculations for our potential targets, we tabulate results for all 8 here:

Source	z	E(B-V)	Min_Flam	Max_Flam	Mean_Flam
Mrk 335	0.025785	0.030	3.8e-14	8.7e-14	6.3e-14
NGC 3783	0.00973	0.101	1.2e-14	1.1e-13	5.0e-14
NGC 4593	0.00900	0.022	0.5e-14	2.4e-14	1.5e-14
Mrk 841	0.036422	0.026	2.0e-14	4.3e-14	3.2e-14
Mrk 509	0.034397	0.051	4.1e-14	1.4e-13	9.0e-14
Ark 564	0.024684	0.053	0.6e-14	1.0e-14	0.8e-14
MR2251-178	0.063980	0.035	1.8e-14	4.7e-14	3.3e-14
NGC 7469	0.016317	0.061	2.7e-14	7.1e-14	4.9e-14

We note that our triggered TOO observation will observe only *one* of these objects.

These observations pose no bright object concerns. All historical flux levels for each of the AGN in our sample lie below the bright object limits for COS. Since all of these objects have been observed successfully before using either COS or STIS, there are also no surrounding field objects that are too bright. All of our targets can get bright enough that we use a spectroscopic target acquisition to ensure there are no bright object violations with an imaging target acquisition. Rather than do a separate ETC check on bright object constraints for each AGN, we simply show here calculations for the faintest object, NGC 4593, and the brightest, Mrk 509. (We note that the only AGN that could ever violate the COS brightness limits are NGC 4151 and 3C 273.)

Our ETC calculations use the ETC FOS quasar spectrum redshifted appropriately with foreground Milky Way extinction from NED. Here we show the historical minimum flux for the faintest (NGC 4593, flam_min=0.5e-14) and the maximum flux at 1368 A (observed for Mrk 509, flam_max=1.4e-13, Dunn et al. 2006) in order to get our limiting cases:

- ACQUISITION -

Configuration	Flux	EXP time	Max cts/s/pix	Total rate	Buffer Time	COS ETC ID
G130M/1291	0.5e-14	8.6 s	0.10	690	3419	COS.sa.768422
G130M/1291	1.4e-13	0.3 s	0.19	7322	322	COS.sa.768423

- EXPOSURES -

Configuration	Flux	EXP time	Max cts/s/pix	Total rate	Buffer Time	COS ETC ID
G130M/1291	5.0e-14	1000	0.13	2816	837	COS.sp.768426
G130M/1291	1.4e-13	1000	0.15	7238	325	COS.sp.768427
G160M/1600	5.0e-14	1000	0.016	1231	1915	COS.sp.768429
G160M/1600	1.4e-13	1000	0.044	3208	735	COS.sp.768428

Although it is recommended to use a BUFFER-TIME that is 2/3 of that given by the ETC, our general strategy is to choose a value that is less than that, and also an integer divisor of the exposure time minus 110 s. This minimizes the overhead between exposures while doing buffer dumps, e.g.,

BUFFER-TIME = (Exposure Time - 110) / n

Visit

Proposal 14481, 1A (01), implementation Wed Mar 16 01:06:39 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(1A (01)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

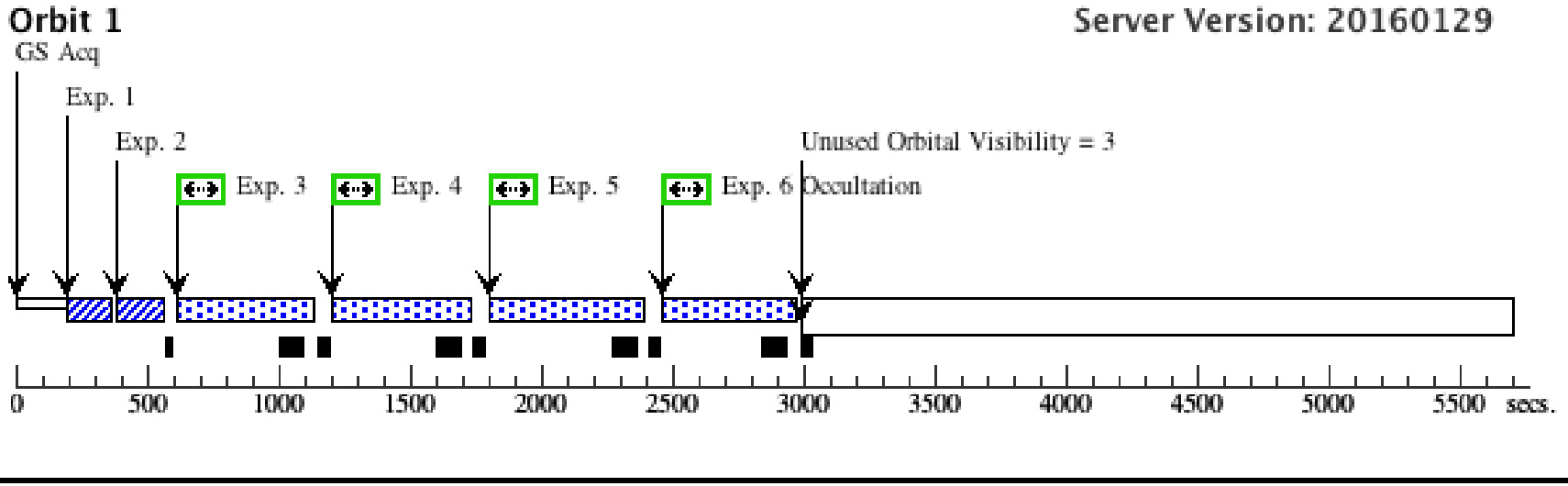
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	MRK-335	RA: 00 06 19.5820 (1.5815917d) Dec: +20 12 10.58 (20.20294d) Equinox: J2000	Redshift: 0.025785	V=13.85+/-0.5 F(1368)=6.3e-14	Reference Frame: ICRS

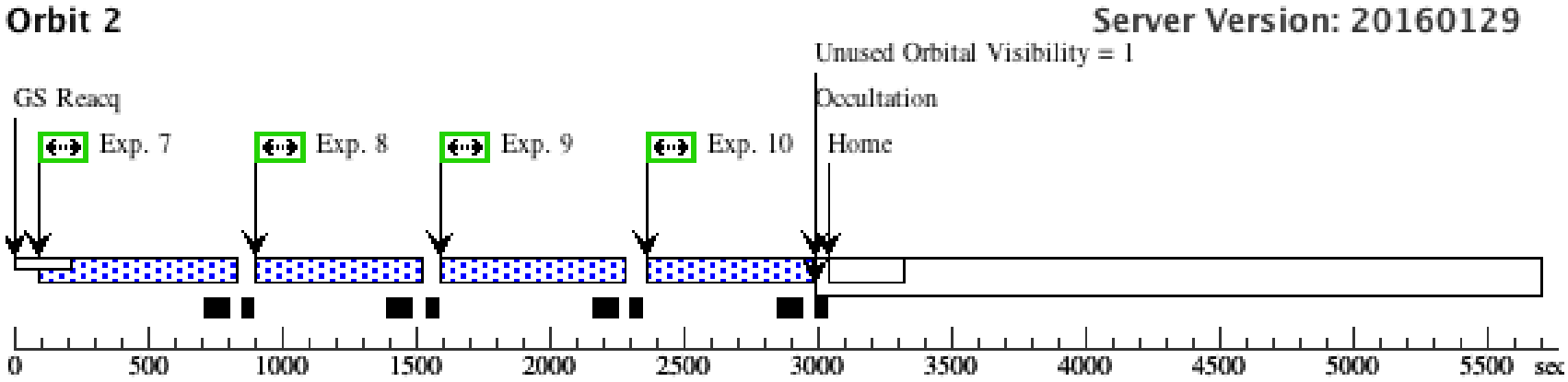
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(1) MRK-335	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(1) MRK-335	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Visit

Proposal 14481, 1B (02), implementation Wed Mar 16 01:06:39 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 01; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(1B (02)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

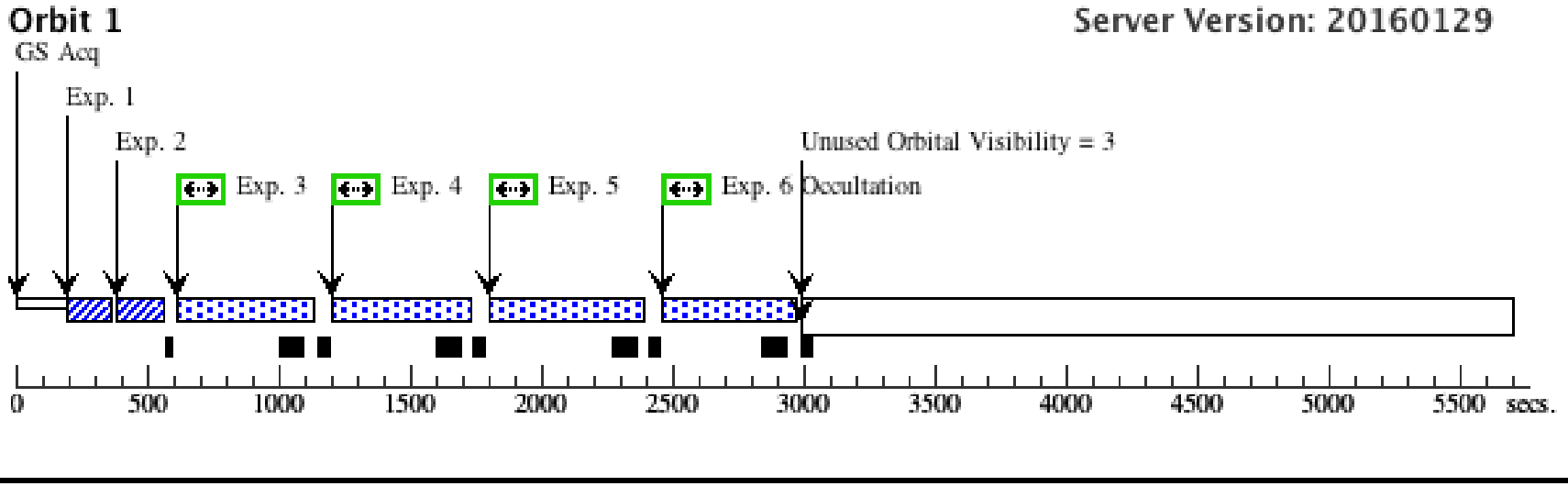
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	MRK-335	RA: 00 06 19.5820 (1.5815917d) Dec: +20 12 10.58 (20.20294d) Equinox: J2000	Redshift: 0.025785	V=13.85+/-0.5 F(1368)=6.3e-14	Reference Frame: ICRS

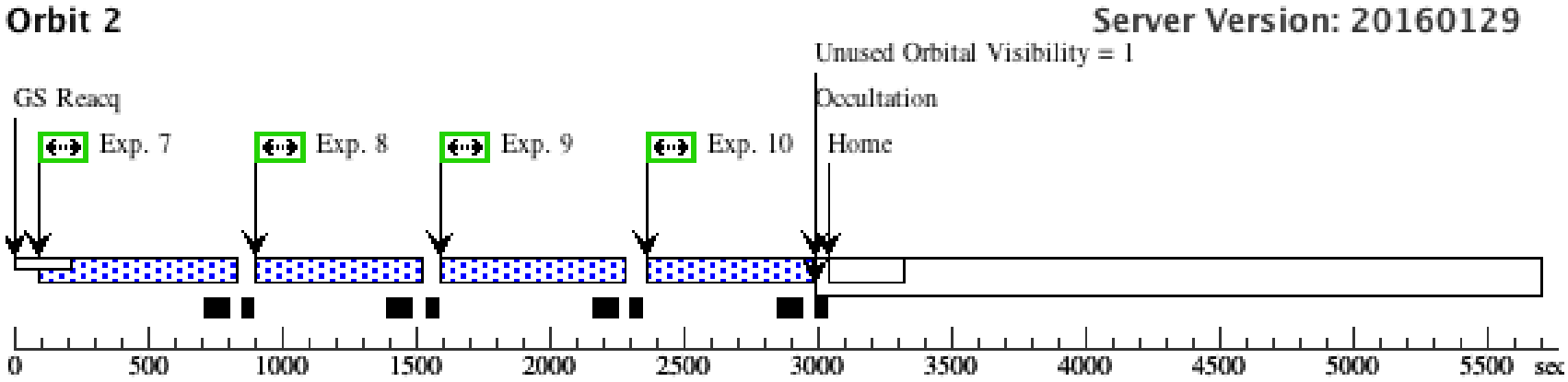
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(1) MRK-335	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(1) MRK-335	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(1) MRK-335	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Visit

Proposal 14481, 2A (03), implementation Wed Mar 16 01:06:39 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(2A (03)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

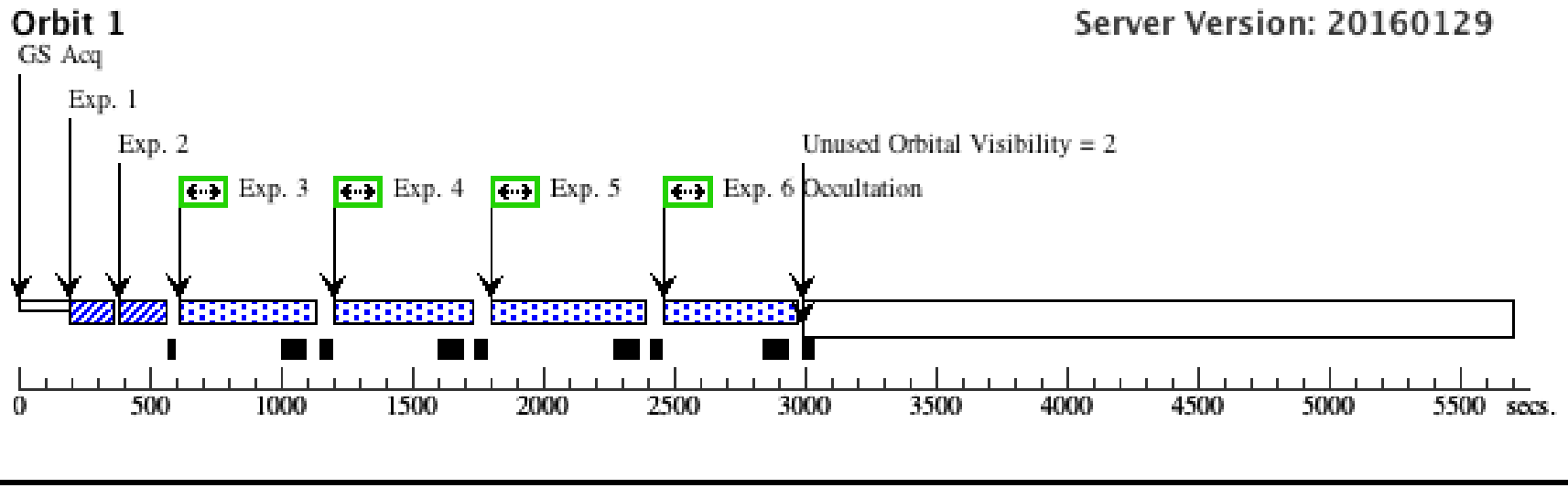
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC-3783	RA: 11 39 1.7210 (174.7571708d)	Redshift: 0.00973	V=13.43+/-0.5	Reference Frame: ICRS
		Dec: -37 44 18.60 (-37.73850d)		F(1368)=5.0e-14	
		Equinox: J2000			

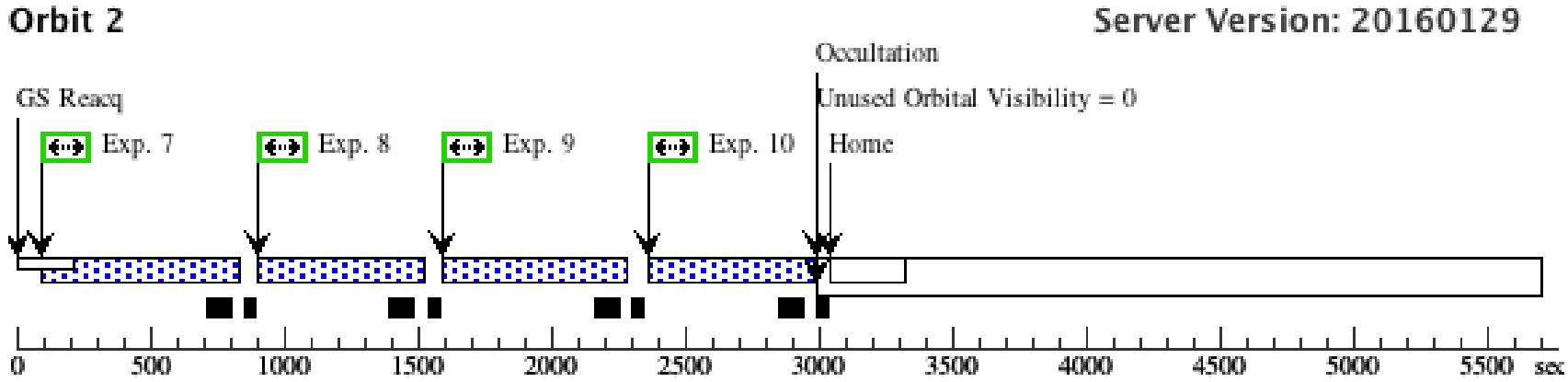
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(2) NGC-3783	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(2) NGC-3783	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Visit

Proposal 14481, 2B (04), implementation Wed Mar 16 01:06:39 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 03; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(2B (04)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

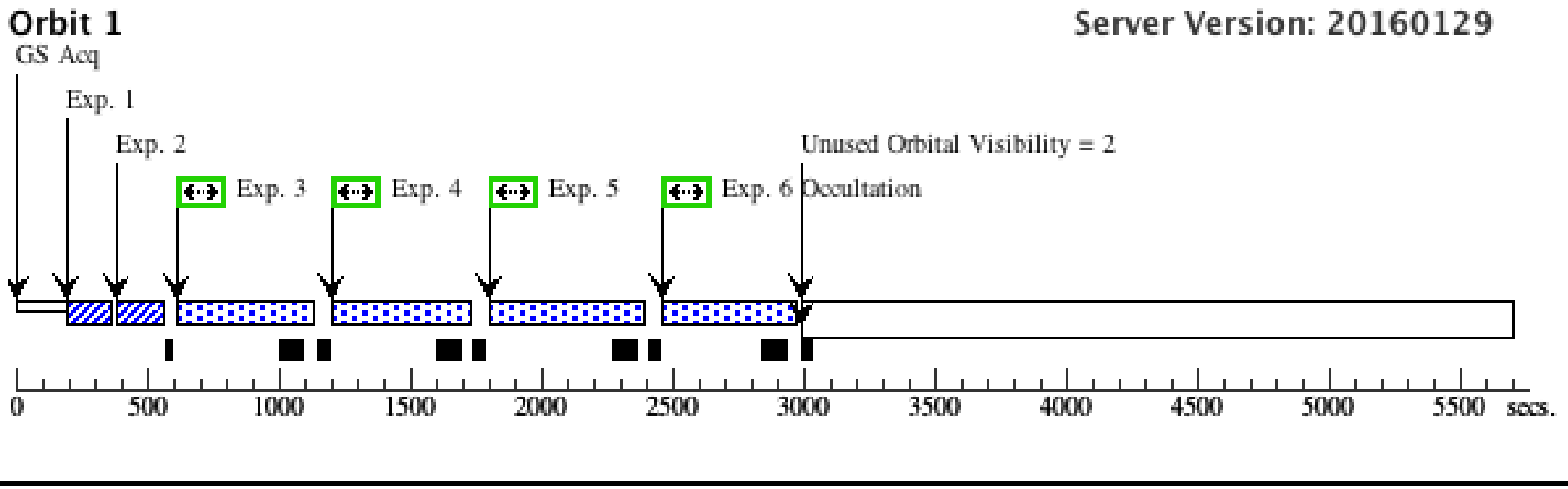
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC-3783	RA: 11 39 1.7210 (174.7571708d)	Redshift: 0.00973	V=13.43+/-0.5	Reference Frame: ICRS
		Dec: -37 44 18.60 (-37.73850d)		F(1368)=5.0e-14	
		Equinox: J2000			

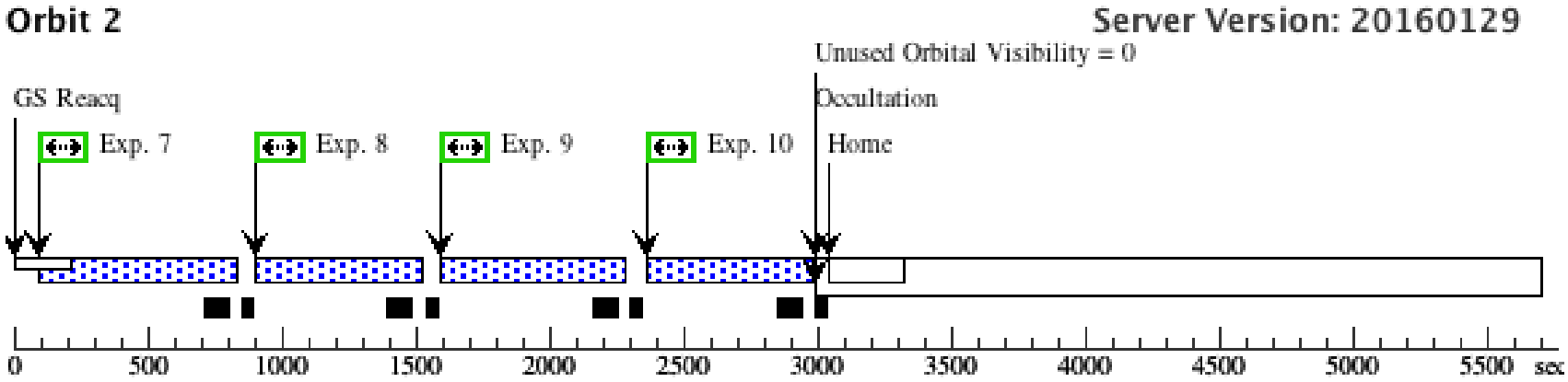
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(2) NGC-3783	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(2) NGC-3783	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(2) NGC-3783	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 3A (05) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 3A (05), implementation Wed Mar 16 01:06:39 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(3A (05)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

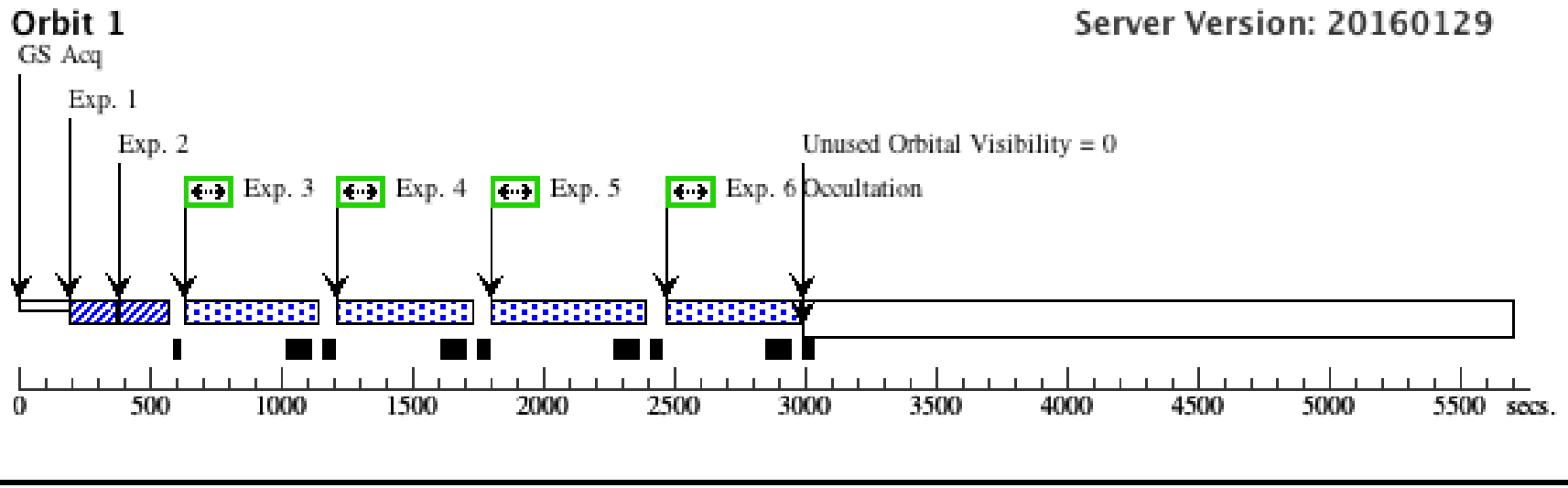
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	NGC-4593	RA: 12 39 39.4920 (189.9145500d) Dec: -05 20 39.16 (-5.34421d) Equinox: J2000	Redshift: 0.00900	V=13.15+/-0.5 F(1368)=1.5e-14	Reference Frame: ICRS

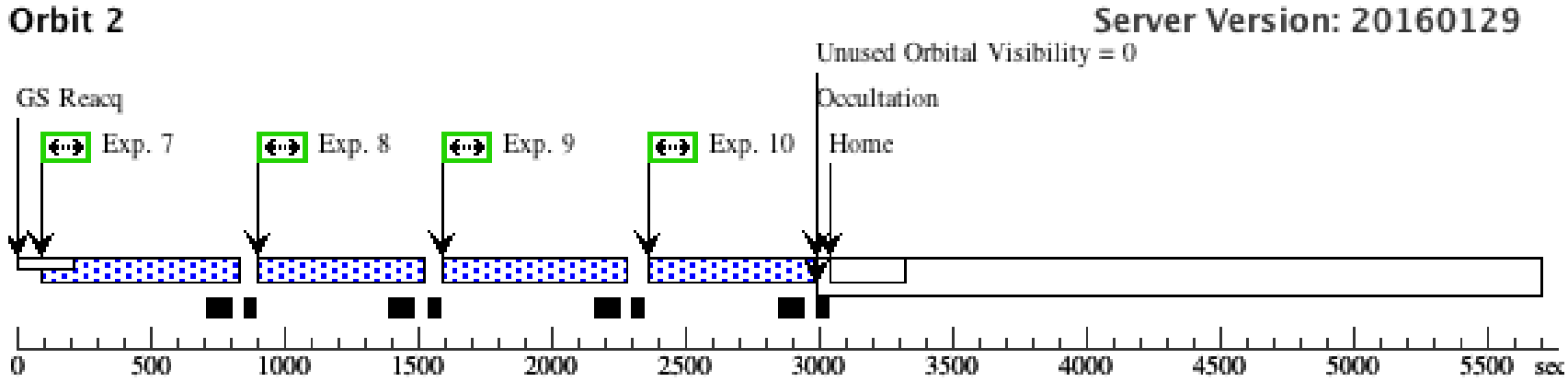
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 422)	(3) NGC-4593	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				8.6 Secs (8.6 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 422)	(3) NGC-4593	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			8.6 Secs (8.6 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=355; FP-POS=3			465 Secs (465 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=355; FP-POS=4			465 Secs (465 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 3B (06) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 3B (06), implementation Wed Mar 16 01:06:39 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 05; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(3B (06)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

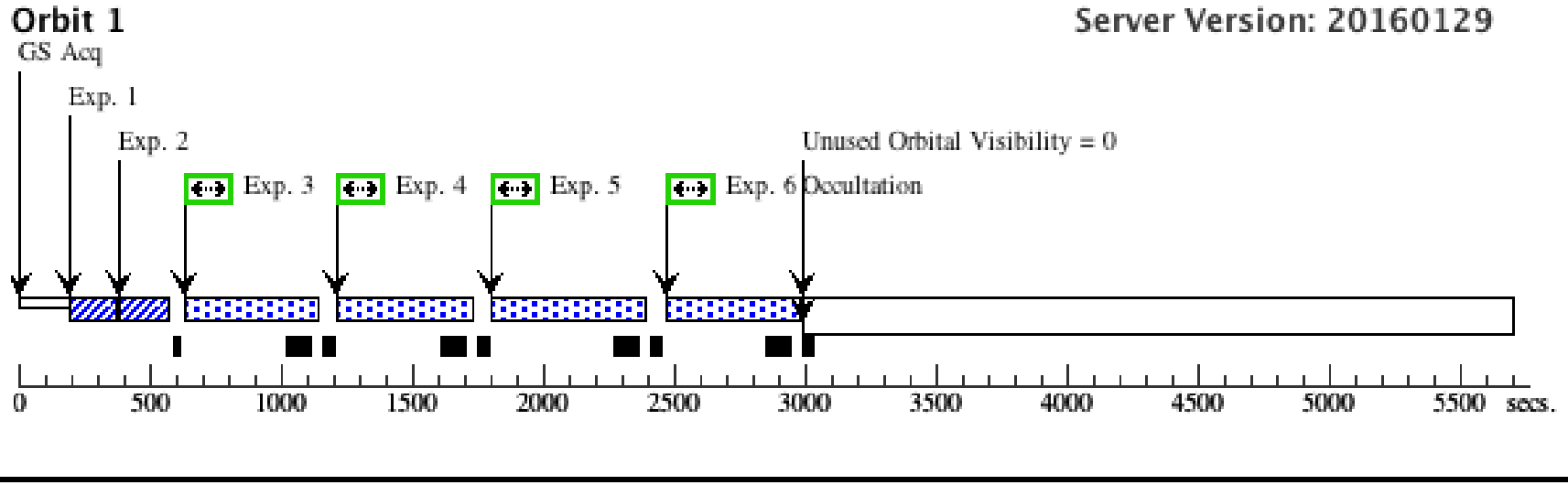
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	NGC-4593	RA: 12 39 39.4920 (189.9145500d) Dec: -05 20 39.16 (-5.34421d) Equinox: J2000	Redshift: 0.00900	V=13.15+/-0.5 F(1368)=1.5e-14	Reference Frame: ICRS

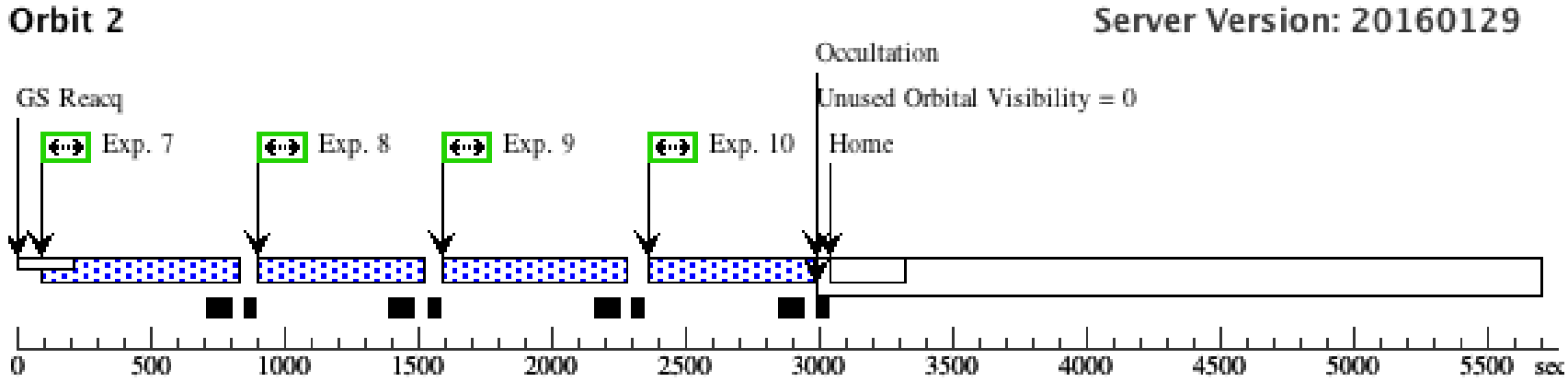
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(3) NGC-4593	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				8.6 Secs (8.6 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(3) NGC-4593	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			8.6 Secs (8.6 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=355; FP-POS=3			465 Secs (465 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=355; FP-POS=4			465 Secs (465 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(3) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Visit

Proposal 14481, 4A (07), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(4A (07)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

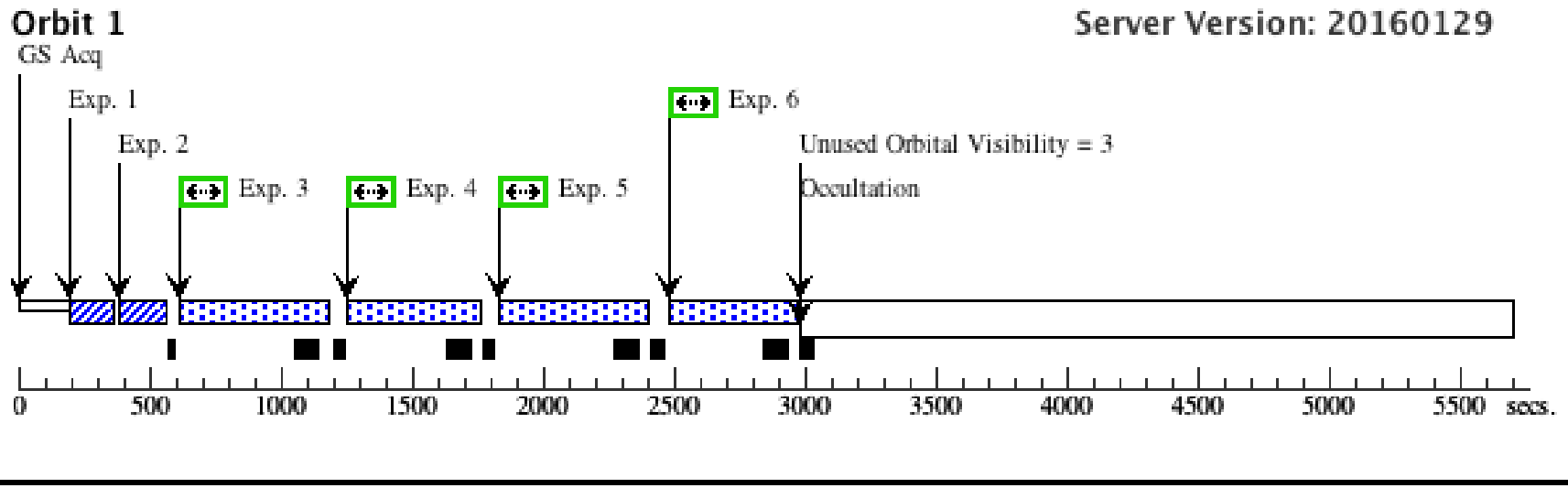
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	MRK-841	RA: 15 04 1.1720 (226.0048833d) Dec: +10 26 16.45 (10.43790d) Equinox: J2000	Redshift: 0.036422	V=14.27+/-0.5 F(1368)=3.2e-14	Reference Frame: ICRS

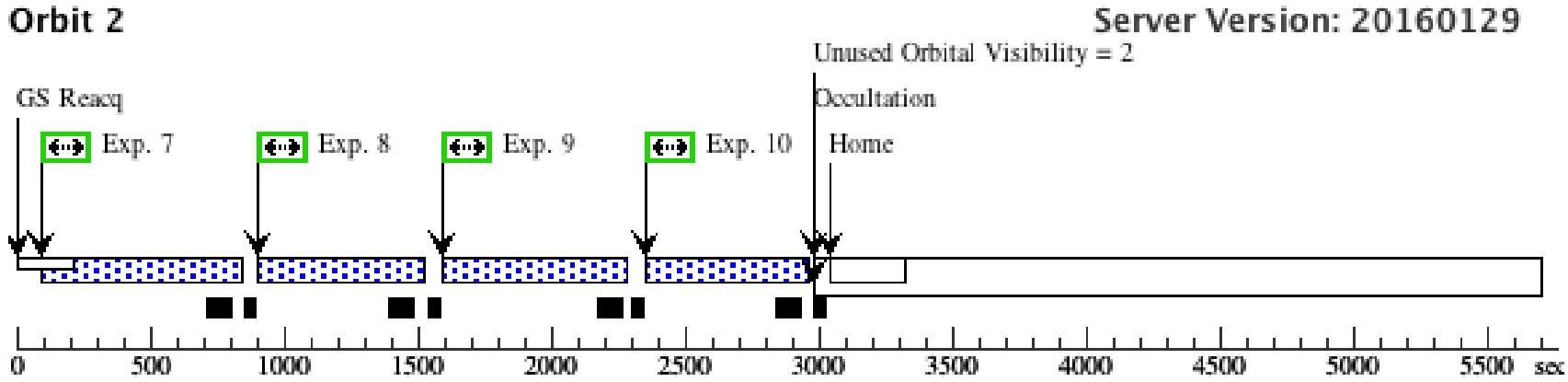
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(4) MRK-841	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(4) MRK-841	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=3			430 Secs (430 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=325; FP-POS=4			435 Secs (435 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			555 Secs (555 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=450; FP-POS=2			560 Secs (560 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Proposal 14481 - 4B (08) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 4B (08), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 07; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(4B (08)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

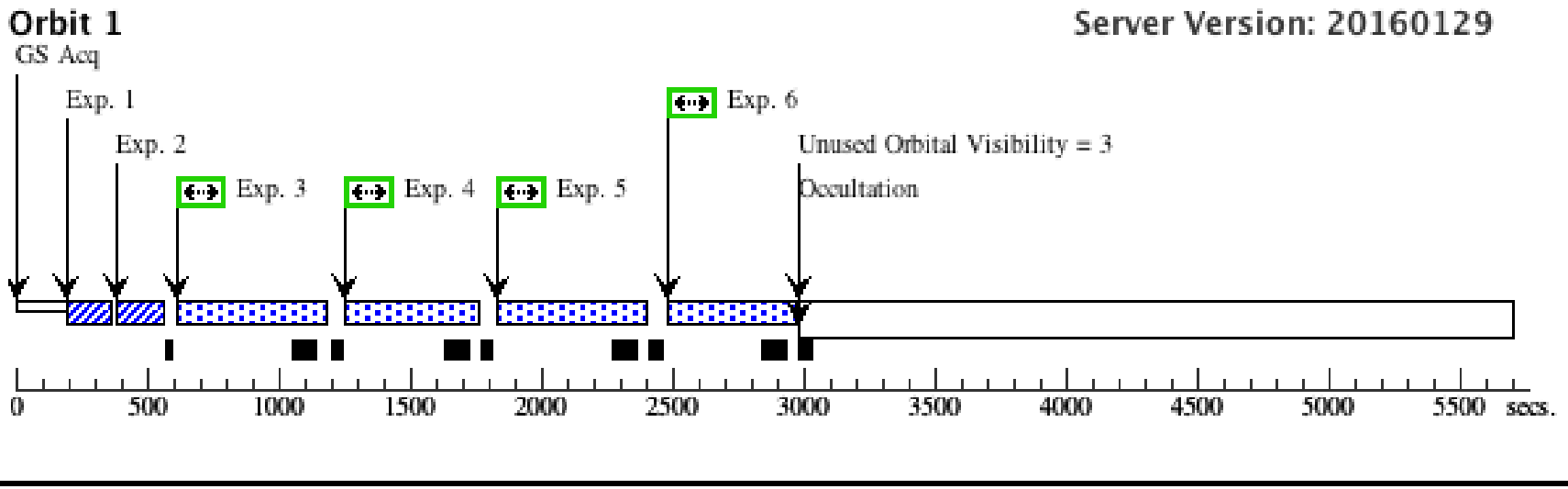
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	MRK-841	RA: 15 04 1.1720 (226.0048833d) Dec: +10 26 16.45 (10.43790d) Equinox: J2000	Redshift: 0.036422	V=14.27+/-0.5 F(1368)=3.2e-14	Reference Frame: ICRS

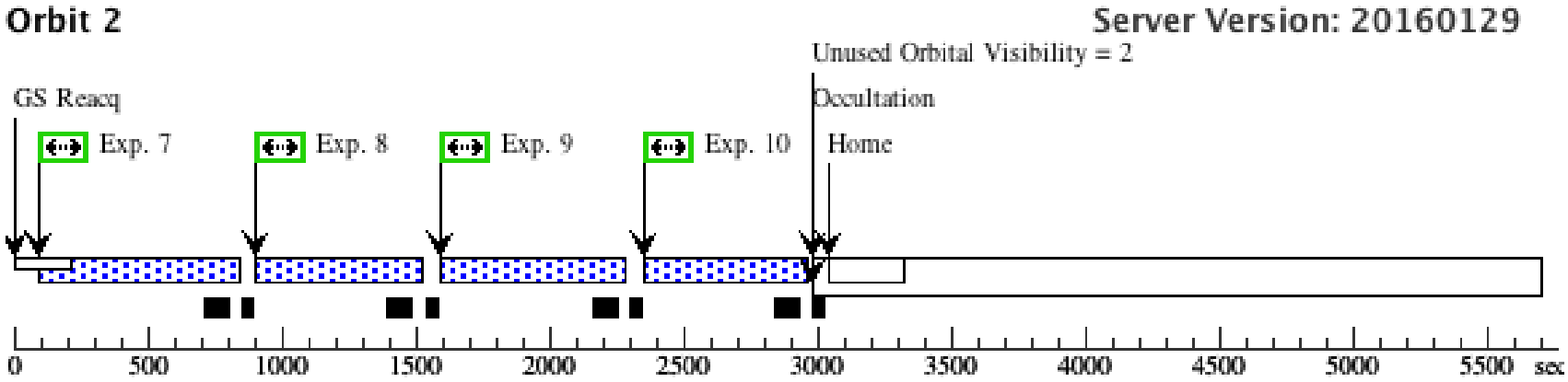
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(4) MRK-841	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(4) MRK-841	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=3			430 Secs (430 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=325; FP-POS=4			435 Secs (435 Secs) *[==>]*	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=445; FP-POS=1			555 Secs (555 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(4) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=450; FP-POS=2			560 Secs (560 Secs) *[==>]*	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Proposal 14481 - 5A (09) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 5A (09), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(5A (09)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

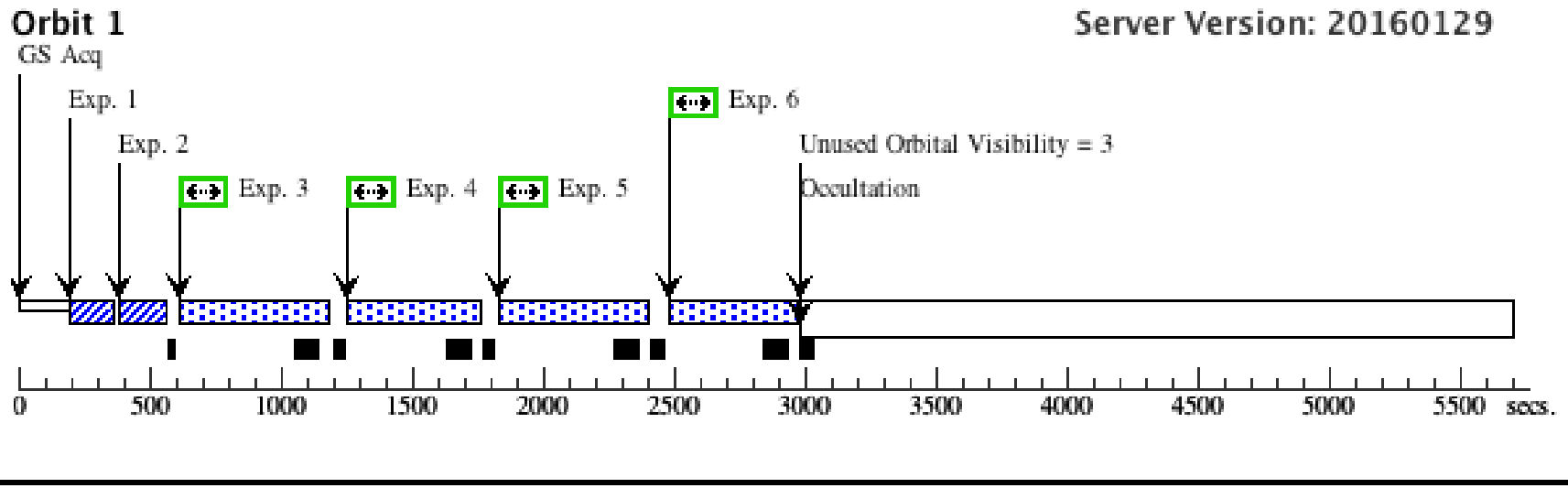
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	MRK-509	RA: 20 44 9.7681 (311.0407004d)	Redshift: 0.034397	V=13.12+/-0.5	Reference Frame: ICRS
		Dec: -10 43 24.44 (-10.72346d)		F(1368)=9.0e-14	
		Equinox: J2000			

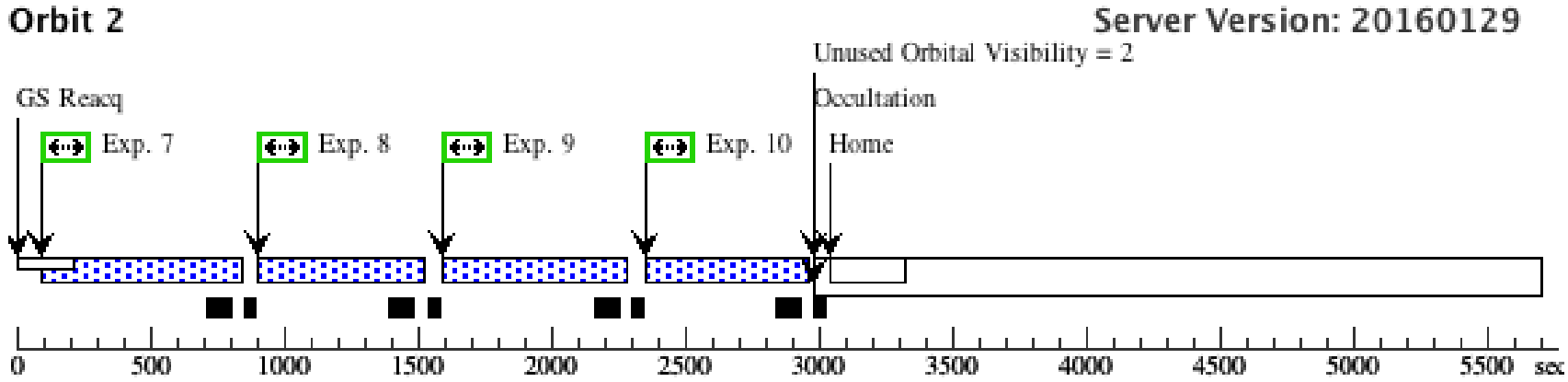
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(5) MRK-509	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(5) MRK-509	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=3			430 Secs (430 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=325; FP-POS=4			435 Secs (435 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=445; FP-POS=1			555 Secs (555 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=450; FP-POS=2			560 Secs (560 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 5B (10) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 5B (10), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 09; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(5B (10)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

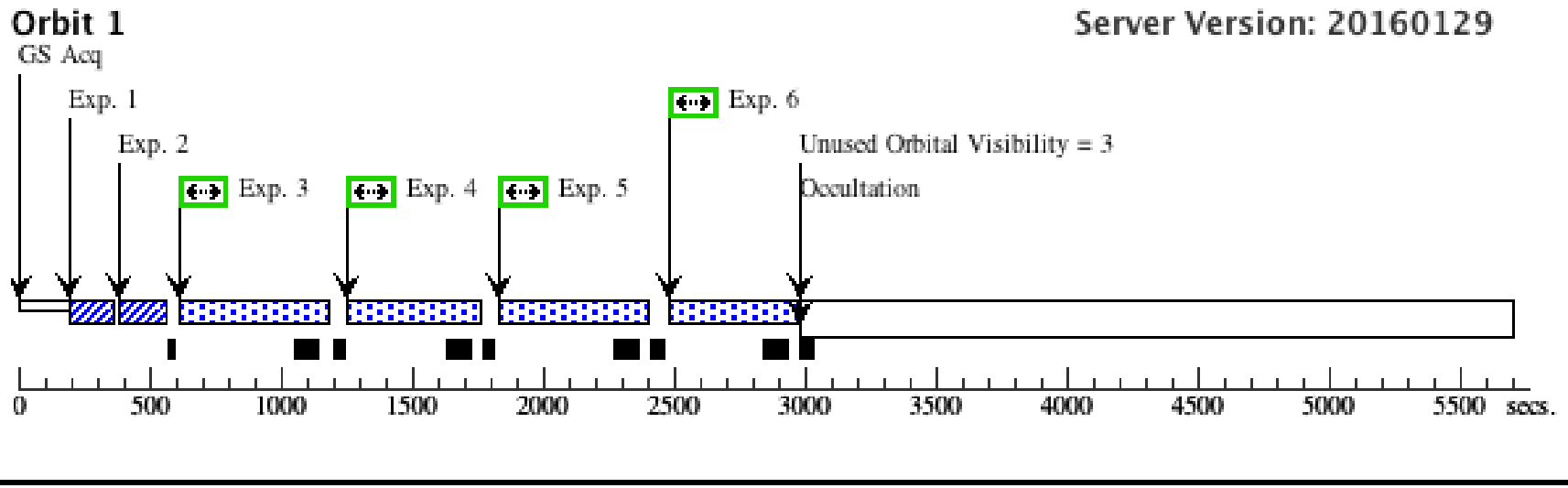
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	MRK-509	RA: 20 44 9.7681 (311.0407004d) Dec: -10 43 24.44 (-10.72346d) Equinox: J2000	Redshift: 0.034397	V=13.12+/-0.5 F(1368)=9.0e-14	Reference Frame: ICRS

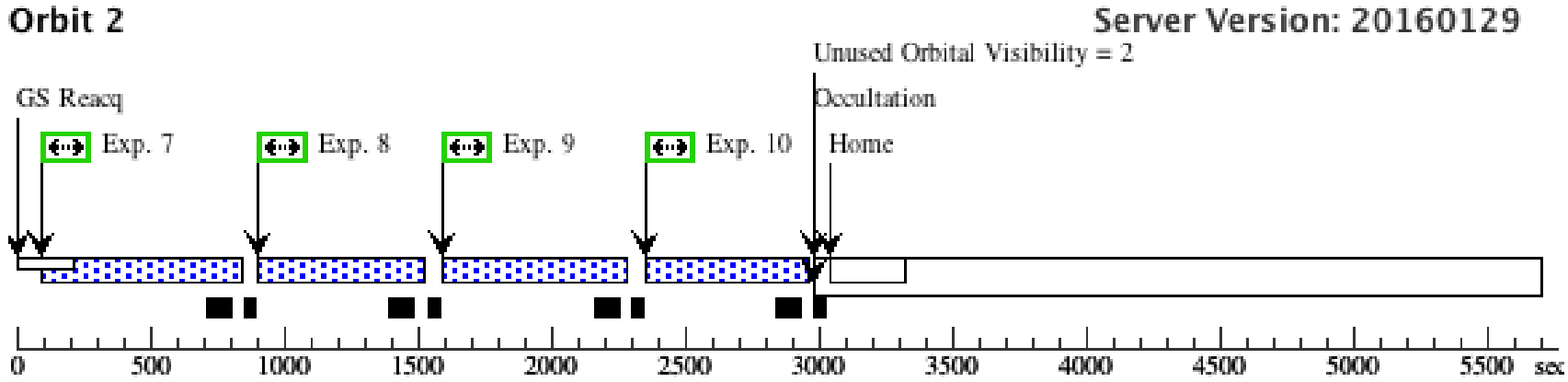
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(5) MRK-509	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(5) MRK-509	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) [==>]	[1]
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
4	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
5	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=3			430 Secs (430 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
6	(COS.sp.768 306)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=325; FP-POS=4			435 Secs (435 Secs) [==>]	[1]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
7	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
8	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
9	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=445; FP-POS=1			555 Secs (555 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									
10	(COS.sp.768 307)	(5) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=450; FP-POS=2			560 Secs (560 Secs) [==>]	[2]
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead between exposures.*									

Orbit Structure





Visit

Proposal 14481, 6A (11), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(6A (11)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

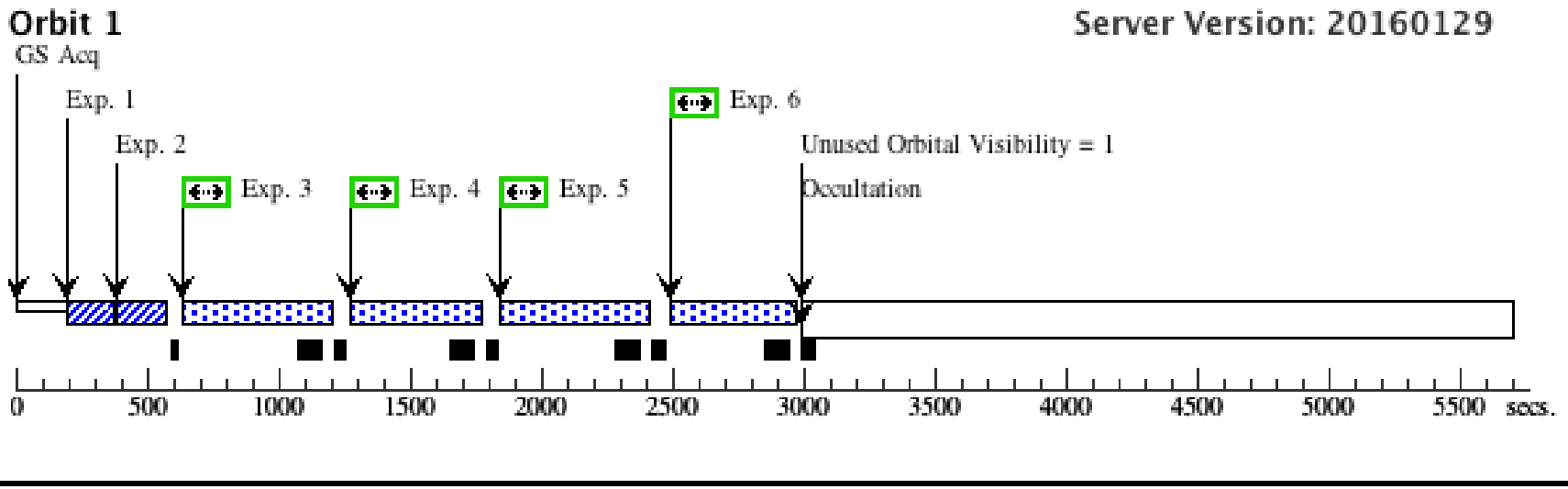
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ARK-564	RA: 22 42 39.3090 (340.6637875d)	Redshift: 0.024684	V=14.16+/-0.5	Reference Frame: ICRS
	Alt Name1: UGC-12163	Dec: +29 43 31.55 (29.72543d)		F(1368)=0.8e-14	
		Equinox: J2000			

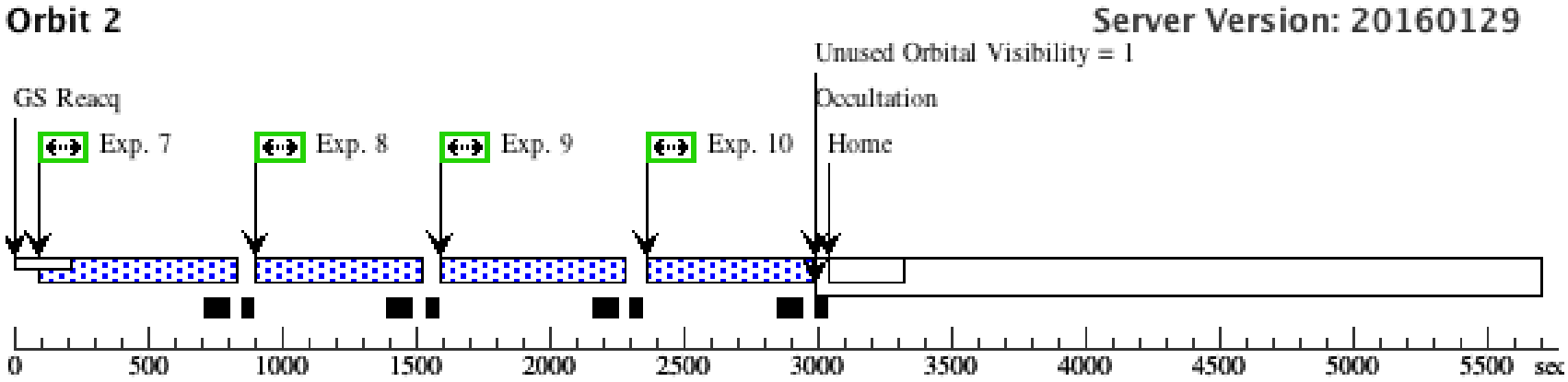
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768422)	(6) ARK-564	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				8.6 Secs (8.6 Secs)	
								[==>]	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768422)	(6) ARK-564	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			8.6 Secs (8.6 Secs)	
								[==>]	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=340; FP-POS=1			450 Secs (450 Secs)	
								[==>]	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=340; FP-POS=2			450 Secs (450 Secs)	
								[==>]	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=3			430 Secs (430 Secs)	
								[==>]	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=4			430 Secs (430 Secs)	
								[==>]	***[1]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs)	
								[==>]	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs)	
								[==>]	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs)	
								[==>]	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs)	
								[==>]	***[2]***
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 6B (12) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 6B (12), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 11; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(6B (12)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

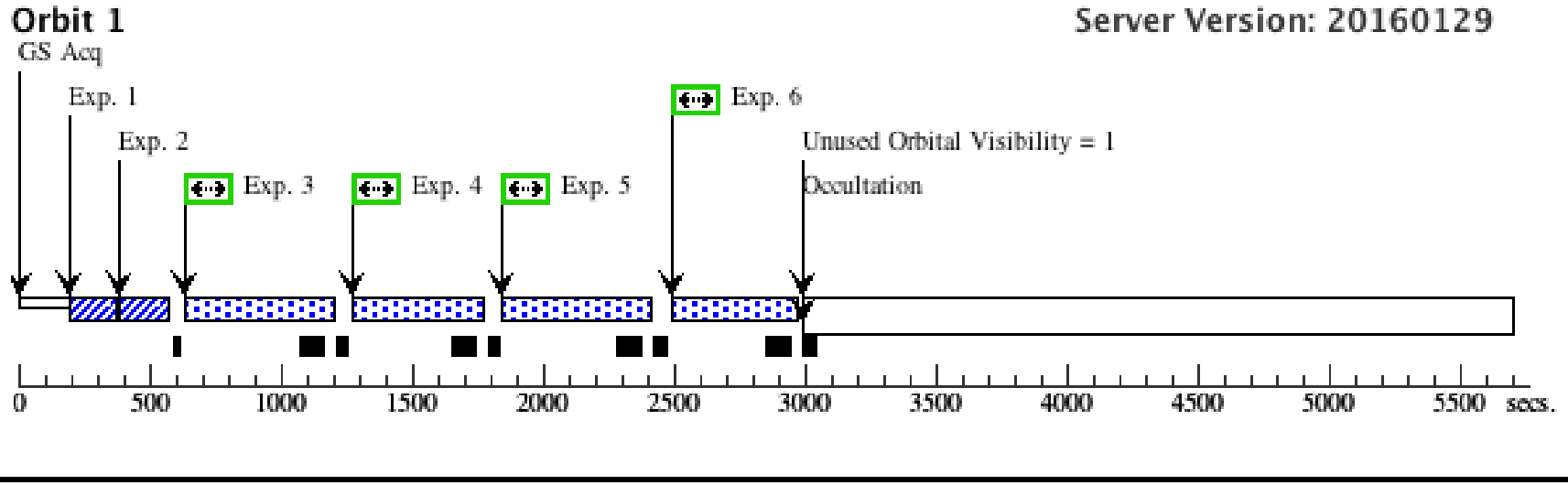
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ARK-564	RA: 22 42 39.3090 (340.6637875d)	Redshift: 0.024684	V=14.16+/-0.5	Reference Frame: ICRS
	Alt Name1: UGC-12163	Dec: +29 43 31.55 (29.72543d)		F(1368)=0.8e-14	
		Equinox: J2000			

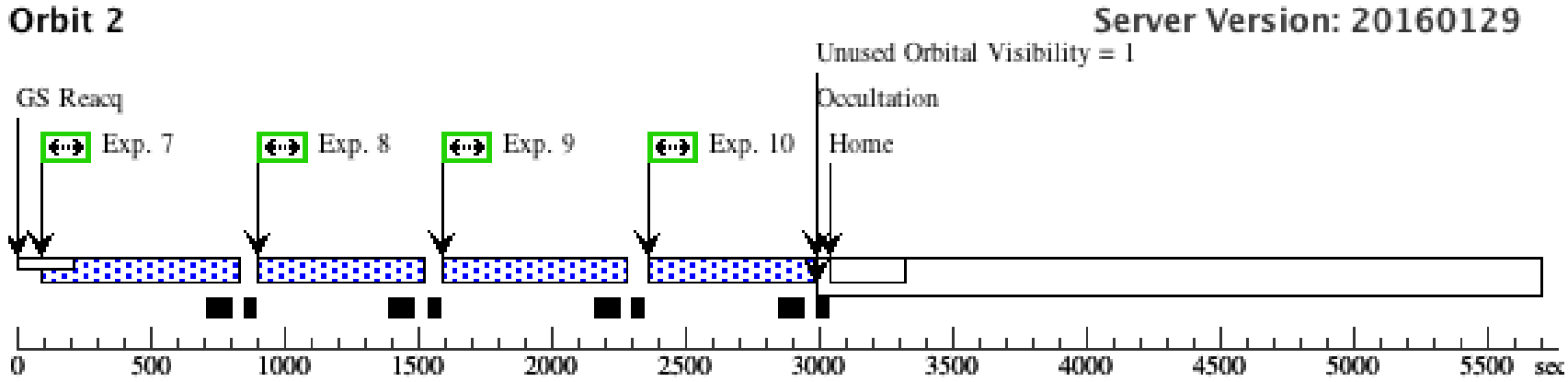
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768422)	(6) ARK-564	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				8.6 Secs (8.6 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768422)	(6) ARK-564	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			8.6 Secs (8.6 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=340; FP-POS=1			450 Secs (450 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=340; FP-POS=2			450 Secs (450 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=3			430 Secs (430 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768306)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=320; FP-POS=4			430 Secs (430 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768307)	(6) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 7A (13) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 7A (13), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(7A (13)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

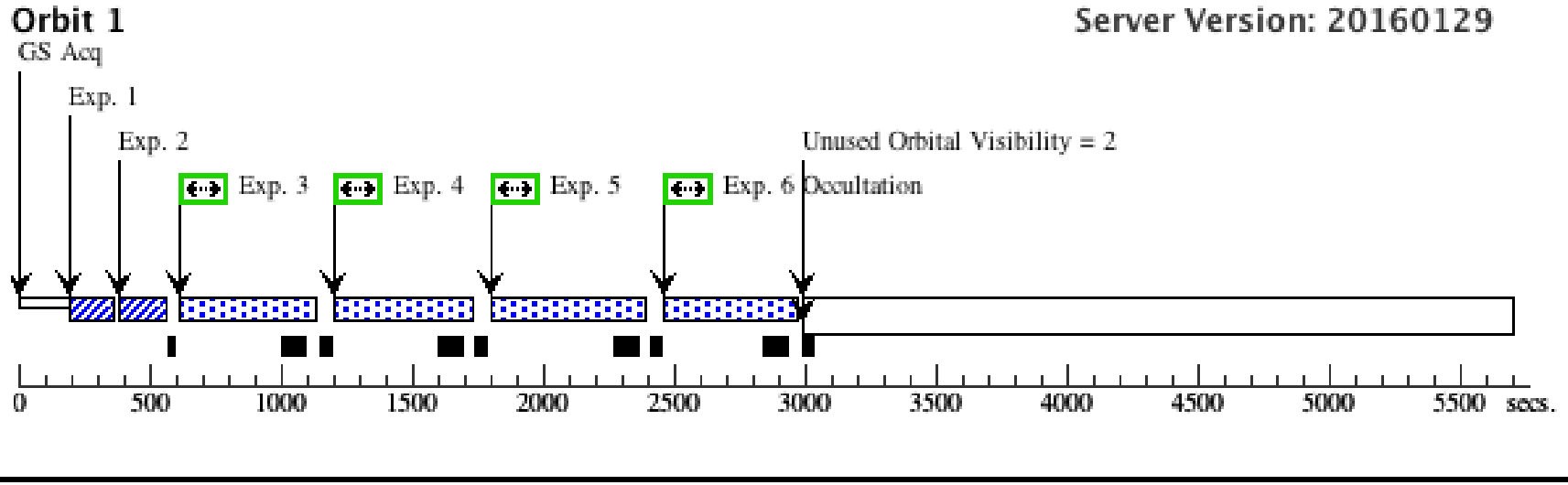
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	MR-2251-178	RA: 22 54 5.8959 (343.5245662d)	Redshift: 0.063980	V=14.36+/-0.5	Reference Frame: ICRS
		Dec: -17 34 55.10 (-17.58197d)		F(1368)=3.3e-14	
		Equinox: J2000			

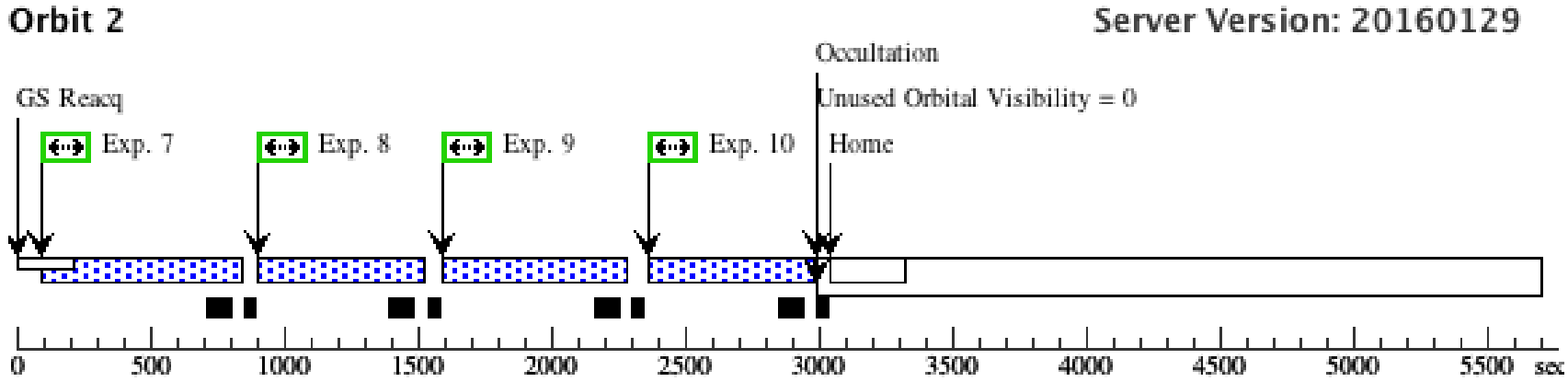
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(7) MR-2251-178	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(7) MR-2251-178	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=450; FP-POS=1			560 Secs (560 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=455; FP-POS=2			565 Secs (565 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 7B (14) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 7B (14), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 13; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(7B (14)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

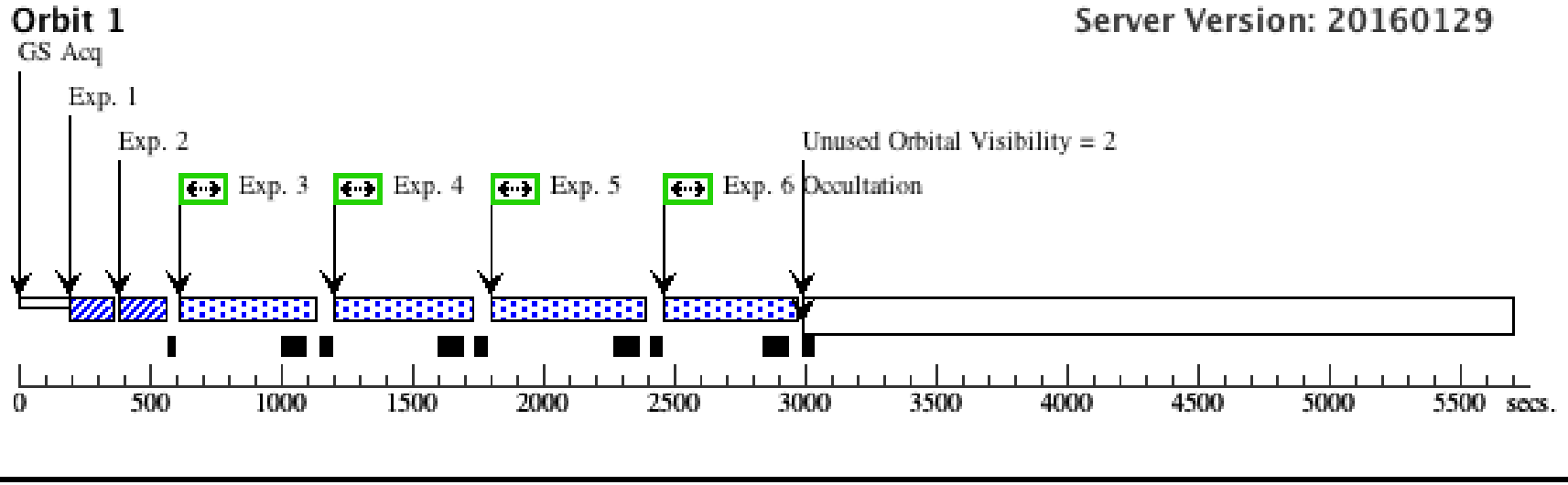
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	MR-2251-178	RA: 22 54 5.8959 (343.5245662d)	Redshift: 0.063980	V=14.36+/-0.5	Reference Frame: ICRS
		Dec: -17 34 55.10 (-17.58197d)		F(1368)=3.3e-14	
		Equinox: J2000			

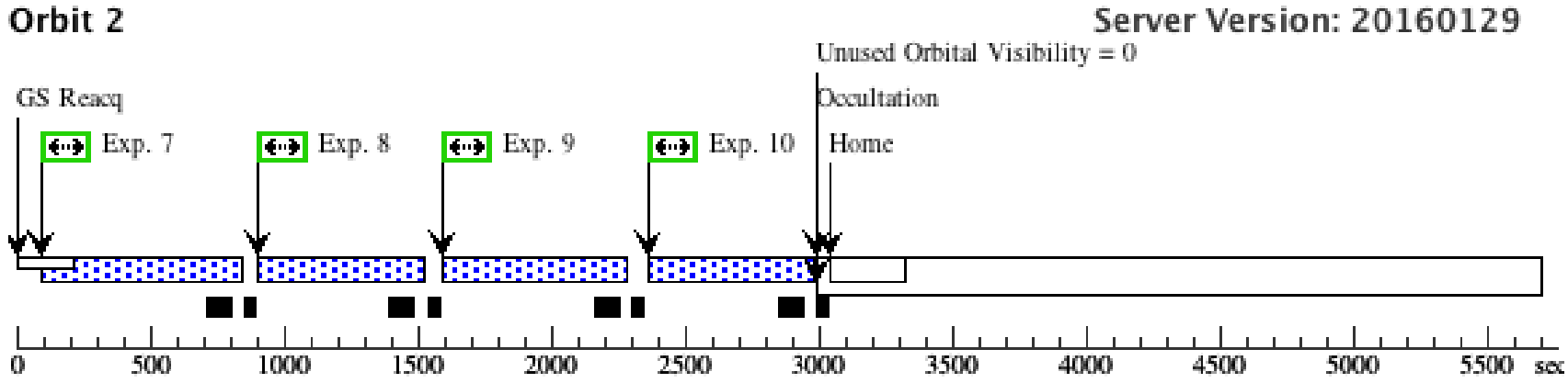
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(7) MR-2251-178	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(7) MR-2251-178	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=450; FP-POS=1			560 Secs (560 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(7) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=455; FP-POS=2			565 Secs (565 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 8A (15) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 8A (15), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the first triggered XMM-Newton visit (100 ks in length) without disrupting the HST timeline.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(8A (15)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

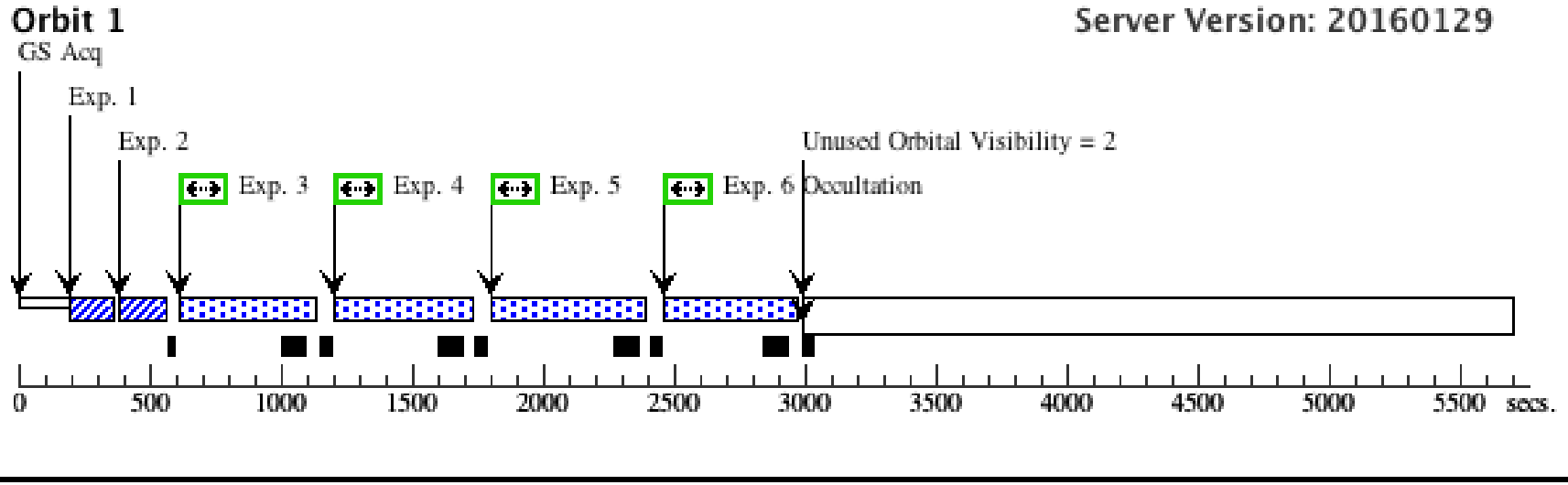
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	NGC-7469	RA: 23 03 15.6740 (345.8153083d) Dec: +08 52 25.28 (8.87369d) Equinox: J2000	Redshift: 0.016317	V=12.34+/-0.5 F(1368)=4.9e-14	Reference Frame: ICRS

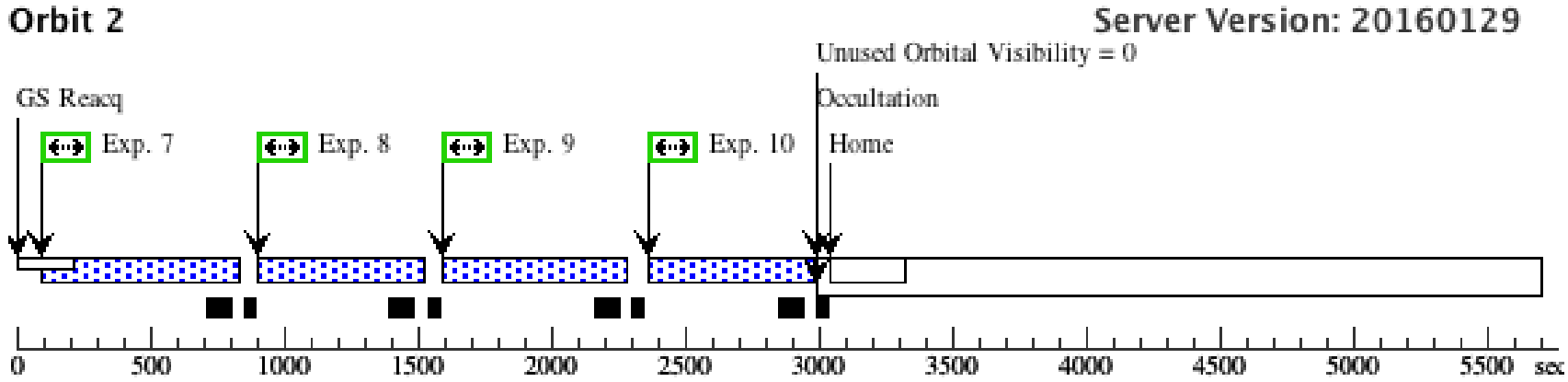
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(8) NGC-7469	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(8) NGC-7469	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure





Proposal 14481 - 8B (16) - Shining light on obscured AGN outflows

Visit

Proposal 14481, 8B (16), implementation Wed Mar 16 01:06:40 GMT 2016

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SCHED 100%; AFTER 15; ON HOLD ; TOO RESPONSE TIME 14.0D

Comments: This visit is to be coordinated as close in time as practical with the second XMM-Newton visit (50 ks in length), which would occur near the end of the XMM visibility window for this target.

On Hold Comments: This visit is on hold until the TOO is triggered.

Diagnostics

(8B (16)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	NGC-7469	RA: 23 03 15.6740 (345.8153083d)	Redshift: 0.016317	V=12.34+/-0.5	Reference Frame: ICRS
		Dec: +08 52 25.28 (8.87369d)		F(1368)=4.9e-14	
		Equinox: J2000			

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.768 304)	(8) NGC-7469	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
2	(COS.sa.768 304)	(8) NGC-7469	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			5 Secs (5 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 1.2e-14.									
3	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=3			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
4	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=365; FP-POS=4			475 Secs (475 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
5	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=1			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
6	(COS.sp.768 306)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=345; FP-POS=2			455 Secs (455 Secs) *[==>]*	*[1]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
7	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=3			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
8	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=454; FP-POS=4			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
9	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									
10	(COS.sp.768 307)	(8) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) *[==>]*	*[2]*
*Comments: We use BUFFER-TIMES much shorter than the 2/3*ETC value for brightest historical flux since this is even safer. They are optimized to be 110 s less than the exposure time to minimize the overhead betw een exposures.*									

Orbit Structure