15673 - Shining light on obscuring outflows in AGN

Cycle: 26, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) NGC-3227	COS/FUV COS/NUV	2	08-Jan-2019 09:00:28.0	yes
02	(1) NGC-3227	COS/FUV COS/NUV	2	08-Jan-2019 09:00:30.0	yes
03	(2) NGC-4593	COS/FUV COS/NUV	2	08-Jan-2019 09:00:32.0	yes
04	(2) NGC-4593	COS/FUV COS/NUV	2	08-Jan-2019 09:00:33.0	yes
05	(3) MRK-841	COS/FUV COS/NUV	2	08-Jan-2019 09:00:35.0	yes
06	(3) MRK-841	COS/FUV COS/NUV	2	08-Jan-2019 09:00:37.0	yes
07	(4) MRK-509	COS/FUV	2	08-Jan-2019 09:00:38.0	yes
08	(4) MRK-509	COS/FUV	2	08-Jan-2019 09:00:41.0	yes
09	(5) ARK-564	COS/FUV COS/NUV	2	08-Jan-2019 09:00:42.0	yes
10	(5) ARK-564	COS/FUV COS/NUV	2	08-Jan-2019 09:00:44.0	yes
11	(6) MR-2251-178	COS/FUV	2	08-Jan-2019 09:00:46.0	yes
12	(6) MR-2251-178	COS/FUV	2	08-Jan-2019 09:00:47.0	yes
13	(7) NGC-7469	COS/FUV	2	08-Jan-2019 09:00:49.0	yes
14	(7) NGC-7469	COS/FUV	2	08-Jan-2019 09:00:50.0	yes

28 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 and NGC 3783 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 broad absorption 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 (98 ks) 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 7 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 all 4 FP-POS positions with CENWAVE=1222 for G130M. For G160M, we use CENWAVES 1533 and 1629 to cover the full FUV wavelength range and to span the gap between segments A and B. We use 2 FP-POS positions for each CENWAVE.

To outline the ETC calculations for our potential targets, we tabulate results for all 8 here.
(Fluxes are obtained from Dunn et al. 2006, PASP, 118, 572, and from the MAST archive.)

Source	z	E(B-V)	Min_Flam	Max_Flam	Mean_Flam
NGC 3227	0.003859	0.020	0.05e-14	0.4e-14	0.12e-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 are faint enough that we can use an imaging target acquisition with Mirror B, except for Mrk 509, for which we use a spectroscopic target acquisition. Rather than do a separate ETC check on bright object constraints for each AGN, we simply show here calculations for the brightest object for which we do an imaging target acquisition, NGC 7469, and the brightest overall, 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 calculations relevant for the minimum and maximum fluxes expected (Dunn et al. 2006) in order to get our limiting cases:

- ACQUISITION (for Mrk 509)-

Configuration	Flux	EXP time	Max cts/s/pix	Total rate	Buffer Time	COS ETC ID
G130M/1291	0.5e-14	11.0 s	0.10	504	4679	COS.sa.1306938
G130M/1291	1.4e-13	0.4 s	0.13	5570	423	COS.sa.1306936

- ACQUISITION (for MR2251-178)-

Configuration	Flux	EXP time	Max cts/s/pix	Total rate	COS ETC ID
PSA/Mirror B	1.8e-14	6.6 s	8	1011	COS.ta.1306935
PSA/Mirror B	4.7e-14	2.5 s	22	1156	COS.ta.1306930

- ACQUISITION (for NGC 3227)-

Configuration	Flux	EXP time	Max cts/s/pix	Total rate	COS ETC ID
PSA/Mirror B	0.05e-14	131 s	0.4	925	COS.ta.1306969
PSA/Mirror B	0.4e-14	16.0 s	4	958	COS.ta.1306973

- EXPOSURES (for Mrk 509)-

Configuration	Flux	EXP time	Max cts/s/pix	Total rate	Buffer Time	COS ETC ID
G130M/1222	5.0e-14	1000	0.01	236	10011	COS.sp.1306947
G130M/1222	1.4e-13	1000	0.03	4663	505	COS.sp.1306941
G160M/1533	5.0e-14	1000	0.001	168	14027	COS.sp.1306951
G160M/1533	1.4e-13	1000	0.032	3232	729	COS.sp.1306954

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 15673, 1A (01) Tue Jan 08 14:00:51 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

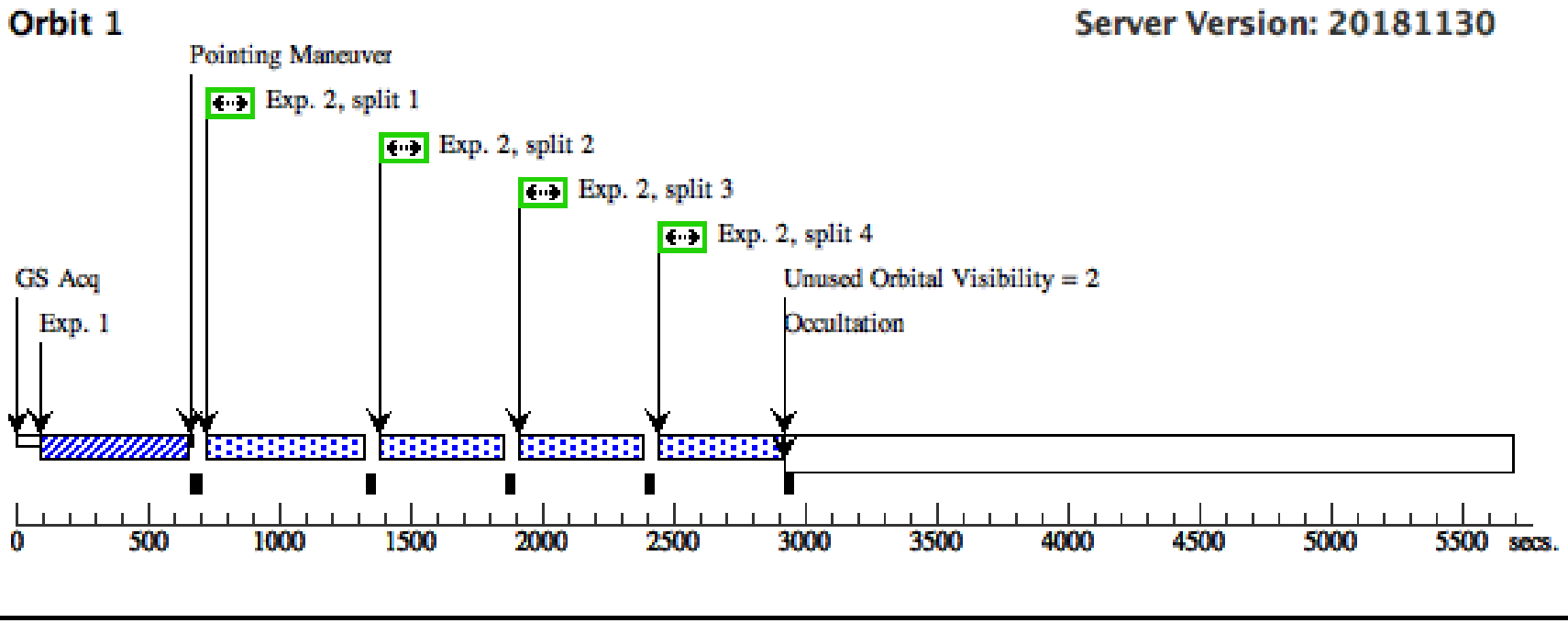
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC-3227	RA: 10 23 30.5700 (155.8773750d) Dec: +19 51 54.30 (19.86508d) Equinox: J2000	Redshift: 0.003859	V=11.75+/-0.5 F(1368)=0.3e-14	Reference Frame: ICRS

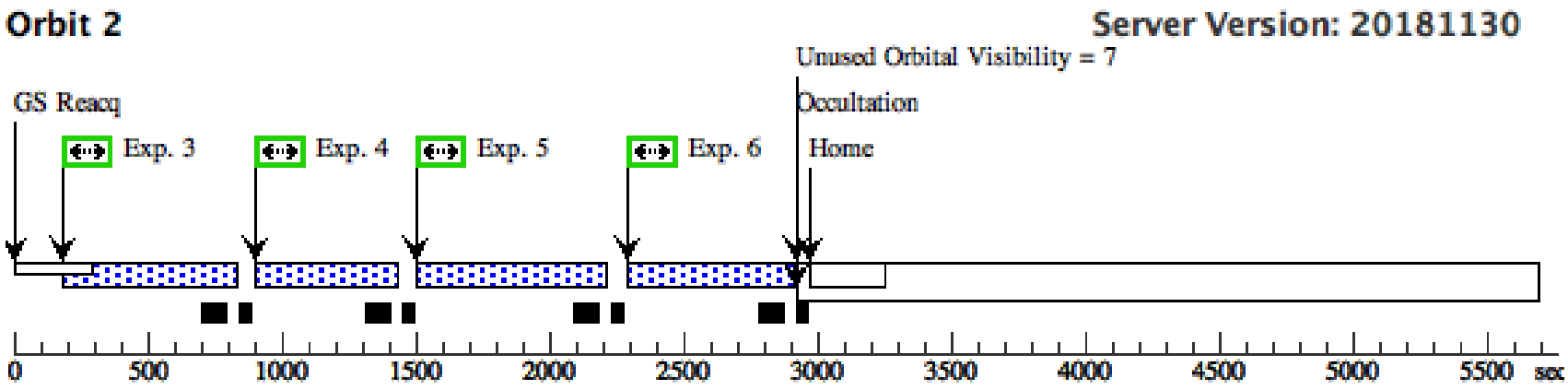
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(1) NGC-3227	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				131 Secs (131 Secs) *[==>]*	*[1]*
Comments: Exposure time is chosen for the faintest historical flux, 0.05e-14.									
2	(COS.sp.1306947)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=3000; FP-POS=ALL			415 Secs (1660 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[1]*
3	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 Secs) *[==>]*	*[2]*
4	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 Secs) *[==>]*	*[2]*
5	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) *[==>]*	*[2]*
6	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) *[==>]*	*[2]*

Orbit Structure





Visit

Proposal 15673, 1B (02) Tue Jan 08 14:00:51 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

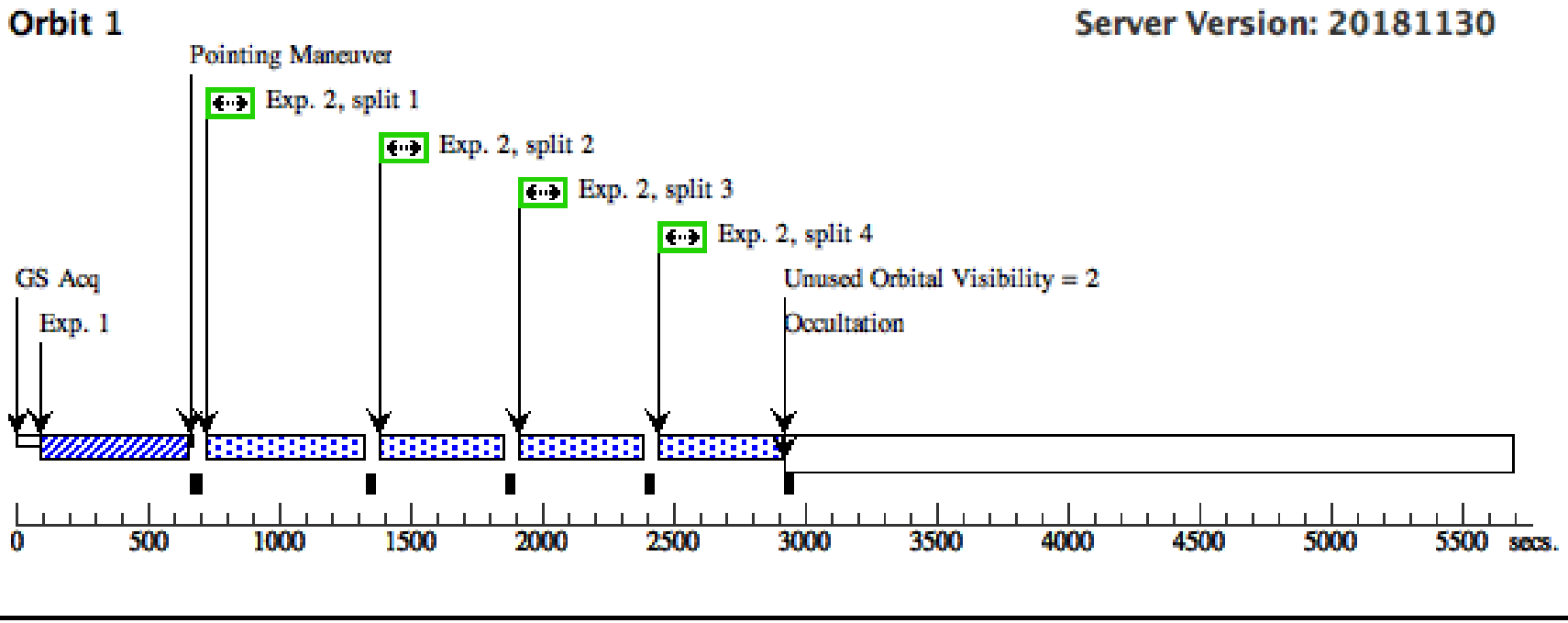
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC-3227	RA: 10 23 30.5700 (155.8773750d) Dec: +19 51 54.30 (19.86508d) Equinox: J2000	Redshift: 0.003859	V=11.75+/-0.5 F(1368)=0.3e-14	Reference Frame: ICRS

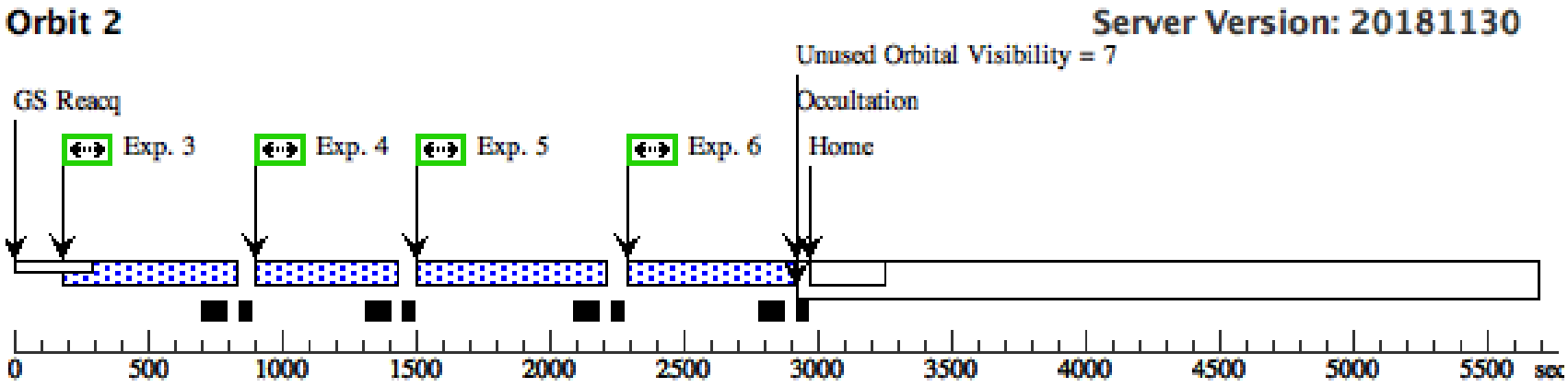
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(1) NGC-3227	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				131 Secs (131 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.05e-14.									
2	(COS.sp.1306947)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=3000; FP-POS=ALL			415 Secs (1660 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[1]***
3	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 Secs) *[==>]*	***[2]***
4	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 Secs) *[==>]*	***[2]***
5	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=1			564 Secs (564 Secs) *[==>]*	***[2]***
6	(COS.sp.1306951)	(1) NGC-3227	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=454; FP-POS=2			564 Secs (564 Secs) *[==>]*	***[2]***

Orbit Structure





Visit

Proposal 15673, 2A (03) Tue Jan 08 14:00:51 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

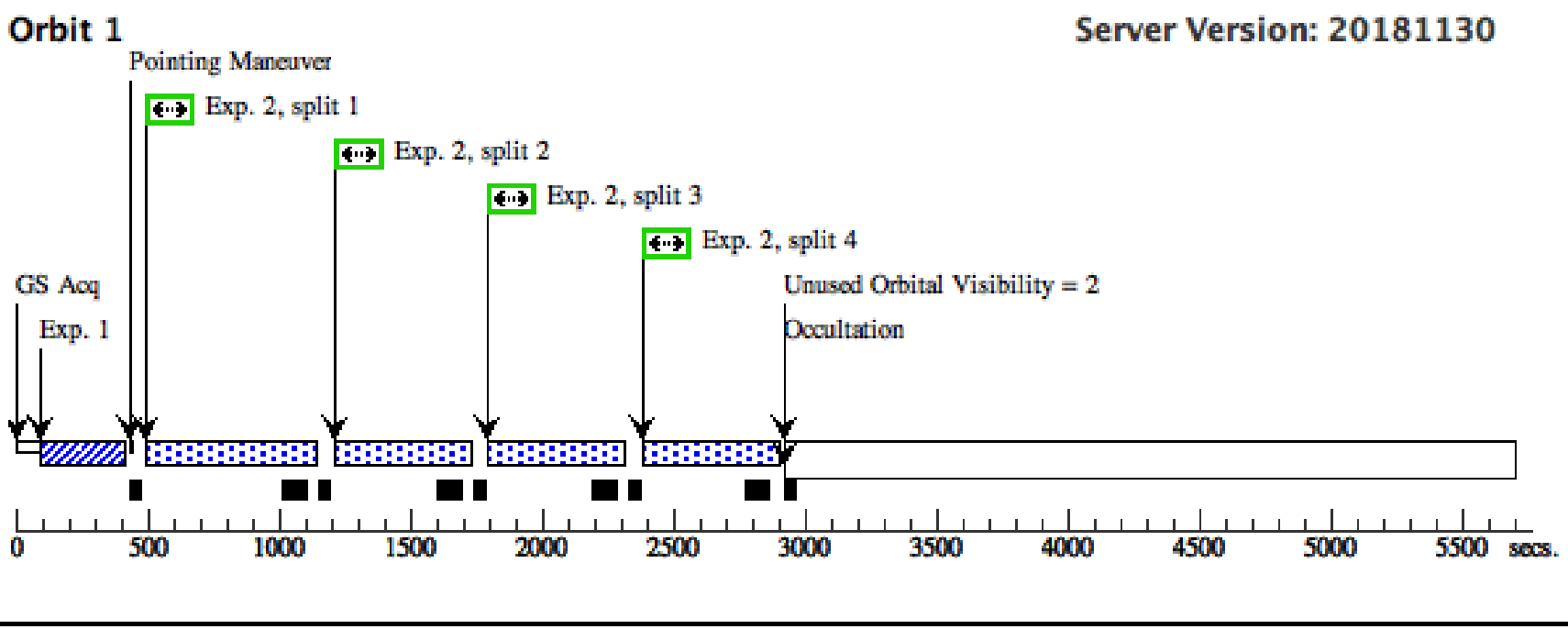
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC-4593	RA: 12 39 39.4920 (189.9145500d)	Redshift: 0.00900	V=13.15+/-0.5	Reference Frame: ICRS
		Dec: -05 20 39.16 (-5.34421d)		F(1368)=1.5e-14	
		Equinox: J2000			

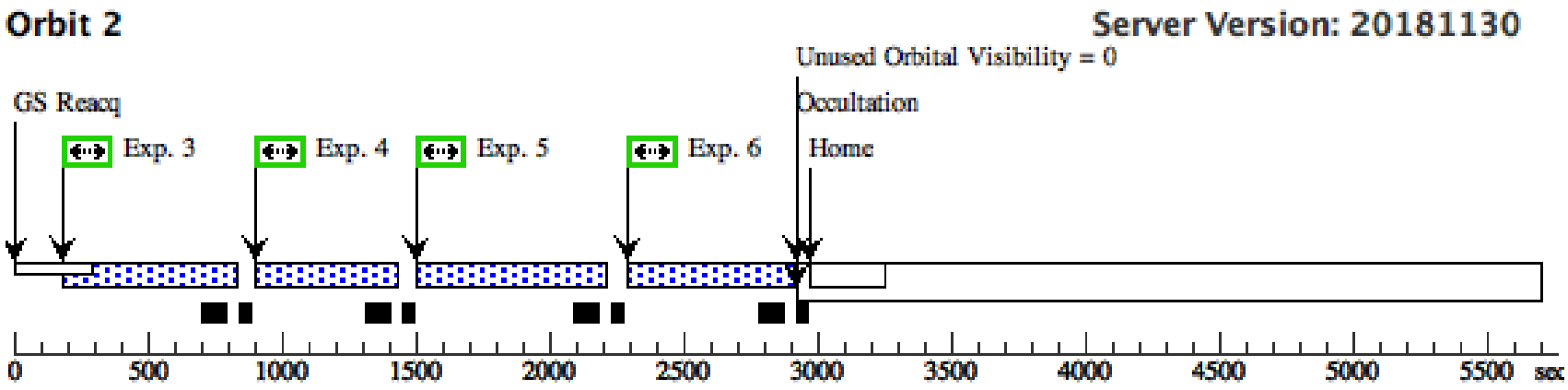
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(2) NGC-4593	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				14 Secs (14 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.5e-14.									
2	(COS.sp.1306947)	(2) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=355; FP-POS=ALL			465 Secs (1860 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.*									
3	(COS.sp.1306951)	(2) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
4	(COS.sp.1306951)	(2) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
5	(COS.sp.1306951)	(2) 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.*									
6	(COS.sp.1306951)	(2) 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





Visit

Proposal 15673, 2B (04) Tue Jan 08 14:00:52 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

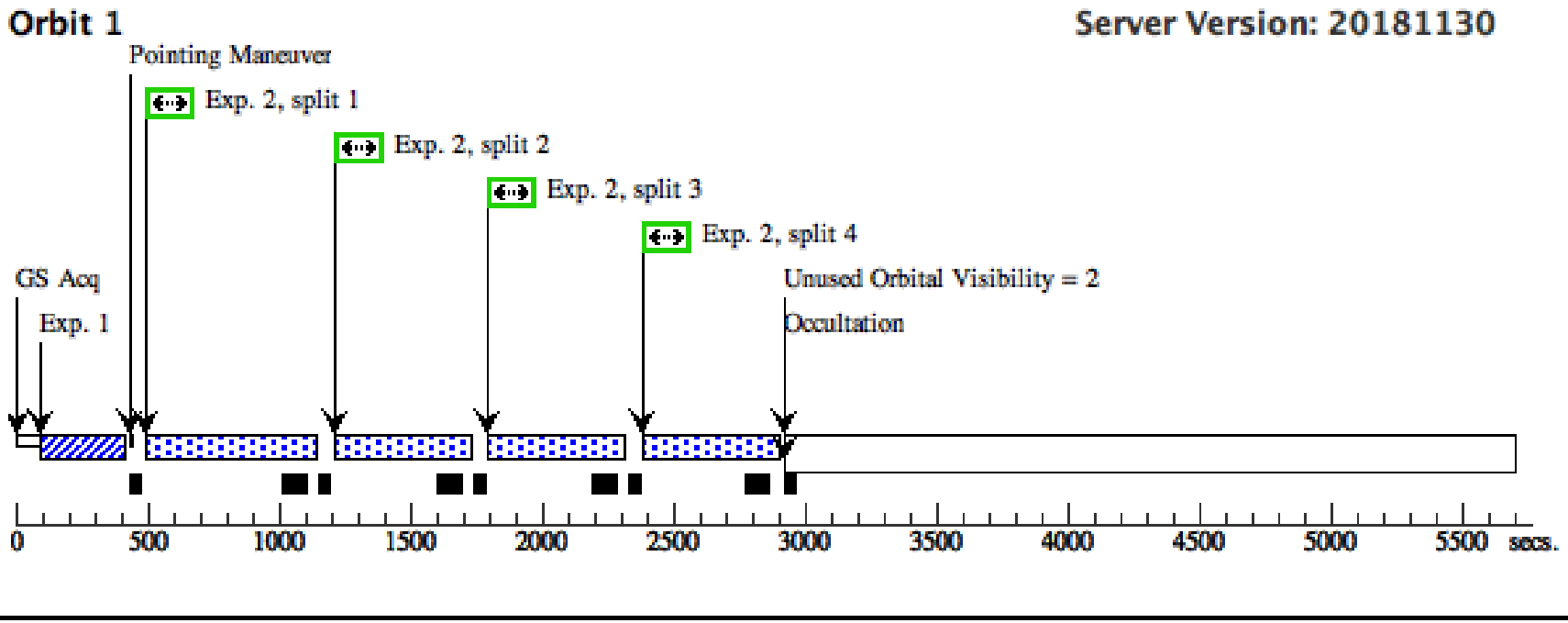
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC-4593	RA: 12 39 39.4920 (189.9145500d)	Redshift: 0.00900	V=13.15+/-0.5	Reference Frame: ICRS
		Dec: -05 20 39.16 (-5.34421d)		F(1368)=1.5e-14	
		Equinox: J2000			

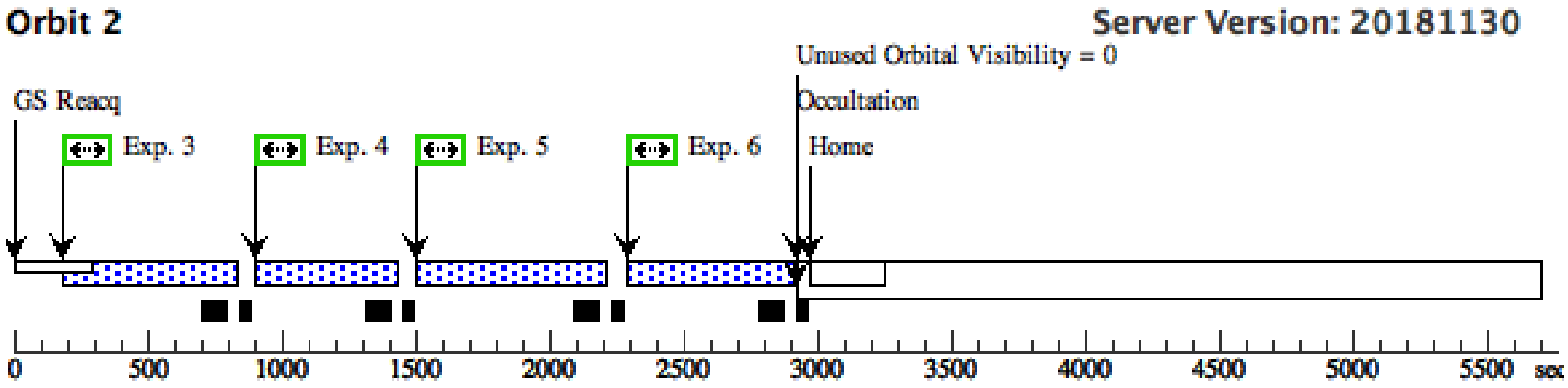
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(2) NGC-4593	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				14 Secs (14 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.5e-14.									
2	(COS.sp.1306947)	(2) NGC-4593	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=355; FP-POS=ALL			465 Secs (1860 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.*									
3	(COS.sp.1306951)	(2) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
4	(COS.sp.1306951)	(2) NGC-4593	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
5	(COS.sp.1306951)	(2) 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.*									
6	(COS.sp.1306951)	(2) 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





Visit

Proposal 15673, 3A (05) Tue Jan 08 14:00:52 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

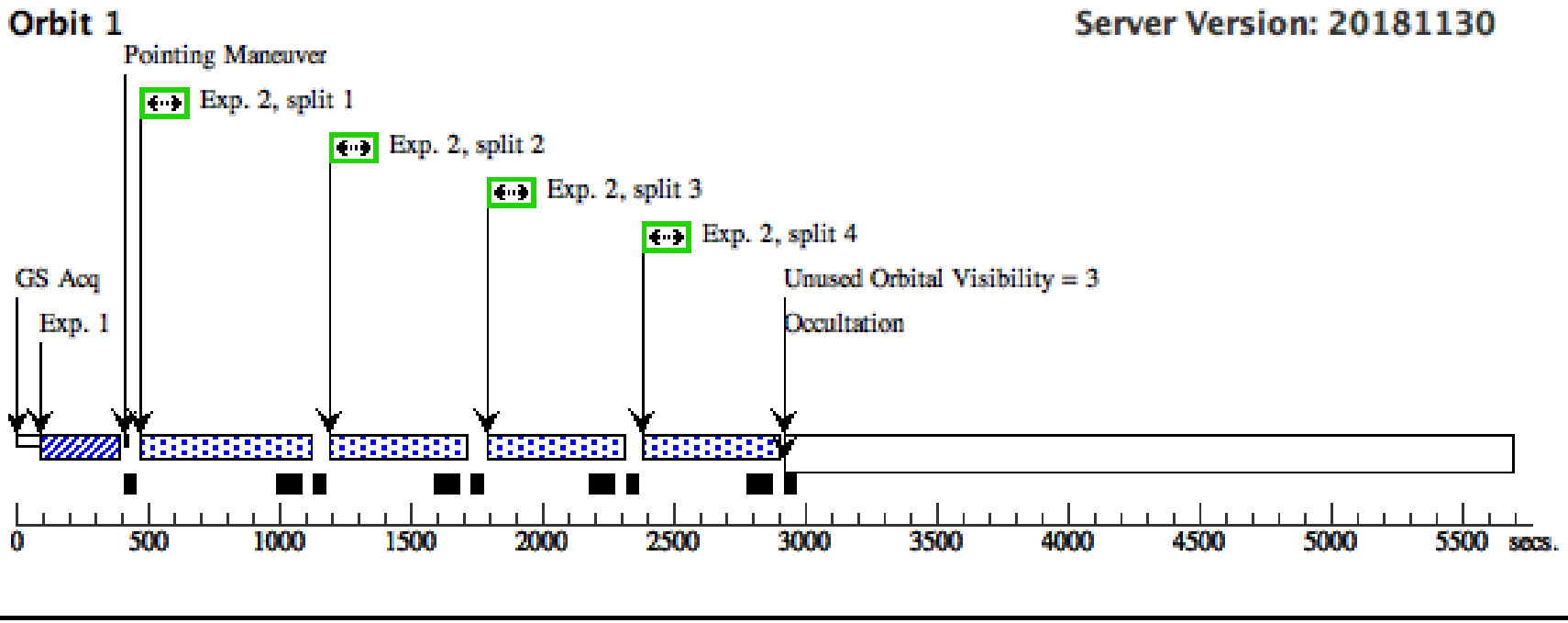
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	MRK-841	RA: 15 04 1.1720 (226.0048833d)	Redshift: 0.036422	V=14.27+/-0.5	Reference Frame: ICRS
		Dec: +10 26 16.45 (10.43790d)		F(1368)=3.2e-14	
		Equinox: J2000			

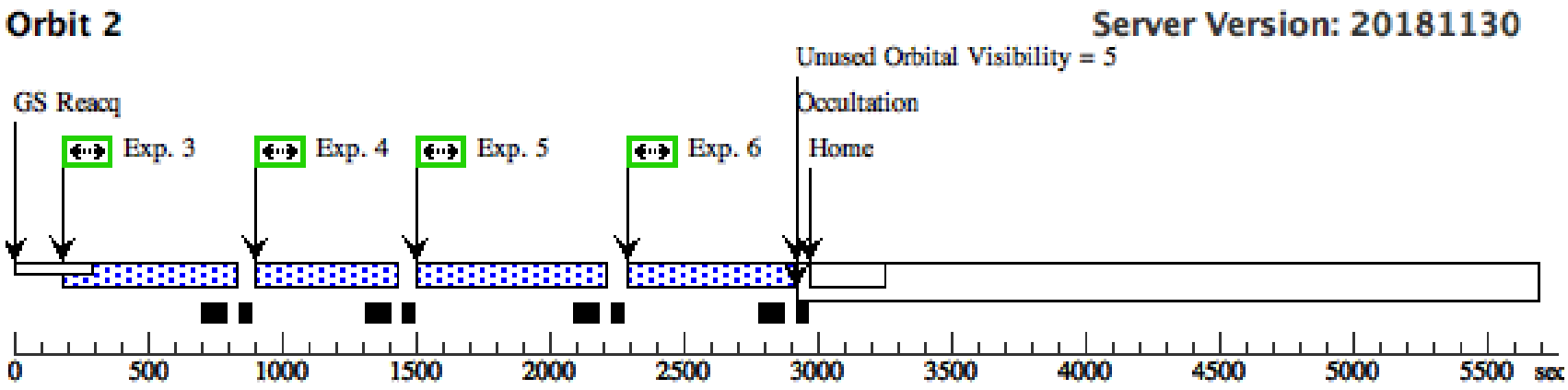
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(3) MRK-841	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				3.3 Secs (3.3 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 2.0e-14.									
2	(COS.sp.1306947)	(3) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=361; FP-POS=ALL			471 Secs (1884 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.*									
3	(COS.sp.1306951)	(3) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
4	(COS.sp.1306951)	(3) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
5	(COS.sp.1306951)	(3) MRK-841	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.*									
6	(COS.sp.1306951)	(3) MRK-841	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 15673 - 3B (06) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 3B (06) Tue Jan 08 14:00:52 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

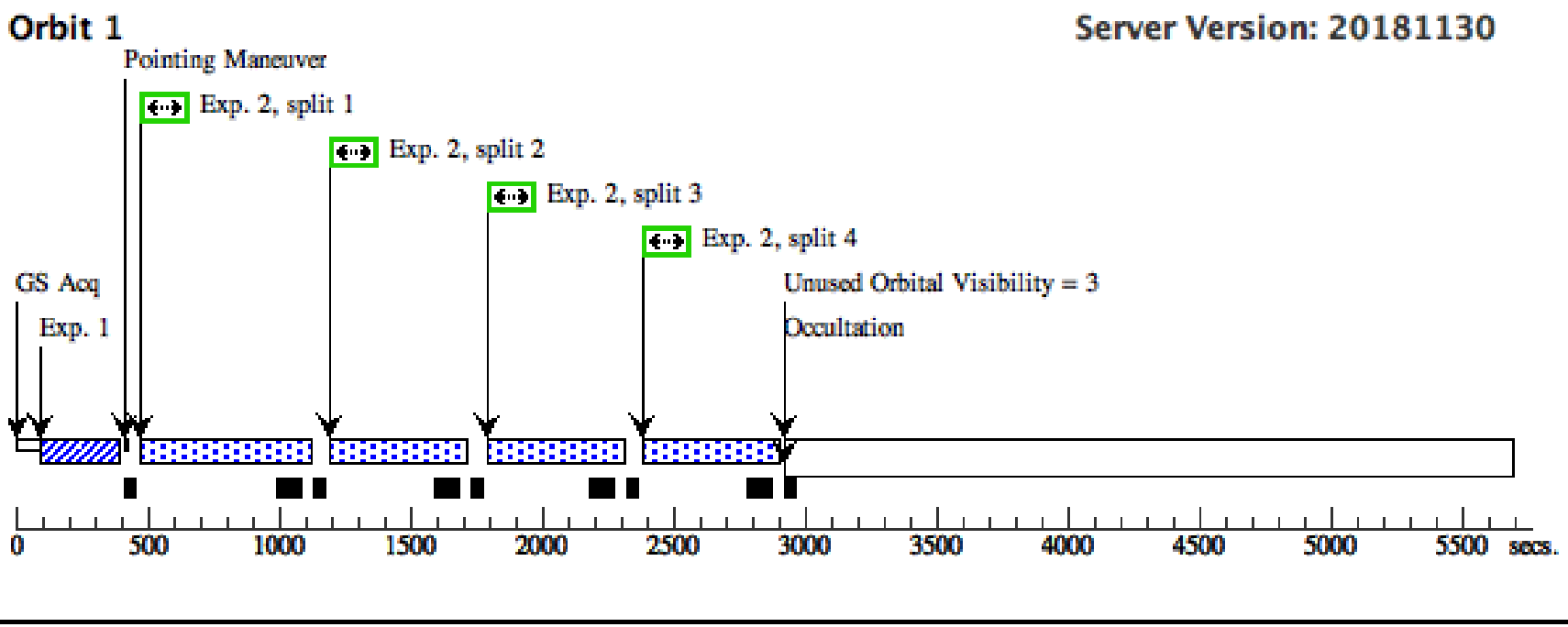
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	MRK-841	RA: 15 04 1.1720 (226.0048833d)	Redshift: 0.036422	V=14.27+/-0.5	Reference Frame: ICRS
		Dec: +10 26 16.45 (10.43790d)		F(1368)=3.2e-14	
		Equinox: J2000			

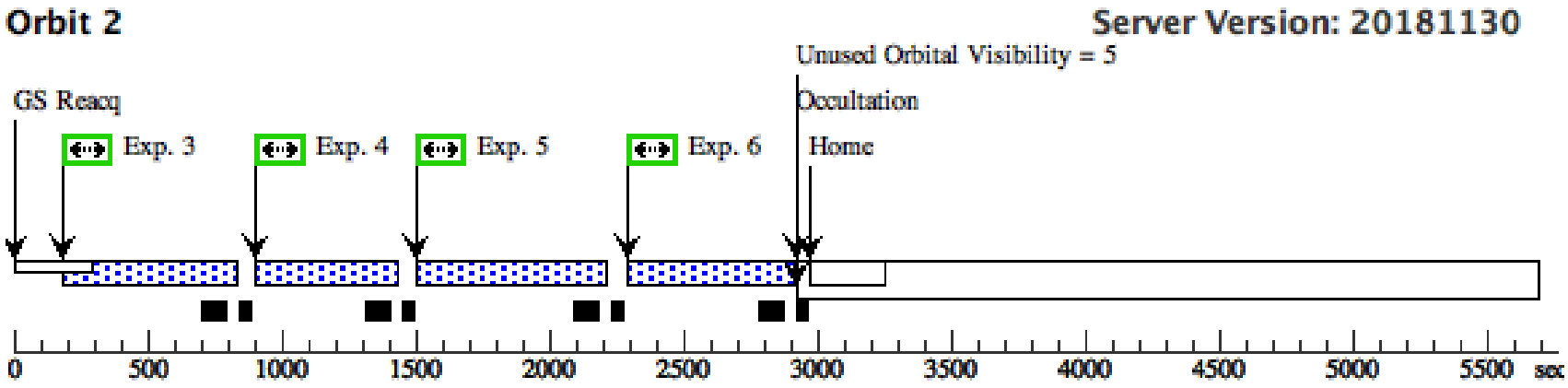
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(3) MRK-841	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				3.3 Secs (3.3 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 2.0e-14.									
2	(COS.sp.1306947)	(3) MRK-841	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=361; FP-POS=ALL			471 Secs (1884 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.*									
3	(COS.sp.1306951)	(3) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
4	(COS.sp.1306951)	(3) MRK-841	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
5	(COS.sp.1306951)	(3) MRK-841	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.*									
6	(COS.sp.1306951)	(3) MRK-841	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 15673 - 4A (07) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 4A (07) Tue Jan 08 14:00:52 GMT 2019

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

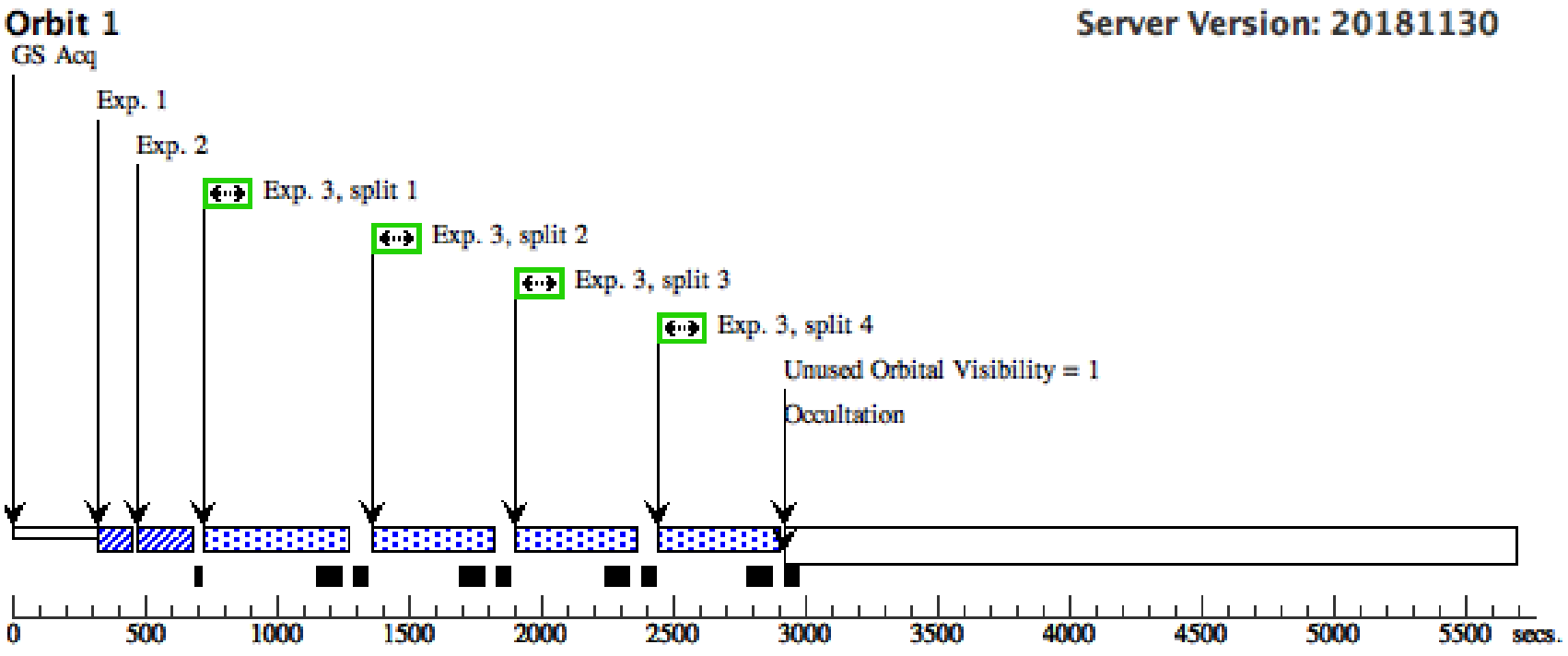
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	MRK-509	RA: 20 44 9.7681 (311.0407004d)	Redshift: 0.034397	V=13.12+/-0.5	Reference Frame: ICRS
		Dec: -10 43 24.44 (-10.72346d)		F(1368)=9.0e-14	
		Equinox: J2000			

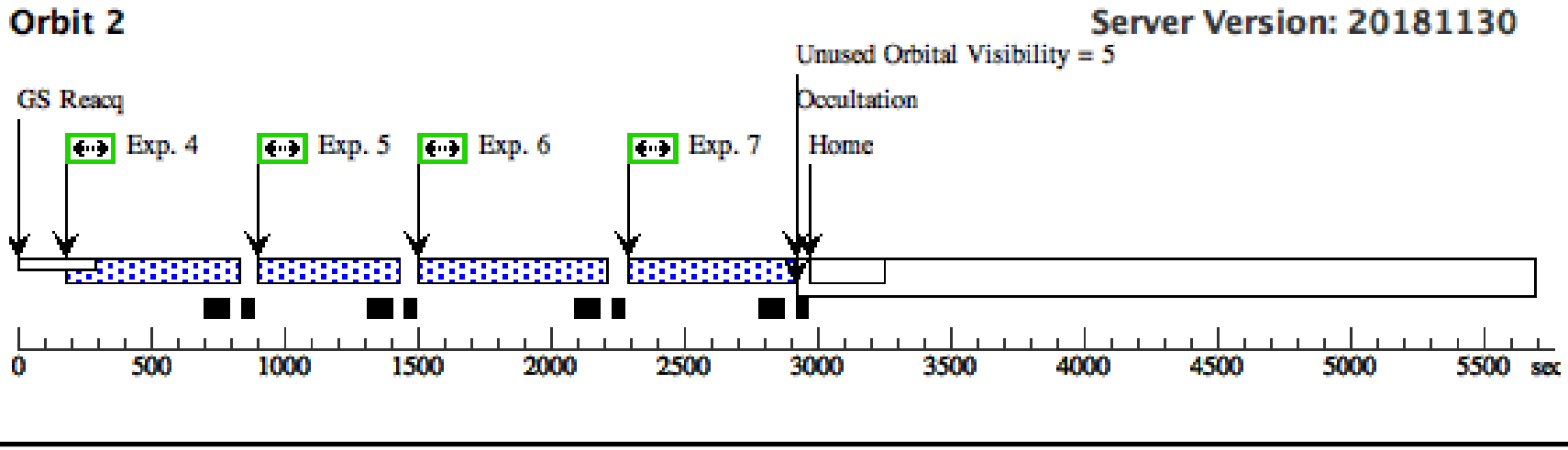
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.130 6936)	(4) MRK-509	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				11 Secs (11 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.5e-14.									
2	(COS.sa.130 6936)	(4) MRK-509	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			11 Secs (11 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.5e-14.									
3	(COS.sp.130 6947)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=3000; FP-POS=ALL			410 Secs (1640 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=3700; FP-POS=3			480 Secs (480 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.*									
5	(COS.sp.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=3700; FP-POS=4			480 Secs (480 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.*									
6	(COS.sp.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=4544; 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.*									
7	(COS.sp.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=4544; 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





Proposal 15673 - 4B (08) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 4B (08) Tue Jan 08 14:00:52 GMT 2019

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

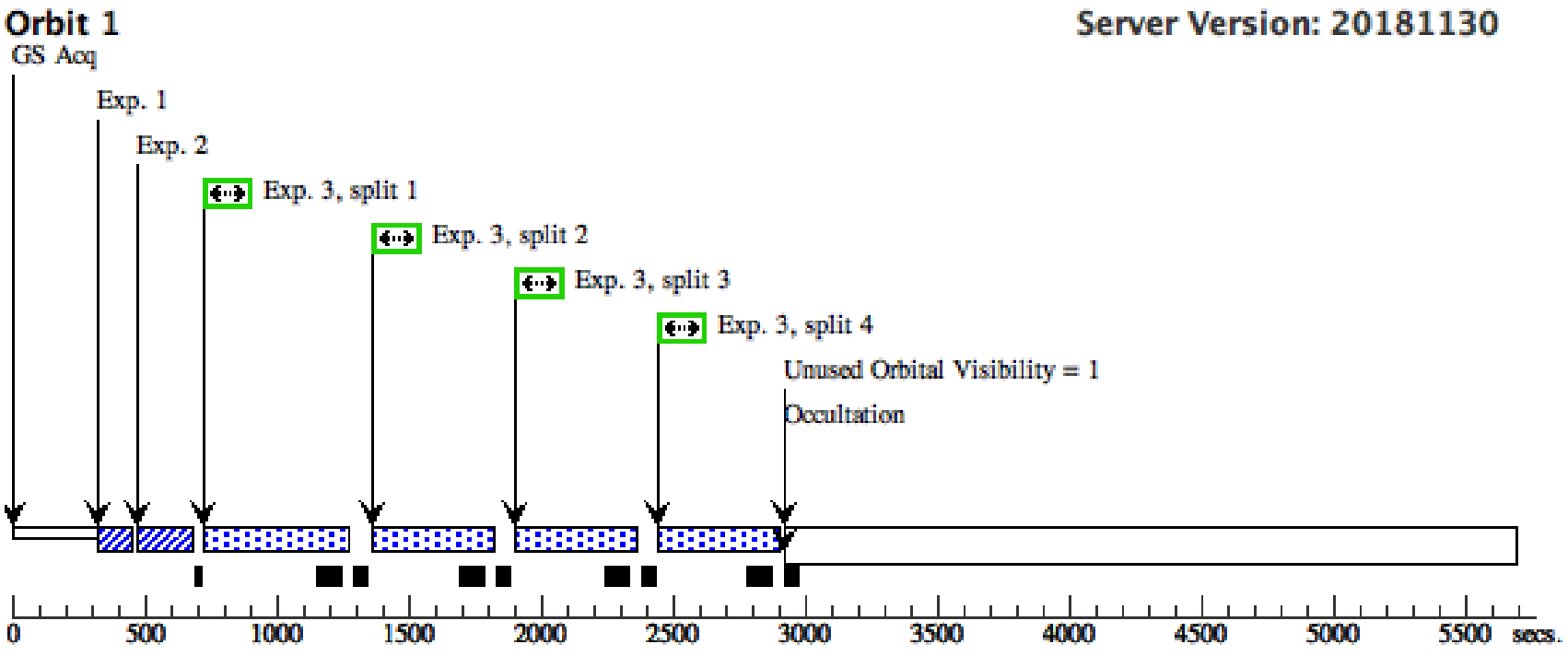
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	MRK-509	RA: 20 44 9.7681 (311.0407004d)	Redshift: 0.034397	V=13.12+/-0.5	Reference Frame: ICRS
		Dec: -10 43 24.44 (-10.72346d)		F(1368)=9.0e-14	
		Equinox: J2000			

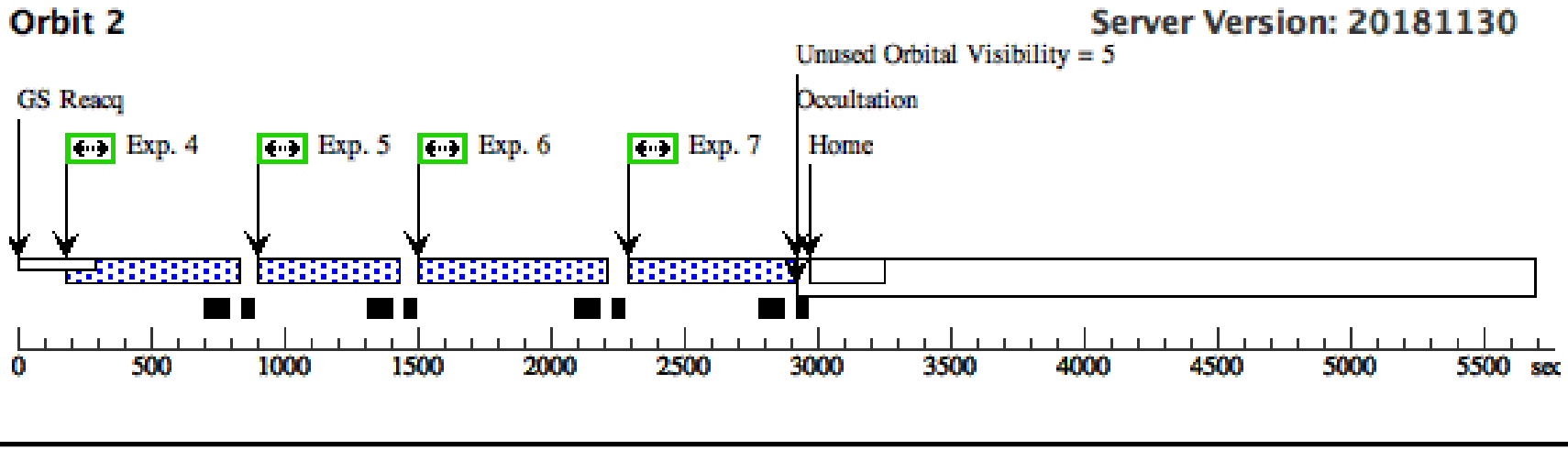
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.130 6936)	(4) MRK-509	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				11 Secs (11 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.5e-14.									
2	(COS.sa.130 6936)	(4) MRK-509	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			11 Secs (11 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.5e-14.									
3	(COS.sp.130 6947)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=3000; FP-POS=ALL			410 Secs (1640 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=3700; FP-POS=3			480 Secs (480 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.*									
5	(COS.sp.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=3700; FP-POS=4			480 Secs (480 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.*									
6	(COS.sp.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=4544; 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.*									
7	(COS.sp.130 6951)	(4) MRK-509	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=4544; 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





Proposal 15673 - 5A (09) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 5A (09) Tue Jan 08 14:00:52 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

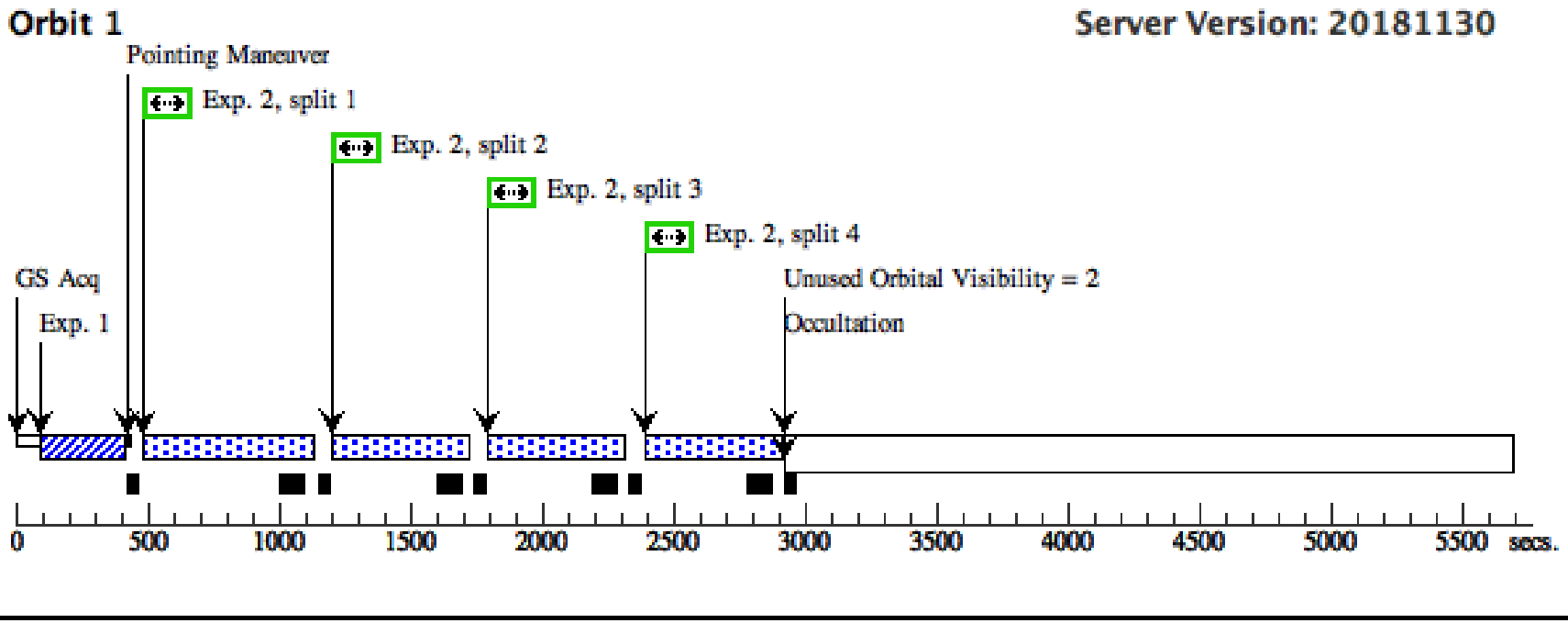
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	ARK-564	RA: 22 42 39.3090 (340.6637875d)	Redshift: 0.024684	V=14.16+/-0.5	Reference Frame: ICRS
	Alt Name1: UGC-12163	Dec: +29 43 31.55 (29.72543d)		F(1368)=0.8e-14	
		Equinox: J2000			

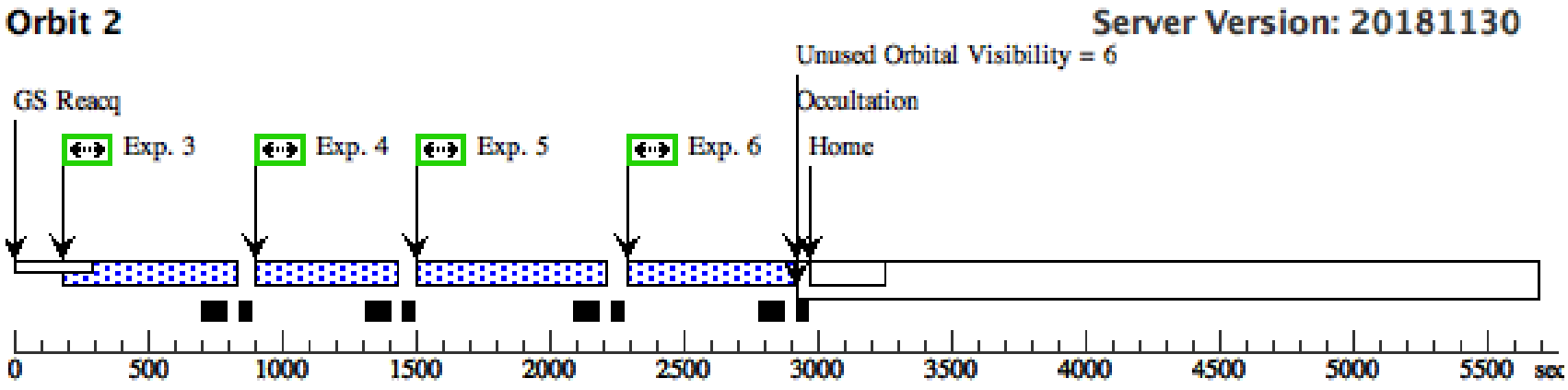
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.ta.1306969)	(5) ARK-564	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				10.7 Secs (10.7 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.6e-14.									
2	(COS.sp.1306947)	(5) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=358; FP-POS=ALL			468 Secs (1872 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.*									
3	(COS.sp.1306951)	(5) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
4	(COS.sp.1306951)	(5) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
5	(COS.sp.1306951)	(5) 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.*									
6	(COS.sp.1306951)	(5) 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 15673 - 5B (10) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 5B (10) Tue Jan 08 14:00:52 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

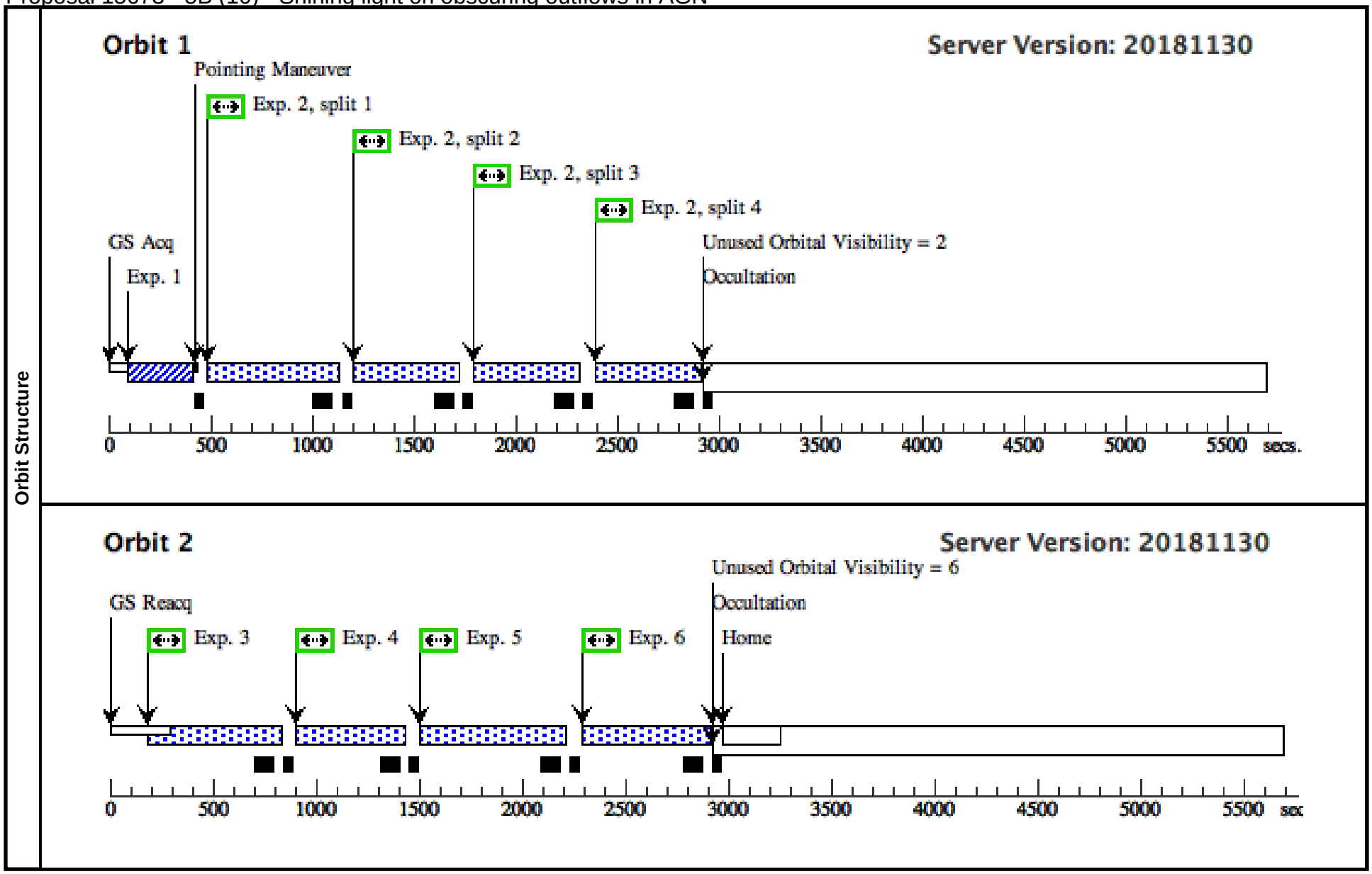
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	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.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
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.ta.1306969)	(5) ARK-564	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				10.7 Secs (10.7 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 0.6e-14.									
2	(COS.sp.1306947)	(5) ARK-564	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=358; FP-POS=ALL			468 Secs (1872 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.*									
3	(COS.sp.1306951)	(5) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
4	(COS.sp.1306951)	(5) ARK-564	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
5	(COS.sp.1306951)	(5) 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.*									
6	(COS.sp.1306951)	(5) 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
Orbit 1
Server Version: 20181130
Pointing Maneuver
Exp. 2, split 1
Exp. 2, split 2
Exp. 2, split 3
Exp. 2, split 4
GS Acq
Exp. 1
Unused Orbital Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20181130
Unused Orbital Visibility = 6
GS Reacq
Occultation
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 15673, 6A (11) Tue Jan 08 14:00:52 GMT 2019

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

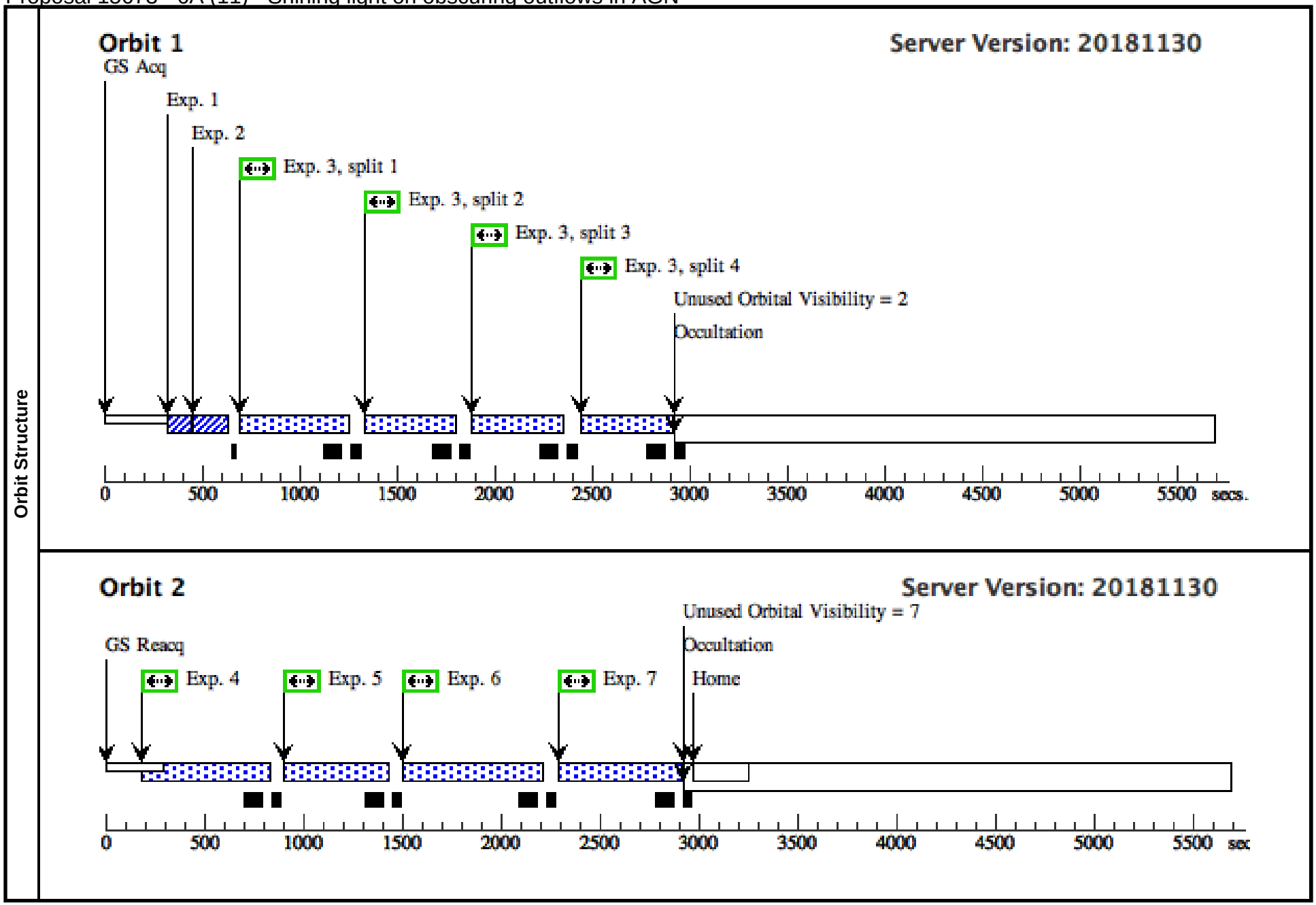
Fixed Targets

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

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
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.ta.1306935)	(6) MR-2251-178	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				6.6 Secs (6.6 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.8e-14.									
2	(COS.ta.1306935)	(6) MR-2251-178	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			6.6 Secs (6.6 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.8e-14.									
3	(COS.sp.1306947)	(6) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=309; FP-POS=ALL			419 Secs (1676 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.1306951)	(6) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
5	(COS.sp.1306951)	(6) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
6	(COS.sp.1306951)	(6) MR-2251-178	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.*									
7	(COS.sp.1306951)	(6) MR-2251-178	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
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20181130
Unused Orbital Visibility = 7
GS Reacq
Occultation
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 15673, 6B (12) Tue Jan 08 14:00:52 GMT 2019

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

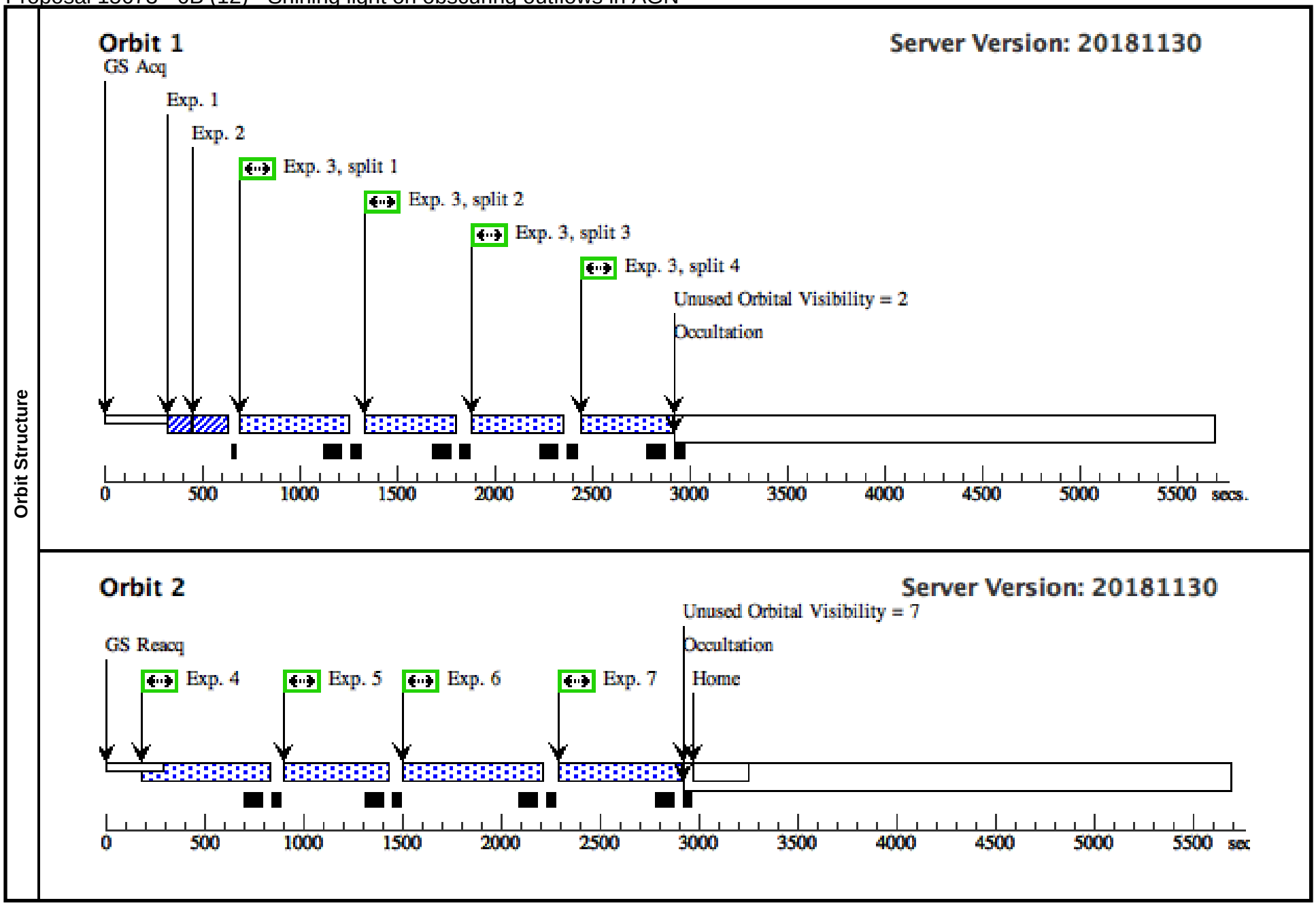
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	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.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
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)	(6) MR-2251-178	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				6.6 Secs (6.6 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.8e-14.									
2	(COS.sa.768 304)	(6) MR-2251-178	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=5; STEP-SIZE=0.9; CENTER=FLUX-WT-FLR			6.6 Secs (6.6 Secs) *[==>]*	***[1]***
Comments: Exposure time is chosen for the faintest historical flux, 1.8e-14.									
3	(COS.sp.130 6947)	(6) MR-2251-178	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=309; FP-POS=ALL			419 Secs (1676 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	***[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.130 6951)	(6) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
5	(COS.sp.130 6951)	(6) MR-2251-178	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
6	(COS.sp.130 6951)	(6) MR-2251-178	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.*									
7	(COS.sp.130 6951)	(6) MR-2251-178	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
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20181130
Unused Orbital Visibility = 7
GS Reacq
Occultation
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 15673 - 7A (13) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 7A (13) Tue Jan 08 14:00:52 GMT 2019

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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

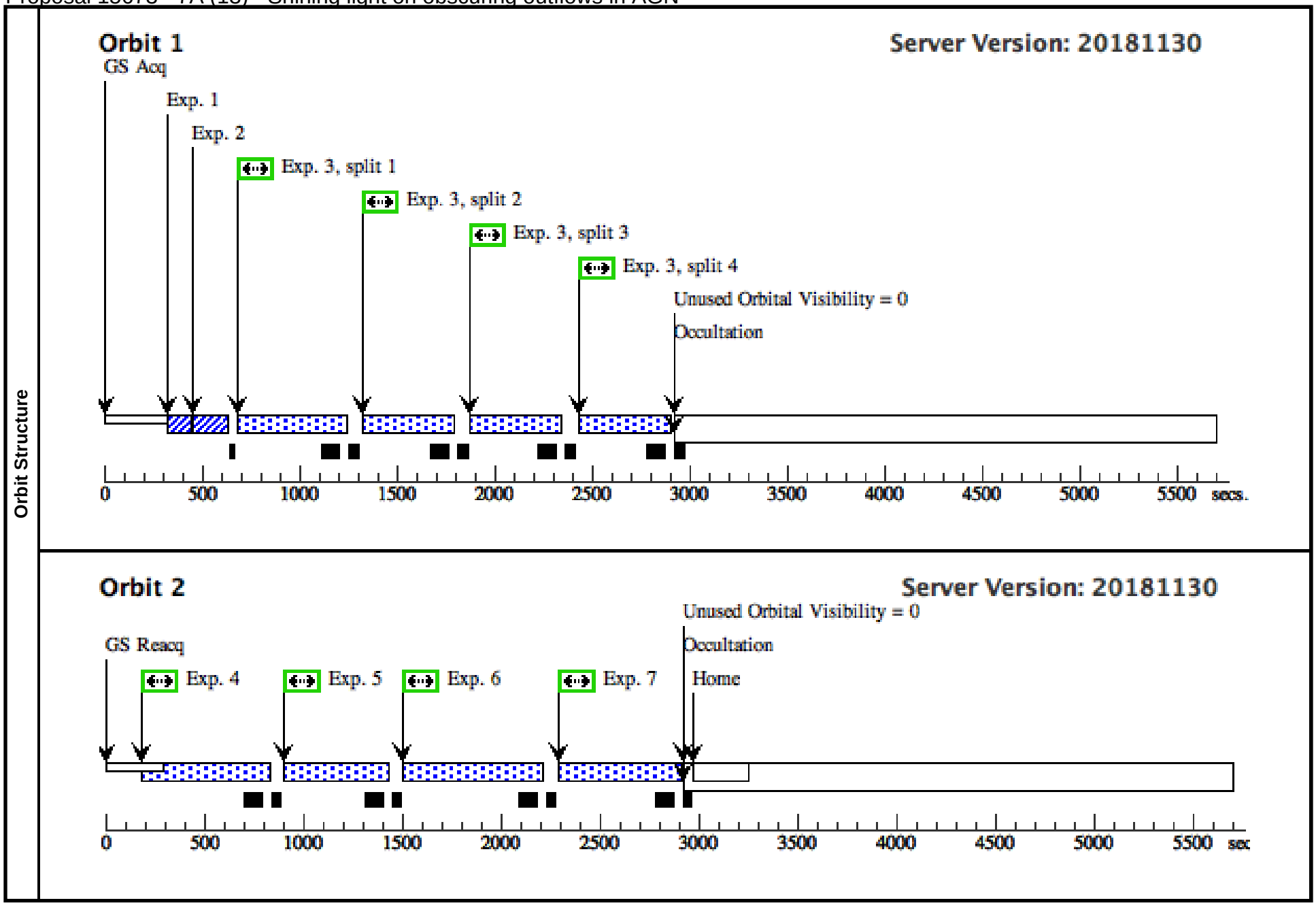
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	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.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
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.130 6938)	(7) 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.130 6938)	(7) 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.130 6947)	(7) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=311; FP-POS=ALL			421 Secs (1684 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[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.130 6951)	(7) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
5	(COS.sp.130 6951)	(7) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
6	(COS.sp.130 6951)	(7) 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.*									
7	(COS.sp.130 6951)	(7) 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
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20181130
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Proposal 15673 - 7B (14) - Shining light on obscuring outflows in AGN

Visit

Proposal 15673, 7B (14) Tue Jan 08 14:00:52 GMT 2019

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 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 the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

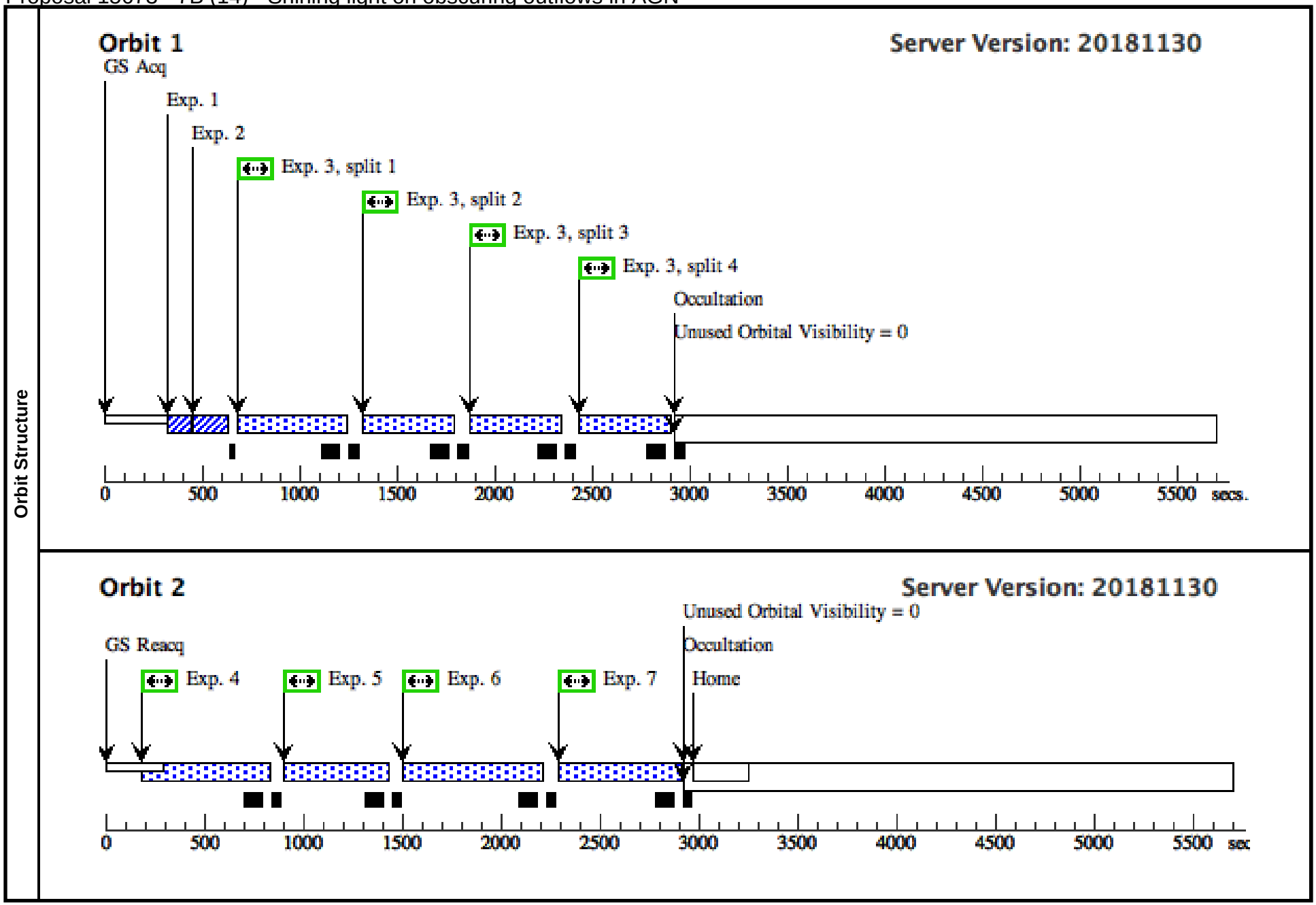
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	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.
Category=GALAXY
Description=[ACCRETION DISK, BLR, NLR, SEYFERT, WIND]
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.130 6938)	(7) 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.130 6938)	(7) 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.130 6947)	(7) NGC-7469	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=311; FP-POS=ALL			421 Secs (1684 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	*[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.130 6951)	(7) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=3			480 Secs (480 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.*									
5	(COS.sp.130 6951)	(7) NGC-7469	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=370; FP-POS=4			480 Secs (480 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.*									
6	(COS.sp.130 6951)	(7) 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.*									
7	(COS.sp.130 6951)	(7) 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
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Occultation
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20181130
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec