15612 - X-ray and UV monitoring of the extraordinary changing-look AGN Mrk 1018

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) MRK-1018	COS/FUV COS/NUV	3	13-Dec-2018 19:01:39.0	yes
02	(1) MRK-1018	COS/FUV COS/NUV	3	13-Dec-2018 19:01:41.0	yes

6 Total Orbits Used

ABSTRACT

We propose two joint Chandra/HST observations (each 45 ks/3 orbits) of the changing-look AGN Mrk 1018. In 2015 our team discovered this highly unique AGN in which we are witnessing the ongoing transition process. Monitoring Mrk 1018 immediate behavior with a joint Chandra/HST observation twice in 2019 is urgently needed and will leverage our extensive multi-wavelength monitoring program built up in the last 4 years. With the proposed data we will study how the X-ray emitting corona and the UV emitting accretion disk respond to the ongoing changes in the accretion rate. The joint X-ray/UV data are also needed to track the evolution of the wavelength-dependent SED (in combination with other wavelength ranges), as well as to understand why Mrk 1018 repeatedly changes its luminosity output.

OBSERVING DESCRIPTION

These COS-FUV observations are part of a coordinated multi-wavelength monitoring program combining X-rays (Chandra) and optical observations of the changing-look AGN Mrk1018. Each epoch we obtain a 3 orbit long FUV spectrum with the G140L grating to cover the FUV continuum at high S/N as well as the flux and shape of broad emission lines such as Lya and CIV.

Visit

Proposal 15612, FUV-COS Mrk1018 (01), implementation Fri Dec 14 00:01:41 GMT 2018

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 50%; BETWEEN 14-JAN-2019:00:00:00 AND 28-FEB-2019:00:00:00

Fixed Targets

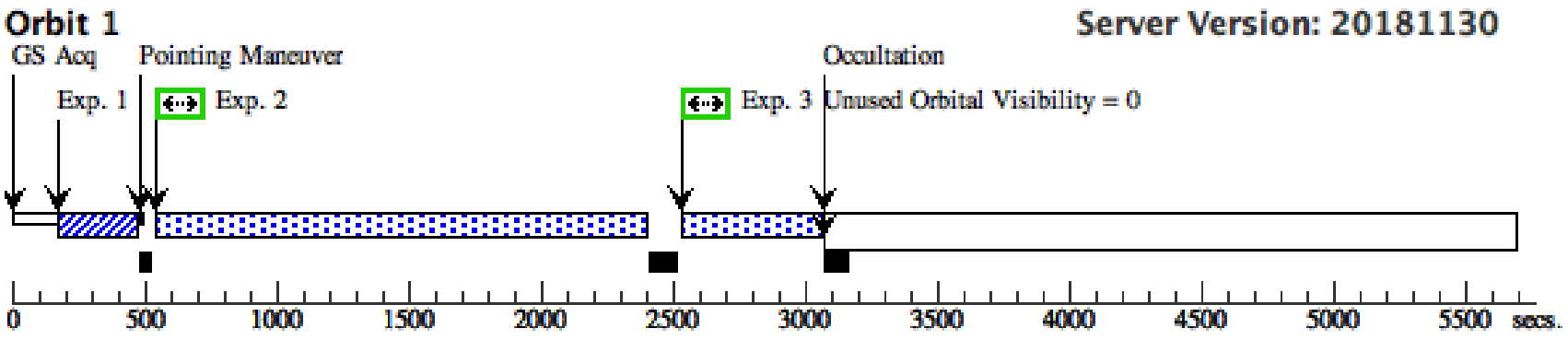
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	MRK-1018	RA: 02 06 15.9898 (31.5666242d) Dec: -00 17 29.22 (-.29145d) Equinox: J2000		V=15.5	Reference Frame: ICRS

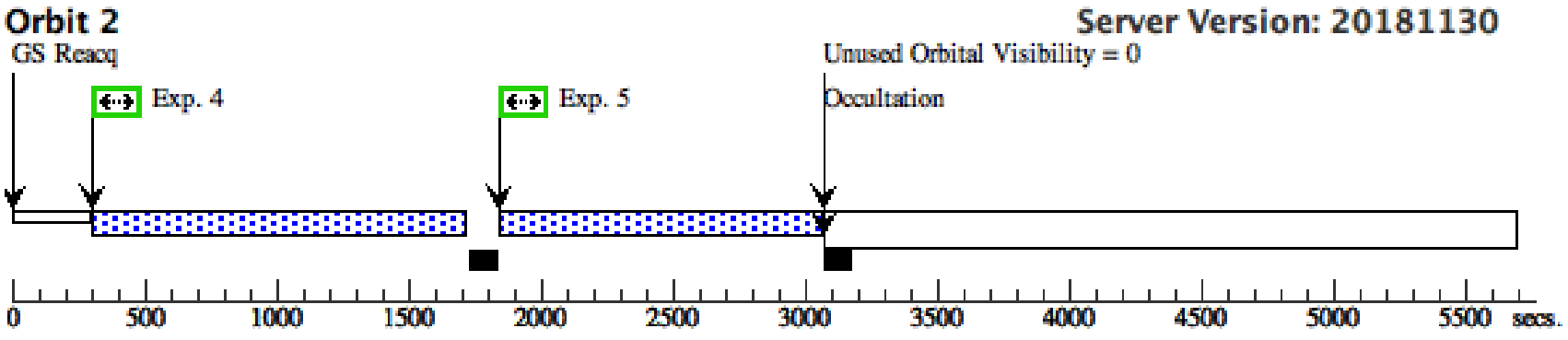
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[SEYFERT]
Extended=NO

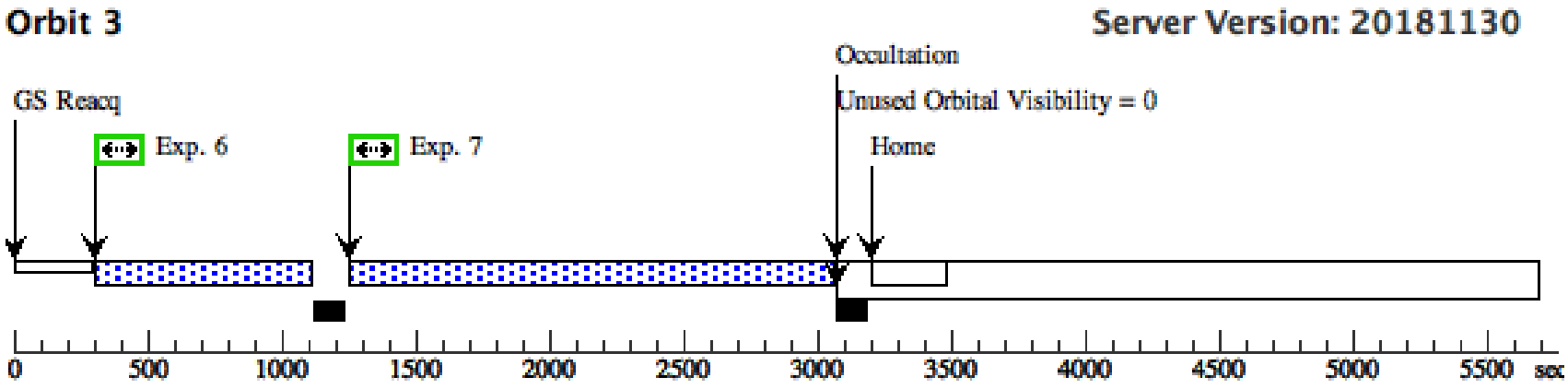
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquisition Exposure (1036530)	(1) MRK-1018	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				40 Secs (40 Secs) *[==>]*	*[1]*
2	Science Exposure 1 (FP-POS1) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1750; FLASH=YES; FP-POS=1; SEGMENT=A			1700 Secs (1680 Secs) *[==>1680.0 Secs]*	*[1]*
3	Science Exposure 2 (FP-POS2) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=550; FLASH=YES; FP-POS=2; SEGMENT=A			500 Secs (480 Secs) *[==>480.0 Secs]*	*[1]*
4	Science Exposure 3 (FP-POS2) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1450; FLASH=YES; FP-POS=2; SEGMENT=A			1400 Secs (1365 Secs) *[==>1365.0 Secs]*	*[2]*
5	Science Exposure 4 (FP-POS3) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1250; FLASH=YES; FP-POS=3; SEGMENT=A			1200 Secs (1165 Secs) *[==>1165.0 Secs]*	*[2]*
6	Science Exposure 5 (FP-POS3) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=750; FLASH=YES; FP-POS=3; SEGMENT=A			700 Secs (760 Secs) *[==>760.0 Secs]*	*[3]*
7	Science Exposure 6 (FP-POS4) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1750; FLASH=YES; FP-POS=4; SEGMENT=A			1700 Secs (1760 Secs) *[==>1760.0 Secs]*	*[3]*

Orbit Structure







Visit

Proposal 15612, FUV-COS Mrk1018 (02), implementation Fri Dec 14 00:01:41 GMT 2018

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 80%; BETWEEN 01-OCT-2019:00:00:00 AND 31-OCT-2019:00:00:00

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	MRK-1018	RA: 02 06 15.9898 (31.5666242d) Dec: -00 17 29.22 (-.29145d) Equinox: J2000		V=15.5	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
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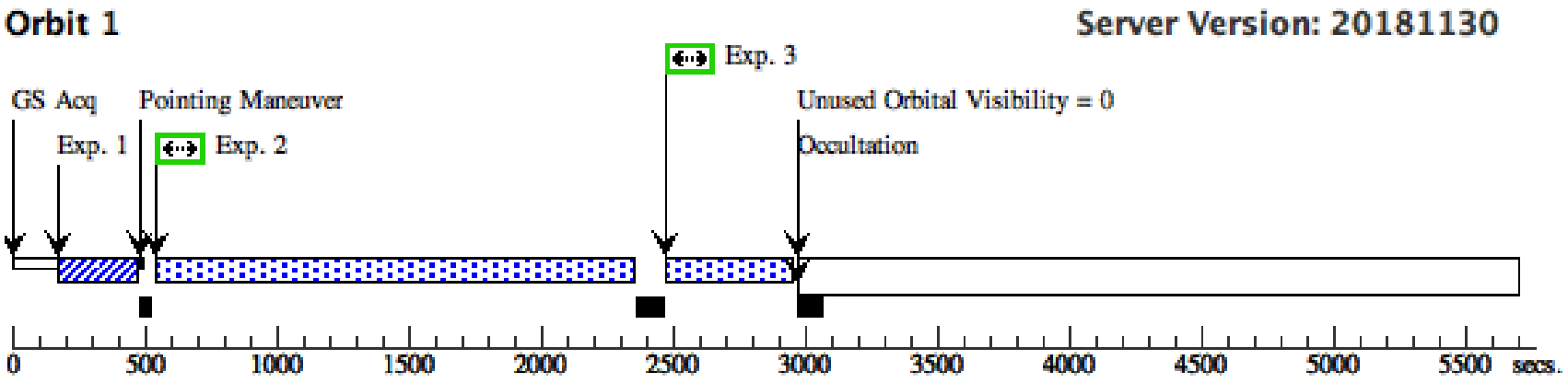
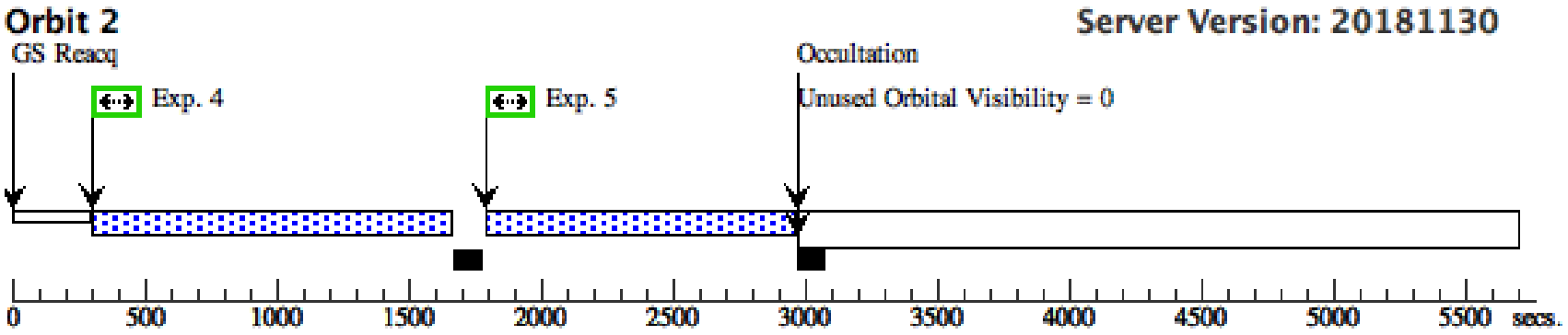
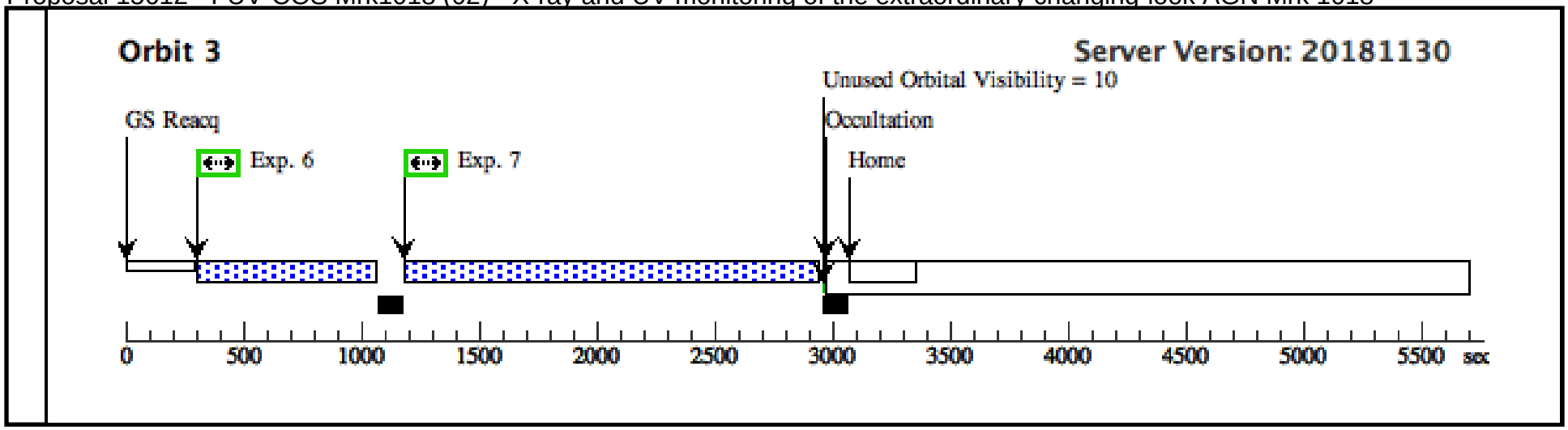
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquisition Exposure (1036530)	(1) MRK-1018	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				40 Secs (40 Secs) *[==>]*	*[1]*
2	Science Exposure 1 (FP-POS1) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1750; FLASH=YES; FP-POS=1; SEGMENT=A			1700 Secs (1628 Secs) *[==>1628.0 Secs]*	*[1]*
3	Science Exposure 2 (FP-POS2) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=550; FLASH=YES; FP-POS=2; SEGMENT=A			500 Secs (428 Secs) *[==>428.0 Secs]*	*[1]*
4	Science Exposure 3 (FP-POS2) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1450; FLASH=YES; FP-POS=2; SEGMENT=A			1400 Secs (1313 Secs) *[==>1313.0 Secs]*	*[2]*
5	Science Exposure 4 (FP-POS3) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1250; FLASH=YES; FP-POS=3; SEGMENT=A			1200 Secs (1113 Secs) *[==>1113.0 Secs]*	*[2]*
6	Science Exposure 5 (FP-POS3) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=750; FLASH=YES; FP-POS=3; SEGMENT=A			700 Secs (708 Secs) *[==>708.0 Secs]*	*[3]*
7	Science Exposure 6 (FP-POS4) (839387)	(1) MRK-1018	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=1750; FLASH=YES; FP-POS=4; SEGMENT=A			1700 Secs (1708 Secs) *[==>1708.0 Secs]*	*[3]*

Orbit Structure



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