



17227 - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observations of Galactic High-Velocity Clouds

Cycle: 30, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Prof. Todd M. Tripp (PI) (Contact)	University of Massachusetts - Amherst
Dr. David V. Bowen (CoI)	Princeton University
Prof. Joseph Neil Burchett (CoI)	New Mexico State University
Dr. Edward B. Jenkins (CoI)	Princeton University

VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
02	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:41.0	yes
03	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:42.0	yes
04	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:43.0	yes
05	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:44.0	yes
06	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:45.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
07	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:46.0	yes
08	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:47.0	yes
09	(2) MRK-817	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:48.0	yes
11	(3) PG0804+761	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:49.0	yes
12	(3) PG0804+761	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:50.0	yes
13	(3) PG0804+761	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:51.0	yes
14	(3) PG0804+761	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:52.0	yes
15	(3) PG0804+761	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:53.0	yes
10	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:54.0	yes
16	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:55.0	yes
17	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:56.0	yes
26	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:57.0	yes
18	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:58.0	yes
19	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:00:59.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
20	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:01:00.0	yes
21	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:01:00.0	yes
22	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:01:01.0	yes
23	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:01:02.0	yes
24	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:01:03.0	yes
25	(1) MRK-509	STIS/CCD STIS/FUV-MAMA	2	07-Jun-2024 15:01:04.0	yes

50 Total Orbits Used

ABSTRACT

In recent years, theorists have been rapidly improving our understanding of the microphysics of the circumgalactic medium, but incisive observational tests of CGM theoretical developments are lagging, partly because it is observationally challenging to test models such as cloud "shattering" and non-equilibrium, rapidly cooling gas. Recently, ultrahigh spectral resolution (2.6 km/s) STIS E140H absorption spectroscopy of a QSO behind the Galactic "Outer Arm" (OA) high-velocity cloud has been published that reveals a multiphase cloud with many of the qualitative characteristics of condensing and possibly shattering gas. Moreover, the highly ionized gas in this HVC, which is kinematically aligned with lower ionization absorption, is best explained by non-equilibrium, rapidly cooling gas, and the HVC shows clear evidence of dust depletion. It has also been shown that these characteristics could not be accurately measured without the excellent spectral resolution of the E140H grating. We propose to obtain similar STIS E140H observations of AGN behind the Complex C, Complex A, and GCN HVCs to investigate whether other HVCs have similar physical characteristics. These diverse HVCs span a range of z heights, gas densities, and environmental factors, and existing lower resolution COS spectra show that a variety of lines will be detected from the HVCs, including NV. We will investigate the following questions: (1) What is the origin of the kinematically aligned highly ionized gas? (2) How do the physical conditions and time scales of the gas compare to CGM theories? (3) Do these diverse HVCs contain dust, and what are the dust depletion patterns in these environments?

OBSERVING DESCRIPTION

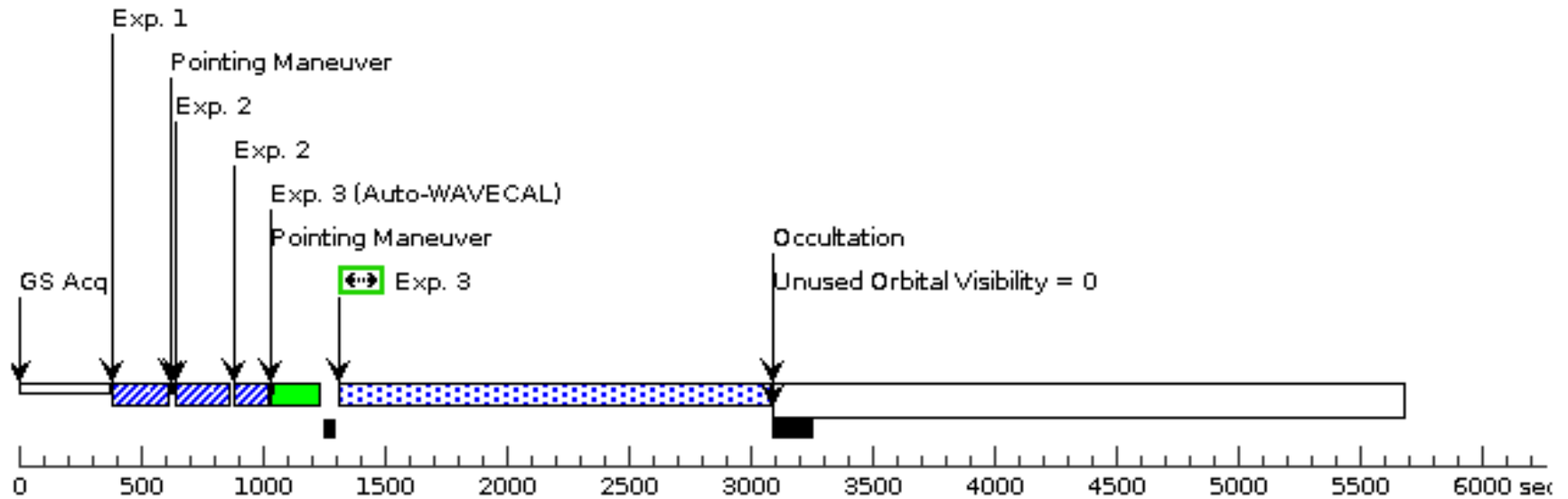
All of the targets in this program have been previously and successfully observed with STIS and/or COS, and the observing plan was modeled after the previous observations. Therefore the targets do not present any health and safety concerns for the STIS MAMA detectors. The targets will be observed with STIS using the E140H grating with the $\lambda(\text{cen}) = 1307 \text{ \AA}$ grating tilt, which covers 1206 - 1408 $\text{\AA}$, and the 0.2x0.2 aperture. This tilt will cover a suite of lines that are known to be detected in the targeted high-velocity clouds, including O I, S II, C II, C II*, C IV, Si II, Si III, Si IV, N V, and possibly Ni II. For optimal wavelength calibration and exposure alignment in the final (coadded) spectrum, the targets will be acquired with an ACQ and ACQ/PEAK sequence. The hot pixels of this STIS mode grow stronger as the temperature of the detector warms up (see, e.g., the appendix in Tripp 2022, MNRAS, 511, 1714), so we request that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before each visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.

Proposal 17227 - MRK817 vis1 (02) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis1 (02), implementation					Fri Jun 07 19:01:05 GMT 2024				
	Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs)	
									[==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs)	
									[==>]	[1]
	3	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs)	
									[==>1758.0 Secs]	[1]
	4	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs)	
								[==>2689.0 Secs]	[2]	

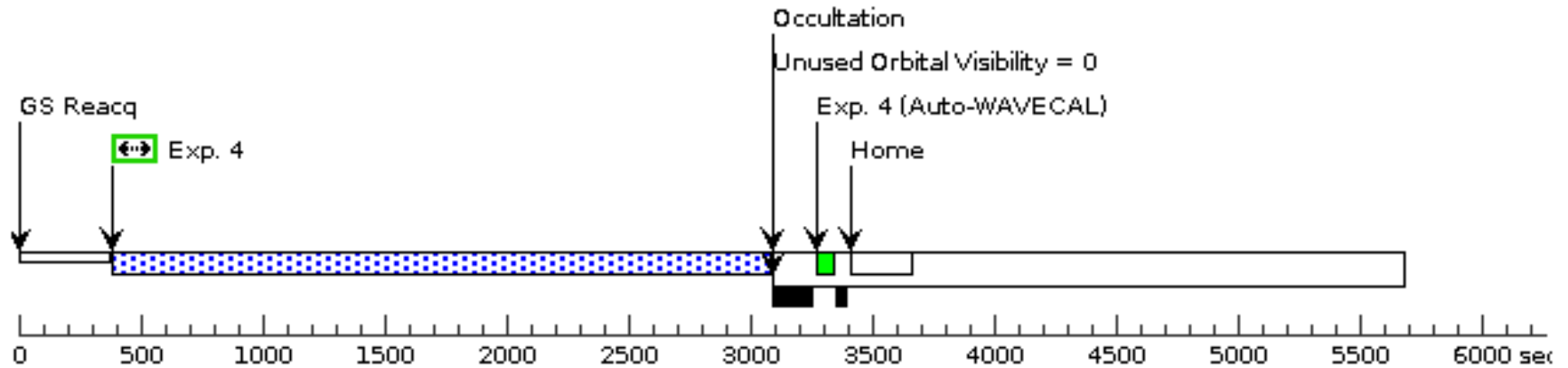
Orbit 1

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Orbit 2

Server Version: 20240604

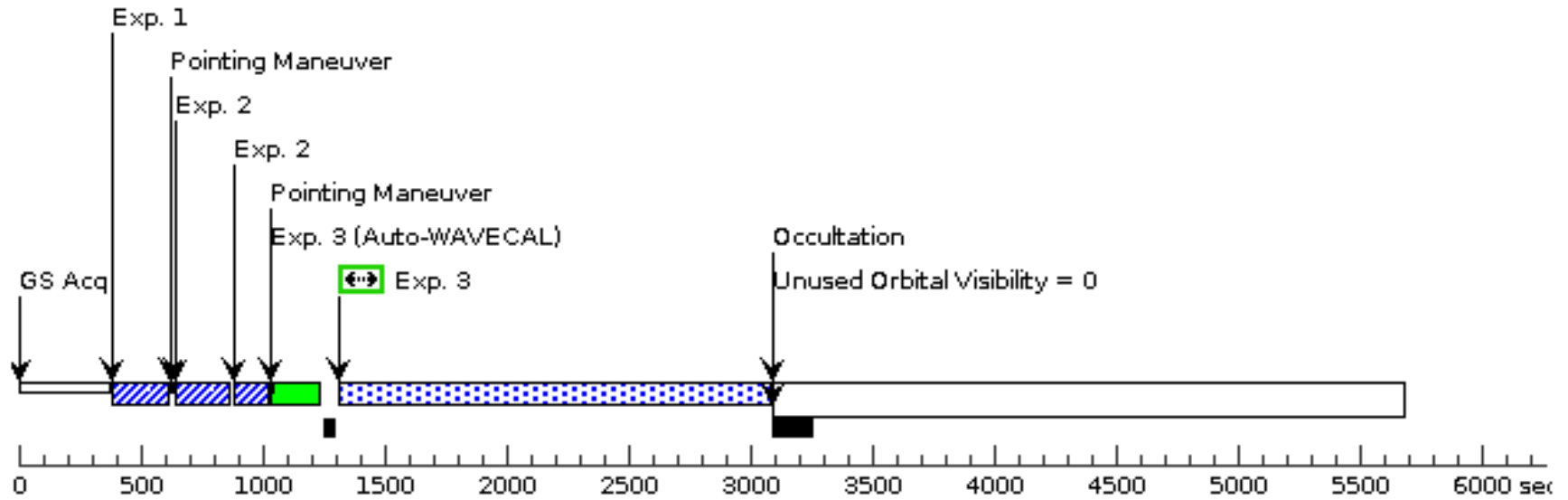


Proposal 17227 - MRK817 vis2 (03) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis2 (03), implementation					Fri Jun 07 19:01:05 GMT 2024				
	Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs)	
									[==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs)	
									[==>]	[1]
	3	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs)	
								[==>1758.0 Secs]	[1]	
	4	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs)	
								[==>2689.0 Secs]	[2]	

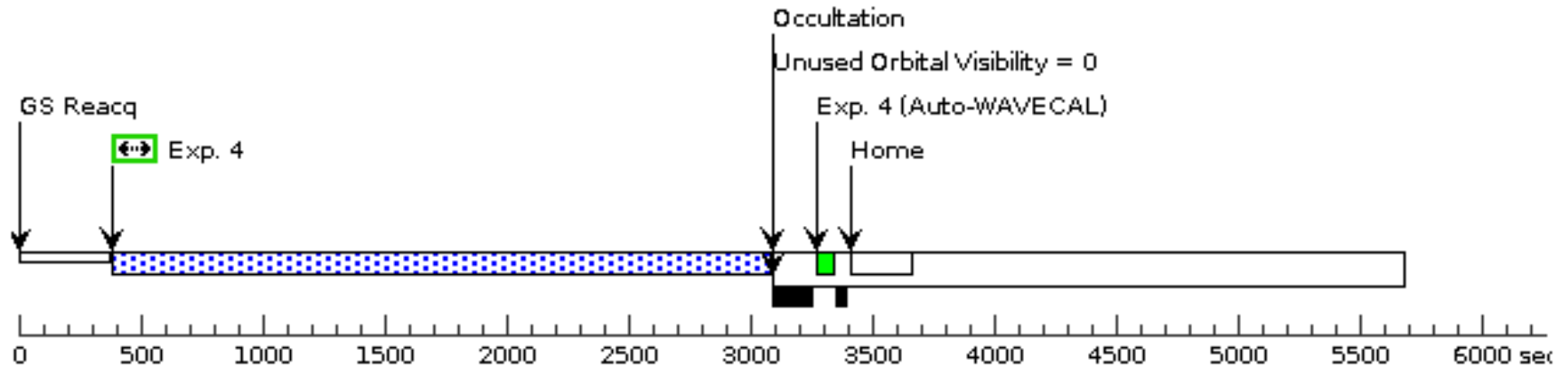
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

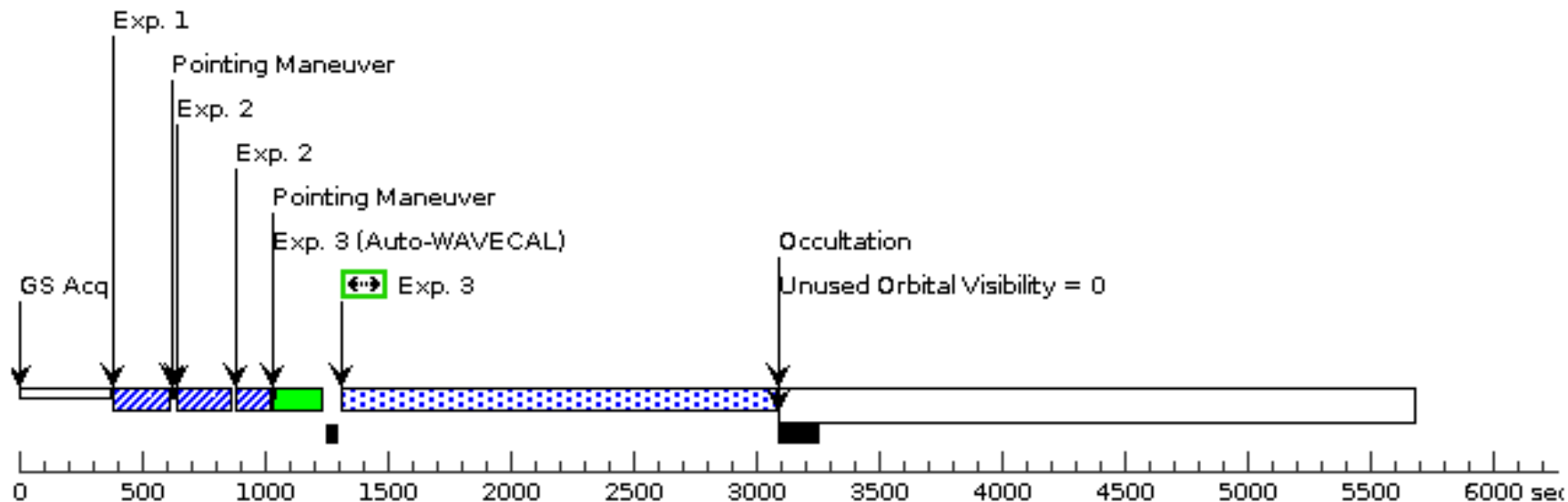


Proposal 17227 - MRK817 vis3 (04) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis3 (04), implementation						Fri Jun 07 19:01:05 GMT 2024			
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA									
	Special Requirements: (none)									
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.									
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs) [==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs) [==>]	[1]
	3	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs) [==>1758.0 Secs]	[1]
	4	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs) [==>2689.0 Secs]	[2]

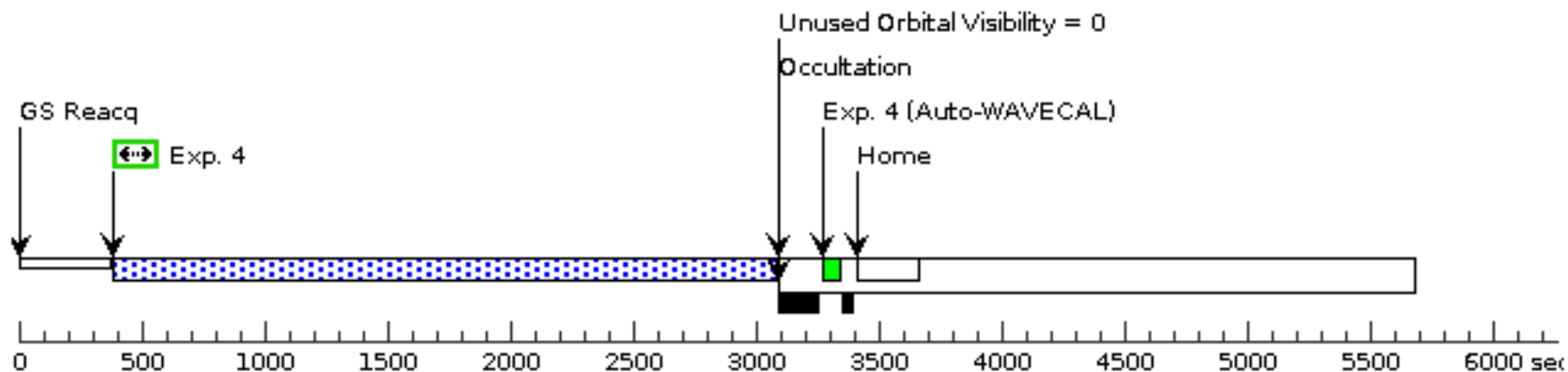
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

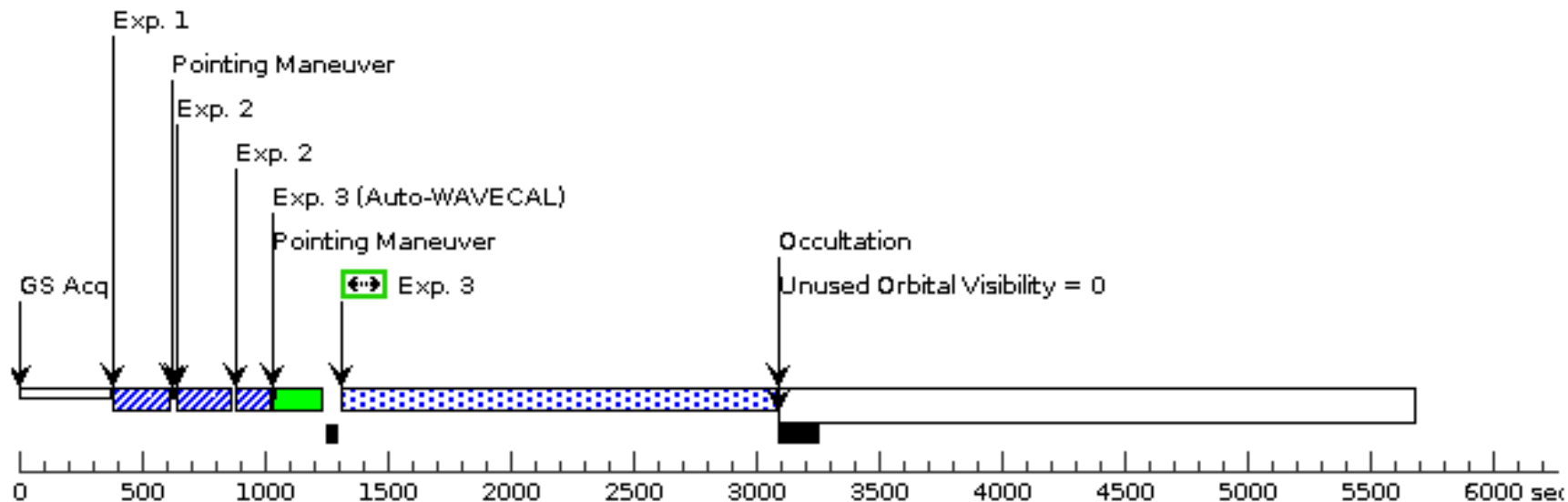


Proposal 17227 - MRK817 vis4 (05) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis4 (05), implementation						Fri Jun 07 19:01:05 GMT 2024			
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA									
	Special Requirements: (none)									
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.									
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs)	
									[==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs)	
									[==>]	[1]
	3	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs)	
									[==>1758.0 Secs]	[1]
	4	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs)	
								[==>2689.0 Secs]	[2]	

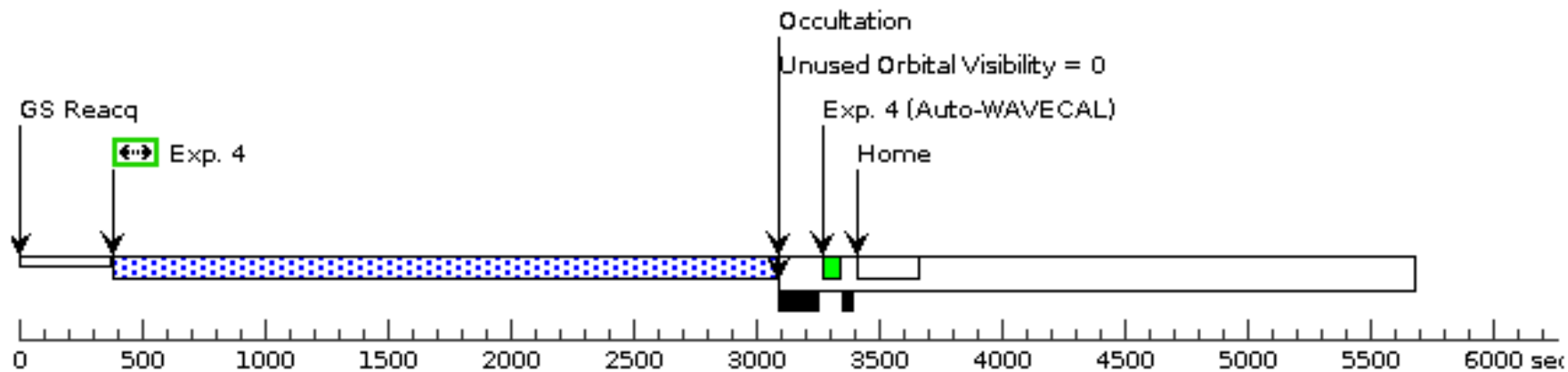
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

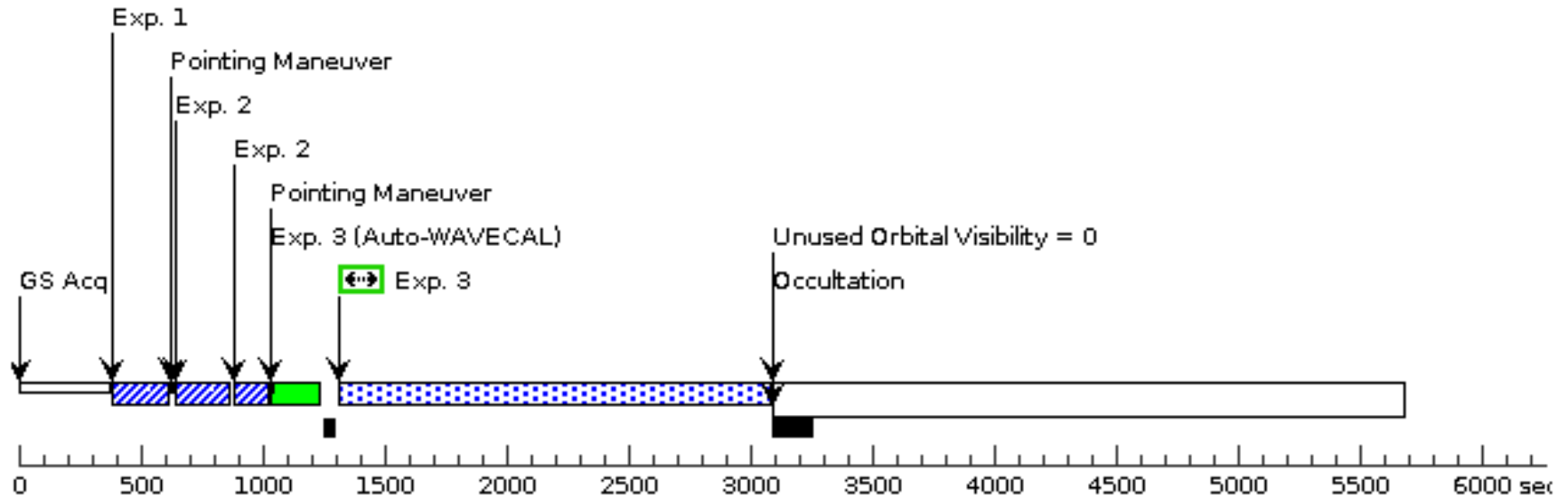


Proposal 17227 - MRK817 vis5 (06) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis5 (06), implementation					Fri Jun 07 19:01:05 GMT 2024				
	Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs)	
									[==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs)	
									[==>]	[1]
	3	MRK817-Science (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs)	
								[==>1758.0 Secs]	[1]	
	4	MRK817-Science (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs)	
									[==>2689.0 Secs]	[2]

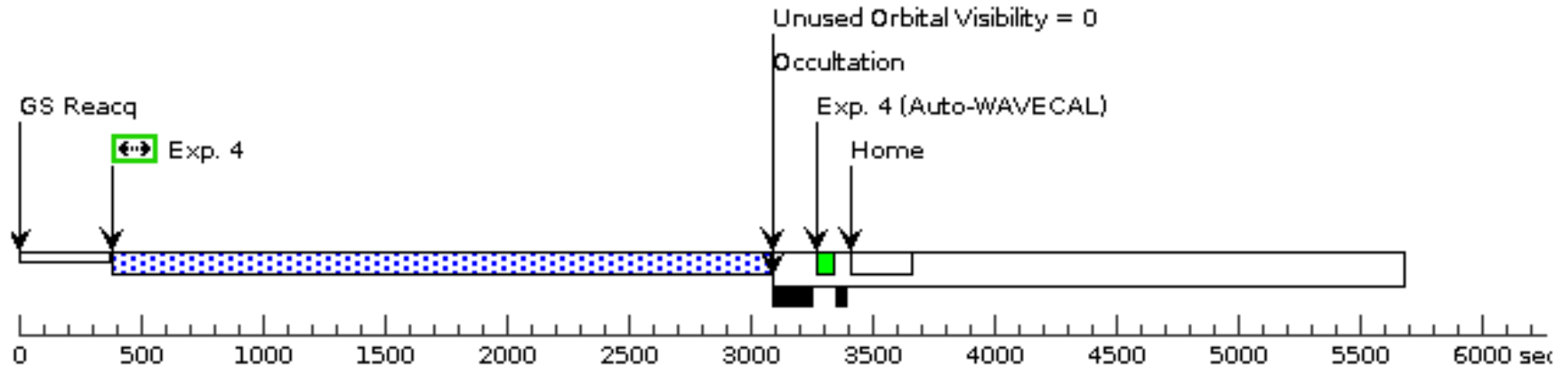
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604



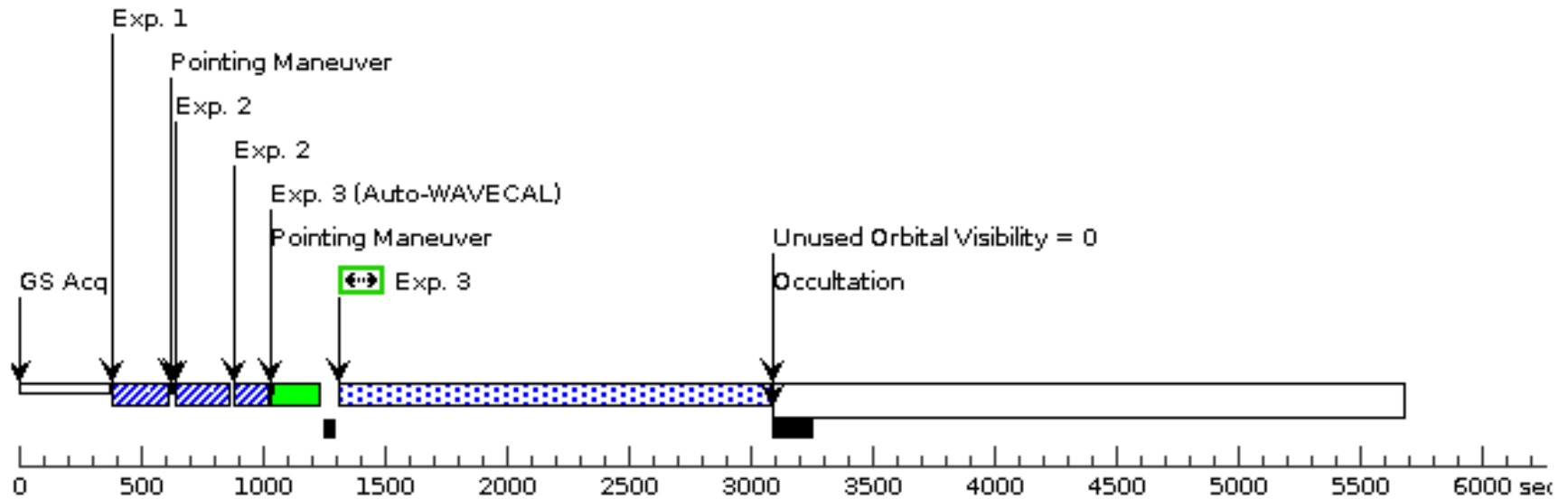
Proposal 17227 - MRK817 vis6 (07) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis6 (07), implementation					Fri Jun 07 19:01:05 GMT 2024				
	Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs)	
									[==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs)	
									[==>]	[1]
	3	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs)	
								[==>1758.0 Secs]	[1]	
	4	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs)	
								[==>2689.0 Secs]	[2]	

Orbit Structure

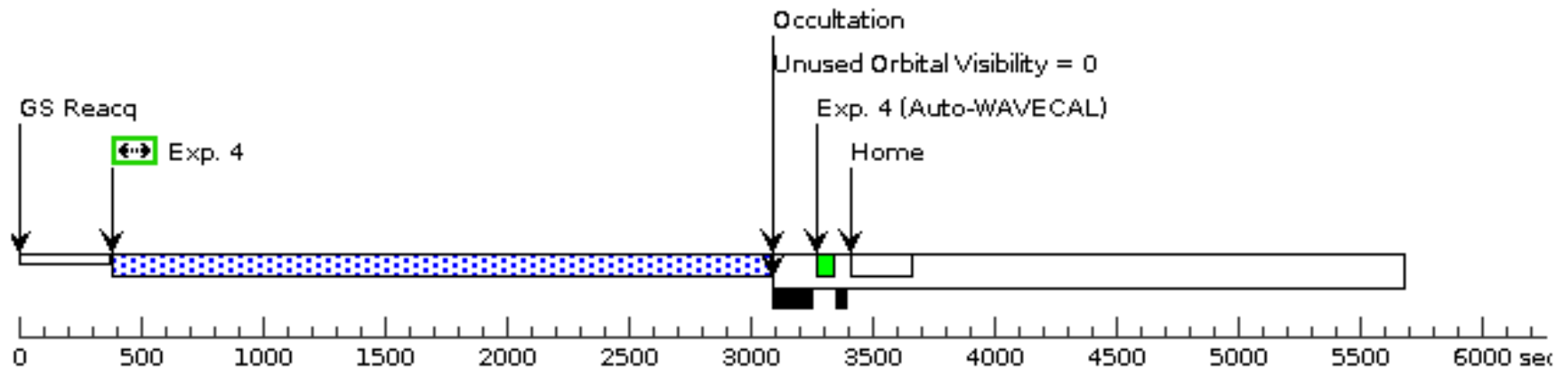
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

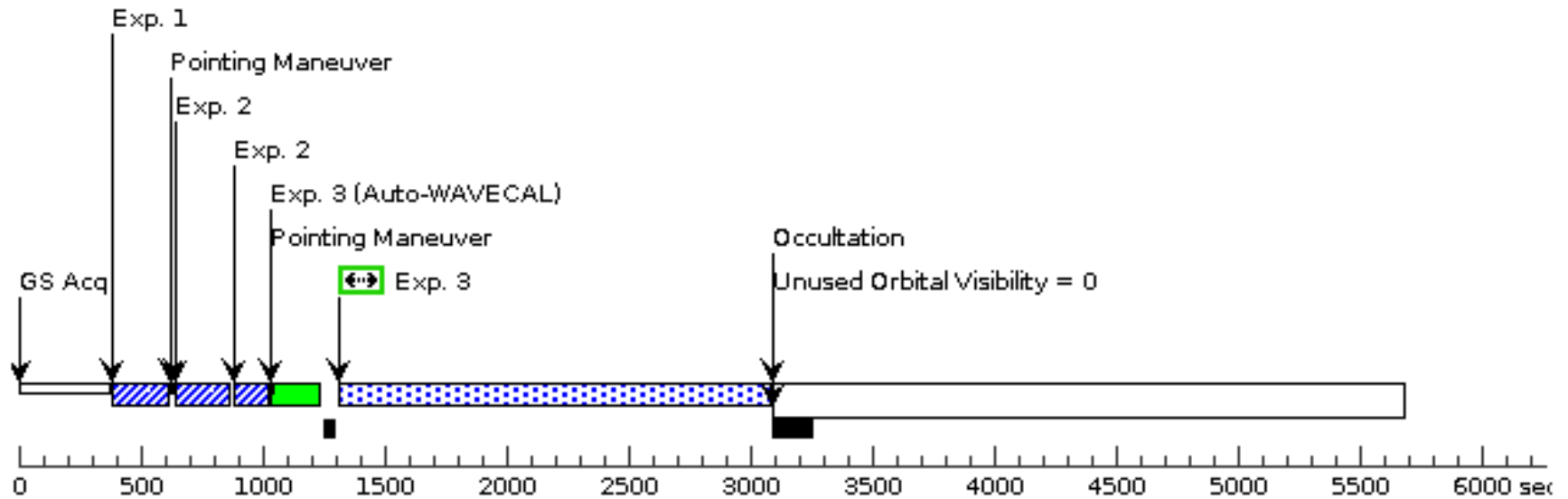


Proposal 17227 - MRK817 vis7 (08) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis7 (08), implementation						Fri Jun 07 19:01:05 GMT 2024			
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA									
	Special Requirements: (none)									
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.									
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs)	
									[==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs)	
									[==>]	[1]
	3	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs)	
									[==>1758.0 Secs]	[1]
	4	MRK817-Sc ience (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs)	
								[==>2689.0 Secs]	[2]	

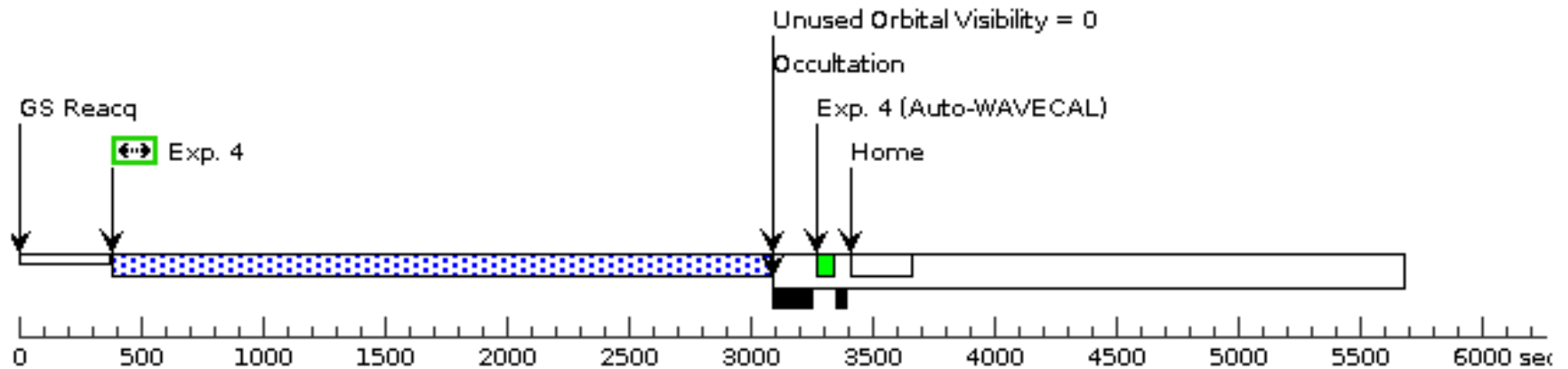
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

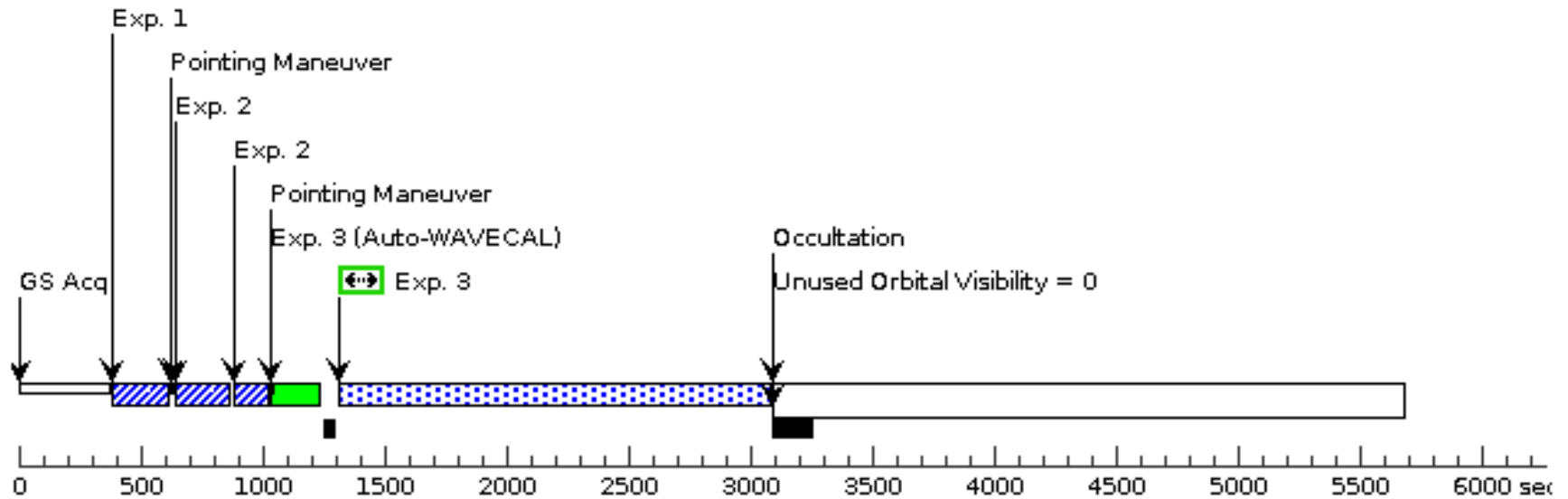


Proposal 17227 - MRK817 vis8 (09) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK817_vis8 (09), implementation					Fri Jun 07 19:01:06 GMT 2024				
	Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none) Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	MRK-817	RA: 14 36 22.0821 (219.0920087d) Dec: +58 47 39.39 (58.79427d) Equinox: J2000	Proper Motion RA: 2.3160994962315615E-6 sec of time/yr Proper Motion Dec: -3.600002855819184E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.031	V=13.79+/-0.1 GALEX FUV mag = 14.77 +/- 0.02; GALEX NUV mag = 14.61 +/- 0.01; Flambda(1238 A) = 1.6 e-13; Flambda(1394 A) = 6.5e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK817-A CQ (STIS.ta.181 2404)	(2) MRK-817	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1.0 Secs (1 Secs) [==>]	[1]
	2	MRK817-A CQPEAK (STIS.ta.181 2405)	(2) MRK-817	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				1.0 Secs (1 Secs) [==>]	[1]
	3	MRK817-Science (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 17			2034.0 Secs (1758 Secs) [==>1758.0 Secs]	[1]
	4	MRK817-Science (STIS.sp.18 12406)	(2) MRK-817	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=14 83			2966.0 Secs (2689 Secs) [==>2689.0 Secs]	[2]

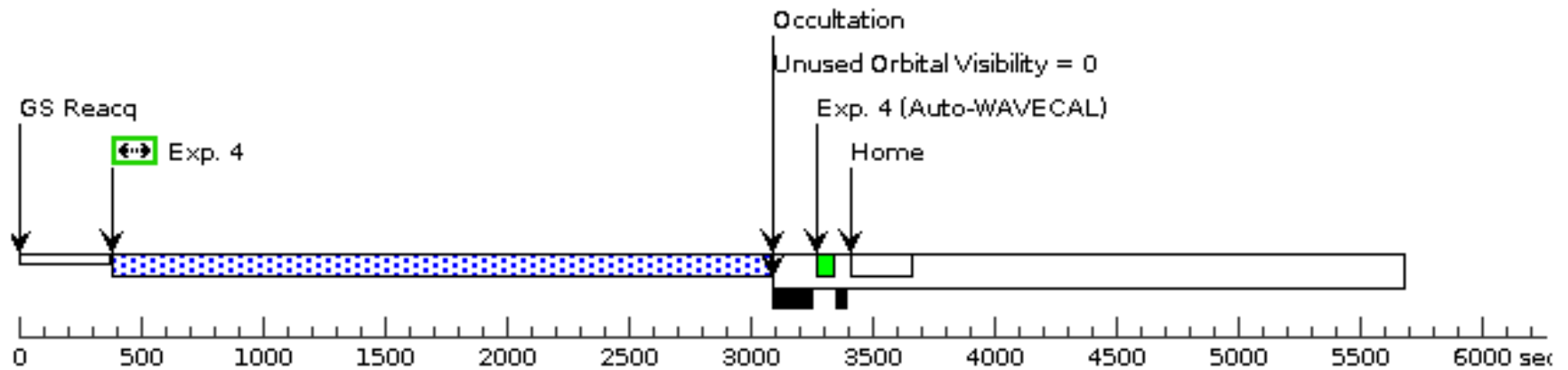
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

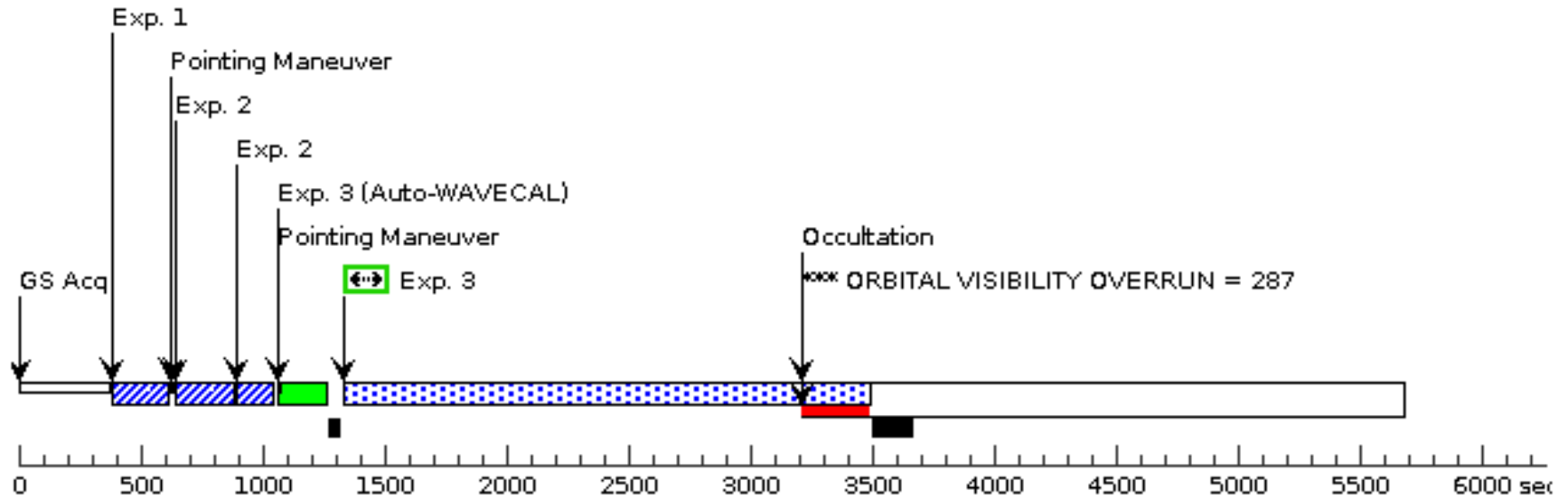


Proposal 17227 - PG0804_vis1 (11) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observation...

Visit	Proposal 17227, PG0804_vis1 (11), completed										Fri Jun 07 19:01:06 GMT 2024
	Diagnostic Status: Warning										
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA										
	Special Requirements: (none)										
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.											
Diagnostics	(PG0804_vis1 (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
	(PG0804_vis1 (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(3)	PG0804+761	RA: 08 10 58.6643 (122.7444346d) Dec: +76 02 42.45 (76.04512d) Equinox: J2000	Proper Motion RA: 6.9111089590620305E-6 sec of time/yr Proper Motion Dec: 2.5E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.100		V=14.71+/-0.1 Flambda(1238 A) = 8.0e-14; Fla mbda(1394 A) = 9.5e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.										
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	PG0804_AC Q (STIS.ta.181 2778)	(3) PG0804+761	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2.0 Secs (2 Secs)		
									[==>]		[1]
	2	PG0804_AC QPEAK (STIS.ta.181 2777)	(3) PG0804+761	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				2.0 Secs (2 Secs)		
									[==>]		[1]
	3	PG0408-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 70			2140.0 Secs (2140 Secs)		
									[==>]		[1]
	4	PG0804-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=15 48.0			3096.0 Secs (3096 Secs)		
								[==>]		[2]	

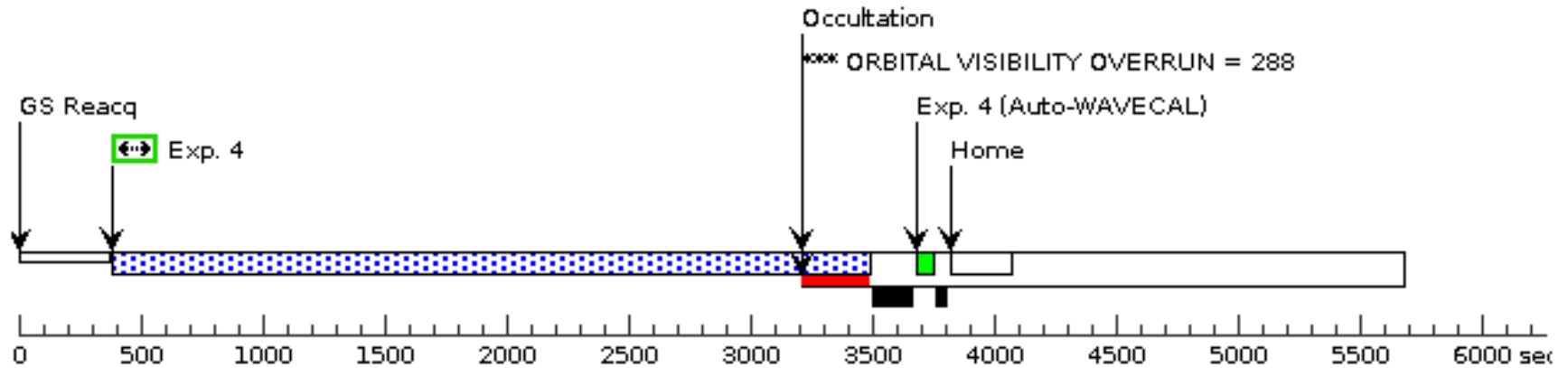
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

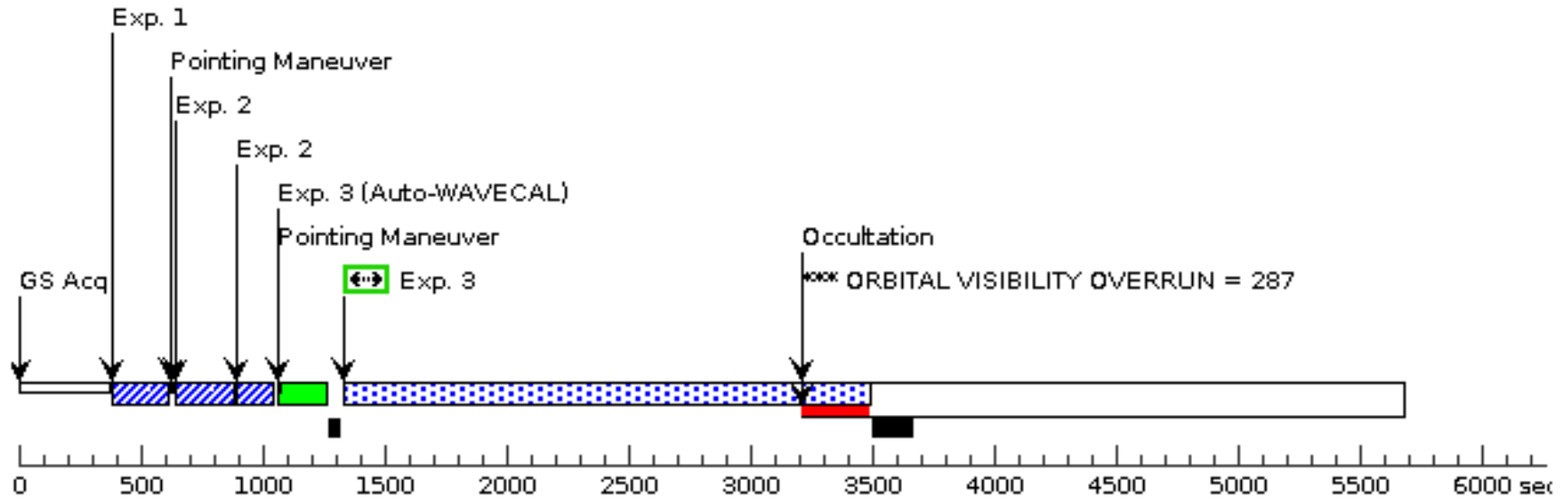


Proposal 17227 - PG0804_vis2 (12) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observation...

Visit	Proposal 17227, PG0804_vis2 (12), completed										Fri Jun 07 19:01:06 GMT 2024
	Diagnostic Status: Warning										
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA										
	Special Requirements: (none)										
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.											
Diagnostics	(PG0804_vis2 (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
	(PG0804_vis2 (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(3)	PG0804+761	RA: 08 10 58.6643 (122.7444346d) Dec: +76 02 42.45 (76.04512d) Equinox: J2000	Proper Motion RA: 6.9111089590620305E-6 sec of time/yr Proper Motion Dec: 2.5E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.100	V=14.71+/-0.1 Flambda(1238 A) = 8.0e-14; Flambda(1394 A) = 9.5e-14	Reference Frame: ICRS					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.										
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	PG0804_AC Q (STIS.ta.181 2778)	(3) PG0804+761	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2.0 Secs (2 Secs)		
									[==>]		[1]
	2	PG0804_AC QPEAK (STIS.ta.181 2777)	(3) PG0804+761	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				2.0 Secs (2 Secs)		
									[==>]		[1]
	3	PG0408-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 70			2140.0 Secs (2140 Secs)		
									[==>]		[1]
	4	PG0804-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=15 48.0			3096.0 Secs (3096 Secs)		
								[==>]		[2]	

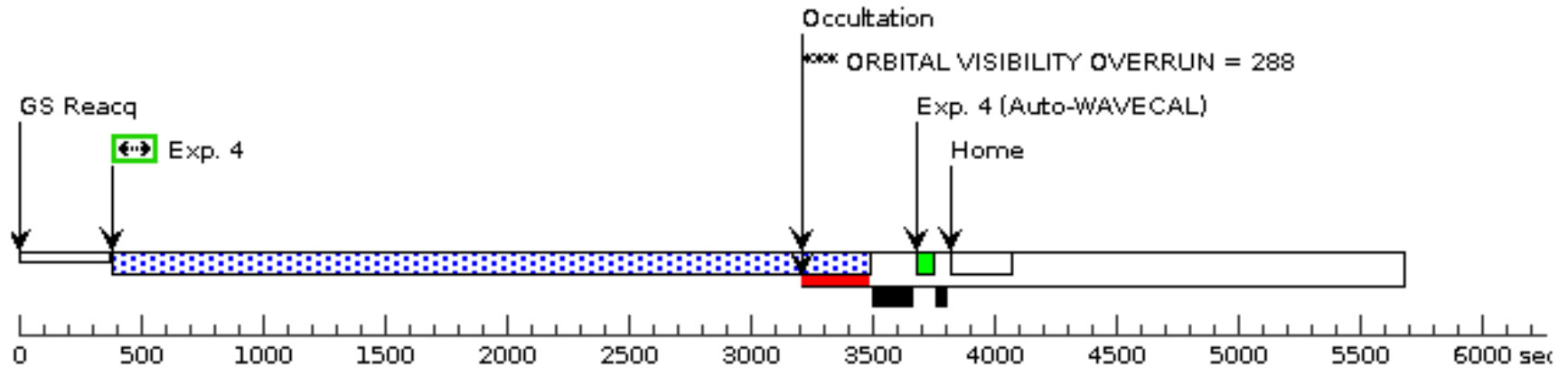
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

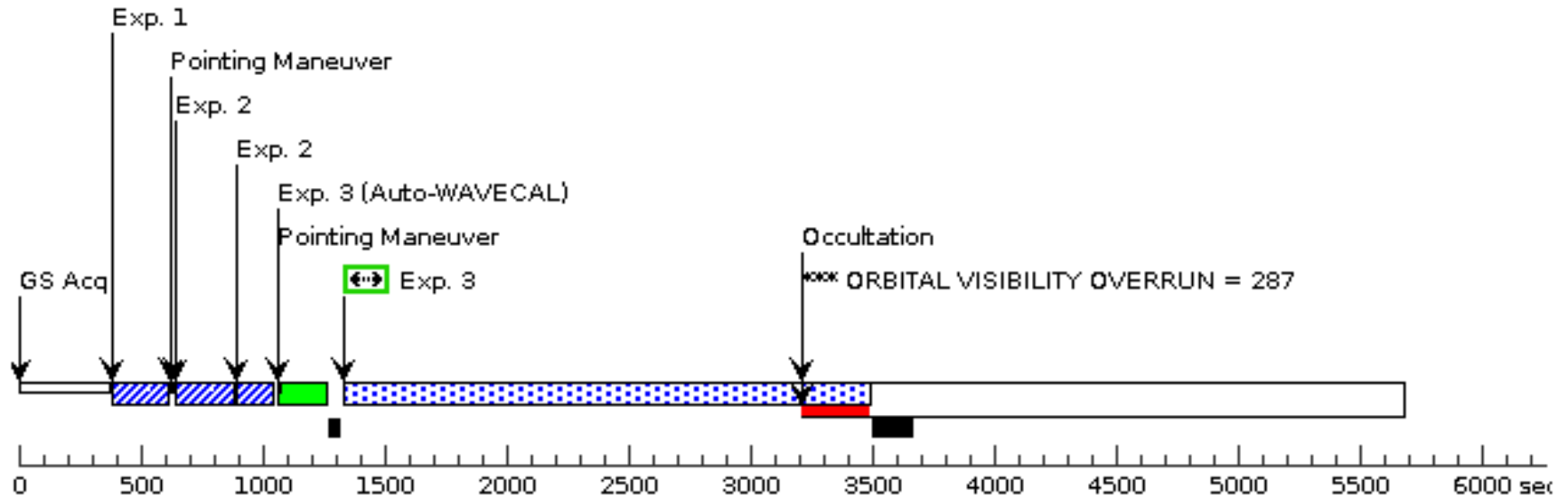


Proposal 17227 - PG0804 vis3 (13) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observation...

Visit	Proposal 17227, PG0804_vis3 (13), completed										Fri Jun 07 19:01:06 GMT 2024
	Diagnostic Status: Warning										
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA										
	Special Requirements: (none)										
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.											
Diagnostics	(PG0804_vis3 (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
	(PG0804_vis3 (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(3)	PG0804+761	RA: 08 10 58.6643 (122.7444346d) Dec: +76 02 42.45 (76.04512d) Equinox: J2000	Proper Motion RA: 6.9111089590620305E-6 sec of time/yr Proper Motion Dec: 2.5E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.100		V=14.71+/-0.1 Flambda(1238 A) = 8.0e-14; Fla mbda(1394 A) = 9.5e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.										
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	PG0804_AC Q (STIS.ta.181 2778)	(3) PG0804+761	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2.0 Secs (2 Secs)		
									[==>]		[1]
	2	PG0804_AC QPEAK (STIS.ta.181 2777)	(3) PG0804+761	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				2.0 Secs (2 Secs)		
									[==>]		[1]
	3	PG0408-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 70			2140.0 Secs (2140 Secs)		
									[==>]		[1]
	4	PG0804-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=15 48.0			3096.0 Secs (3096 Secs)		
								[==>]		[2]	

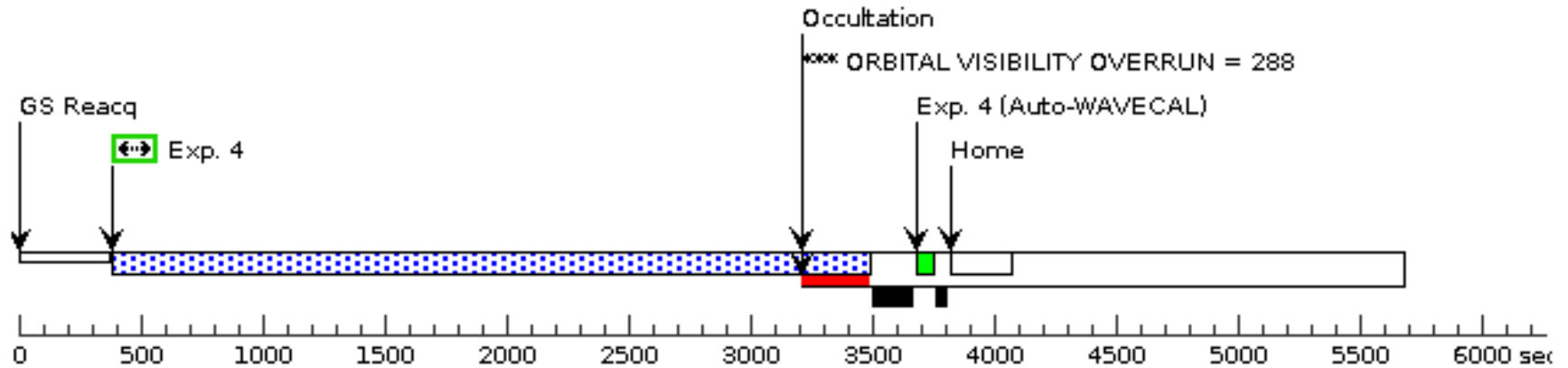
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

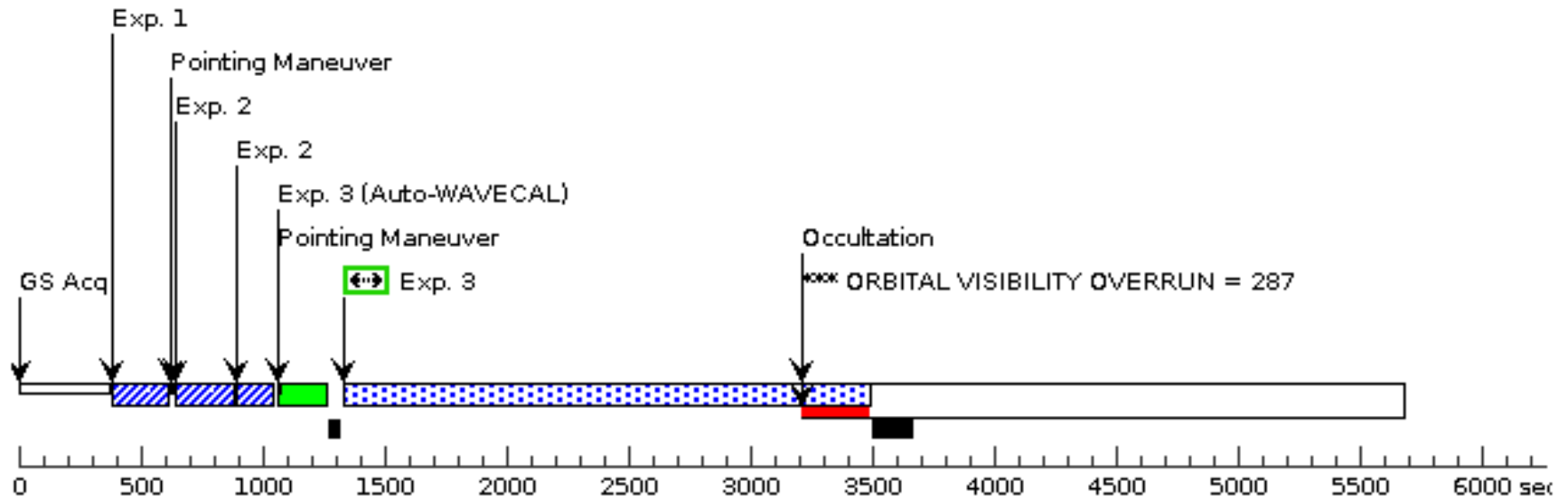


Proposal 17227 - PG0804_vis4 (14) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observation...

Visit	Proposal 17227, PG0804_vis4 (14), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(PG0804_vis4 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(PG0804_vis4 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(3)	PG0804+761	RA: 08 10 58.6643 (122.7444346d) Dec: +76 02 42.45 (76.04512d) Equinox: J2000		Proper Motion RA: 6.9111089590620305E-6 sec of time/yr Proper Motion Dec: 2.5E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.100		V=14.71+/-0.1 Flambda(1238 A) = 8.0e-14; Fla mbda(1394 A) = 9.5e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	PG0804_AC (3) PG0804+761 Q (STIS.ta.181 2778)	PG0804+761	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2.0 Secs (2 Secs)			
									[==>]		[1]	
	2	PG0804_AC (3) PG0804+761 QPEAK (STIS.ta.181 2777)	PG0804+761	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				2.0 Secs (2 Secs)			
									[==>]		[1]	
	3	PG0408-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 70			2140.0 Secs (2140 Secs)			
									[==>]		[1]	
	4	PG0804-Science (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=15 48.0			3096.0 Secs (3096 Secs)			
								[==>]		[2]		

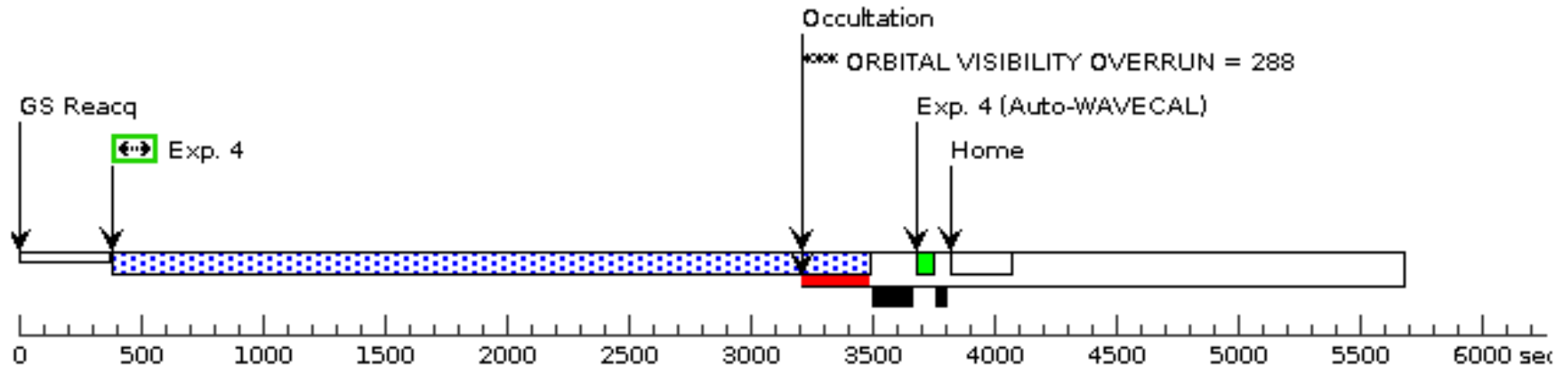
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

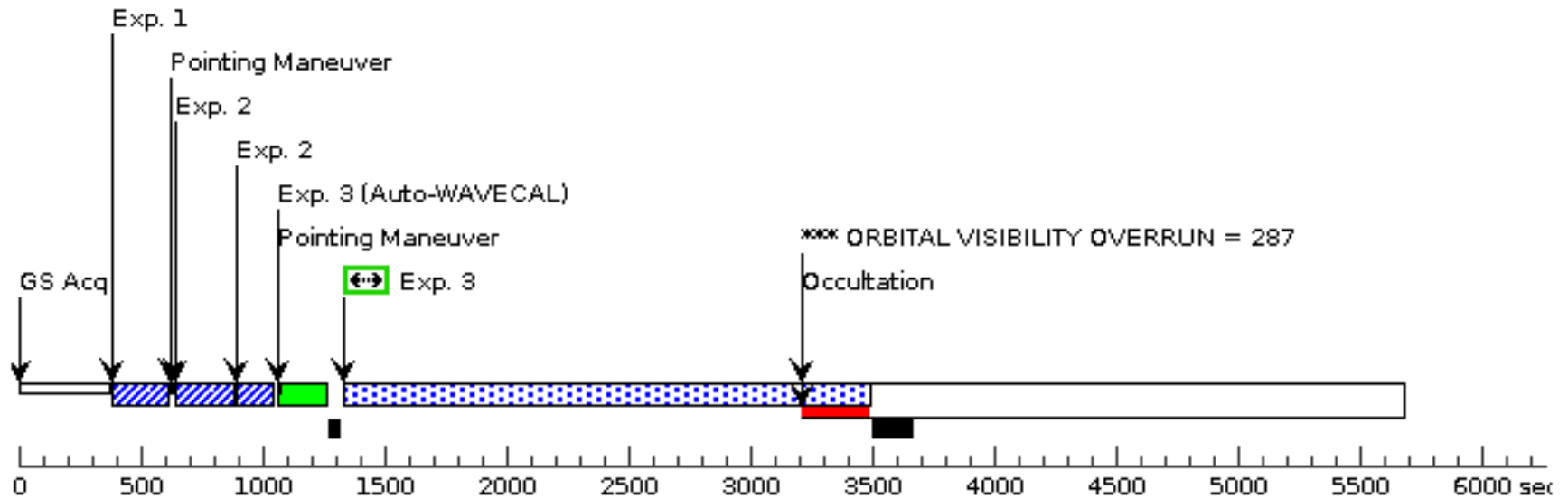


Proposal 17227 - PG0804_vis5 (15) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observation...

Visit	Proposal 17227, PG0804_vis5 (15), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(PG0804_vis5 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(PG0804_vis5 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(3)	PG0804+761	RA: 08 10 58.6643 (122.7444346d) Dec: +76 02 42.45 (76.04512d) Equinox: J2000		Proper Motion RA: 6.9111089590620305E-6 sec of time/yr Proper Motion Dec: 2.5E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.100		V=14.71+/-0.1 Flambda(1238 A) = 8.0e-14; Fla mbda(1394 A) = 9.5e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	PG0804_AC (3) PG0804+761 Q (STIS.ta.181 2778)	(3) PG0804+761	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2.0 Secs (2 Secs)			
									[==>]		[1]	
	2	PG0804_AC (3) PG0804+761 QPEAK (STIS.ta.181 2777)	(3) PG0804+761	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				2.0 Secs (2 Secs)			
									[==>]		[1]	
	3	PG0408-Sci (3) PG0804+761 ence (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=10 70			2140.0 Secs (2140 Secs)			
									[==>]		[1]	
	4	PG0804-Sci (3) PG0804+761 ence (STIS.sp.18 12779)	(3) PG0804+761	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=15 48.0			3096.0 Secs (3096 Secs)			
								[==>]		[2]		

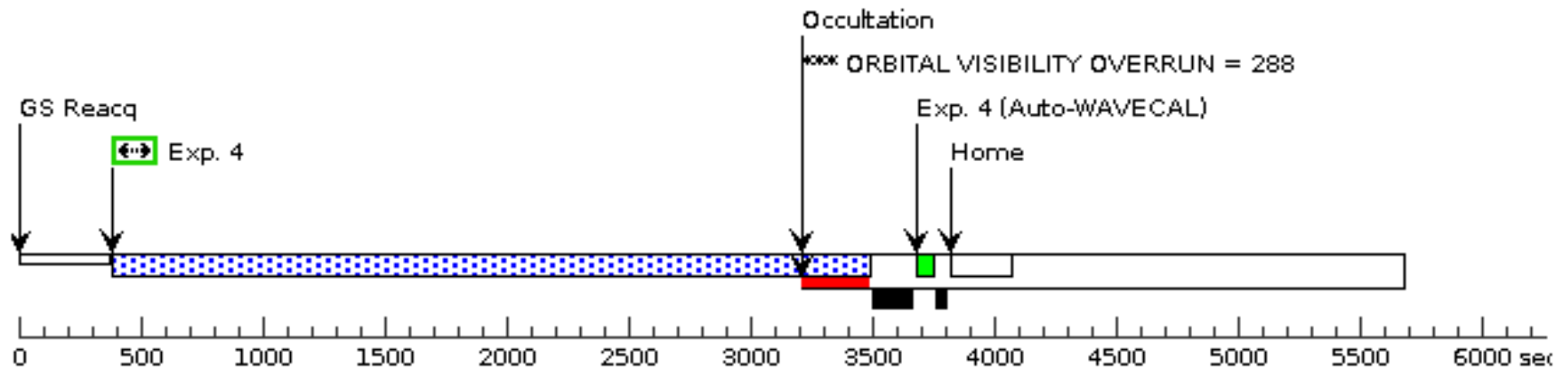
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

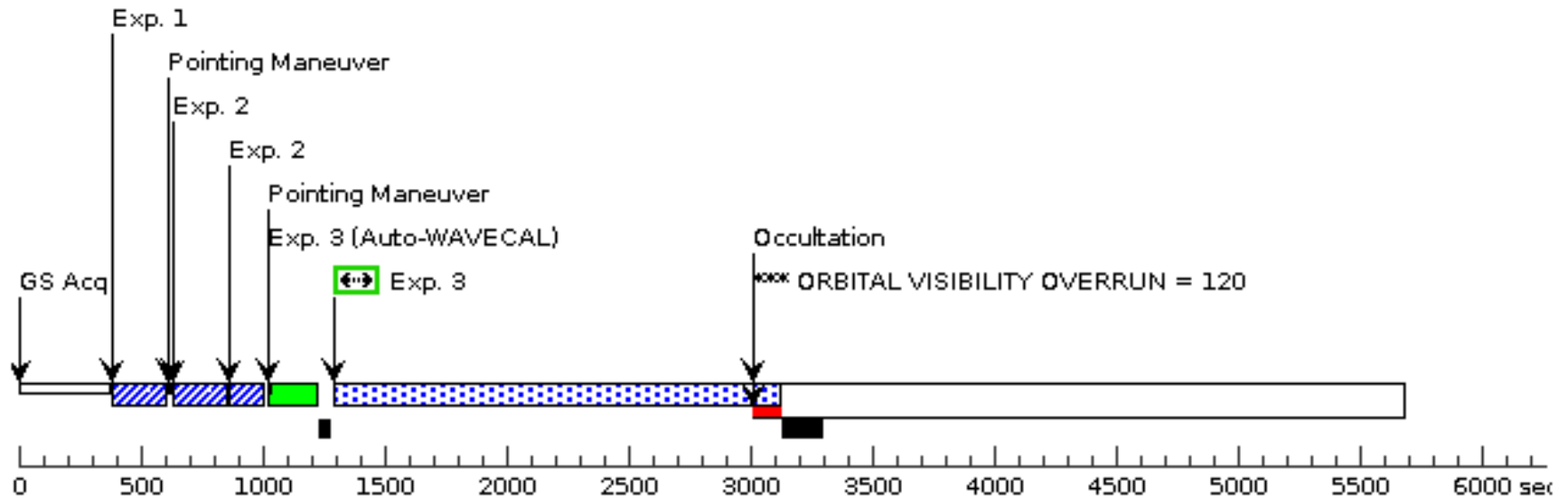


Proposal 17227 - MRK509_vis1 (10) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis1 (10), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis1 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis1 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

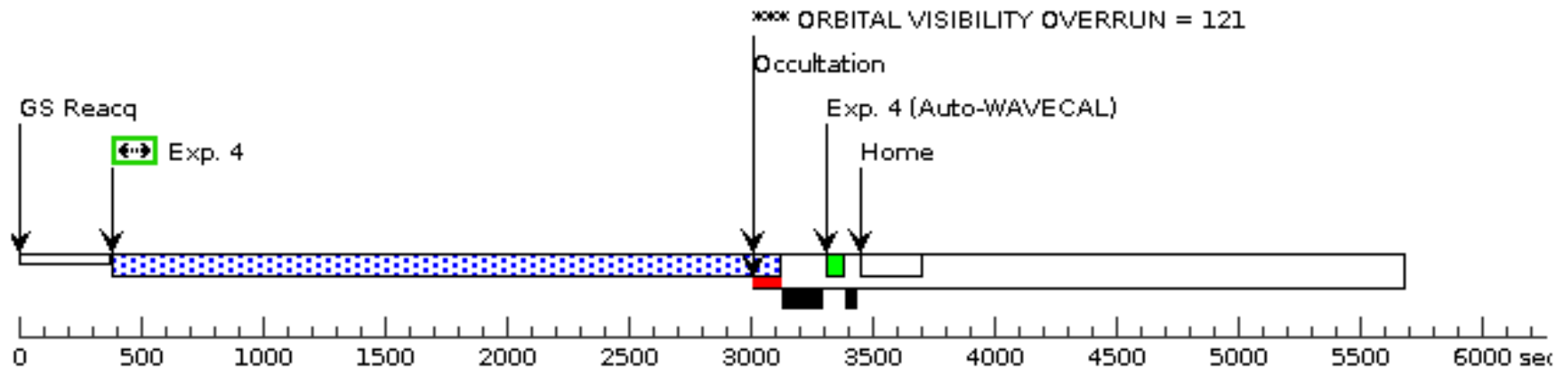
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

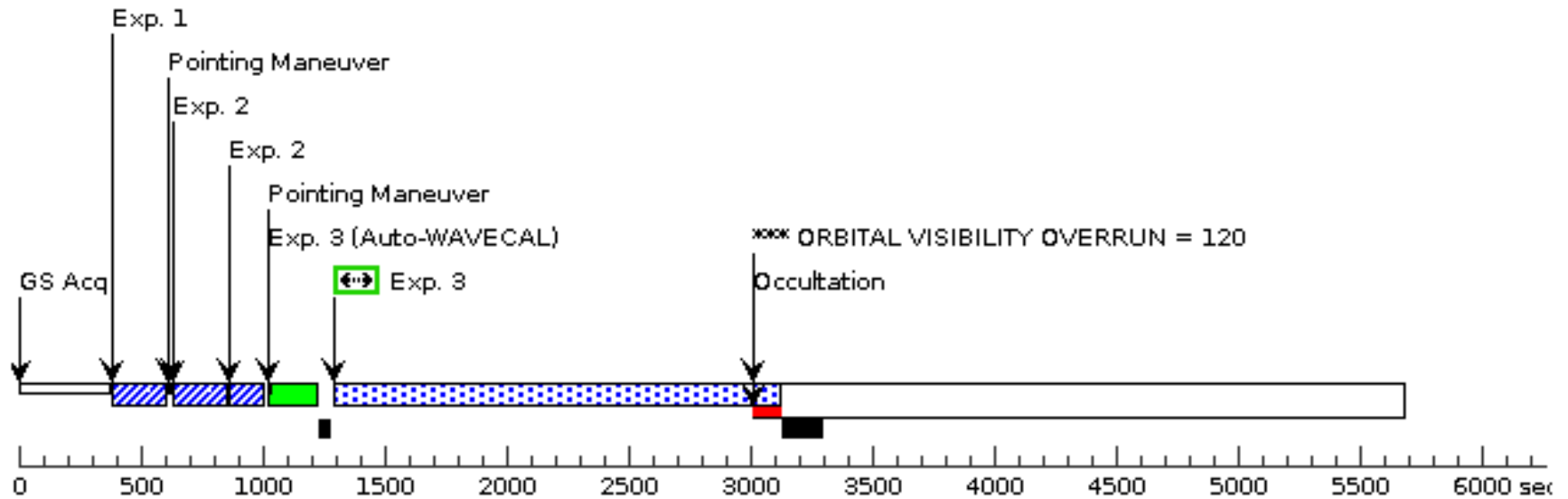


Proposal 17227 - MRK509_vis2 (16) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis2 (16), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis2 (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis2 (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Science (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Science (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

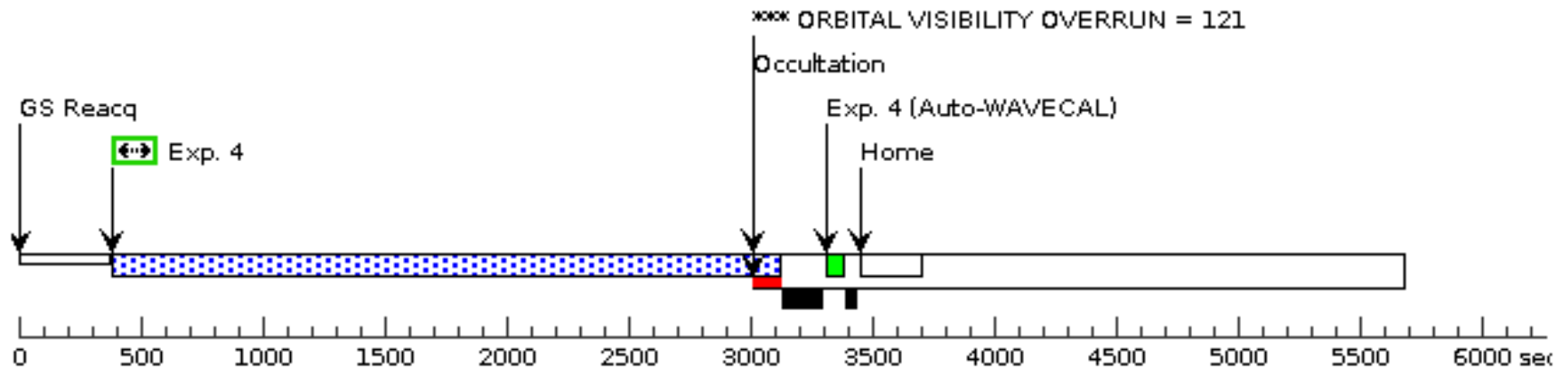
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

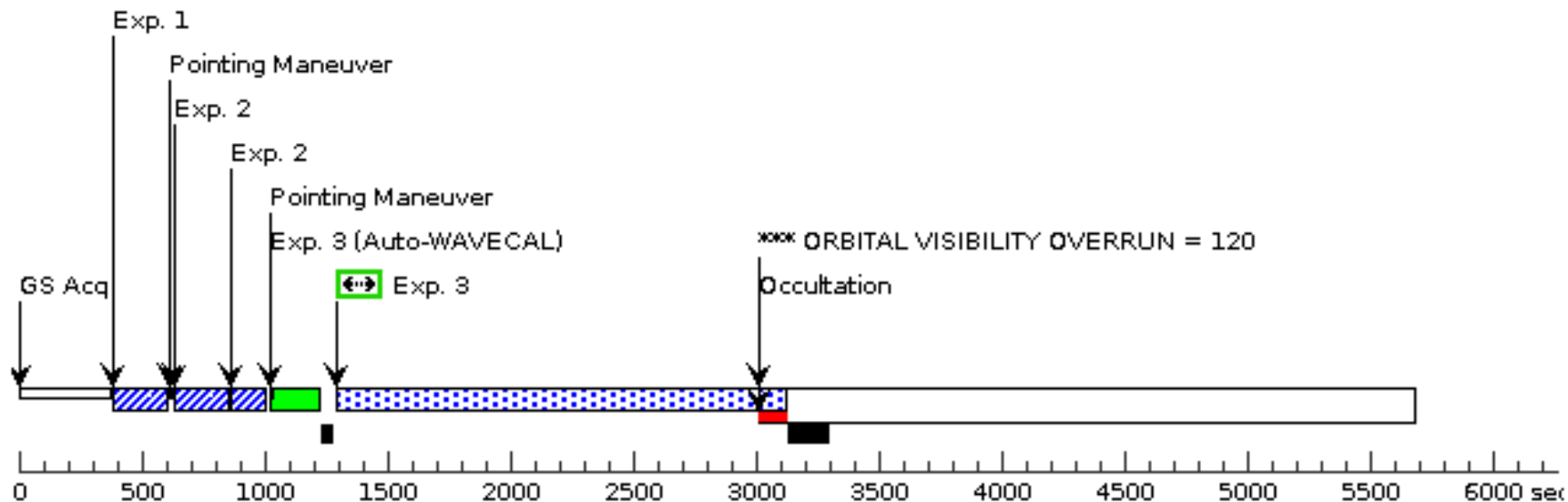


Proposal 17227 - MRK509_vis3 (17) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis3 (17), failed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
	Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.											
Diagnostics	(MRK509_vis3 (17)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis3 (17)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets												
	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000		Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP		MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)		
										[==>]		[1]
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09		MIRROR				0.3 Secs (0.3 Secs)		
										[==>]		[1]
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2		E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)		
										[==>]		[1]
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2		E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)		
									[==>]		[2]	

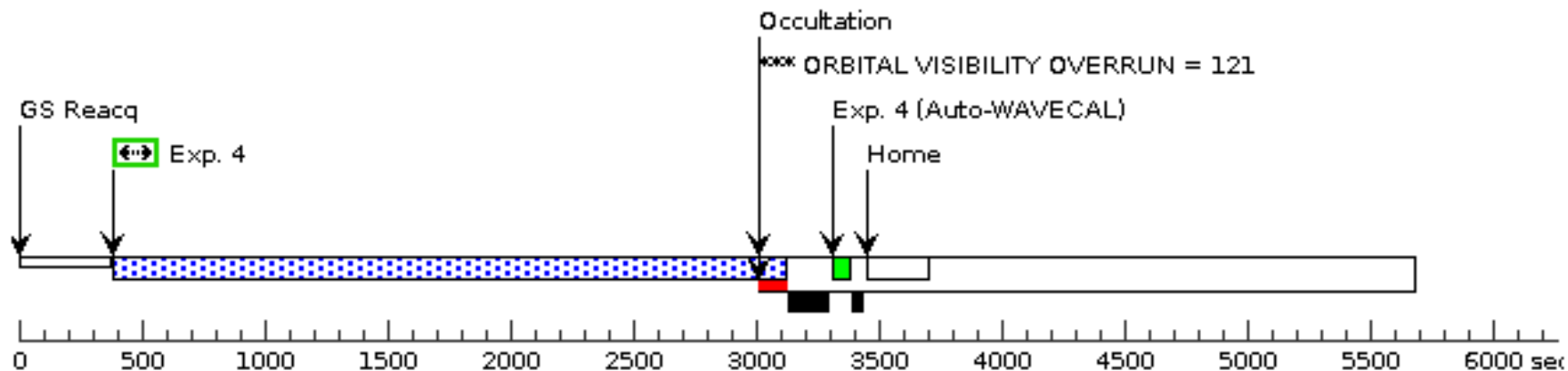
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

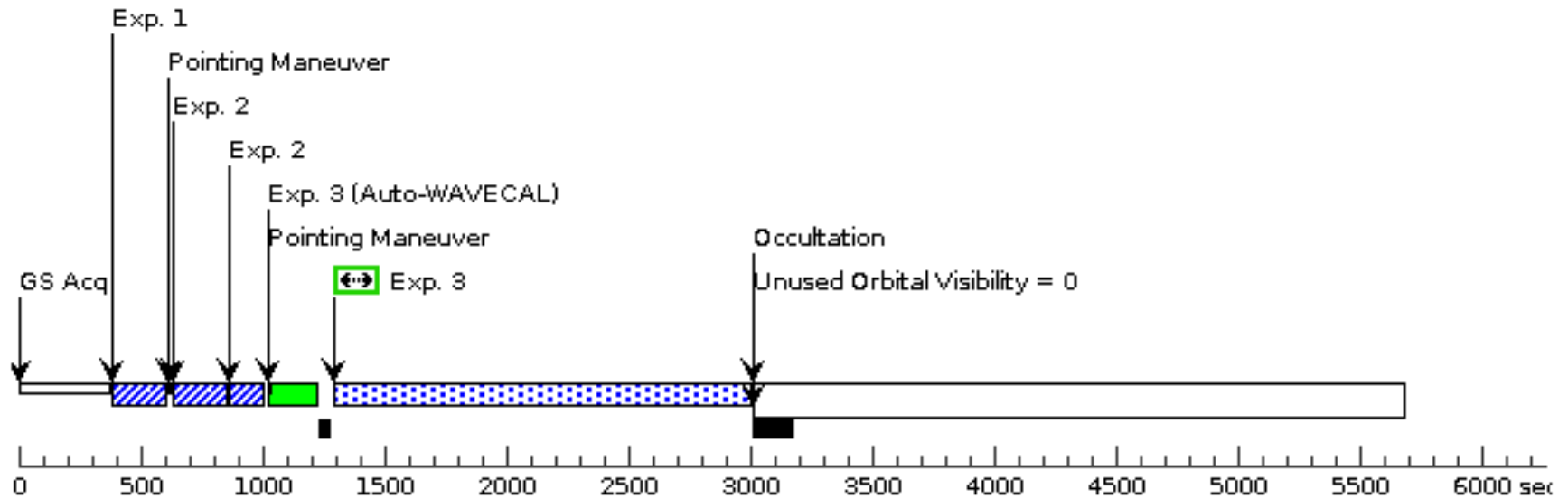


Proposal 17227 - MRK509 vis3 (26) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis3 (26), implementation							Fri Jun 07 19:01:06 GMT 2024		
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA									
	Special Requirements: (none)									
	Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.									
Copy of visit 17 to be the partial repeat of visits 17 and 19. (1 orbit to repeat in each visit of 17 and 19 = these two orbits)										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034	V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4 e-13; Flambda(1394 A) = 5.0e-14	Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.									
	Category=ISM									
	Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD]									
Extended=NO										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)	
									[==>]	[1]
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)	
									[==>]	[1]
	3	MRK509-Science (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1692 Secs)	
									[==>1692.0 Secs]	[1]
	4	MRK509-Science (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2605 Secs)	
									[==>2605.0 Secs]	[2]

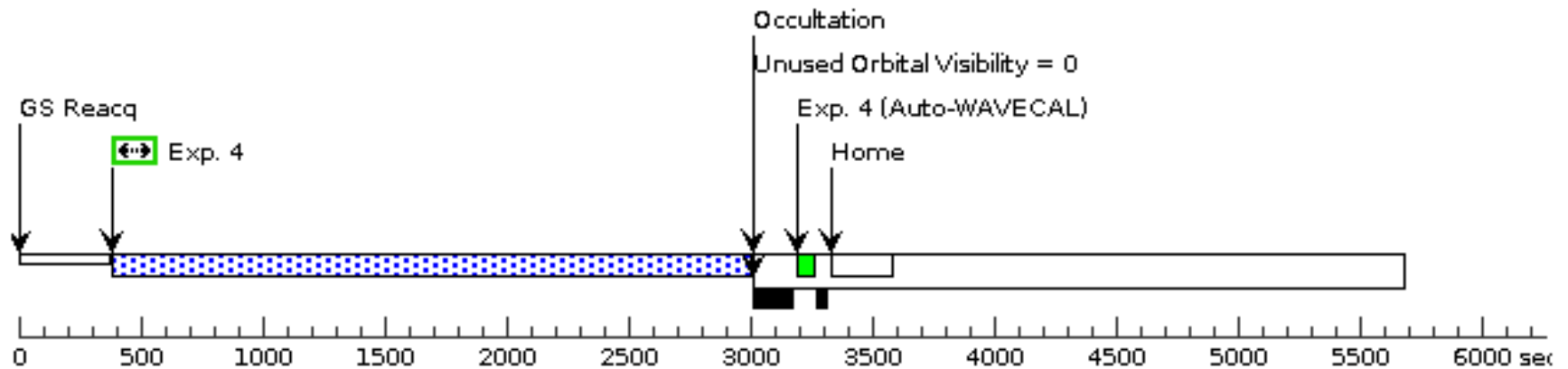
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

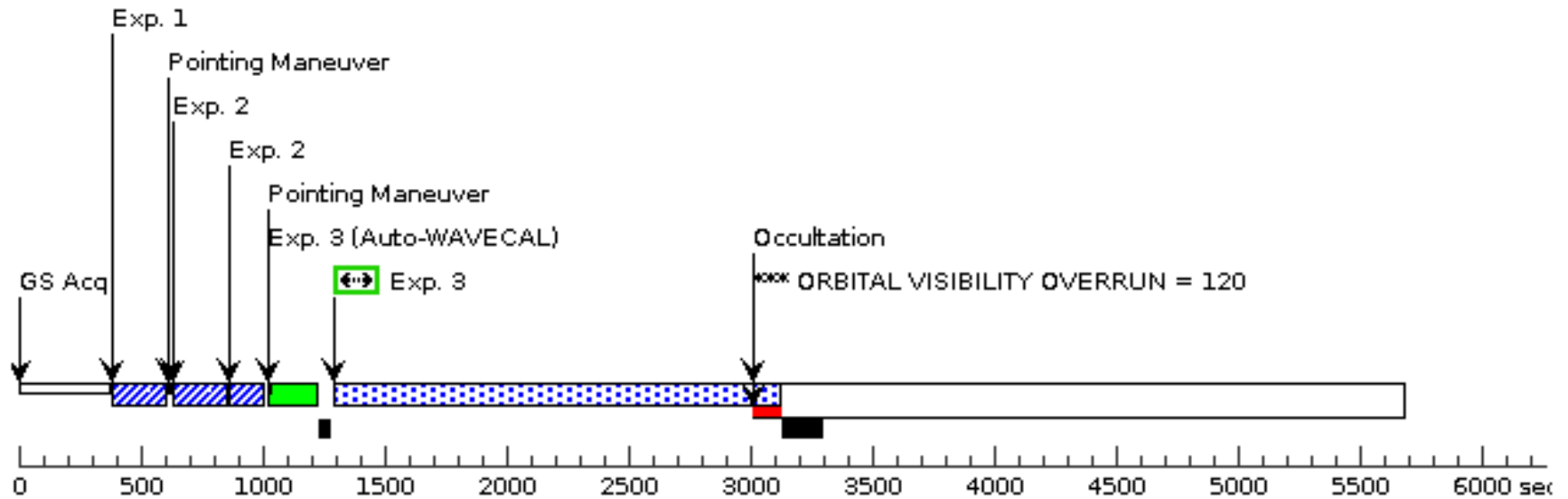


Proposal 17227 - MRK509 vis4 (18) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis4 (18), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis4 (18)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis4 (18)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

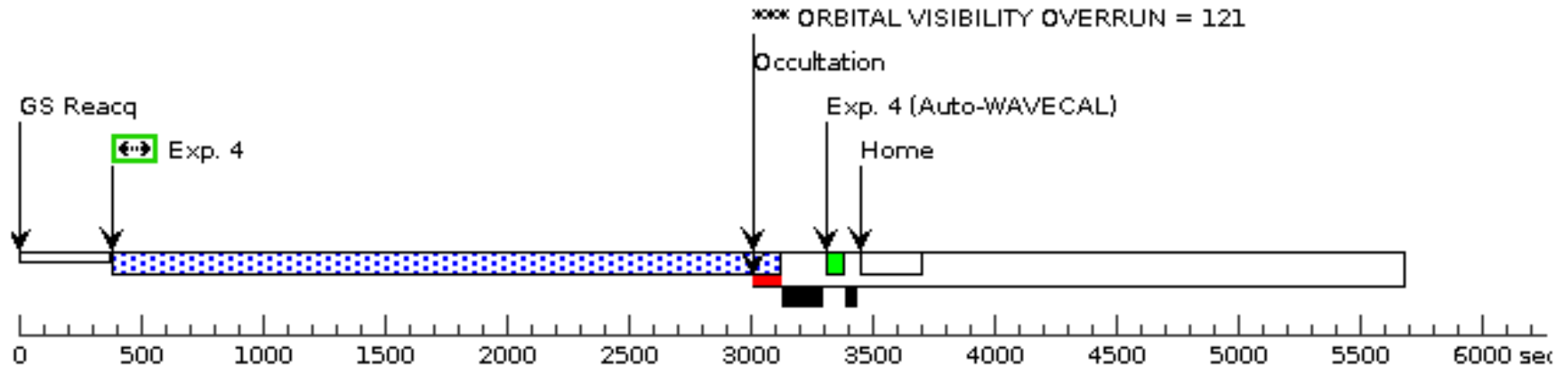
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

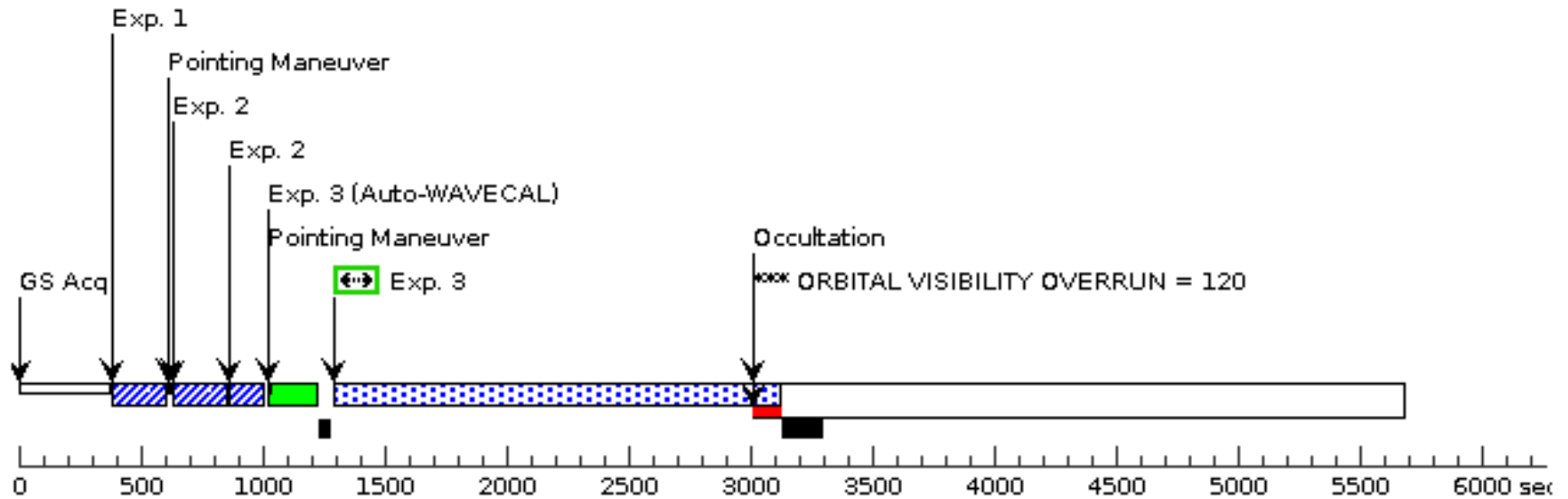


Proposal 17227 - MRK509_vis5 (19) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis5 (19), failed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis5 (19)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis5 (19)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

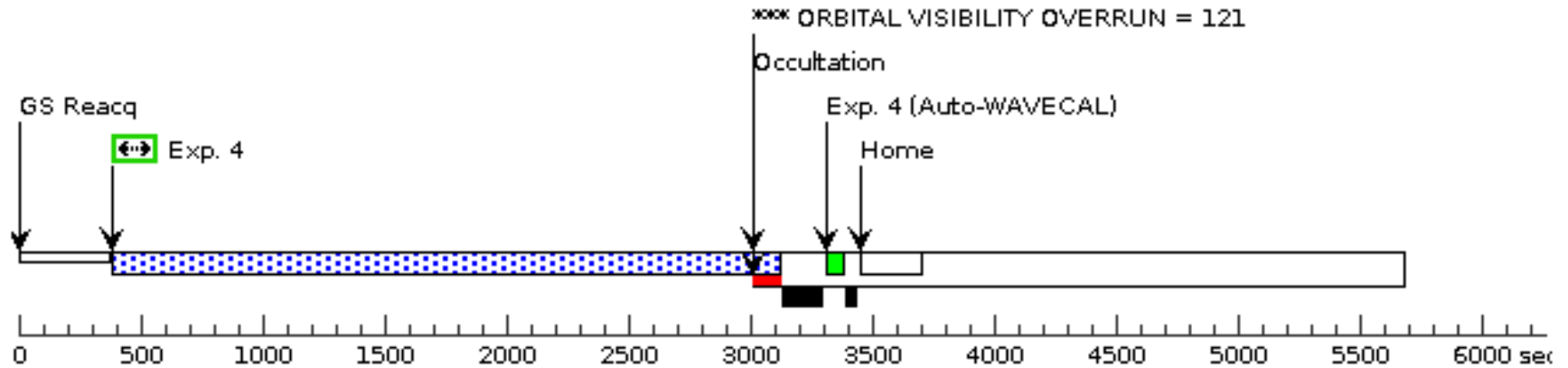
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

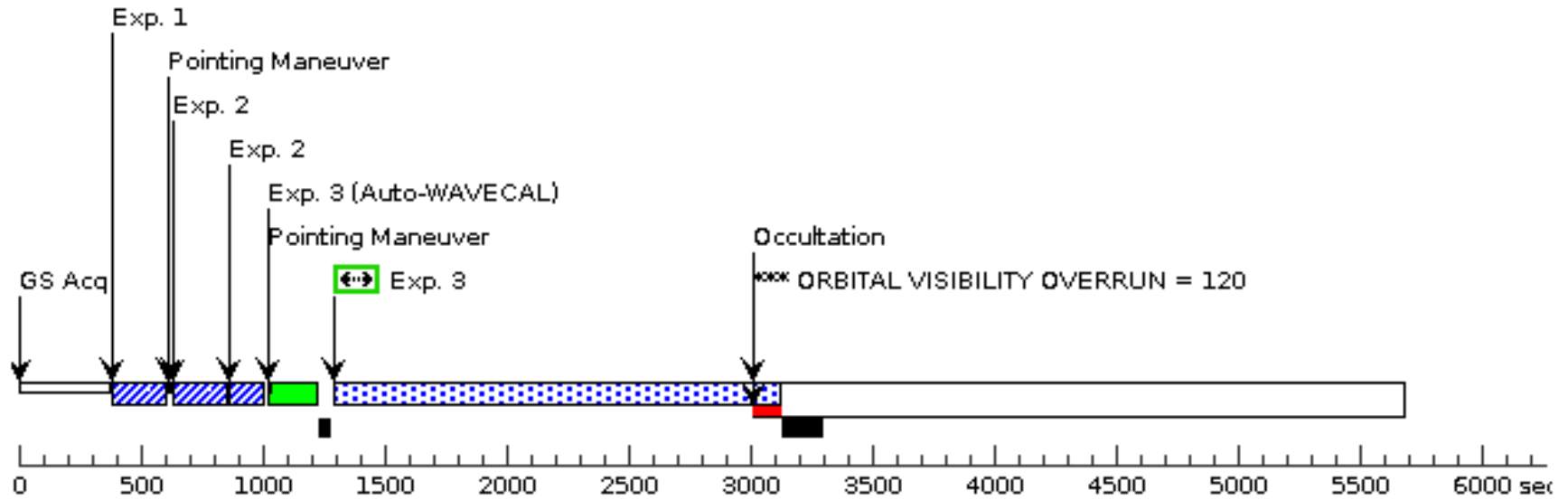


Proposal 17227 - MRK509_vis6 (20) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis6 (20), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis6 (20)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis6 (20)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Science (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Science (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

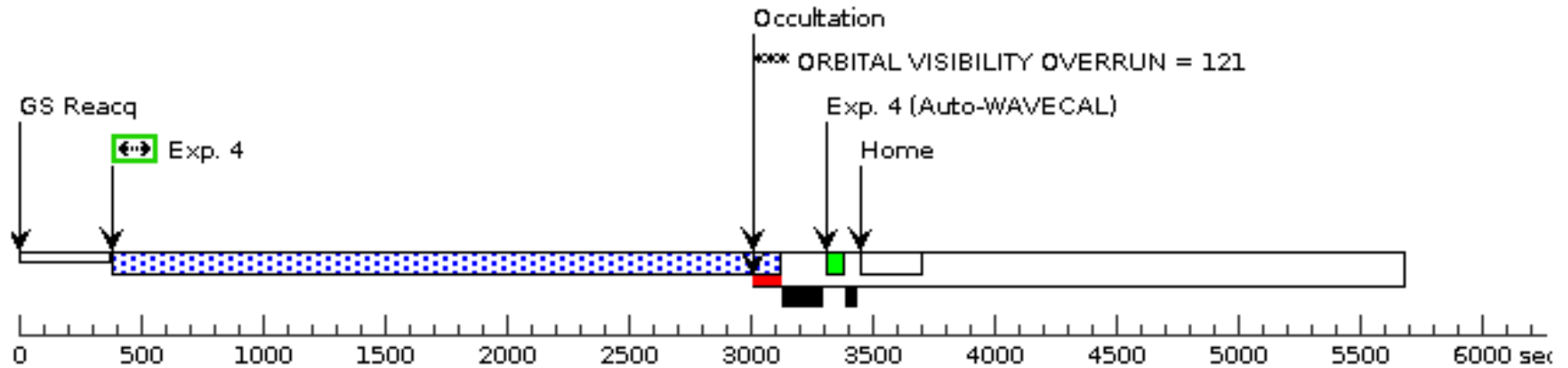
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

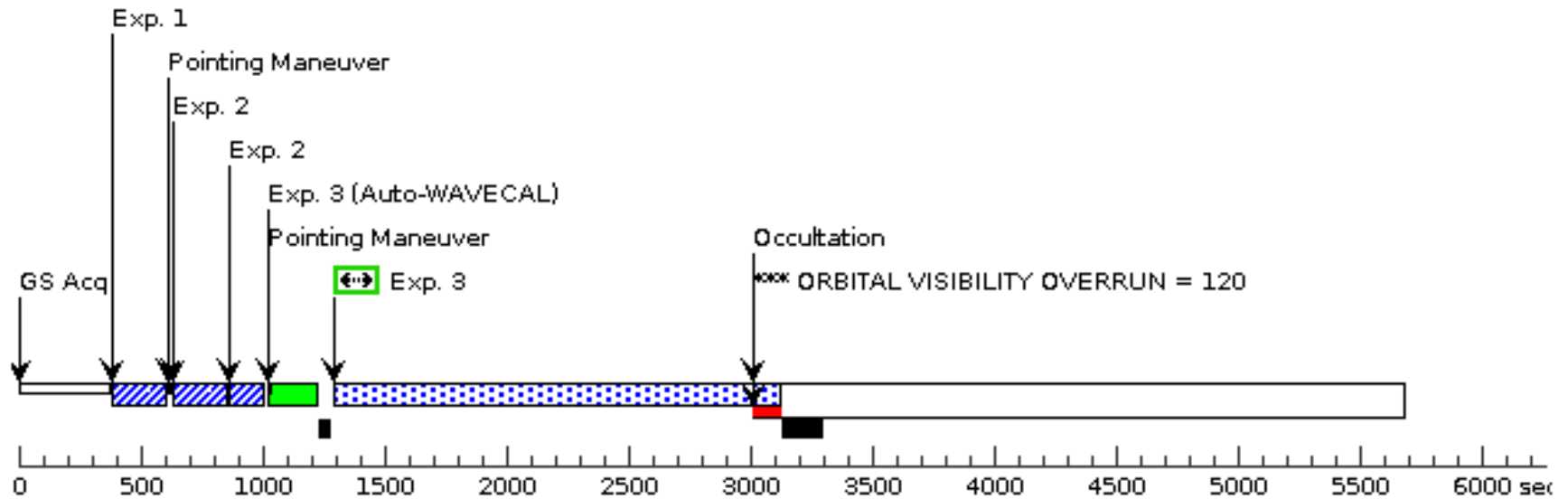


Proposal 17227 - MRK509_vis7 (21) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis7 (21), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis7 (21)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis7 (21)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4 e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

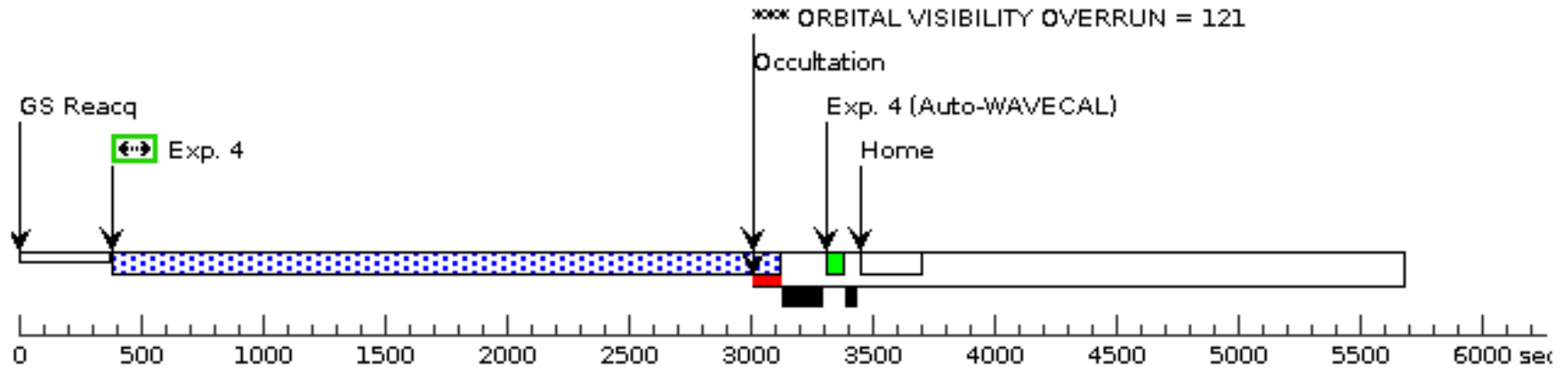
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

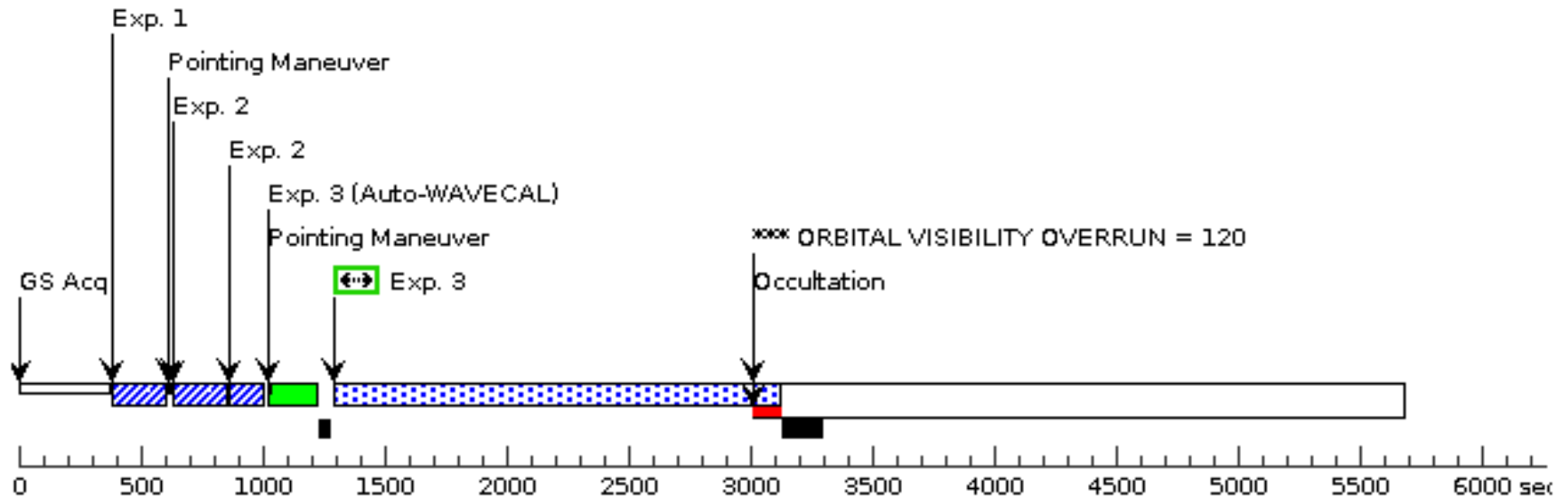


Proposal 17227 - MRK509 vis8 (22) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis8 (22), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis8 (22)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis8 (22)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000		Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

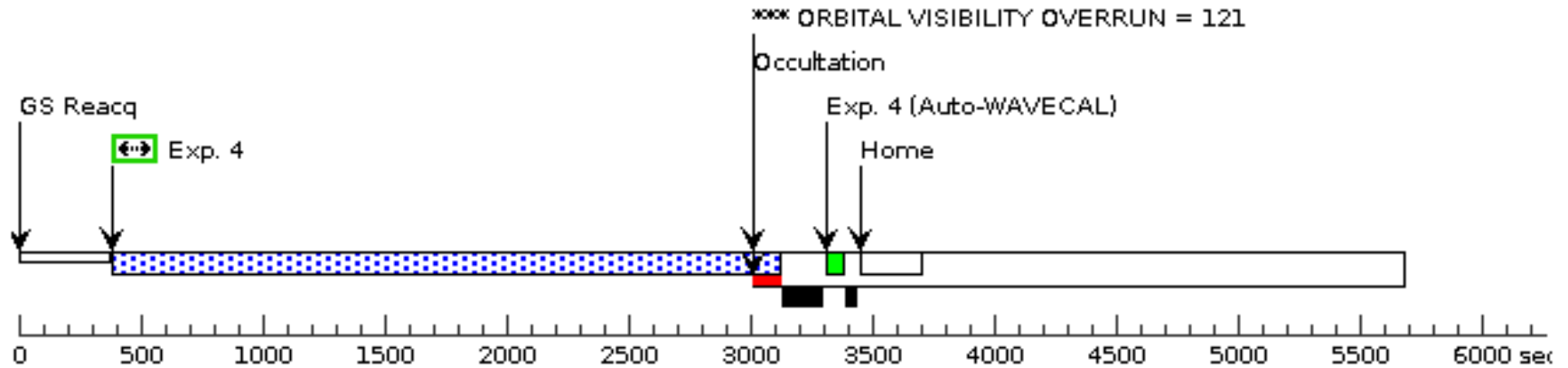
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

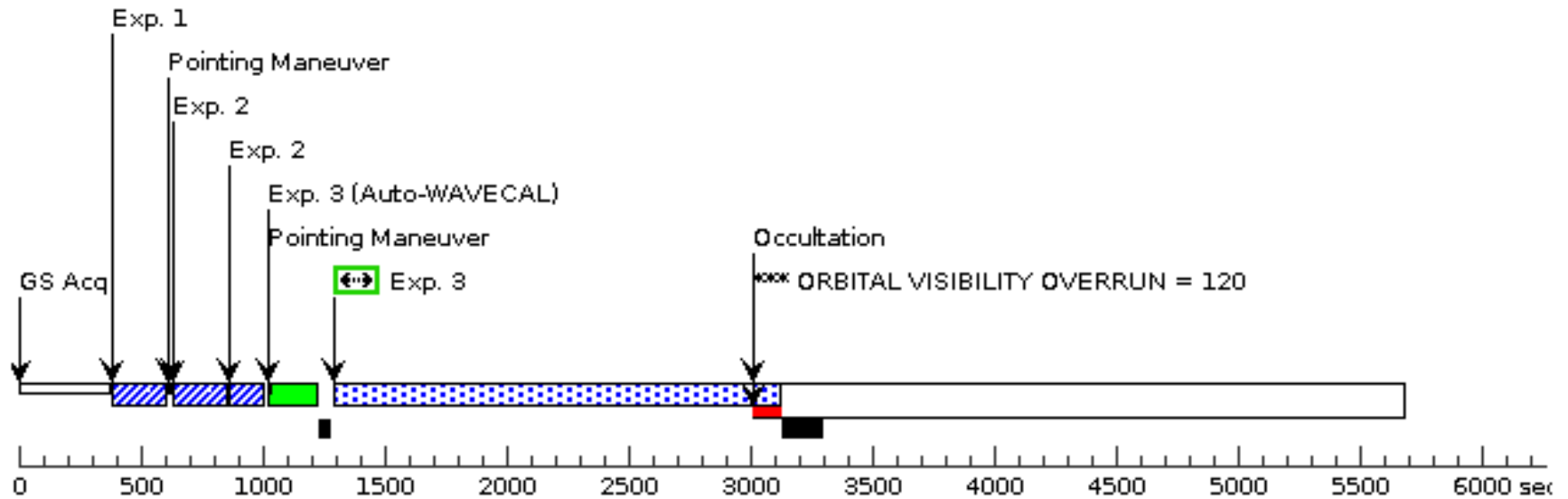


Proposal 17227 - MRK509 vis9 (23) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observatio...

Visit	Proposal 17227, MRK509_vis9 (23), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis9 (23)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis9 (23)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000		Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

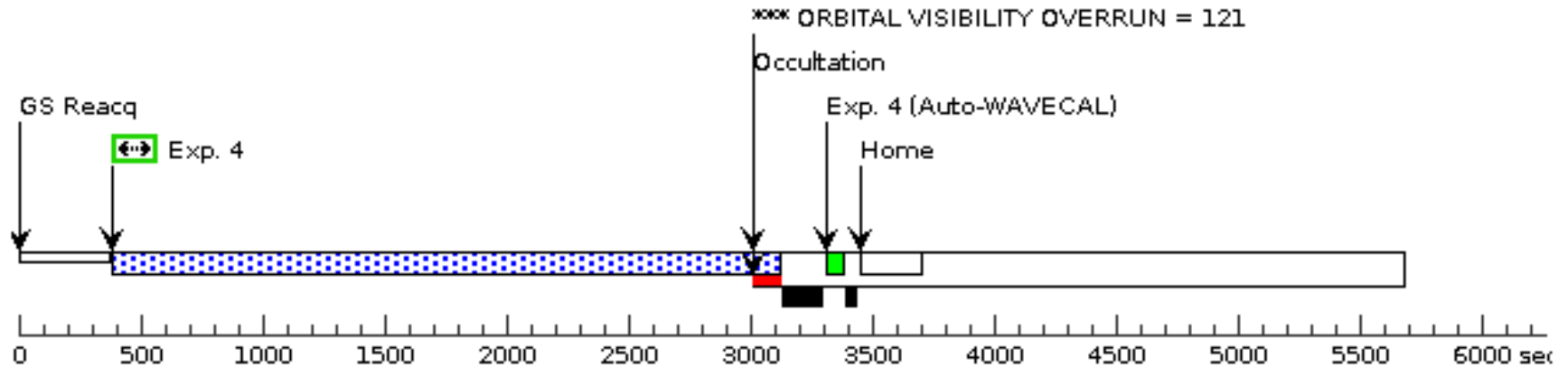
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

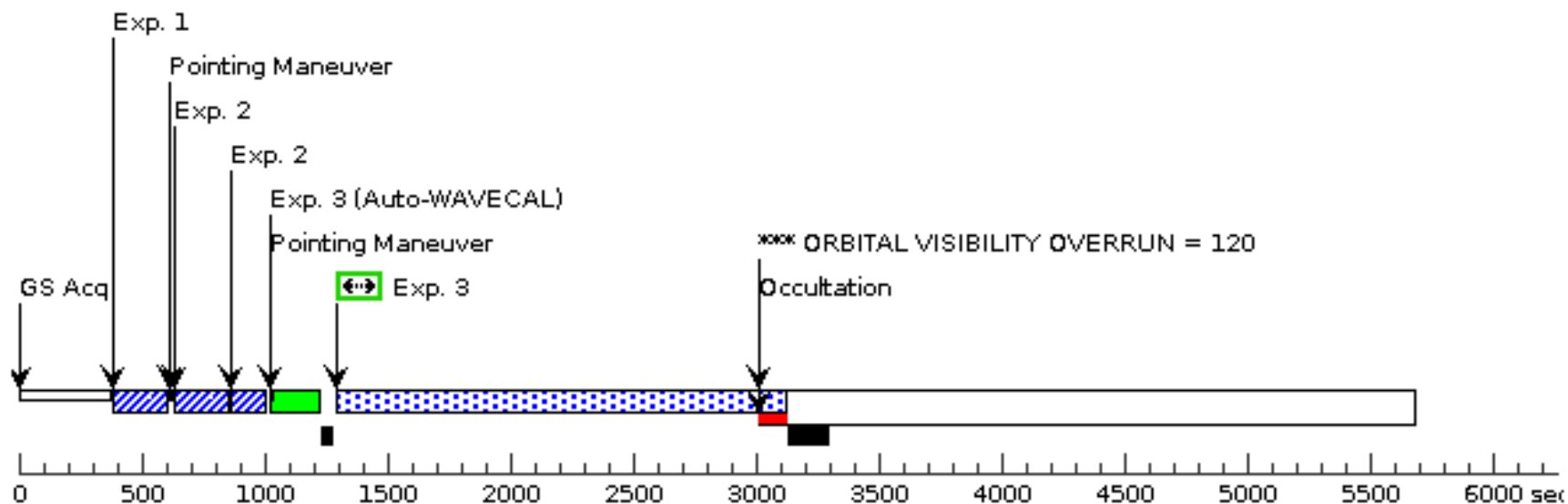


Proposal 17227 - MRK509_vis10 (24) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observati...

Visit	Proposal 17227, MRK509_vis10 (24), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis10 (24)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis10 (24)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4 e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

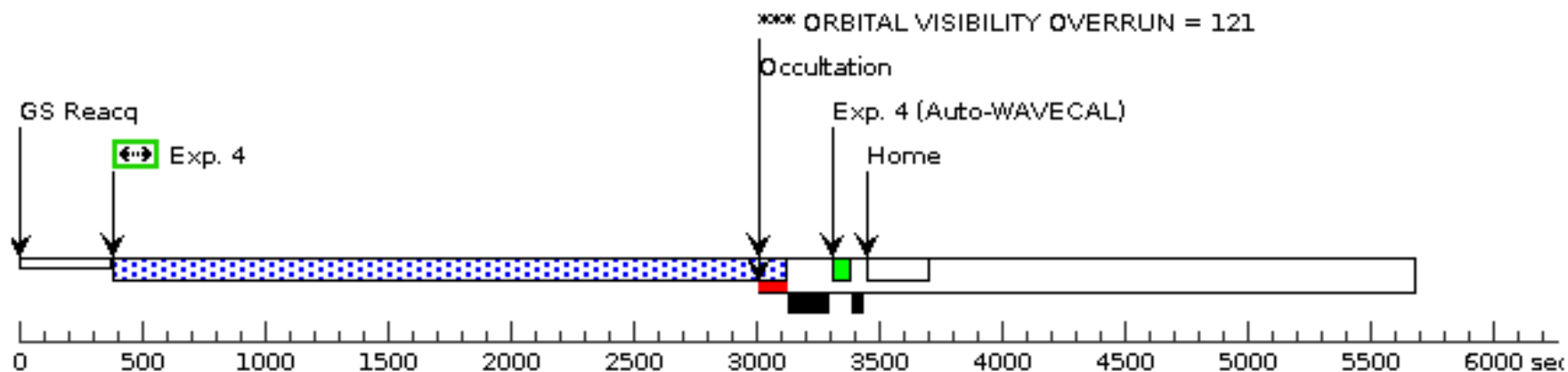
Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

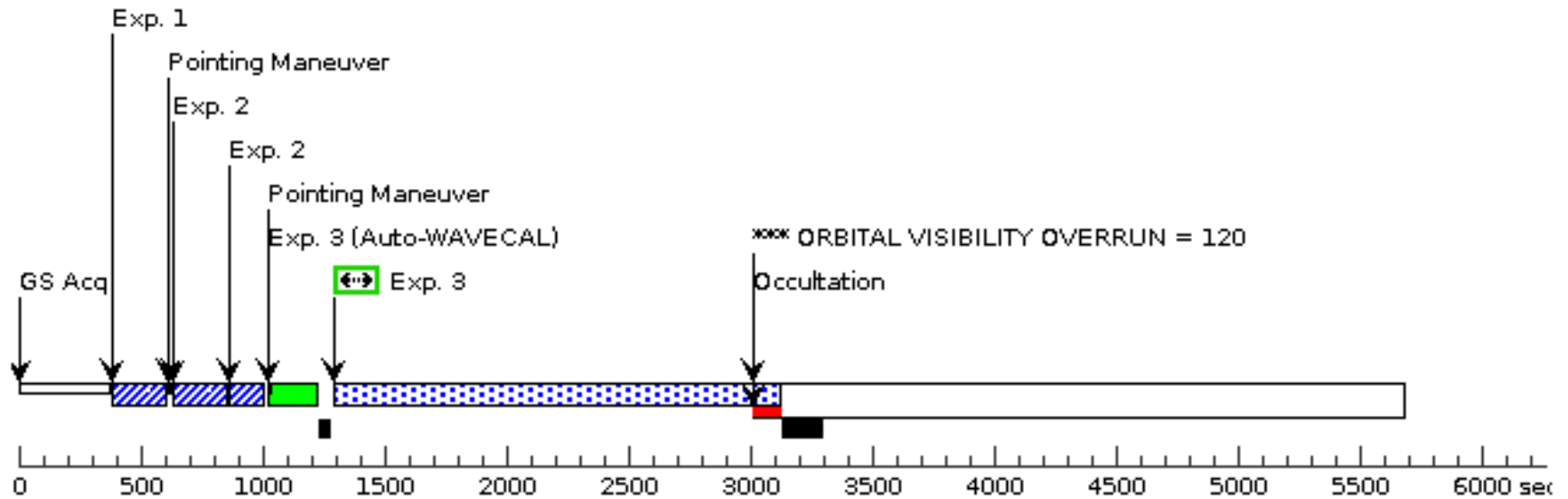


Proposal 17227 - MRK509_vis11 (25) - Unique Constraints on the Physics of Circumgalactic Gas from Ultrahigh Resolution Observati...

Visit	Proposal 17227, MRK509_vis11 (25), completed										Fri Jun 07 19:01:06 GMT 2024	
	Diagnostic Status: Warning											
	Scientific Instruments: STIS/CCD, STIS/FUV-MAMA											
	Special Requirements: (none)											
Comments: Important scheduling note: please ensure that the STIS MAMA detector has been turned off for 10 hours or more (based on ISR ACS 2018-07) before this visit begins. This will prevent STIS hot pixels from corrupting the spectra as the MAMA heats up.												
Diagnostics	(MRK509_vis11 (25)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
	(MRK509_vis11 (25)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous				
	(1)	MRK-509	RA: 20 44 9.7505 (311.0406271d) Dec: -10 43 24.73 (-10.72354d) Equinox: J2000	Proper Motion RA: 4.0710957931701643E-7 sec of time/yr Proper Motion Dec: 2.7999999999999996E-5 arcsec/yr Epoch of Position: 2015.5 Redshift: 0.034		V=13.12+/-0.1 GALEX FUV mag = 14.62 +/- 0.01; GALEX NUV mag = 14.50 +/- 0.01; Flambda(1238 A) = 1.4 e-13; Flambda(1394 A) = 5.0e-14		Reference Frame: ICRS				
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=ISM Description=[ABSORPTION LINE SYSTEM - GALACTIC, CORONAL GAS, HALO, HIGH VELOCITY CLOUD] Extended=NO											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1	MRK509-A CQ (STIS.ta.181 2421)	(1) MRK-509	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	2	MRK509-A CQPEAK (STIS.ta.181 2422)	(1) MRK-509	STIS/CCD, ACQ/PEAK, 0.2X0.09	MIRROR				0.3 Secs (0.3 Secs)			
									[==>]		[1]	
	3	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=90 6.			1812.0 Secs (1812 Secs)			
									[==>]		[1]	
	4	MRK509-Sc ience (STIS.sp.18 12423)	(1) MRK-509	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1307 A	BUFFER-TIME=13 63.0			2726.0 Secs (2726 Secs)			
								[==>]		[2]		

Orbit 1

Server Version: 20240604



Orbit 2

Server Version: 20240604

