



## 11611 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Cycle: 17, Proposal Category: GO

(Availability Mode: SUPPORTED)

### INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
<b>Prof. D. Michael Crenshaw (PI)</b>	<b>Georgia State University Research Foundation</b>	<b>crenshaw@chara.gsu.edu</b>
Prof. Steven Kraemer (CoI)	Catholic University of America	stiskraemer@yancey.gsfc.nasa.gov
Dr. Varendra Das (CoI)	Indian Institute of Astrophysics	alvin@iiap.res.in
Dr. Henrique R. Schmitt (CoI)	Naval Research Laboratory	hschmitt@ccs.nrl.navy.mil

### VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) MRK-766	STIS/CCD	1	01-Jun-2009 21:24:09.0	yes
02	(1) MRK-766	STIS/CCD	1	01-Jun-2009 21:24:13.0	yes
03	(2) MRK-1040	STIS/CCD	1	01-Jun-2009 21:24:16.0	yes
04	(2) MRK-1040	STIS/CCD	1	01-Jun-2009 21:24:19.0	yes
05	(3) MRK-705	STIS/CCD	1	01-Jun-2009 21:24:21.0	yes
06	(3) MRK-705	STIS/CCD	1	01-Jun-2009 21:24:24.0	yes

6 Total Orbits Used

### ABSTRACT

We will obtain spatially resolved spectra of 3 Narrow-Line Seyfert 1 galaxies (NLS1s) with the STIS G430M grating centered on the bright [O III] emission lines. We will measure the radial velocities of the [O III] lines across the narrow-line regions of these AGN and determine the inclinations of their torus/accretion-disk axes via our kinematic models. Our goal is to answer the following question: are NLS1s viewed pole-on? If so, then the narrow widths of their permitted lines may be due to geometric effects, rather than low black hole masses and correspondingly high Eddington ratios as indicated by the currently popular paradigm for NLS1s.

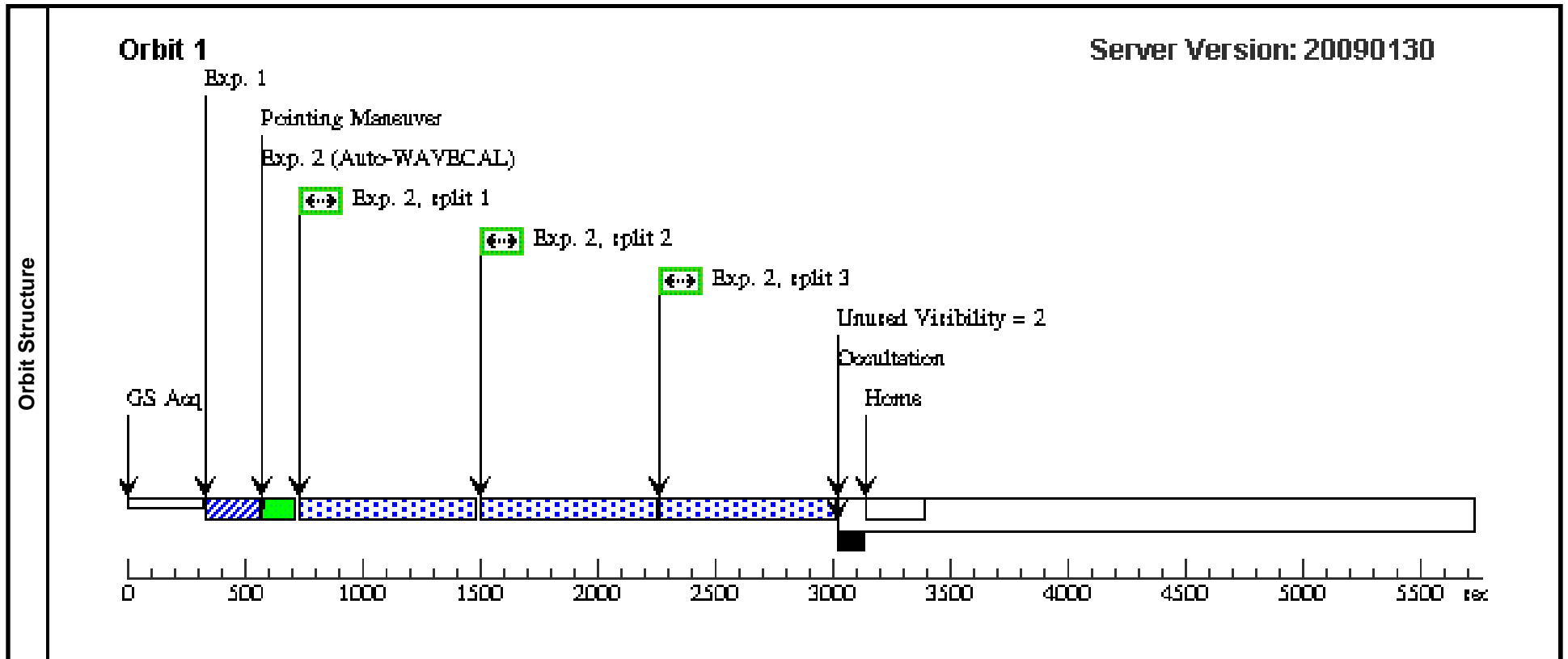
### **OBSERVING DESCRIPTION**

We will obtain long-slit STIS spectra of each of our 3 targets at two roughly perpendicular slit position angles. Due to the compactness of the NLRs in our targets, the 52 x 0.1 arcsec slit is essential for isolating spatially distinct regions. We will use the G430M grating centered on [O~III] 5007, which is the brightest emission line. Based on our previous experience, the velocity resolution provided by this grating (30 km/sec) is ideal for separating distinct kinematic components and measuring accurate velocity centroids and dispersions for each component. We will use the available HST [O III] images (Schmitt et al. 2003) to place the slits along the major and minor axes of the narrow-line regions. We will use a standard point-source target acquisition.

Proposal 11611 - Visit 01 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Tue Jun 02 01:24:27 GMT 2009

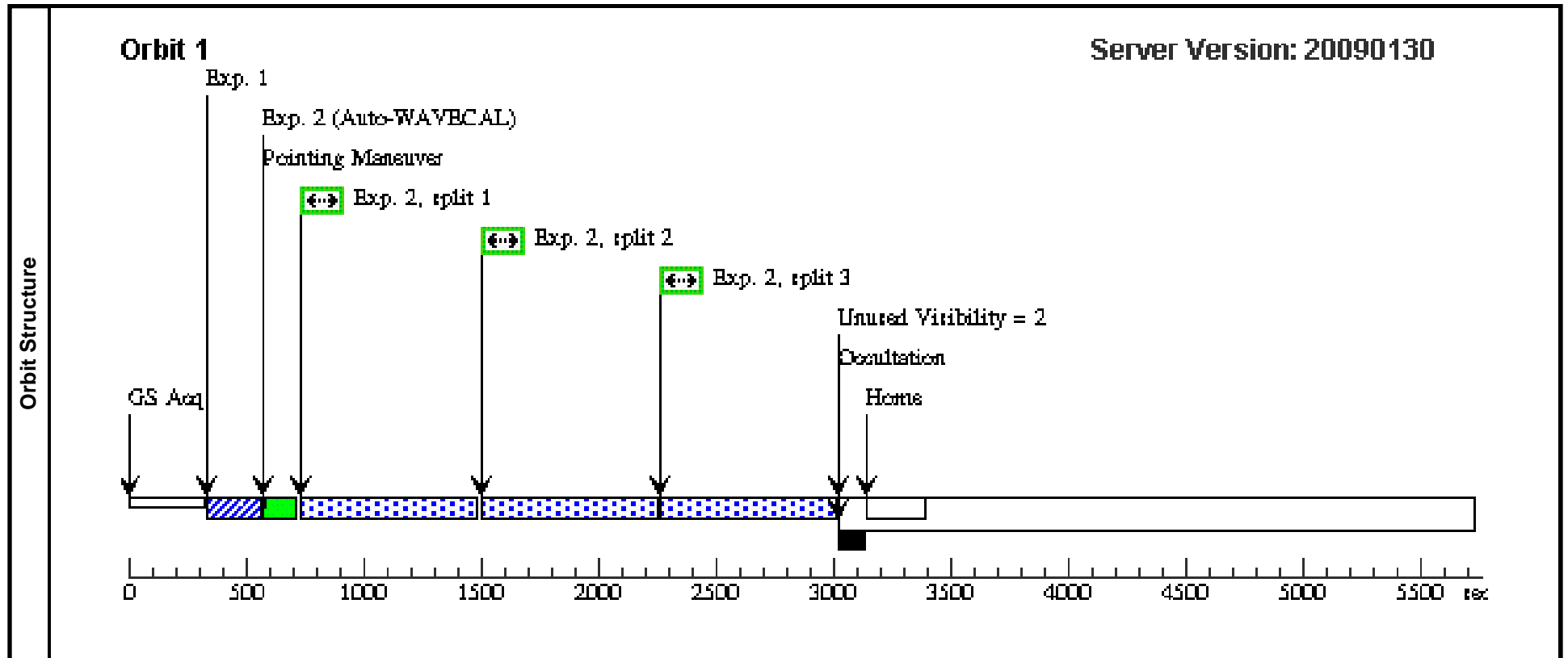
Visit	<b>Proposal 11611, Visit 01, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ORIENT 175D TO 195 D; ORIENT 355D TO 15 D									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	MRK-766	RA: 12 18 26.5100 (184.6104583d) Dec: +29 48 46.30 (29.81286d) Equinox: J2000		V=13.7	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) MRK-766		STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O BASE1B3		1 Secs [==>]	[1]
	2	(1) MRK-766		STIS/CCD, ACCUM, 52X0.1	G430M 5093 A	CR-SPLIT=3			2148 Secs [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]



Proposal 11611 - Visit 02 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Tue Jun 02 01:24:27 GMT 2009

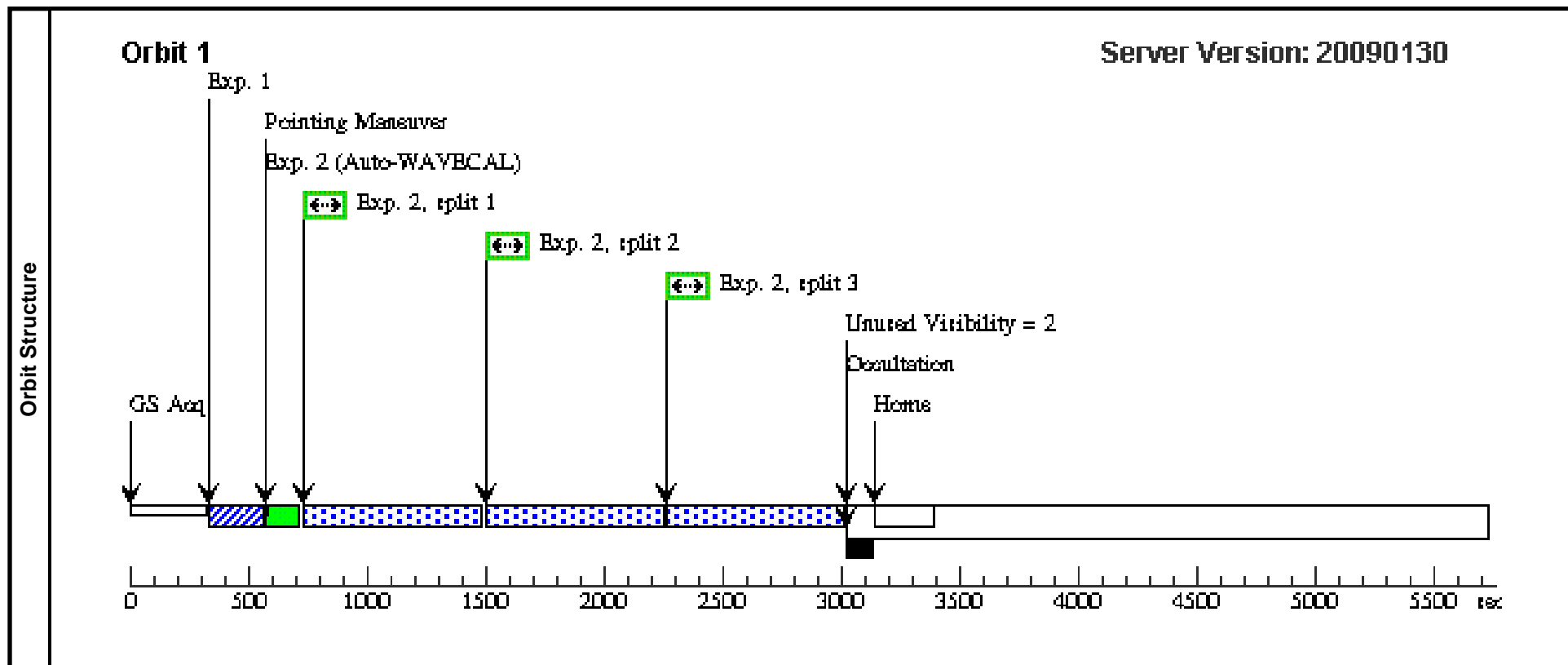
<b>Visit</b>	<b>Proposal 11611, Visit 02, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ORIENT 85D TO 105 D; ORIENT 265D TO 285 D									
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>			
(1)		MRK-766	RA: 12 18 26.5100 (184.6104583d) Dec: +29 48 46.30 (29.81286d) Equinox: J2000		V=13.7	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>									
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1	(1) MRK-766	(1) MRK-766	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs	
									[==>]	[1]
	2	(1) MRK-766	(1) MRK-766	STIS/CCD, ACCUM, 52X0.1	G430M 5093 A	CR-SPLIT=3			2148 Secs	
								[==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]	



Proposal 11611 - Visit 03 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Tue Jun 02 01:24:28 GMT 2009

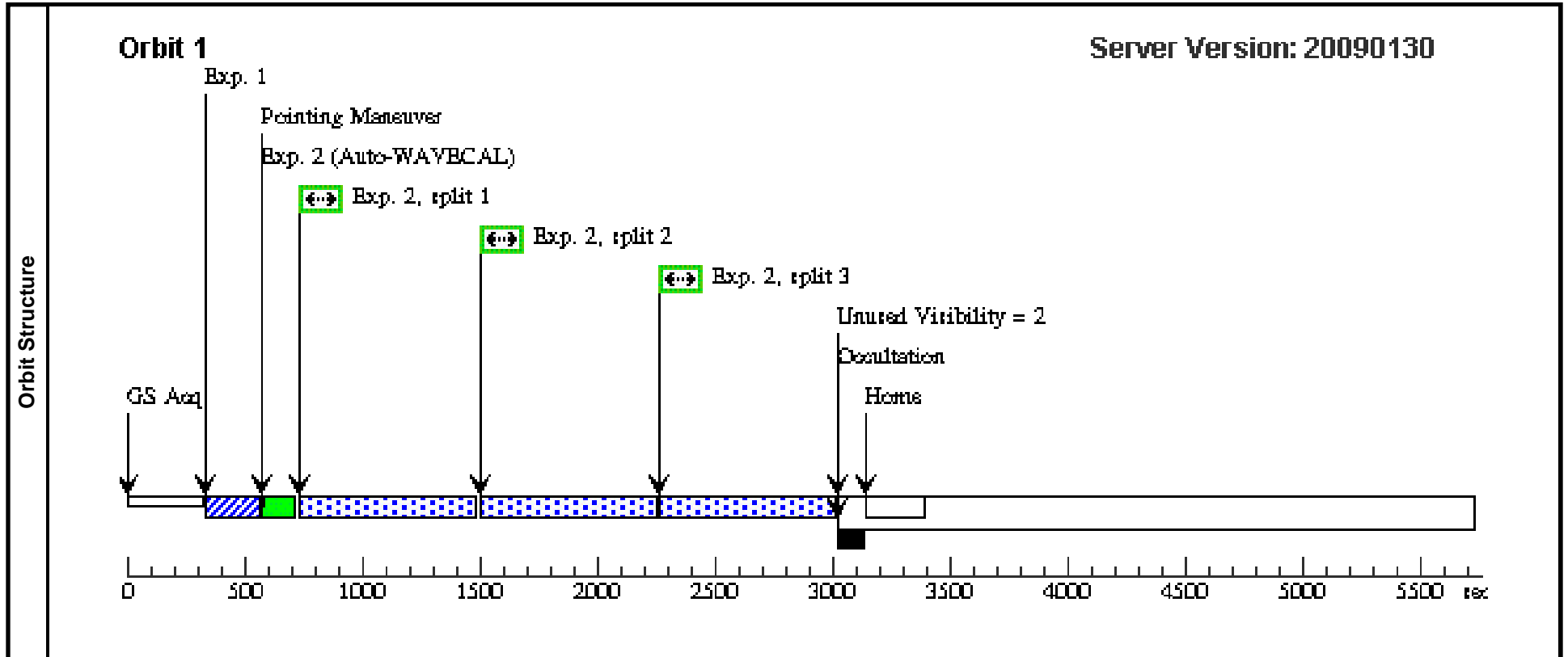
<b>Visit</b>	<b>Proposal 11611, Visit 03, implementation</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ORIENT 75D TO 95 D; ORIENT 255D TO 275 D									
	(Exposure 1 (Visit 03) special requirements) Warning (Form): The specified GS Acq Scenario is not in the current list of valid scenarios.									
<b>Diagnosics</b>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(2)	MRK-1040	RA: 02 28 14.5300 (37.0605417d) Dec: +31 18 40.80 (31.31133d) Equinox: J2000		V=14.4	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1	(2) MRK-1040		STIS/CCD, ACQ, F28X50LP	MIRROR		GS ACQ SCENARI O BASE1BR		1 Secs	
									[==>]	[1]
	2	(2) MRK-1040		STIS/CCD, ACCUM, 52X0.1	G430M 5093 A	CR-SPLIT=3			2148 Secs	
								[==>(Split 1)]		
								[==>(Split 2)]		
								[==>(Split 3)]	[1]	



Proposal 11611 - Visit 04 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Tue Jun 02 01:24:28 GMT 2009

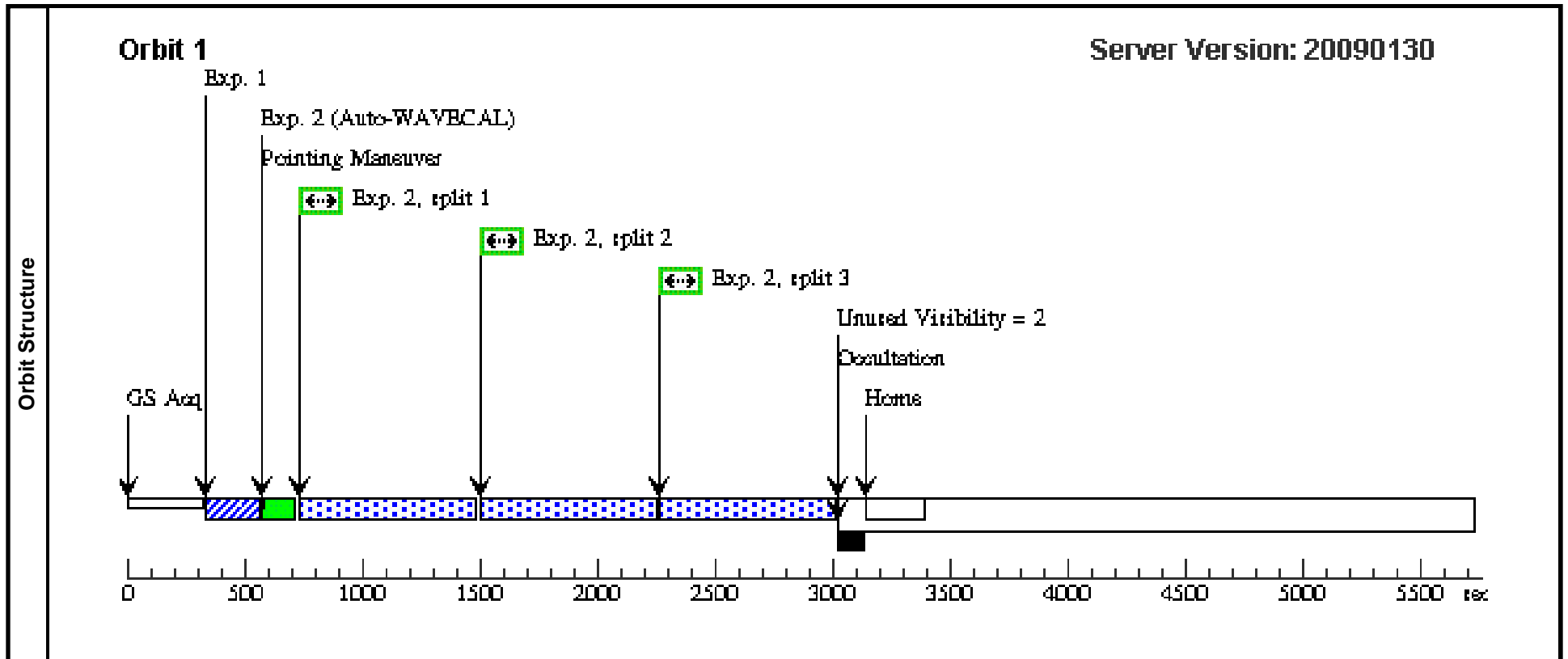
Visit	<b>Proposal 11611, Visit 04, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ORIENT 165D TO 185 D; ORIENT 345D TO 5 D									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(2)	MRK-1040	RA: 02 28 14.5300 (37.0605417d) Dec: +31 18 40.80 (31.31133d) Equinox: J2000		V=14.4	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) MRK-1040	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs [==>]	[1]
	2		(2) MRK-1040	STIS/CCD, ACCUM, 52X0.1	G430M 5093 A	CR-SPLIT=3			2148 Secs [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]



Proposal 11611 - Visit 05 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Tue Jun 02 01:24:28 GMT 2009

Visit	<b>Proposal 11611, Visit 05, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ORIENT 125D TO 145 D; ORIENT 305D TO 325 D									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(3)	MRK-705	RA: 09 26 3.2900 (141.5137083d) Dec: +12 44 3.60 (12.73433d) Equinox: J2000		V=14.9	Reference Frame: ICRS	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(3) MRK-705	STIS/CCD, ACQ, F28X50LP	MIRROR			GS ACQ SCENARI O BASE1B3		1 Secs [==>]	[1]
	2	(3) MRK-705	STIS/CCD, ACCUM, 52X0.1	G430M 5093 A	CR-SPLIT=3			2148 Secs [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]	



Proposal 11611 - Visit 06 - Are Narrow-Line Seyfert 1 Galaxies Viewed Pole-on?

Tue Jun 02 01:24:29 GMT 2009

Visit	<b>Proposal 11611, Visit 06, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ORIENT 35D TO 55 D; ORIENT 215D TO 235 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	MRK-705	RA: 09 26 3.2900 (141.5137083d) Dec: +12 44 3.60 (12.73433d) Equinox: J2000		V=14.9	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the NED database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(3) MRK-705		STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs [==>]	[1]
	2	(3) MRK-705		STIS/CCD, ACCUM, 52X0.1	G430M 5093 A	CR-SPLIT=3			2148 Secs [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]

