17831 - Ionization Echoes of Fading AGN

Cycle: 32, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
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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) GB0113+0106	ACS/WFC	2	27-Mar-2026 10:00:15.0	yes
02	(1) GB0113+0106	WFC3/IR WFC3/UVIS	2	27-Mar-2026 10:00:15.0	yes
03	(2) GB1155-0147	ACS/WFC	2	27-Mar-2026 10:00:16.0	yes
53	(2) GB1155-0147	ACS/WFC	1	27-Mar-2026 10:00:16.0	yes
04	(2) GB1155-0147	WFC3/IR WFC3/UVIS	2	27-Mar-2026 10:00:17.0	yes
05	(3) GB1347+5453	ACS/WFC	2	27-Mar-2026 10:00:17.0	yes
06	(3) GB1347+5453	WFC3/IR WFC3/UVIS	2	27-Mar-2026 10:00:18.0	yes
07	(4) GB1455+0446	ACS/WFC	2	27-Mar-2026 10:00:18.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
08	(4) GB1455+0446	WFC3/IR WFC3/UVIS	2	27-Mar-2026 10:00:19.0	yes
09	(5) GB1505+1944	ACS/WFC	2	27-Mar-2026 10:00:19.0	yes
56	(5) GB1505+1944	ACS/WFC	1	27-Mar-2026 10:00:19.0	yes
10	(5) GB1505+1944	WFC3/IR WFC3/UVIS	2	27-Mar-2026 10:00:20.0	yes
11	(6) GB2240-0927	ACS/WFC	2	27-Mar-2026 10:00:20.0	yes
54	(6) GB2240-0927	ACS/WFC	1	27-Mar-2026 10:00:21.0	yes
55	(6) GB2240-0927	ACS/WFC	1	27-Mar-2026 10:00:21.0	yes
12	(6) GB2240-0927	WFC3/IR WFC3/UVIS	2	27-Mar-2026 10:00:22.0	yes

28 Total Orbits Used

ABSTRACT

Understanding how and why Active Galactic Nuclei (AGN) vary in ionizing output can provide insight into the physics of AGN accretion and fueling. "Green Bean" nebulae at z~0.3 surround powerful AGN that show evidence of having ramped down in ionizing output by 3-4 orders of magnitude over the past 10,000-100,000 years; this significant variability will be imprinted as an ionization echo within the surrounding extended emission line gas. Leveraging a successful recombination balance approach demonstrated previously for a sample of lower redshift Seyfert-class systems, we propose to obtain HST ACS ramp filter Halpha and [OIII] imaging and WFC3 continuum imaging of Green Bean nebulae in order to constrain the ionization histories of luminous AGN at high spatial, and therefore time, resolution. In addition, when combined with existing HST Lyman-alpha and UV continuum imaging of the Green Beans, the proposed observations will provide insight into the importance of Lyman-alpha resonant scattering within extended emission line nebulae, while benefitting from lower surface brightness dimming than at higher redshifts and avoiding the issue of geocoronal Lyman-alpha contamination that can plague local galaxy studies.

OBSERVING DESCRIPTION

We propose to obtain HST ACS ramp filter imaging of redshifted [OIII] and Halpha plus WFC3-UVIS and IR continuum imaging for six "Green Bean" nebulae at z~0.3 in order to map out the ionization histories of these luminous Active Galactic Nuclei (AGN) at high spatial, and therefore

time, resolution.

~~ACS Ramp Filter Imaging~~

Filters --
Our targets are at z~0.281-0.341. We will use ramp filters FR656N and FR853N with central wavelengths set to match redshifted [OIII] and Halpha for each target. For FR656N, that corresponds to central wavelengths of 6416-6716A, and for FR853N, that corresponds to central wavelengths of 8409-8803A.

Aperture --
For FR656N, we will use the default WFC1-MRAMP aperture.
For FR853N, we will use the default WFC1-IRAMP aperture.

Dither Pattern --
We do not need to dither over the chip gap. To minimize CTE issues, we will prioritize longer exposure times and use a 2-point ACS-WFC-DITHER-LINE dither pattern (#12 from the online ACS "Dither Strategies" manual). This will allow us to improve the sampling of the point spread function and help address image artifacts and cosmic rays.

Exposure times -- Exposure times are set to maxmize on-target exposure during each orbit.

~~WFC3-UVIS Continuum Imaging~~~

Aperture -- To minimize CTE issues, we will use the UVIS2-C1K1C-CTE aperture. This aperture is centered ~20" from the edge of the image, and so will contain the full extent of each of our targets (4-9" in radius).

Dither Pattern -- We do not need to dither over the chip gap. To minimize CTE issues, we will prioritize longer exposure times by using the default 2-point WFC3-UVIS-DITHER-LINE dither pattern. This will allow us to improve the sampling of the point spread function and help address image artifacts and cosmic rays.

Flash -- In the case of one target (GB0113+0106), we apply a post-flash of FLASH=3 electrons, which is needed to achieve the recommended 20 electrons of background to minimize CTE issues given default background assumptions (low zodiacal light, average earth shine, average air glow).

Exposure times -- Exposure times are set to maxmize on-target exposure during each orbit.

~~WFC3-IR Continuum Imaging~~~

Aperture -- We will use the standard IR aperture. We note that, due to the choice of the UVIS2-C1K1C-CTE aperture for UVIS, the IR and UVIS imaging will only partially overlap. However, this will allow us to obtain high resolution HST imaging for a larger number of surrounding galaxies, which will be useful for ancillary science on the local environments of our targets.

Dither Pattern -- We will use the WFC3-IR-DITHER-BLOB dither pattern to address "IR blobs", and then the subpattern WFC3-IR-DITHER-LINE to improve the sampling of the point spread function and better address image artifacts and cosmic rays.

Exposure times -- Exposure times are set by the combination of SAMP-SEQ and NSAMP. Based on the WFC3 Instrument Manual, for F098M (two targets) we need 586s exp to get to the background limited regime. Therefore, we will use SAMP-SEQ=SPARS50 and NSAMP=12, which is the maximum number of reads that will fit into the orbit, given 4 dither positions (WFC3-IR-DITHER-BLOB plus WFC3-IR-DITHER-LINE).
For F105W (4 targets), we need 360s exp to get to the background limited regime, but we also want to maximize exposure time during the orbit. Therefore, we will use the same SAMP-SEQ=SPARS50 and NSAMP=12, the maximum number of reads that will fit into the orbit, given 4 dither positions (WFC3-IR-DITHER-BLOB plus WFC3-IR-DITHER-LINE).

Visit

Proposal 17831, GB0113+0106 Ramp (01), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB0113+0106 Ramp (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB0113+0106 Ramp (01))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

(Exposure 2 (Pattern 1, Exps 2-2 in GB0113+0106 Ramp (01))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1), (2)

Fixed Targets

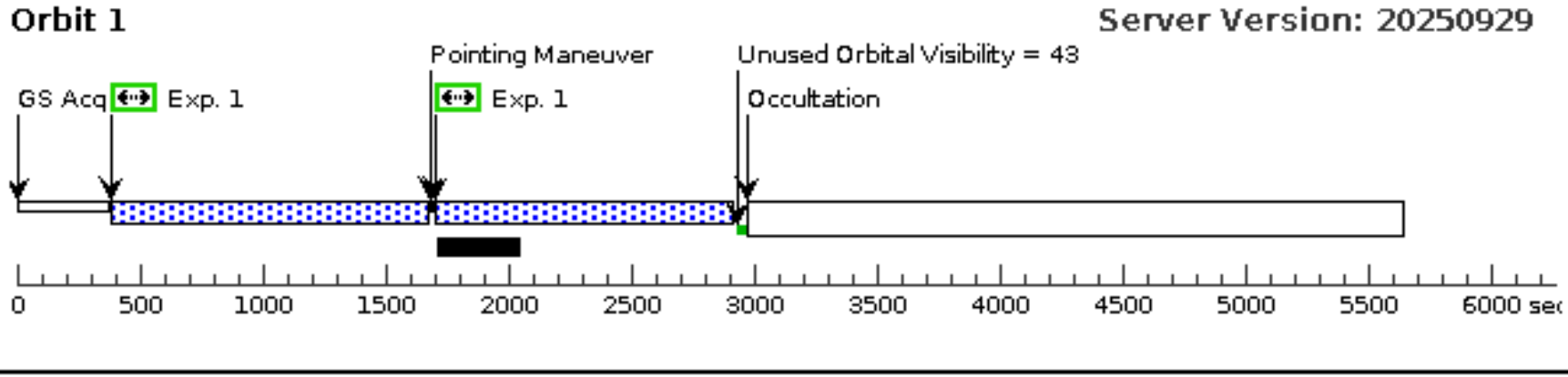
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GB0113+0106	RA: 01 13 41.1100 (18.4212917d) Dec: +01 06 8.53 (1.10237d) Equinox: J2000		V=(?) SDSSr=18.5	Reference Frame: ICRS

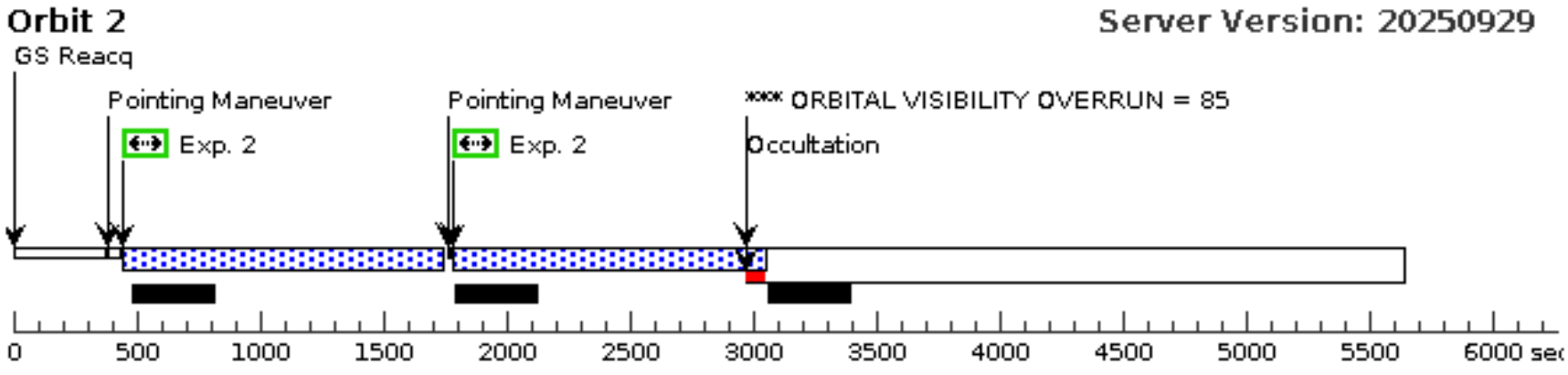
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) GB0113+0106	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6416 A			Pattern 1, Exps 1-1 in GB0113+0106 Ramp (01) (1)	1089 Secs (2178 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(1) GB0113+0106	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8409 A			Pattern 1, Exps 2-2 in GB0113+0106 Ramp (01) (1)	1144 Secs (2288 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB0113+0106 Broadband (02), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Diagnostics

(GB0113+0106 Broadband (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false			(1)
(3)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

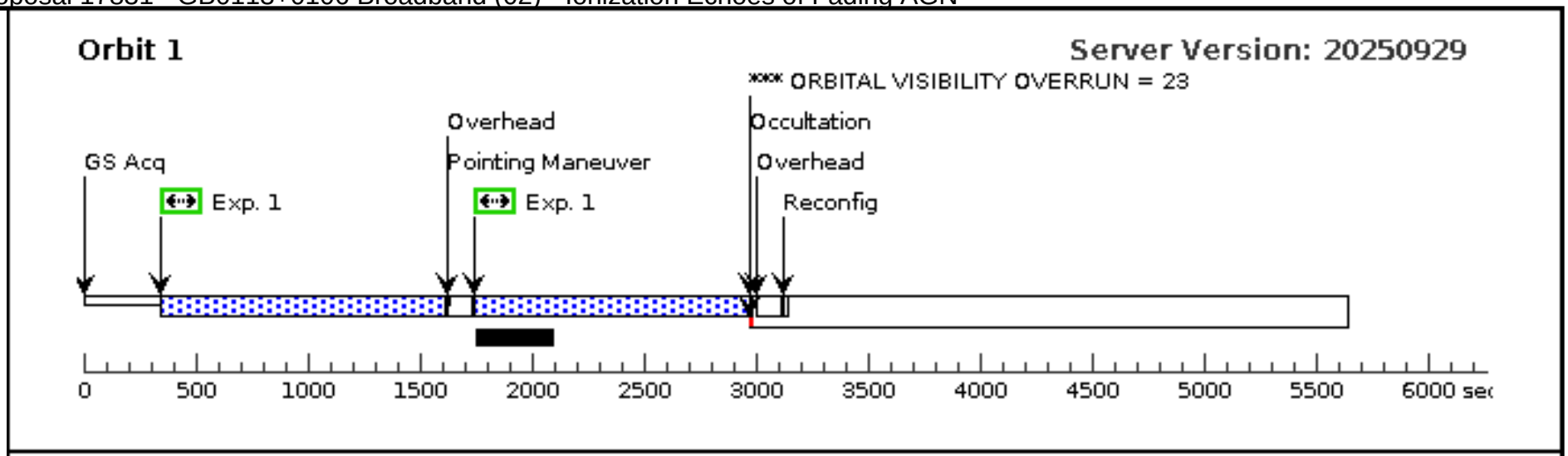
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GB0113+0106	RA: 01 13 41.1100 (18.4212917d) Dec: +01 06 8.53 (1.10237d) Equinox: J2000		V=(?) SDSSr=18.5	Reference Frame: ICRS

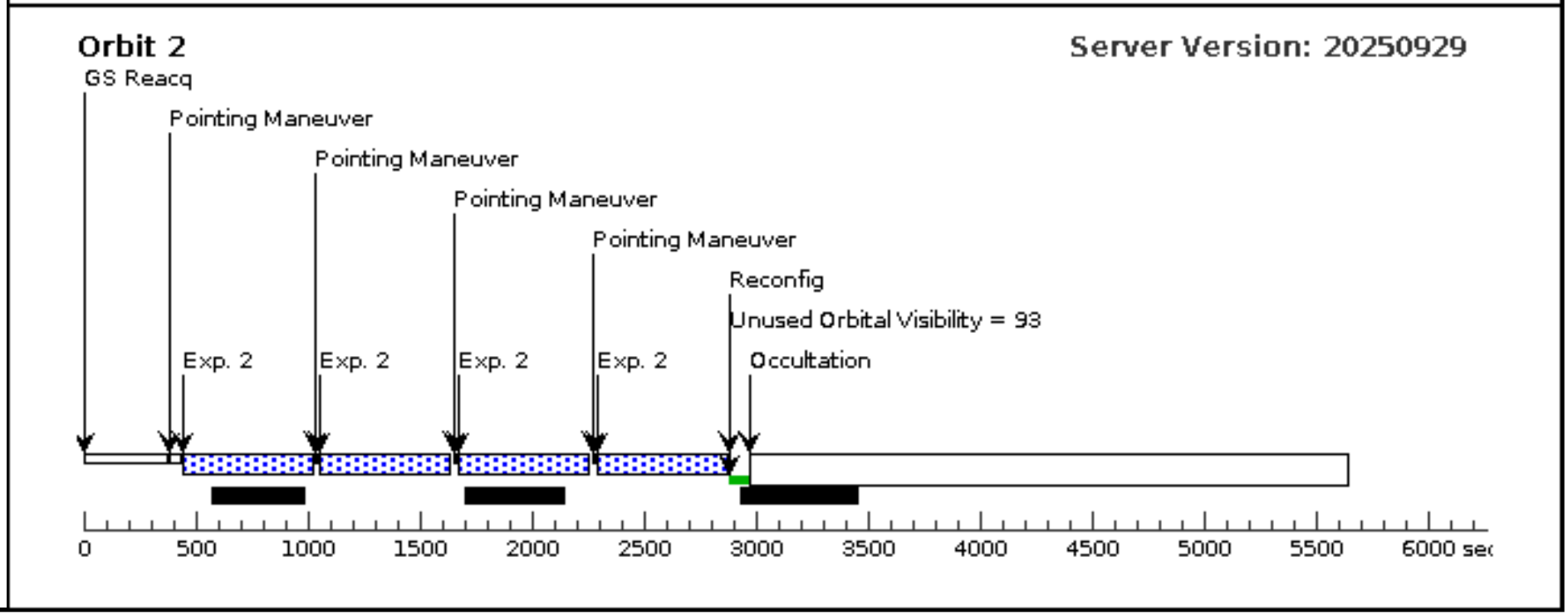
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) GB0113+0106	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F763M	FLASH=3		Pattern 2, Exps 1-1 in GB0113+0106 Broadband (02) (2)	1241 Secs (2482 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(1) GB0113+0106	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS50; NSAMP=12		Pattern 3, Exps 2-2 in GB0113+0106 Broadband (02) (3)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB1155-0147 Ramp (03), failed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB1155-0147 Ramp (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(GB1155-0147 Ramp (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB1155-0147 Ramp (03))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

(Exposure 2 (Pattern 1, Exps 2-2 in GB1155-0147 Ramp (03))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1), (2)

Fixed Targets

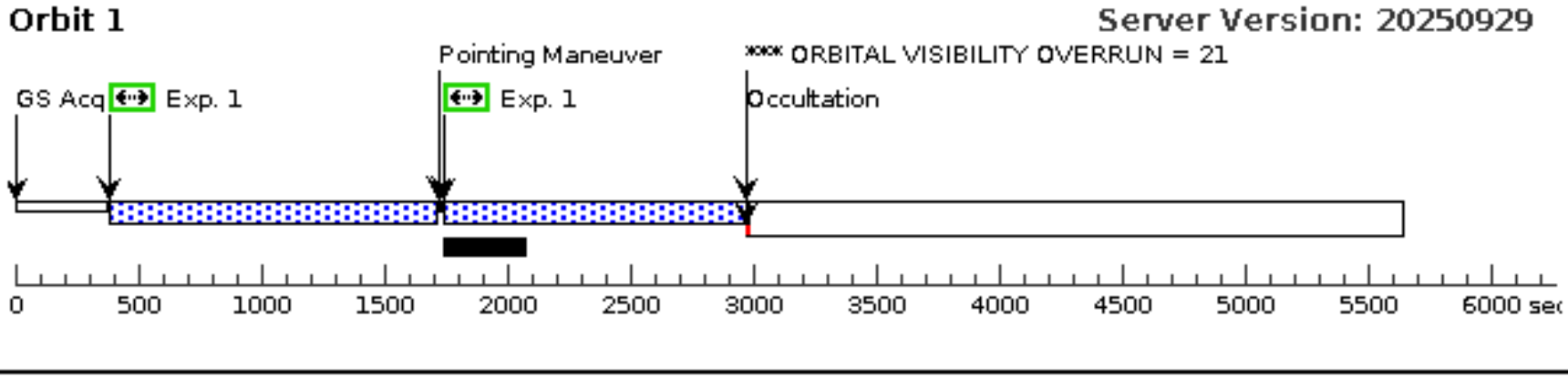
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GB1155-0147	RA: 11 55 44.5920 (178.9358000d) Dec: -01 47 39.95 (-1.79443d) Equinox: J2000		V=(?) SDSSr=17.9	Reference Frame: ICRS

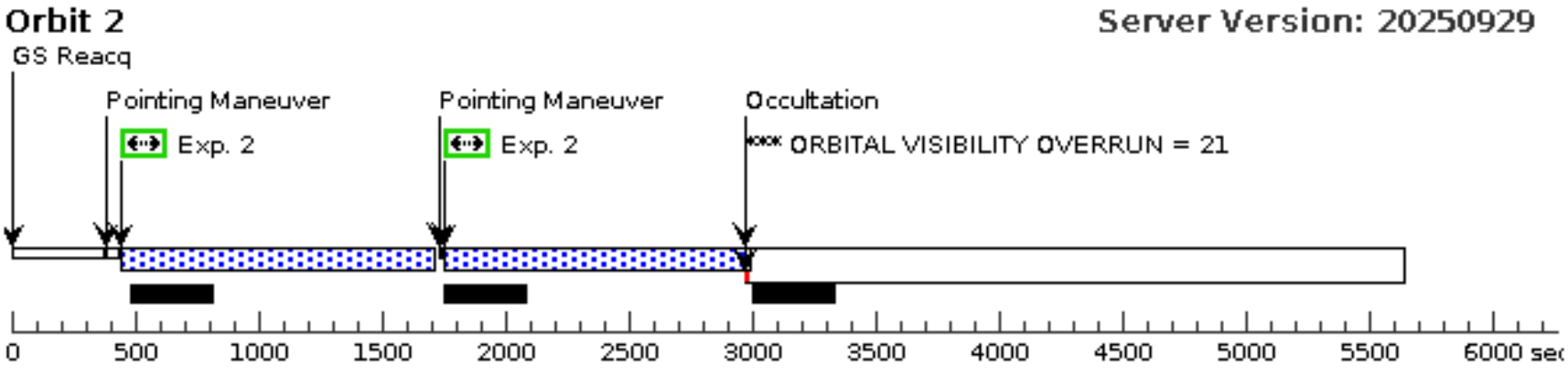
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) GB1155-0147	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6541 A		GS ACQ SCENARIO BASE1O3	Pattern 1, Exps 1-1 in GB1155-0147 Ramp (03) (1)	1121 Secs (2242 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(2) GB1155-0147	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8573 A			Pattern 1, Exps 2-2 in GB1155-0147 Ramp (03) (1)	1112 Secs (2224 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB1155-0147 Ramp (53), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Comments: HOPR repeat of orbit 1 of visit 3

Diagnostics

(GB1155-0147 Ramp (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB1155-0147 Ramp (53))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

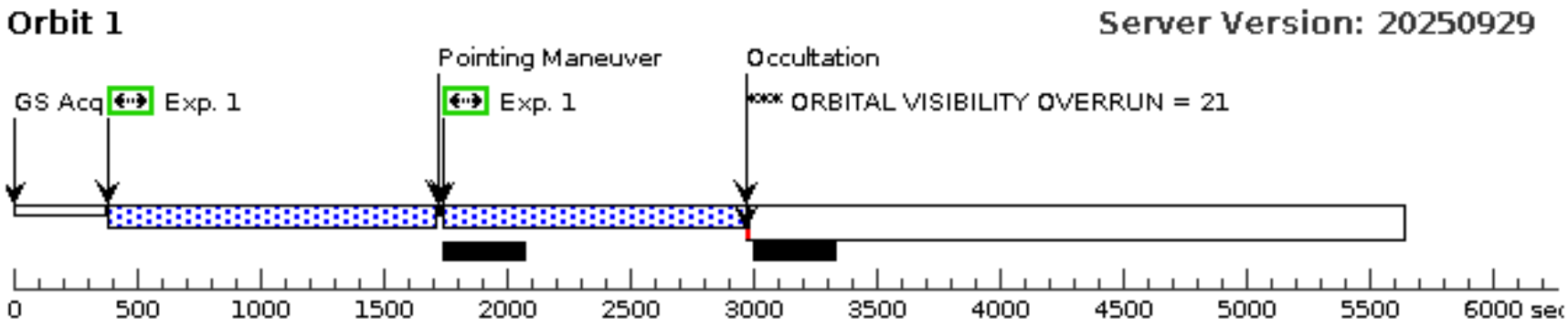
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GB1155-0147	RA: 11 55 44.5920 (178.9358000d) Dec: -01 47 39.95 (-1.79443d) Equinox: J2000		V=(?) SDSSr=17.9	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) GB1155-0147	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6541 A		GS ACQ SCENARIO BASE1O3	Pattern 1, Exps 1-1 in GB1155-0147 Ramp (53) (1)	1121 Secs (2242 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 17831, GB1155-0147 Broadband (04), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Diagnostics

(GB1155-0147 Broadband (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false			(1)
(3)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

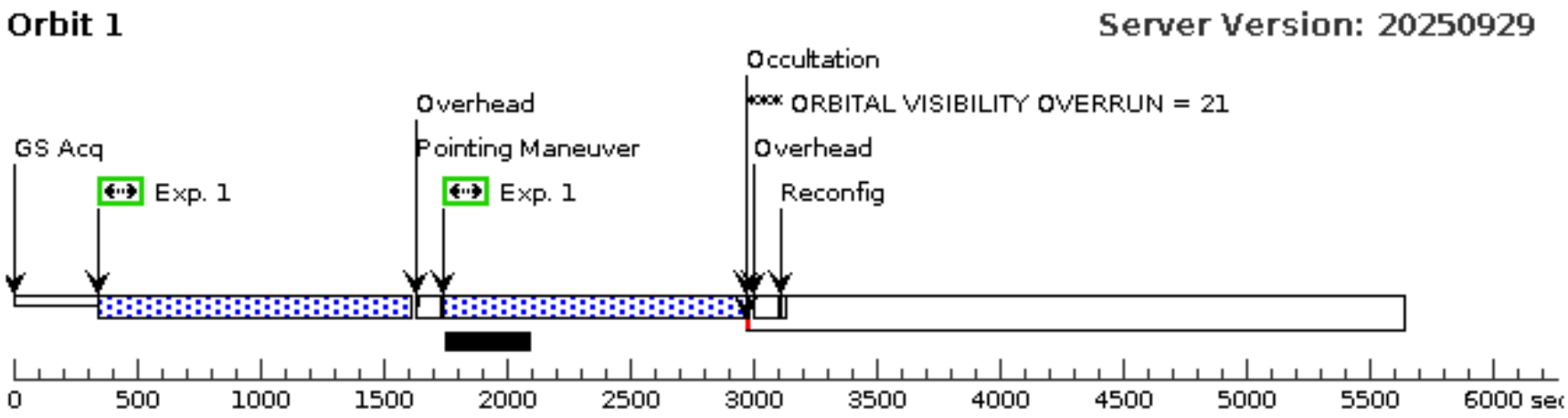
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GB1155-0147	RA: 11 55 44.5920 (178.9358000d) Dec: -01 47 39.95 (-1.79443d) Equinox: J2000		V=(?) SDSSr=17.9	Reference Frame: ICRS

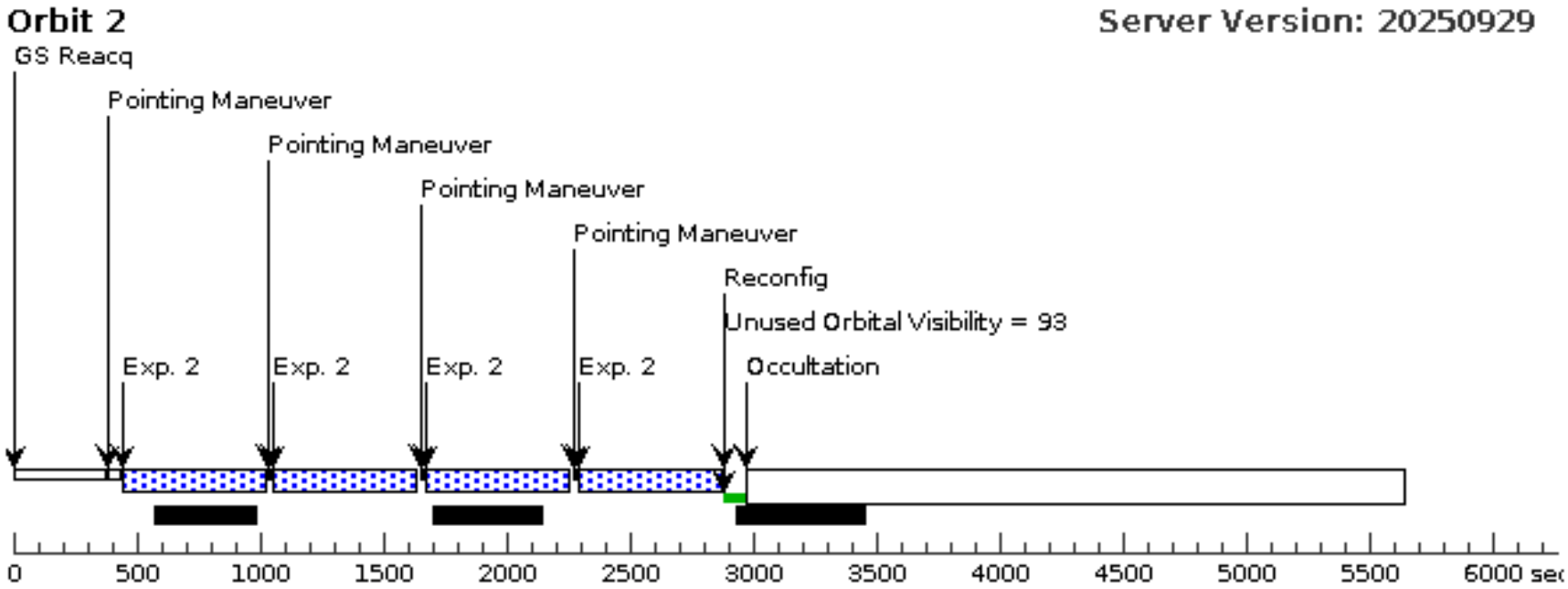
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) GB1155-0147	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F775W		GS ACQ SCENARIO BASE1O3	Pattern 2, Exps 1-1 in GB1155-0147 Broadband (04) (2)	1242 Secs (2484 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(2) GB1155-0147	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS50; NSAMP=12		Pattern 3, Exps 2-2 in GB1155-0147 Broadband (04) (3)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB1347+5453 Ramp (05), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB1347+5453 Ramp (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB1347+5453 Ramp (05))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

(Exposure 2 (Pattern 1, Exps 2-2 in GB1347+5453 Ramp (05))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1), (2)

Fixed Targets

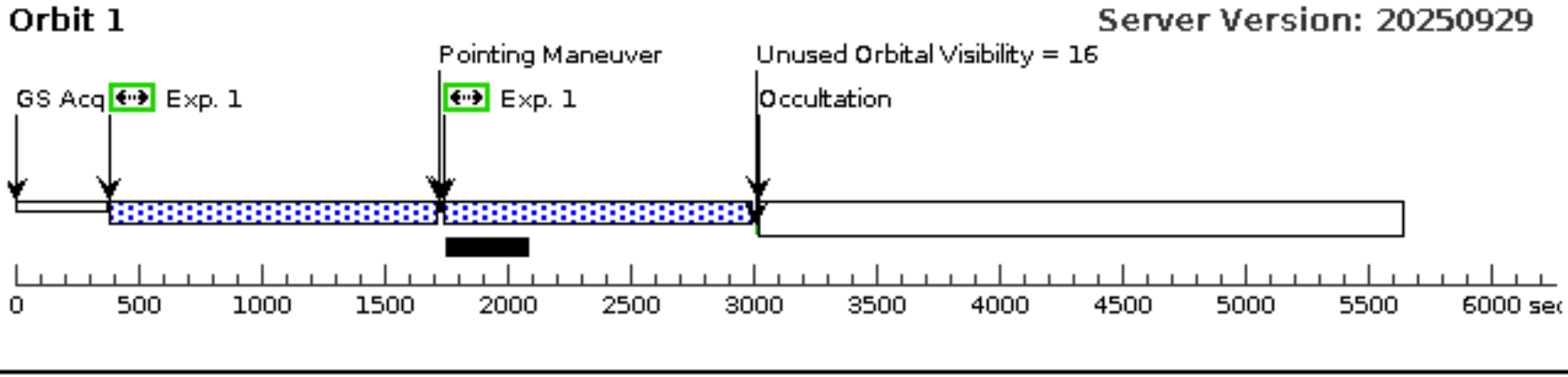
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	GB1347+5453	RA: 13 47 9.1250 (206.7880208d) Dec: +54 53 10.93 (54.88637d) Equinox: J2000		V=(?) SDSSr=18.7	Reference Frame: ICRS

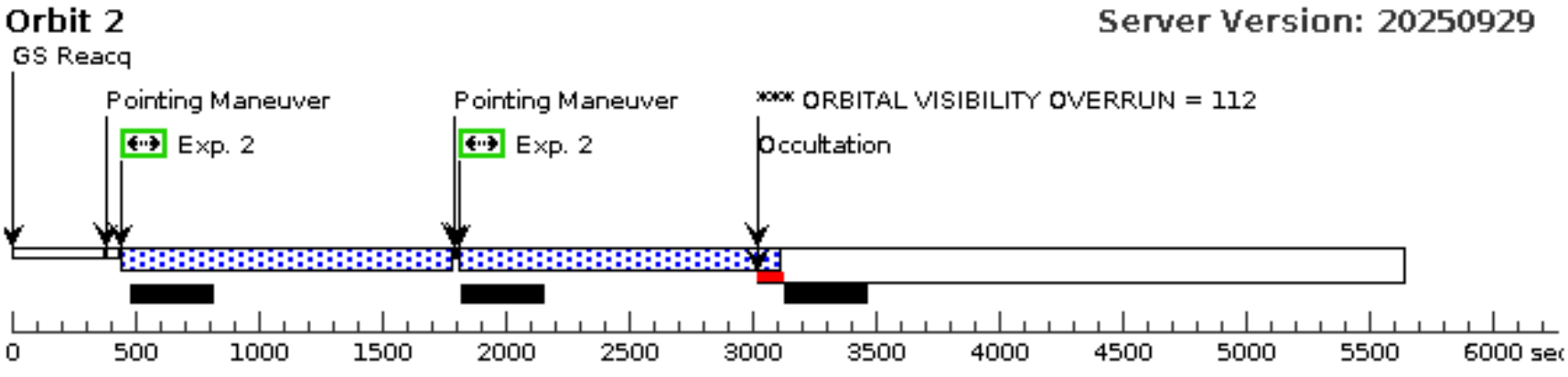
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) GB1347+5453	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6671 A			Pattern 1, Exps 1-1 in GB1347+5453 Ramp (05) (1)	1126 Secs (2252 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(3) GB1347+5453	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8744 A			Pattern 1, Exps 2-2 in GB1347+5453 Ramp (05) (1)	1181 Secs (2362 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB1347+5453 Broadband (06), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Diagnostics

(GB1347+5453 Broadband (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false			(1)
(3)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

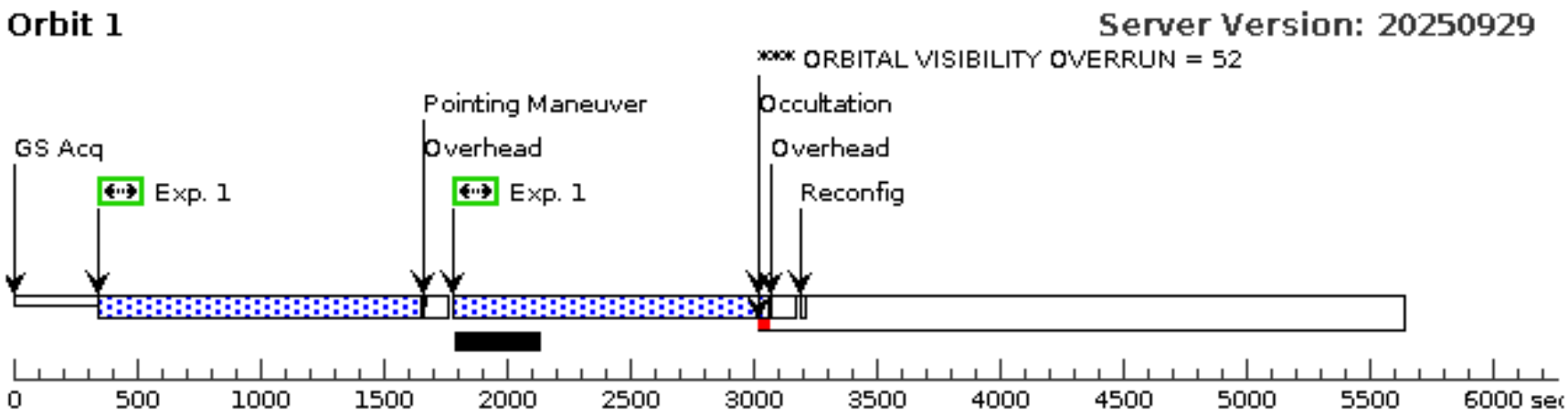
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	GB1347+5453	RA: 13 47 9.1250 (206.7880208d) Dec: +54 53 10.93 (54.88637d) Equinox: J2000		V=(?) SDSSr=18.7	Reference Frame: ICRS

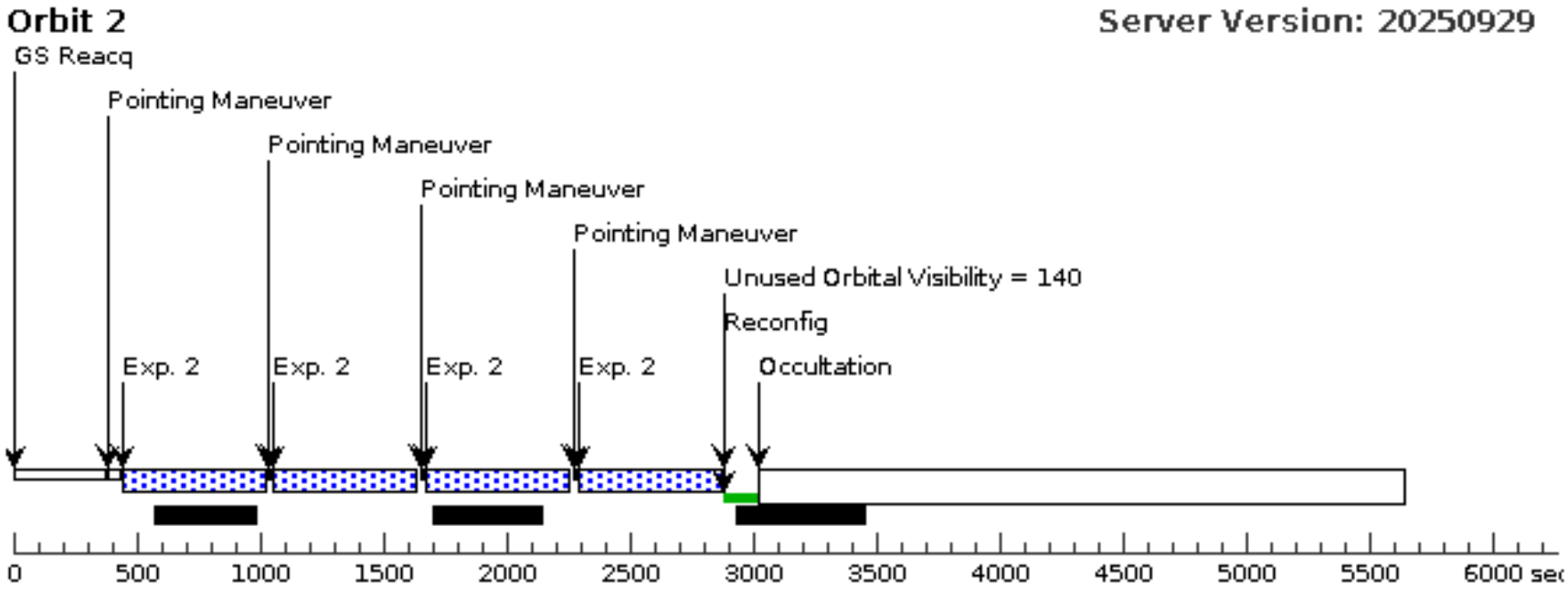
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) GB1347+5453	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F775W		GS ACQ SCENARIO BASE1O3	Pattern 2, Exps 1-1 in GB1347+5453 Broadband (06) (2)	1281 Secs (2562 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(3) GB1347+5453	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS50; NSAMP=12		Pattern 3, Exps 2-2 in GB1347+5453 Broadband (06) (3)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB1455+0446 Ramp (07), completed Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB1455+0446 Ramp (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(GB1455+0446 Ramp (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB1455+0446 Ramp (07))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

(Exposure 2 (Pattern 1, Exps 2-2 in GB1455+0446 Ramp (07))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1), (2)

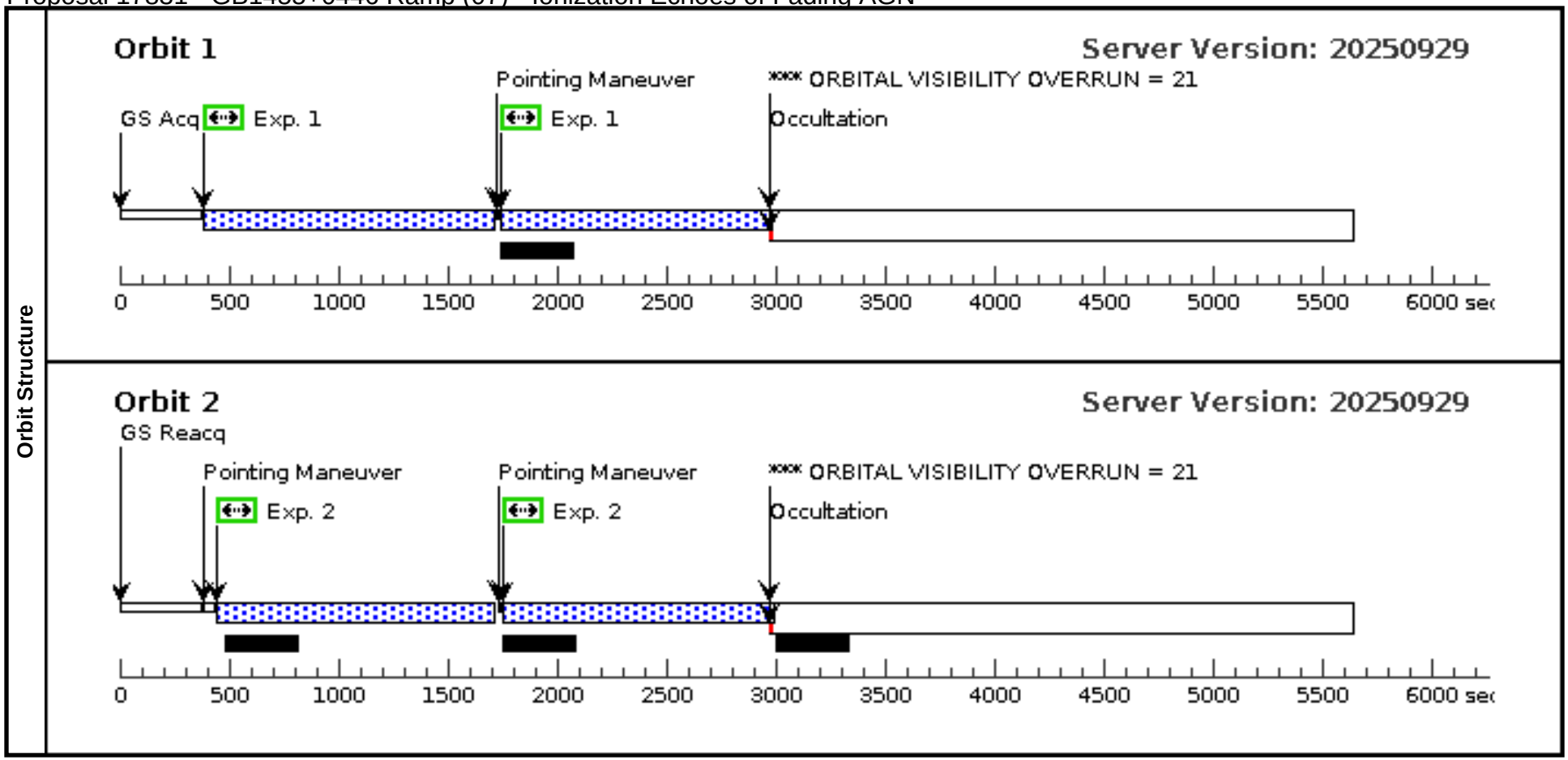
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	GB1455+0446	RA: 14 55 33.6880 (223.8903667d) Dec: +04 46 43.22 (4.77867d) Equinox: J2000		V=(?) SDSSr=18.5	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) GB1455+0446	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6681 A			Pattern 1, Exps 1-1 in GB1455+0446 Ramp (07) (1)	1121 Secs (2242 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(4) GB1455+0446	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8757 A			Pattern 1, Exps 2-2 in GB1455+0446 Ramp (07) (1)	1112 Secs (2224 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20250929
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 21
GS Acq
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 2
Server Version: 20250929
GS Reacq
Pointing Maneuver
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 21
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17831, GB1455+0446 Broadband (08), scheduling Fri Mar 27 14:00:22 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Diagnostics

(GB1455+0446 Broadband (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false			(1)
(3)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

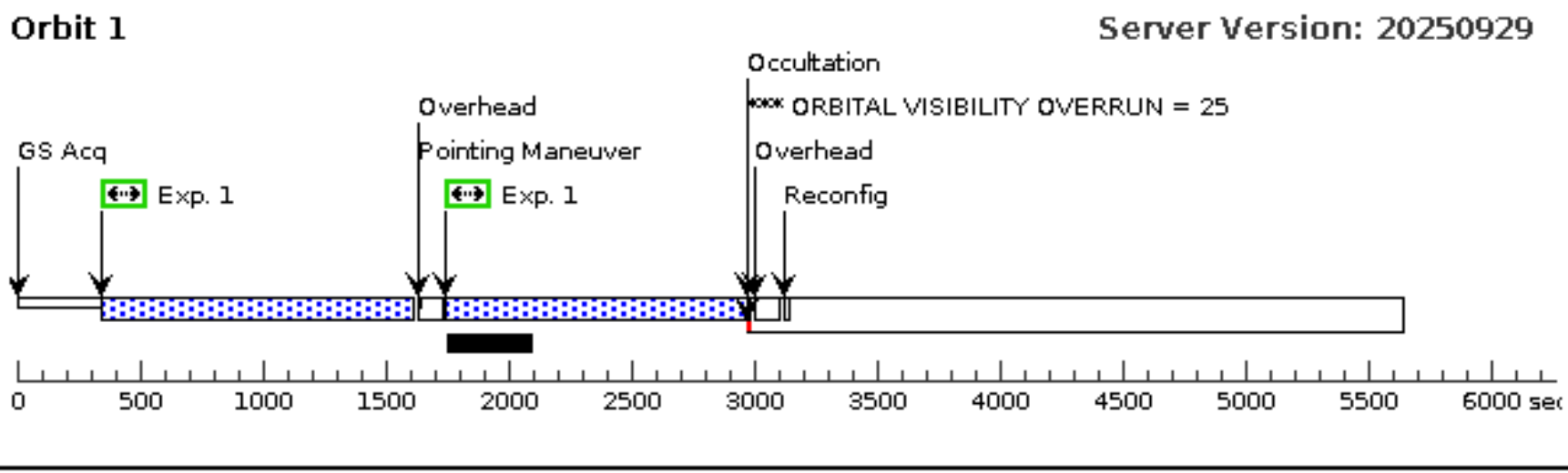
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	GB1455+0446	RA: 14 55 33.6880 (223.8903667d) Dec: +04 46 43.22 (4.77867d) Equinox: J2000		V=(?) SDSSr=18.5	Reference Frame: ICRS

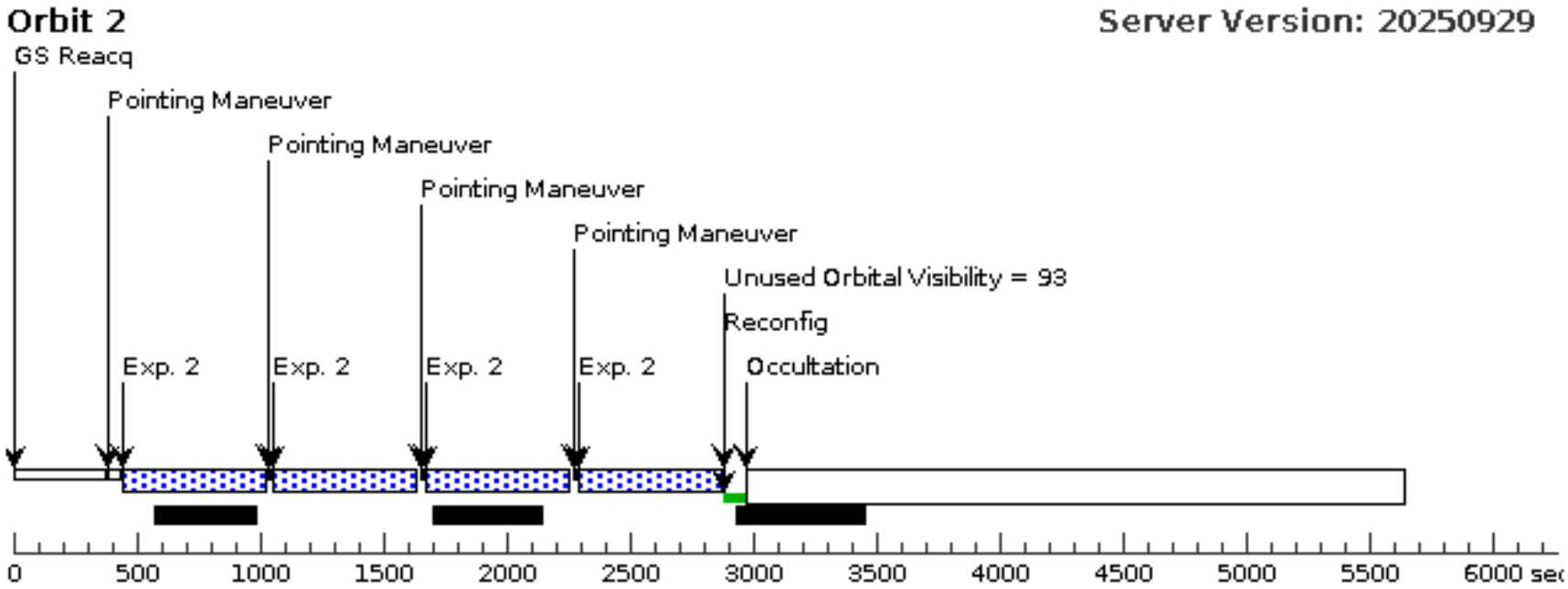
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) GB1455+0446	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F775W		GS ACQ SCENARIO BASE1O3	Pattern 2, Exps 1-1 in GB1455+0446 Broadband (08) (2)	1244 Secs (2488 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(4) GB1455+0446	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS50; NSAMP=12		Pattern 3, Exps 2-2 in GB1455+0446 Broadband (08) (3)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB1505+1944 Ramp (09), completed Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB1505+1944 Ramp (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(GB1505+1944 Ramp (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB1505+1944 Ramp (09))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

(Exposure 2 (Pattern 1, Exps 2-2 in GB1505+1944 Ramp (09))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1), (2)

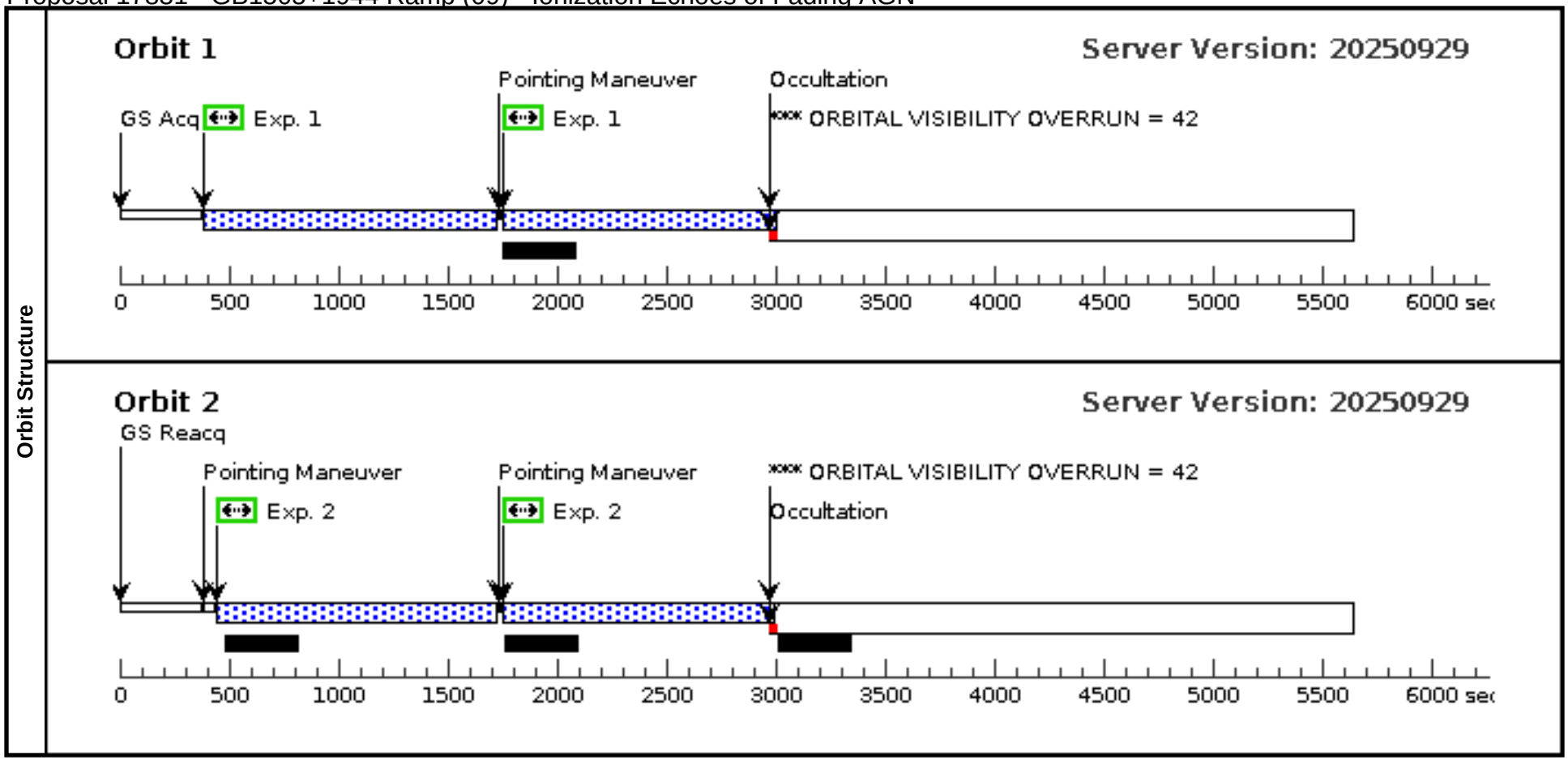
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	GB1505+1944	RA: 15 05 17.6330 (226.3234708d) Dec: +19 44 44.81 (19.74578d) Equinox: J2000		V=(?) SDSSr=17.9	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) GB1505+1944	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6716 A			Pattern 1, Exps 1-1 in GB1505+1944 Ramp (09) (1)	1130 Secs (2260 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(5) GB1505+1944	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8803 A			Pattern 1, Exps 2-2 in GB1505+1944 Ramp (09) (1)	1121 Secs (2242 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20250929
Pointing Maneuver
Occultation
GS Acq
Exp. 1
Exp. 1
*** ORBITAL VISIBILITY OVERRUN = 42
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 2
Server Version: 20250929
GS Reacq
Pointing Maneuver
Pointing Maneuver
*** ORBITAL VISIBILITY OVERRUN = 42
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17831, GB1505+1944 Ramp (56) Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Comments: HOPR copy of visit 9 (orbit 2)

Diagnostics

(Exposure 1 (Pattern 1, Exps 1-1 in GB1505+1944 Ramp (56))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

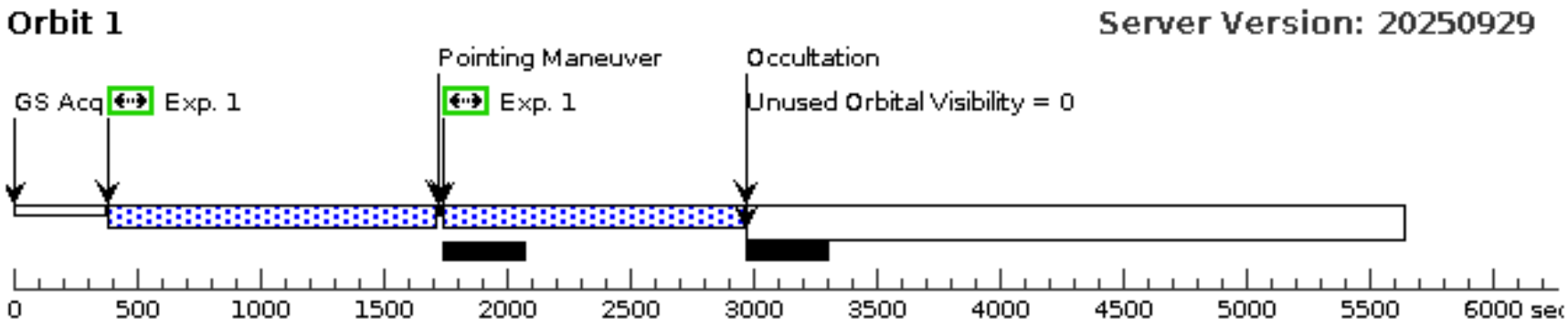
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	GB1505+1944	RA: 15 05 17.6330 (226.3234708d) Dec: +19 44 44.81 (19.74578d) Equinox: J2000		V=(?) SDSSr=17.9	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) GB1505+1944	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8803 A			Pattern 1, Exps 1-1 in GB1505+1944 Ramp (56) (1)	1121 Secs (2218 Secs) *[==>(Pattern 1)]* *[==>1097.0 Secs (Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17831, GB1505+1944 Broadband (10), completed Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Diagnostics

(GB1505+1944 Broadband (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false			(1)
(3)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

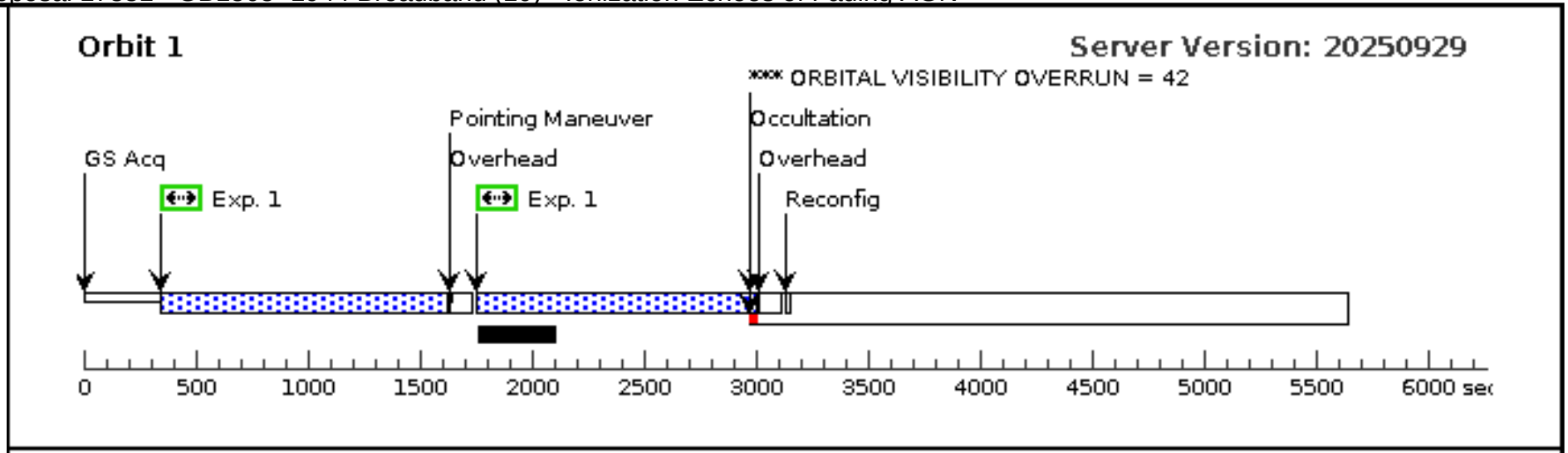
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	GB1505+1944	RA: 15 05 17.6330 (226.3234708d) Dec: +19 44 44.81 (19.74578d) Equinox: J2000		V=(?) SDSSr=17.9	Reference Frame: ICRS

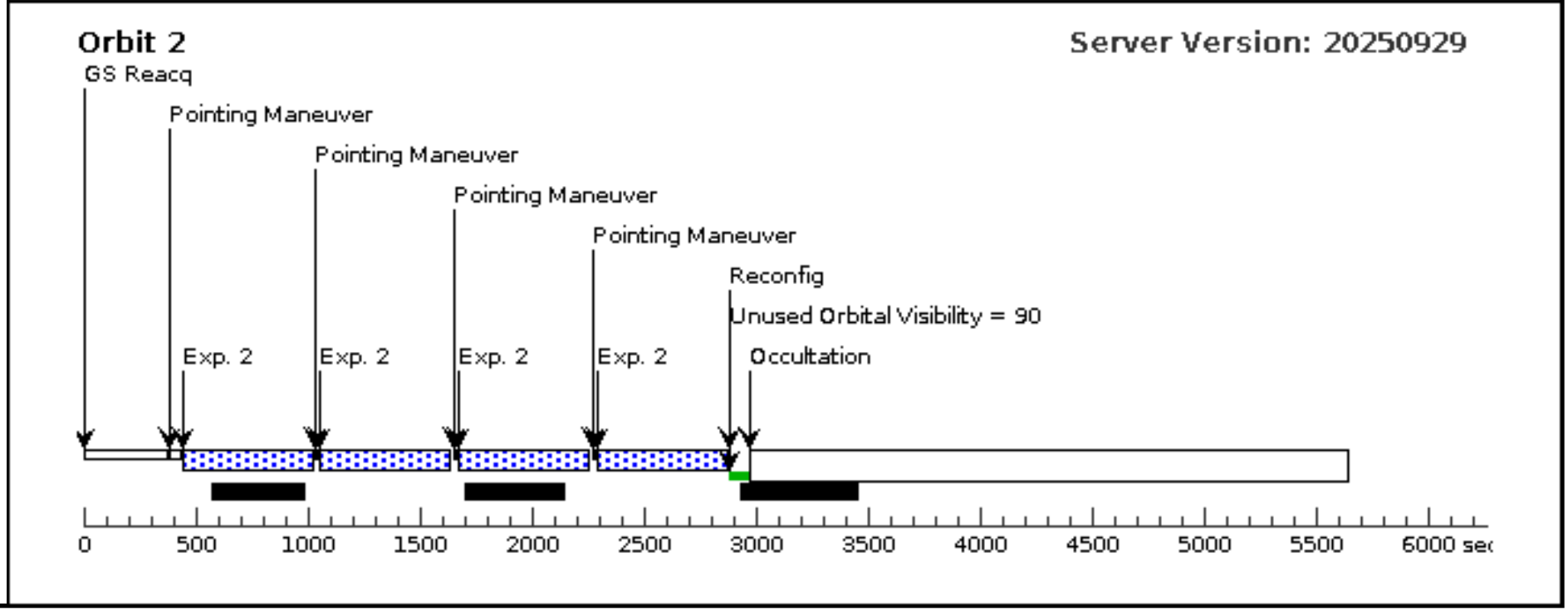
Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) GB1505+1944	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F775W		GS ACQ SCENARIO BASE1O3	Pattern 2, Exps 1-1 in GB1505+1944 Broadband (10) (2)	1251 Secs (2502 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(5) GB1505+1944	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS50; NSAMP=12		Pattern 3, Exps 2-2 in GB1505+1944 Broadband (10) (3)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]*	***[2]***

Orbit Structure





Visit

Proposal 17831, GB2240-0927 Ramp (11), failed Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB2240-0927 Ramp (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(GB2240-0927 Ramp (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB2240-0927 Ramp (11))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

(Exposure 2 (Pattern 1, Exps 2-2 in GB2240-0927 Ramp (11))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1), (2)

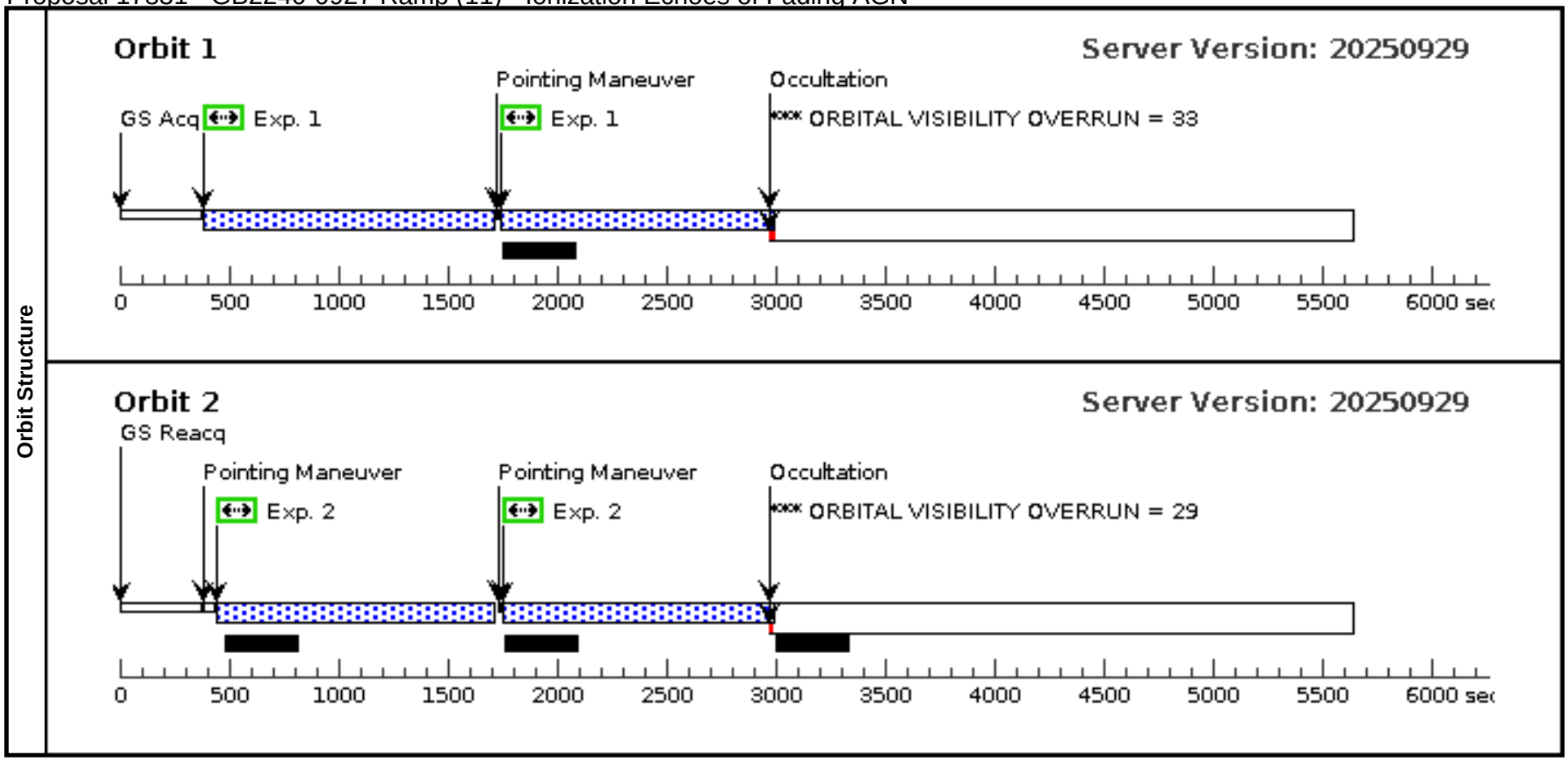
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	GB2240-0927	RA: 22 40 24.1060 (340.1004417d) Dec: -09 27 48.06 (-9.46335d) Equinox: J2000		V=(?) SDSSr=18.3	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) GB2240-0927	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6641 A		GS ACQ SCENARIO BASE1O3	Pattern 1, Exps 1-1 in GB2240-0927 Ramp (11) (1)	1126 Secs (2252 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(6) GB2240-0927	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8705 A			Pattern 1, Exps 2-2 in GB2240-0927 Ramp (11) (1)	1115 Secs (2230 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[2]***


Orbit Structure
Orbit 1
Server Version: 20250929
Pointing Maneuver
Occultation
GS Acq
Exp. 1
Exp. 1
*** ORBITAL VISIBILITY OVERRUN = 33
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 2
Server Version: 20250929
GS Reacq
Pointing Maneuver
Pointing Maneuver
Occultation
Exp. 2
Exp. 2
*** ORBITAL VISIBILITY OVERRUN = 29
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17831, GB2240-0927 Ramp (54), failed Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Diagnostics

(GB2240-0927 Ramp (54)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB2240-0927 Ramp (54))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

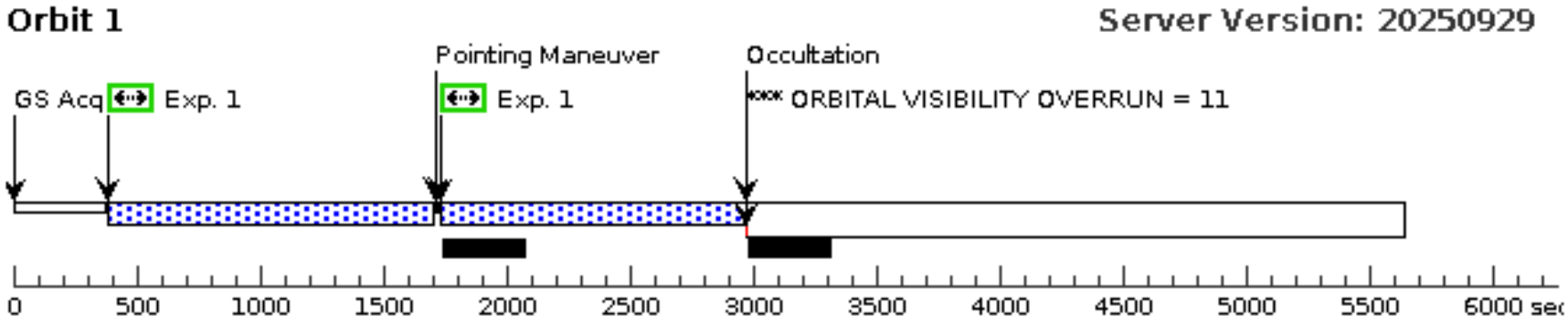
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	GB2240-0927	RA: 22 40 24.1060 (340.1004417d) Dec: -09 27 48.06 (-9.46335d) Equinox: J2000		V=(?) SDSSr=18.3	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) GB2240-0927	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8705 A			Pattern 1, Exps 1-1 in GB2240-0927 Ramp (54) (1)	1115 Secs (2230 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17831, GB2240-0927 Ramp (55), completed Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Comments: HOPR copy of visit 54

Diagnostics

(GB2240-0927 Ramp (55)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Exposure 1 (Pattern 1, Exps 1-1 in GB2240-0927 Ramp (55))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.149 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=34.25 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

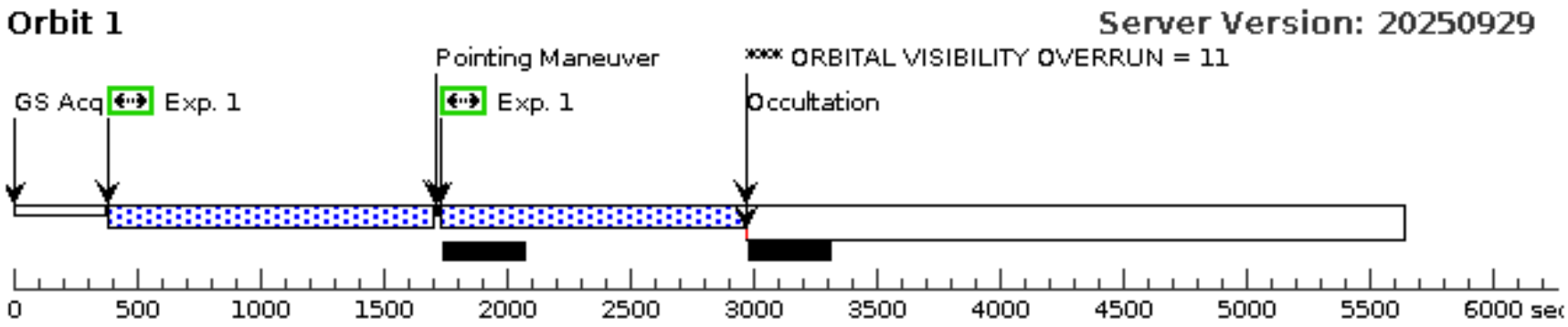
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	GB2240-0927	RA: 22 40 24.1060 (340.1004417d) Dec: -09 27 48.06 (-9.46335d) Equinox: J2000		V=(?) SDSSr=18.3	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) GB2240-0927	ACS/WFC, ACCUM, WFC1-IRAMP	FR853N 8705 A			Pattern 1, Exps 1-1 in GB2240-0927 Ramp (55) (1)	1115 Secs (2230 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17831, GB2240-0927 Broadband (12), completed Fri Mar 27 14:00:23 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Diagnostics

(GB2240-0927 Broadband (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false			(1)
(3)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false	(2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	GB2240-0927	RA: 22 40 24.1060 (340.1004417d) Dec: -09 27 48.06 (-9.46335d) Equinox: J2000		V=(?) SDSSr=18.3	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[EMISSION LINE NEBULA, SEYFERT]
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) GB2240-0927	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F775W		GS ACQ SCENARIO BASE1O3	Pattern 2, Exps 1-1 in GB2240-0927 Broadband (12) (2)	1247 Secs (2494 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2		(6) GB2240-0927	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS50; NSAMP=12		Pattern 3, Exps 2-2 in GB2240-0927 Broadband (12) (3)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1,1)]* *[==>(Pattern 1,2)]* *[==>(Pattern 2,1)]* *[==>(Pattern 2,2)]*	***[2]***

Orbit Structure