17450 - A holistic view of compact binary mergers: from kilonova to afterglow

Cycle: 31, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
Dr. Eleonora Troja (PI) (ESA Member) (Contact)	**Universita degli Studi di Roma Tor Vergata**
Dr. Ori Dosovitz Fox (CoI)	Space Telescope Science Institute
Dr. Nathaniel Butler (CoI)	Arizona State University
Dr. Alan Watson (CoI)	National Autonomous University of Mexico
Dr. William H. Lee (CoI)	National Autonomous University of Mexico
Josefa Becerra-Gonzalez (CoI) (ESA Member)	Instituto de Astrofisica de Canarias
Dr. Chris Fryer (CoI)	Los Alamos National Laboratory
Dr. Alexander Kutyrev (CoI)	University of Maryland
Brendan O'Connor (CoI) (AdminUSPI)	Carnegie Mellon University
Dr. James Herbert Gillanders (CoI) (ESA Member)	University of Oxford
Dr. Taka Sakamoto (CoI)	Aoyama Gakuin University
Dr. Amy Lien (CoI)	University of Tampa
Oleg Korobkin (CoI)	Los Alamos National Laboratory
Ryan Wollaeger (CoI)	Los Alamos National Laboratory
Hendrik J VanEerten (CoI) (ESA Member)	University of Bath
Dr. Geoffrey Ryan (CoI) (CSA Member)	Perimeter Institute for Theoretical Physics
Simone Dichiara (CoI)	The Pennsylvania State University
Dr. Yuhan Yang (CoI) (ESA Member)	Universita degli Studi di Roma Tor Vergata

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) UVKN	WFC3/UVIS	3	22-Aug-2025 22:00:16.0	yes
02	(1) UVKN	WFC3/UVIS	2	22-Aug-2025 22:00:17.0	yes
03	(1) UVKN	WFC3/UVIS	2	22-Aug-2025 22:00:18.0	yes
04	(2) IRKN	WFC3/IR	1	22-Aug-2025 22:00:19.0	yes
05	(2) IRKN	WFC3/IR	1	22-Aug-2025 22:00:20.0	yes
06	(2) IRKN	WFC3/IR	1	22-Aug-2025 22:00:20.0	yes
07	(2) IRKN	WFC3/IR	1	22-Aug-2025 22:00:21.0	yes
08	(2) IRKN	WFC3/IR	1	22-Aug-2025 22:00:22.0	yes
09	(3) AG	WFC3/IR	1	22-Aug-2025 22:00:22.0	yes
10	(4) AT2025ULZ	WFC3/UVIS	2	22-Aug-2025 22:00:23.0	yes
11	(3) AG	WFC3/UVIS	2	22-Aug-2025 22:00:25.0	yes
12	(4) AT2025ULZ	WFC3/UVIS	1	22-Aug-2025 22:00:26.0	yes
14	(4) AT2025ULZ	WFC3/IR	1	22-Aug-2025 22:00:26.0	yes
15	(4) AT2025ULZ	WFC3/IR	1	22-Aug-2025 22:00:27.0	yes
16	(4) AT2025ULZ	WFC3/IR	1	22-Aug-2025 22:00:27.0	yes
18	(4) AT2025ULZ	WFC3/IR	1	22-Aug-2025 22:00:28.0	yes

22 Total Orbits Used

ABSTRACT

The fate of two compact objects is to spiral into each other and eventually collide (or merge) due to angular momentum and energy losses to gravitational radiation. By combining extreme gravity, copious emission of gravitational waves, and luminous electromagnetic radiation, these mergers serve as excellent astrophysical laboratories to explore a wide range of fundamental problems: from the formation of ultrafast outflows to the cosmic production of heavy metals, from the equation of state of cold ultra-dense matter to the expansion rate of the universe. Our understanding of these systems was revolutionized in 2017 by the discovery of GW170817, the first mergers of two neutron stars (NSs) studied through gravitational waves and light. Thanks to its proximity and an unprecedented observing campaign, this one event revealed the rich complexity of the merger phenomenon and opened up new horizons for the study of these systems. Here we propose a comprehensive investigation of compact binary mergers

aimed at maximizing the scientific return of future GW events. By using of the unique HST capabilities, we will map the explosion properties and environment of NS mergers with unprecedented detail, thus realizing in full the potential of multi-messenger astrophysics.

OBSERVING DESCRIPTION

We request 6 orbits of disruptive ToO observations split between 3 visits.
We will use the WFC3/UVIS camera with the F225W and F336W filters and grism G280 for bright events.

We request 6 orbits of disruptive ToO observations split between 3 visits.
We will use the WFC3/IR camera with the F105W, F125W, and F160W filters and grisms G102/G141 for bright events.

We request 12 orbits of non-disruptive ToO observations split between 4 visits.
We will use the WFC3/UVIS and IR cameras with the F606W, F814W, F110W, and F160W filters.

Visit

Proposal 17450, UVKN (01), implementation Sat Aug 23 02:00:28 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ON HOLD ; TOO RESPONSE TIME 2.0D

On Hold Comments: GW counterpart with optical detection

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)
(6)	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=1 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=5 Angle Between Sides= Center Pattern=false	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(2)

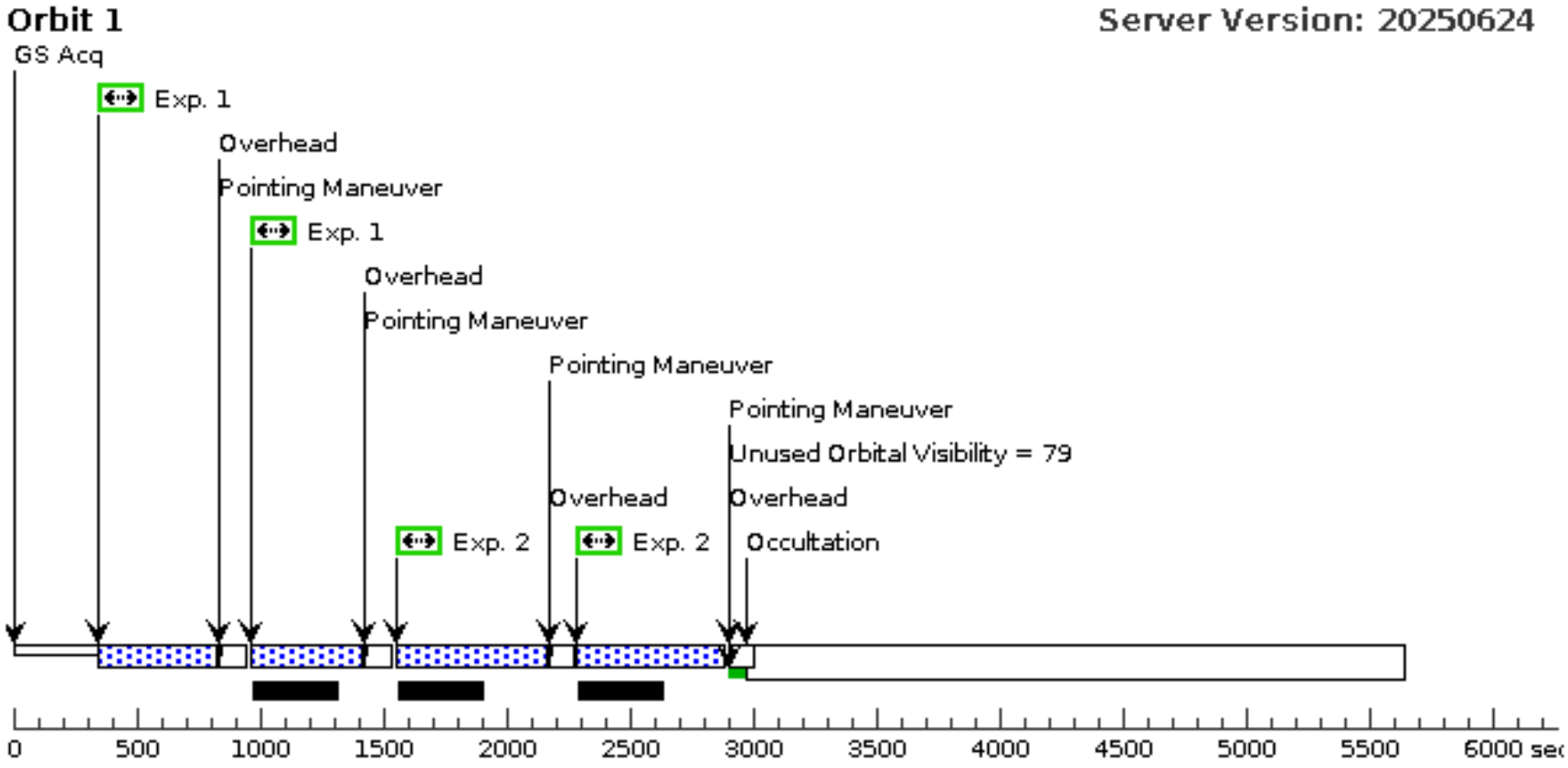
Generic Targets

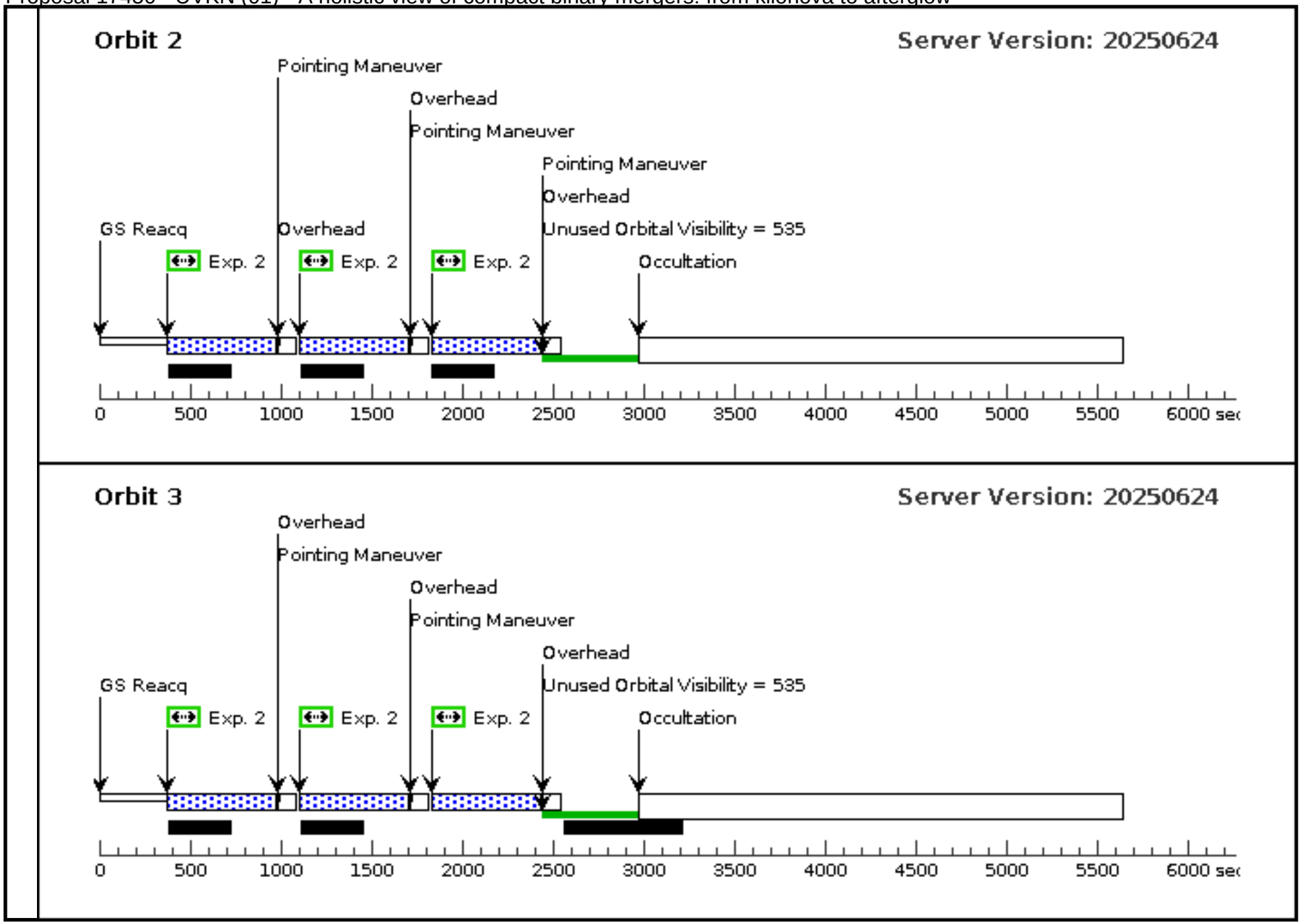
#	Name	Criteria	Description
(1)	UVKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) UVKN	WFC3/UVIS, ACCUM, UVIS	F300X	FLASH=19		Pattern 2, Exps 1-1 in UVKN (01) (2)	450 Secs (900 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
2		(1) UVKN	WFC3/UVIS, ACCUM, UVIS	G280	CR-SPLIT=NO		Pattern 6, Exps 2-2 in UVKN (01) (6)	600 Secs (4800 Secs)	
								[==>(Pattern 1,1)] *[==>(Pattern 1,2)]*	***[1]***
								[==>(Pattern 1,3)] *[==>(Pattern 1,4)]* *[==>(Pattern 2,1)]*	***[2]***
								[==>(Pattern 2,2)] *[==>(Pattern 2,3)]* *[==>(Pattern 2,4)]*	***[3]***

Orbit Structure




Orbit 2
Server Version: 20250624
Pointing Maneuver
Overhead
Pointing Maneuver
Pointing Maneuver
Overhead
GS Reacq
Overhead
Unused Orbital Visibility = 535
Exp. 2
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 3
Server Version: 20250624
Overhead
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
GS Reacq
Unused Orbital Visibility = 535
Exp. 2
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17450, UVKN (02), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ON HOLD ; TOO RESPONSE TIME 2.0D

On Hold Comments: GW counterpart with optical detection

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1-2)

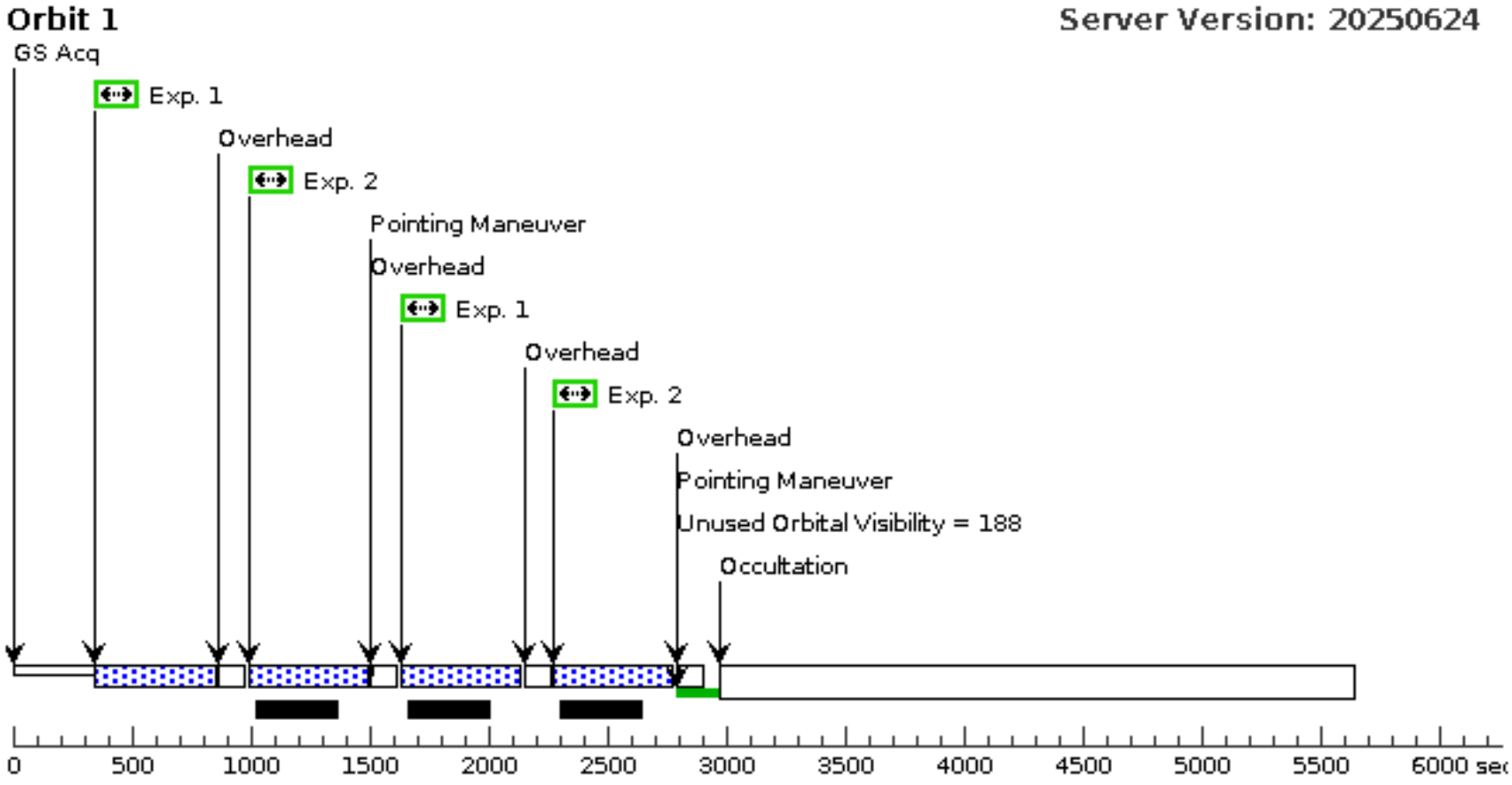
Generic Targets

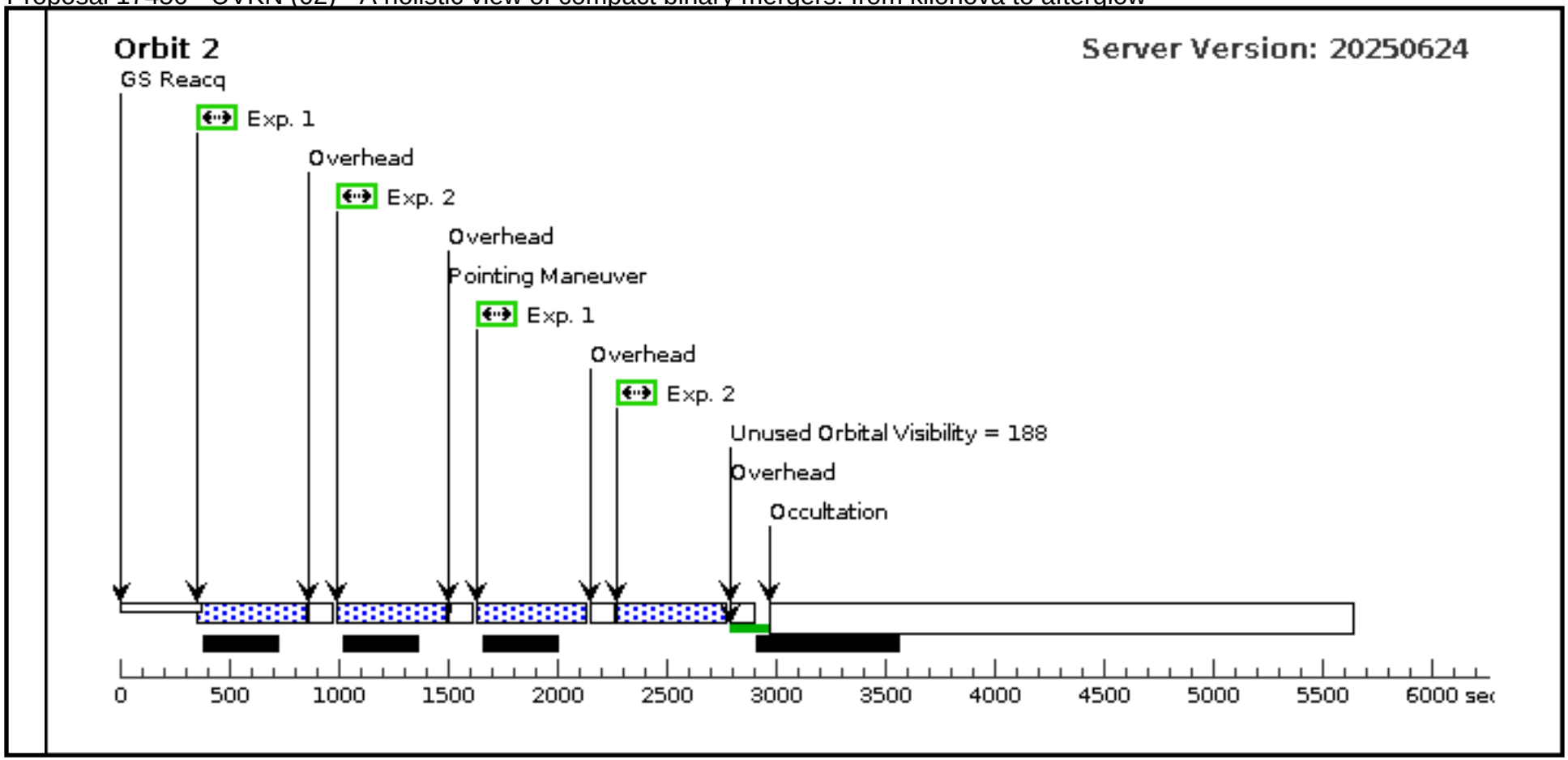
#	Name	Criteria	Description
(1)	UVKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) UVKN	WFC3/UVIS, ACCUM, UVIS	F336W	FLASH=19; CR-SPLIT=NO		Pattern 1, Exps 1-2 in UVKN (02) (1)	480 Secs (1920 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
								[==>(Pattern 3)] *[==>(Pattern 4)]*	***[2]***
2		(1) UVKN	WFC3/UVIS, ACCUM, UVIS	F275W	FLASH=19; CR-SPLIT=NO		Pattern 1, Exps 1-2 in UVKN (02) (1)	480 Secs (1920 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
								[==>(Pattern 3)] *[==>(Pattern 4)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20250624
GS Reacq
Exp. 1
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 1
Overhead
Exp. 2
Unused Orbital Visibility = 188
Overhead
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17450, UVKN (03), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: ON HOLD ; TOO RESPONSE TIME 2.0D

On Hold Comments: GW counterpart with optical detection

Diagnostics

(UVKN (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(UVKN (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1-2)

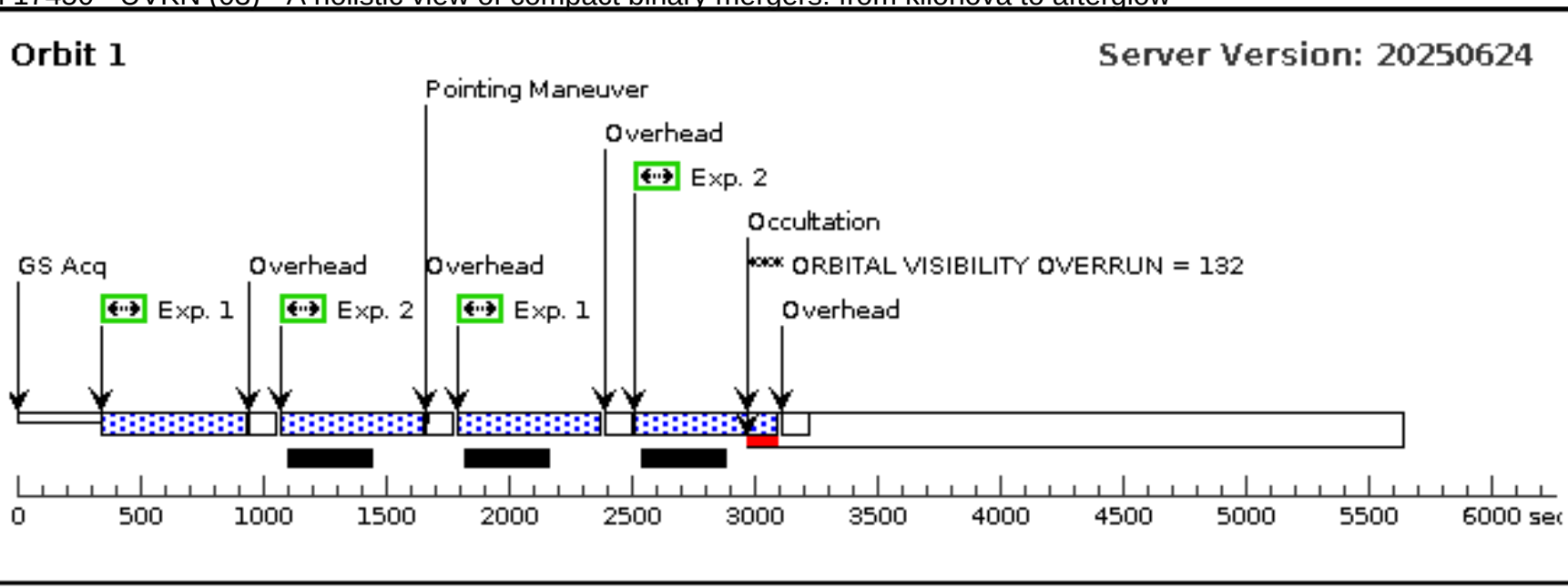
Generic Targets

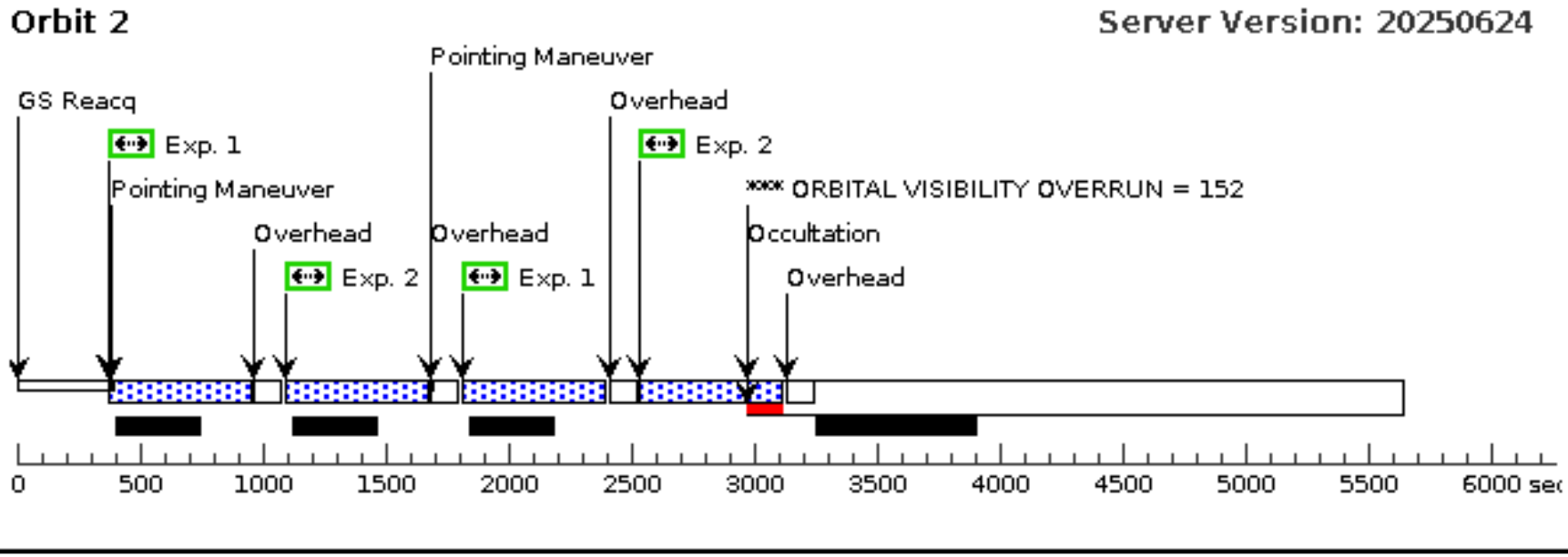
#	Name	Criteria	Description
(1)	UVKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) UVKN	WFC3/UVIS, ACCUM, UVIS	F336W	FLASH=19; CR-SPLIT=NO		Pattern 1, Exps 1-2 in UVKN (03) (1)	560 Secs (2240 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
								[==>(Pattern 3)] *[==>(Pattern 4)]*	***[2]***
2		(1) UVKN	WFC3/UVIS, ACCUM, UVIS	F275W	FLASH=19; CR-SPLIT=NO		Pattern 1, Exps 1-2 in UVKN (03) (1)	560 Secs (2240 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
								[==>(Pattern 3)] *[==>(Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 17450, IRKN (04), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1), (2)

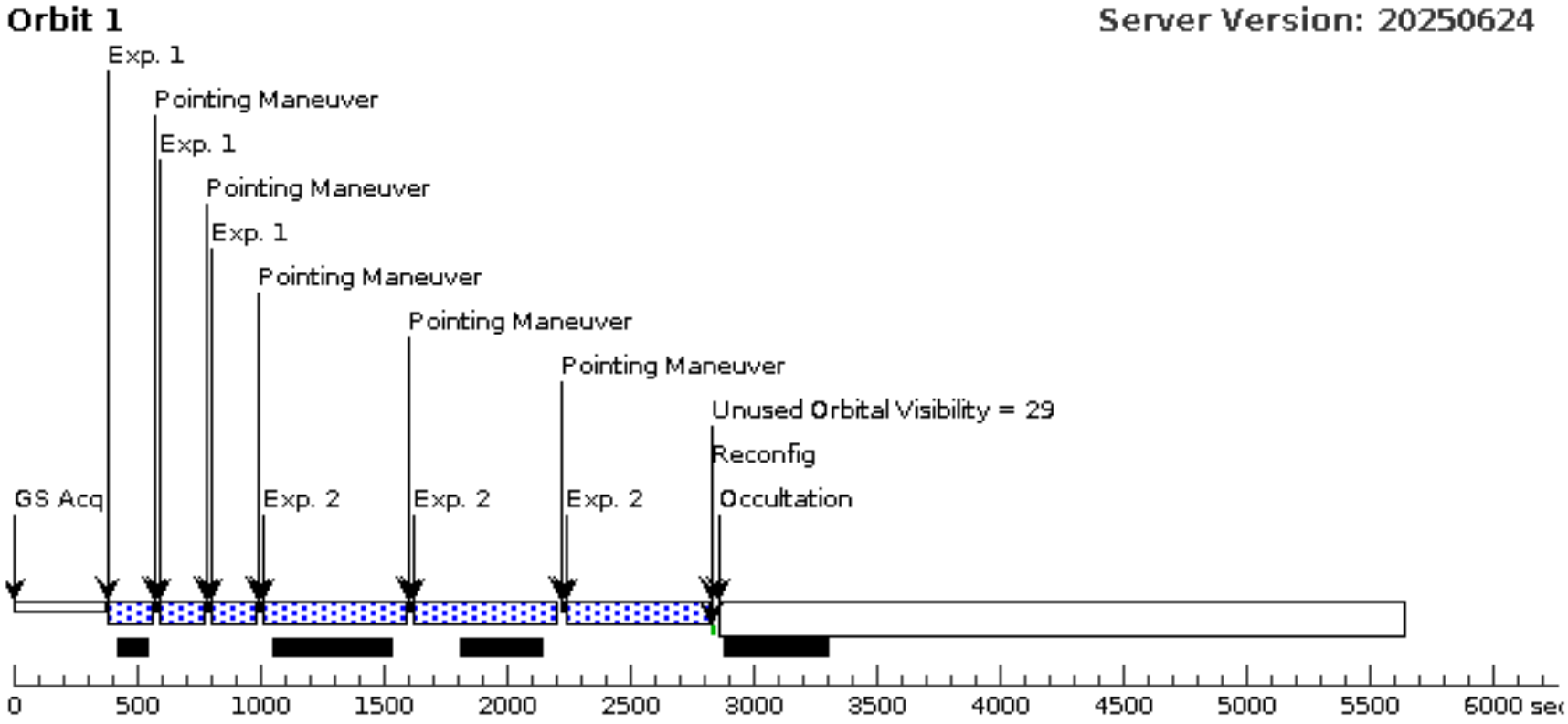
Generic Targets

#	Name	Criteria	Description
(2)	IRKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) IRKN	WFC3/IR, MULTIACCUM, GRISM1024	F110W	NSAMP=8; SAMP-SEQ=STEP50		Pattern 5, Exps 1-1 in IRKN (04) (5)	149.231128 Secs (447.693 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	 ***[1]***
2		(2) IRKN	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=12; SAMP-SEQ=SPARS50		Pattern 5, Exps 2-2 in IRKN (04) (5)	552.937252 Secs (1658.812 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	 ***[1]***

Orbit Structure



Visit

Proposal 17450, IRKN (05), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1), (2)

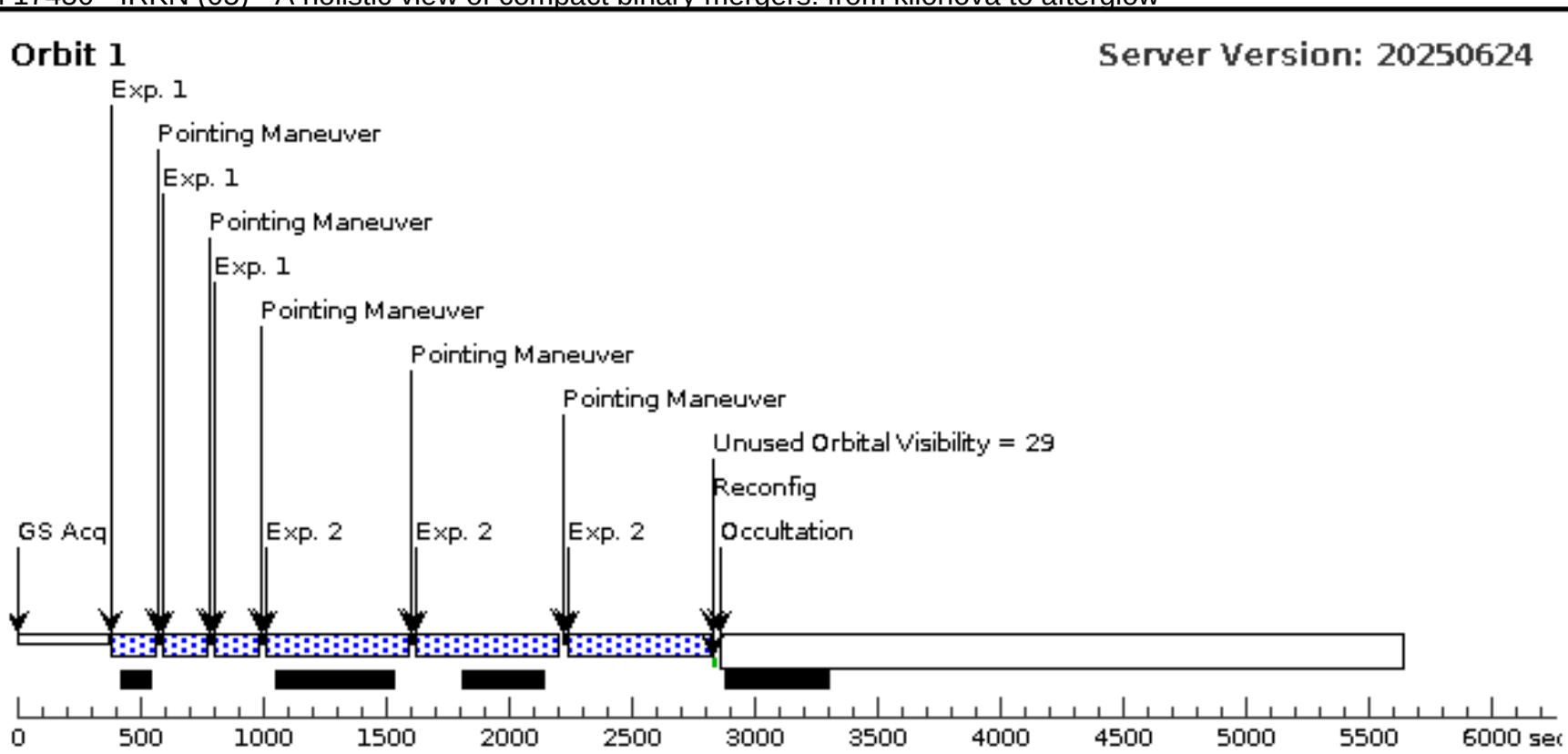
Generic Targets

#	Name	Criteria	Description
(2)	IRKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) IRKN	WFC3/IR, MULTIACCUM, GRISM1024	F160W	NSAMP=8; SAMP-SEQ=STEP50		Pattern 5, Exps 1-1 in IRKN (05) (5)	149.231128 Secs (447.693 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	 ***[1]***
2		(2) IRKN	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=12; SAMP-SEQ=SPARS50		Pattern 5, Exps 2-2 in IRKN (05) (5)	552.937252 Secs (1658.812 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	 ***[1]***

Orbit Structure



Visit

Proposal 17450, IRKN (06), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

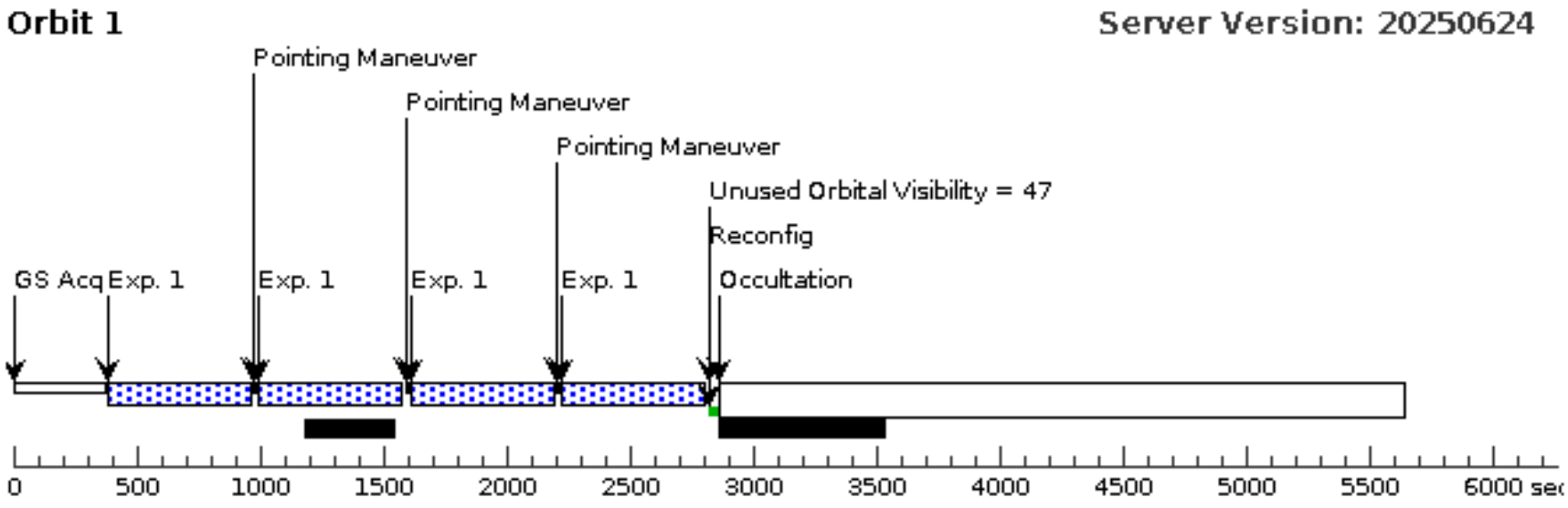
Generic Targets

#	Name	Criteria	Description
(2)	IRKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) IRKN	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50		Pattern 4, Exps 1-1 in IRKN (06) (4)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*

Orbit Structure



Visit

Proposal 17450, IRKN (07), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

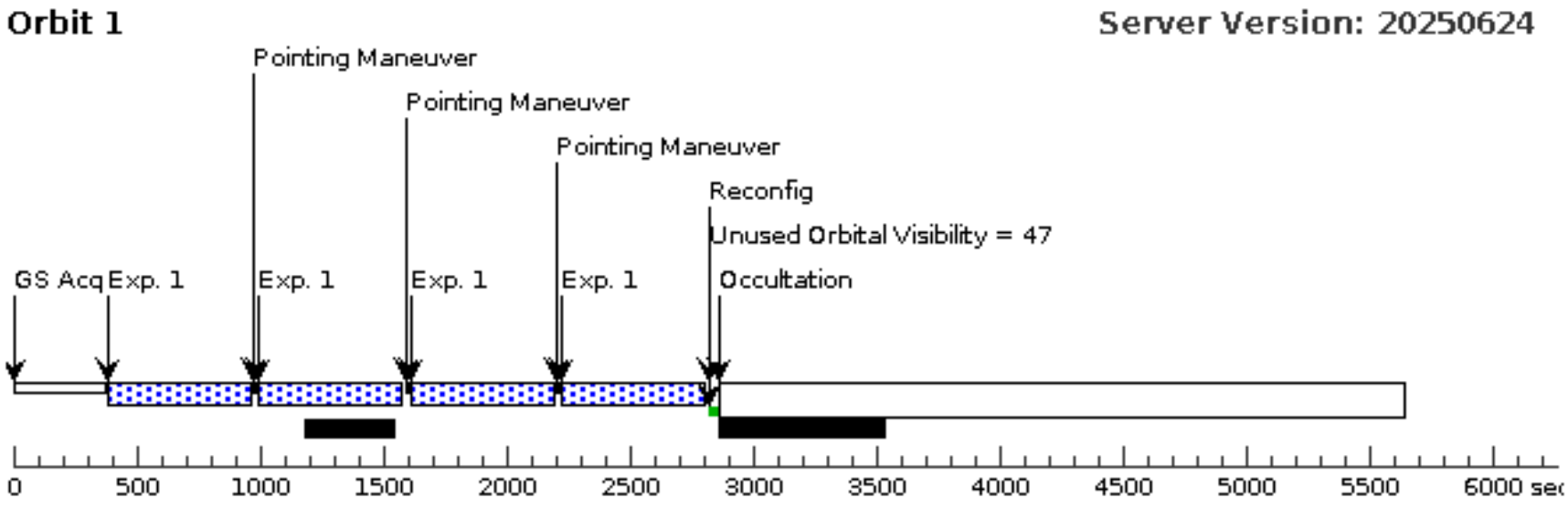
Generic Targets

#	Name	Criteria	Description
(2)	IRKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) IRKN	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50		Pattern 4, Exps 1-1 in IRKN (07) (4)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*

Orbit Structure



Visit

Proposal 17450, IRKN (08), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

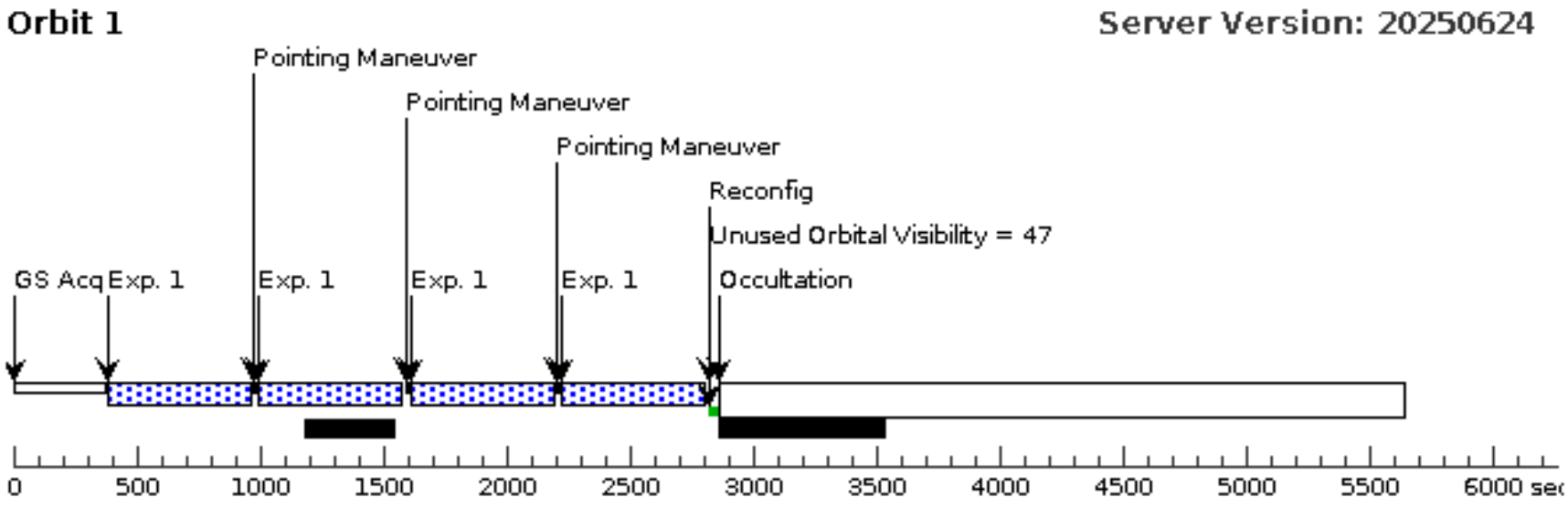
Generic Targets

#	Name	Criteria	Description
(2)	IRKN	GW counterpart	GAMMA RAY BURSTER

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) IRKN	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50		Pattern 4, Exps 1-1 in IRKN (08) (4)	552.937252 Secs (2211.749 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*

Orbit Structure



Visit

Proposal 17450, AG (09), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(4)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

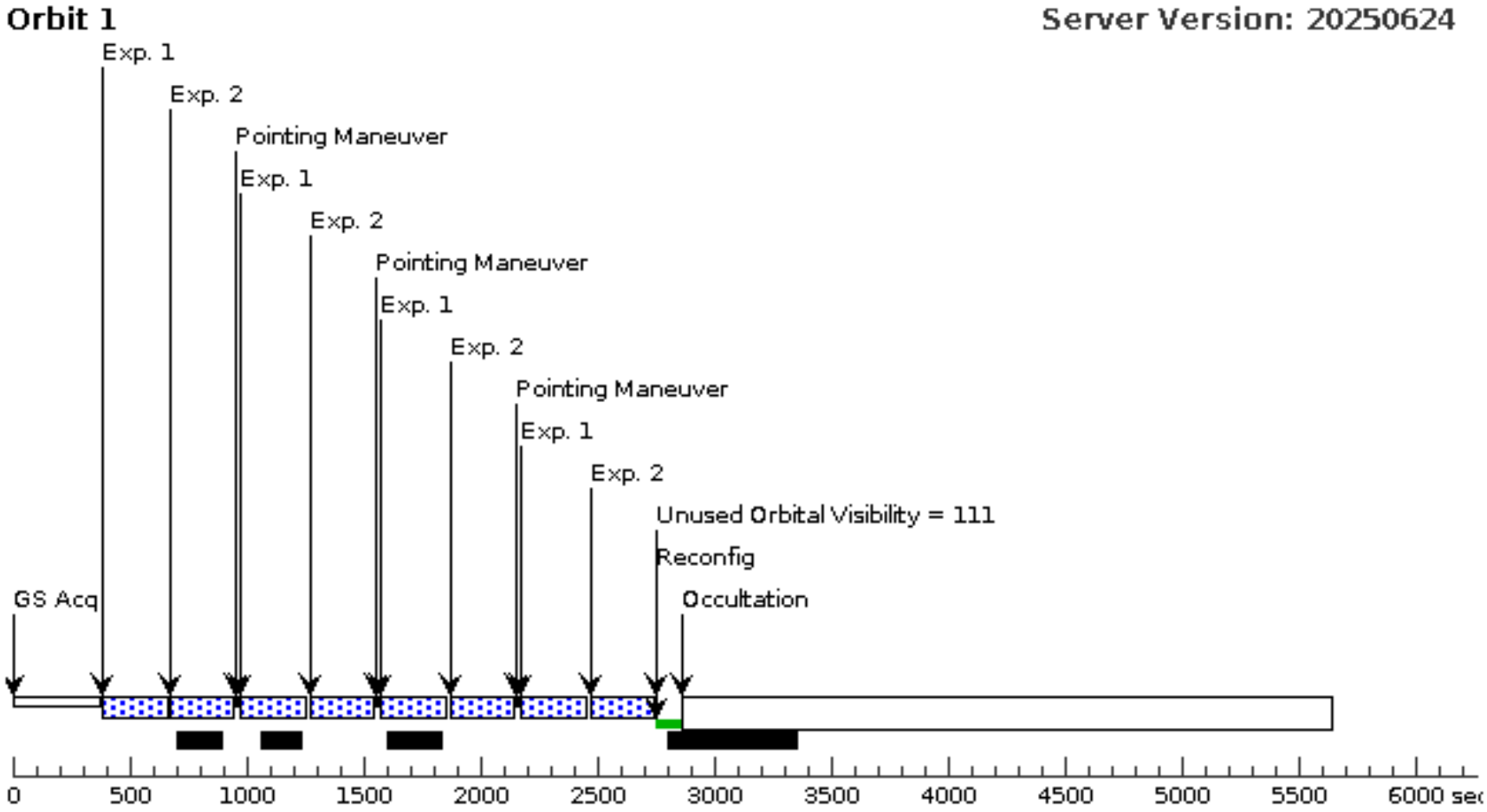
Generic Targets

#	Name	Criteria	Description
(3)	AG	GW counterpart	

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) AG	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=6; SAMP-SEQ=SPARS50		Pattern 4, Exps 1-2 in AG (09) (4)	252.934546 Secs (1011.738 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	 ***[1]***
2		(3) AG	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=6; SAMP-SEQ=SPARS50		Pattern 4, Exps 1-2 in AG (09) (4)	252.934546 Secs (1011.738 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	 ***[1]***

Orbit Structure



Visit

Proposal 17450, AG (10), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Diagnostics

(AG (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(AG (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)

Fixed Targets

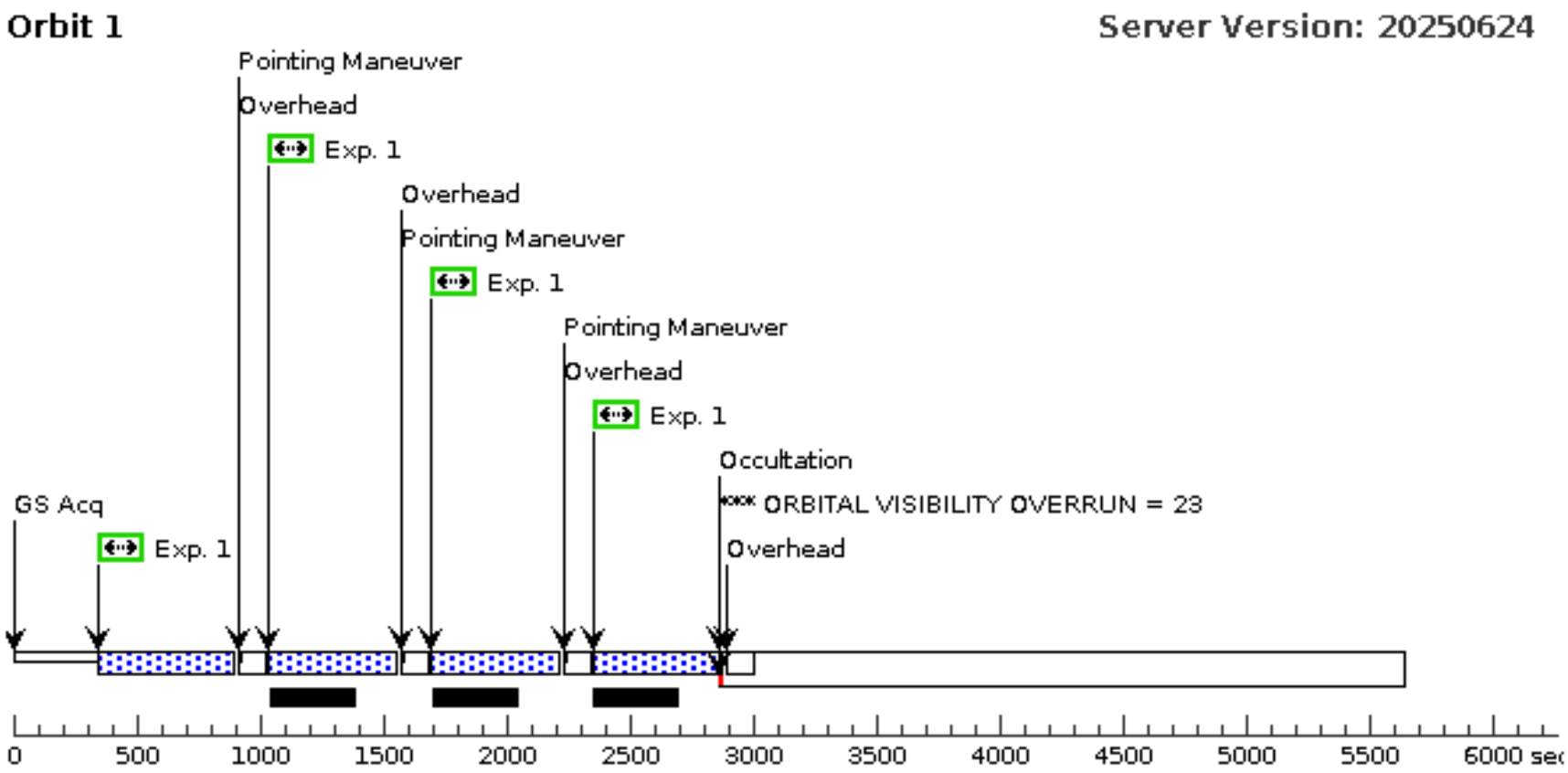
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AT2025ULZ	RA: 15 51 54.1711 (237.9757129d) Dec: +30 54 8.33 (30.90231d) Equinox: J2000		V=28	Reference Frame: ZTF

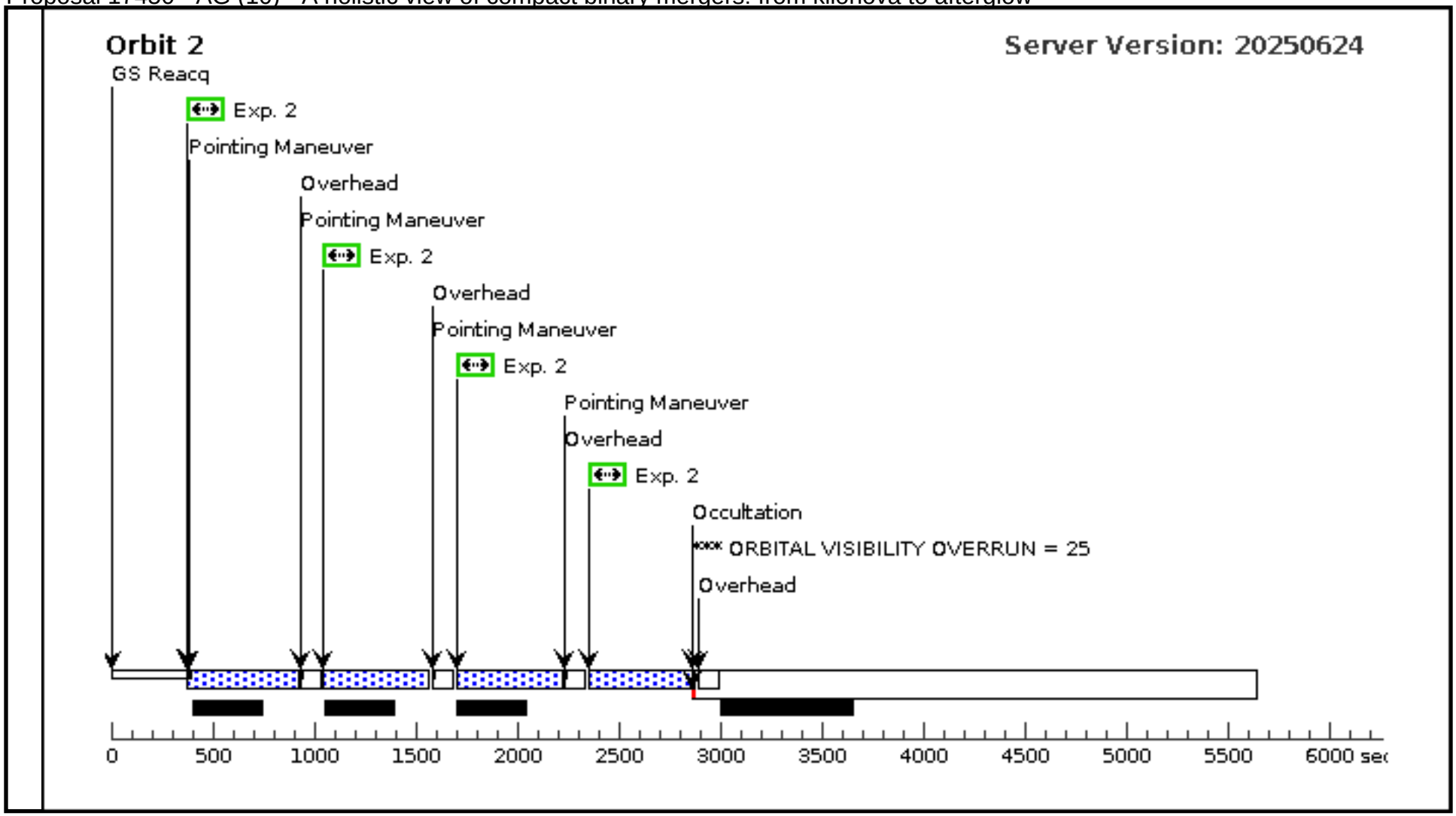
Comments:
Category=STAR
Description=[EJECTA, NEUTRON STAR]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) AT2025ULZ	WFC3/UVIS, ACCUM, UVIS2	F814W	FLASH=9		Pattern 1, Exps 1-1 in AG (10) (1)	525 Secs (2100 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2		(4) AT2025ULZ	WFC3/UVIS, ACCUM, UVIS2	F606W			Pattern 1, Exps 2-2 in AG (10) (1)	240 Secs (2100 Secs) *[==>525.0 Secs (Pattern 1)]* *[==>525.0 Secs (Pattern 2)]* *[==>525.0 Secs (Pattern 3)]* *[==>525.0 Secs (Pattern 4)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20250624
GS Reacq
Exp. 2
Pointing Maneuver
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
**** ORBITAL VISIBILITY OVERRUN = 25
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17450, TEMPLATE_AG_10 (11), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 21.0D

On Hold Comments: Awaiting GW trigger

Diagnostics

(TEMPLATE_AG_10 (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(TEMPLATE_AG_10 (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)

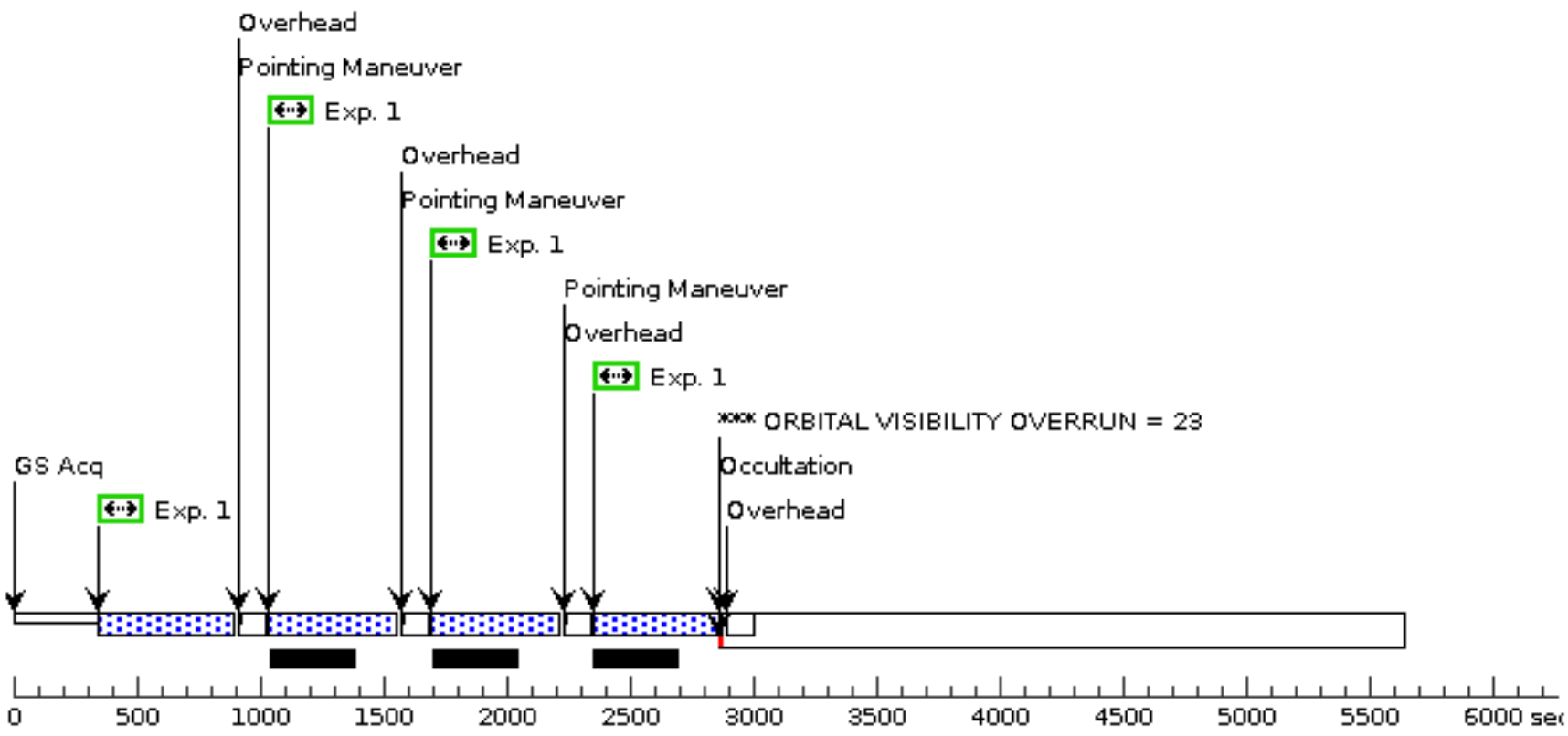
Generic Targets

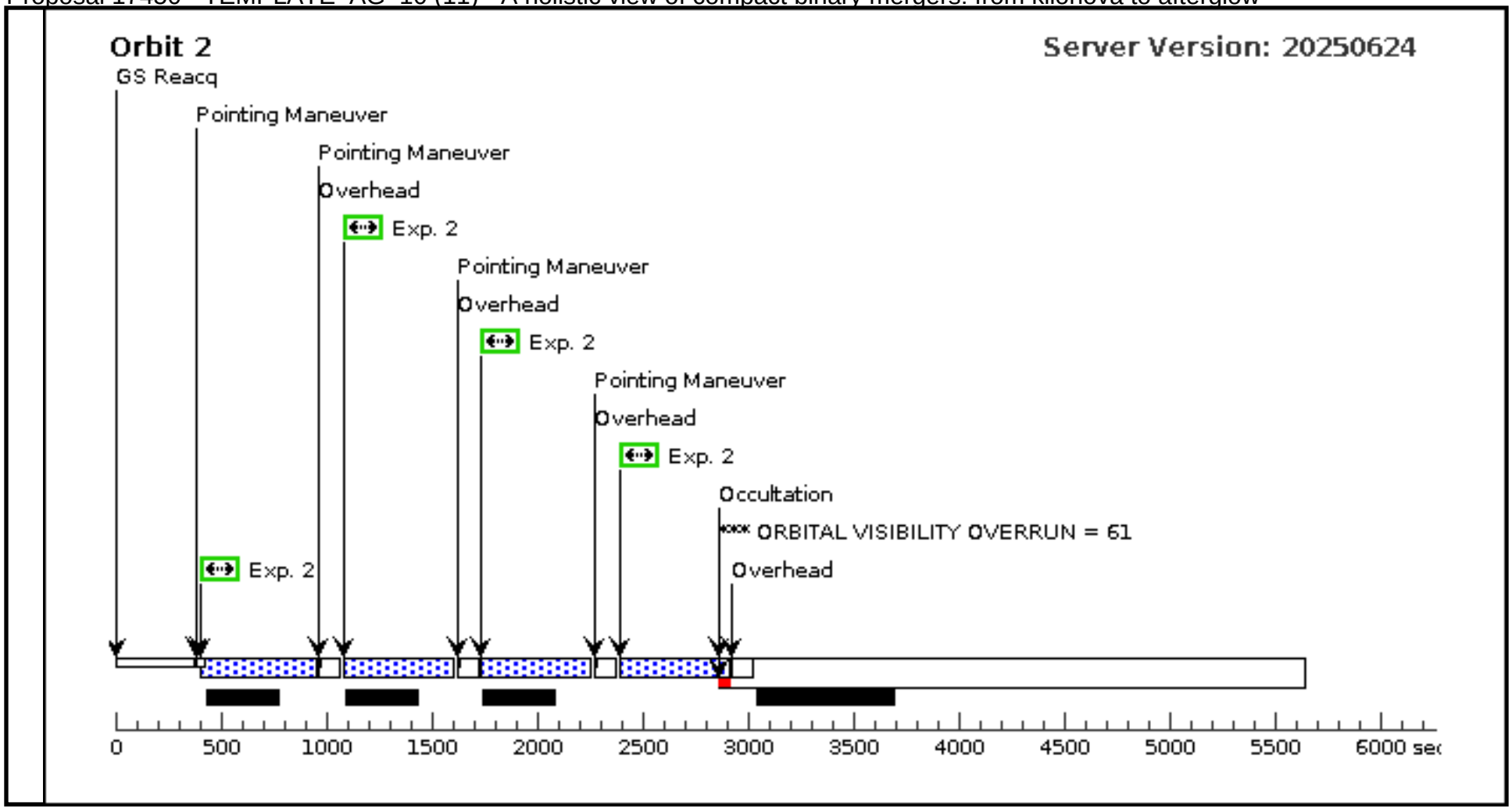
#	Name	Criteria	Description
(3)	AG	GW counterpart	

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) AG	WFC3/UVIS, ACCUM, UVIS1	F814W	FLASH=9		Pattern 1, Exps 1-1 in TEMPLATE_AG_10 (11) (1)	525 Secs (2100 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2		(3) AG	WFC3/UVIS, ACCUM, UVIS2	F606W			Pattern 1, Exps 2-2 in TEMPLATE_AG_10 (11) (1)	240 Secs (2100 Secs)	
								[==>525.0 Secs (Pattern 1)] *[==>525.0 Secs (Pattern 2)]* *[==>525.0 Secs (Pattern 3)]* *[==>525.0 Secs (Pattern 4)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20250624
GS Reacq
Pointing Maneuver
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
*** ORBITAL VISIBILITY OVERRUN = 61
Exp. 2
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17450, UVKN (12), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: TOO RESPONSE TIME 3.0D

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)

Fixed Targets

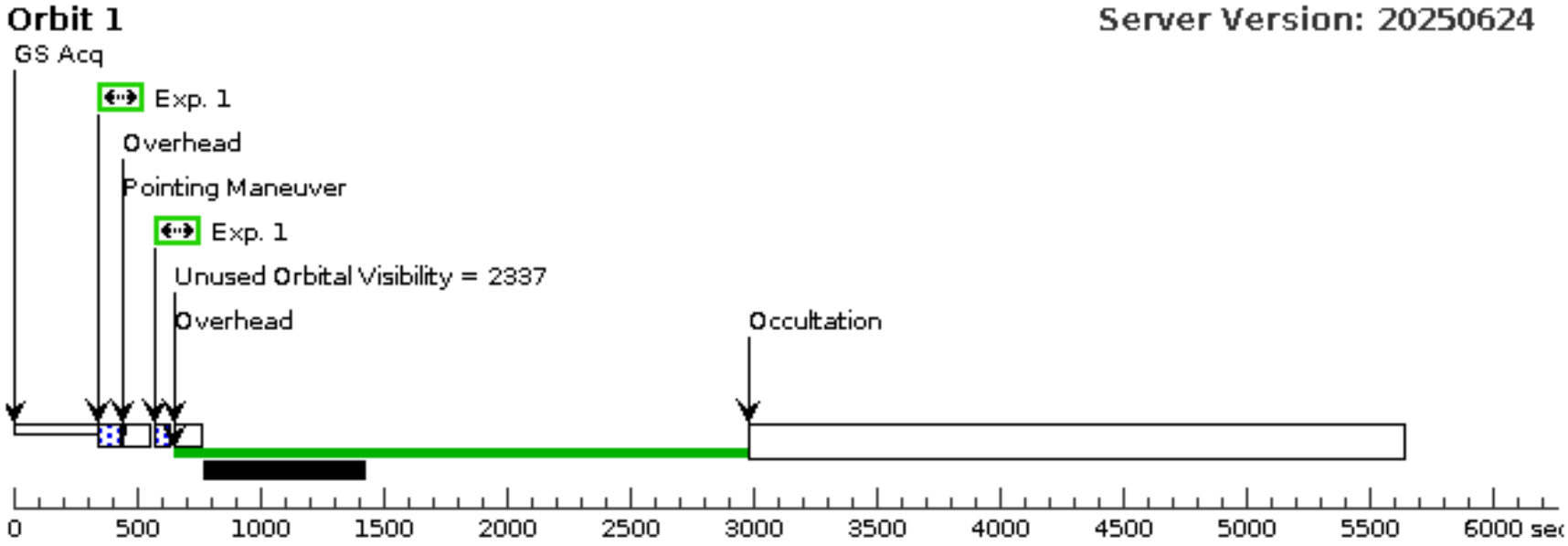
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AT2025ULZ	RA: 15 51 54.1711 (237.9757129d) Dec: +30 54 8.33 (30.90231d) Equinox: J2000		V=28	Reference Frame: ZTF

Comments:
Category=STAR
Description=[EJECTA, NEUTRON STAR]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) AT2025ULZ	WFC3/UVIS, ACCUM, UVIS2-C1K1C-CTE	F606W	CR-SPLIT=NO; FLASH=19		Pattern 2, Exps 1-1 in UVKN (12) (2)	60 Secs (120 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17450, IRKN (14), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

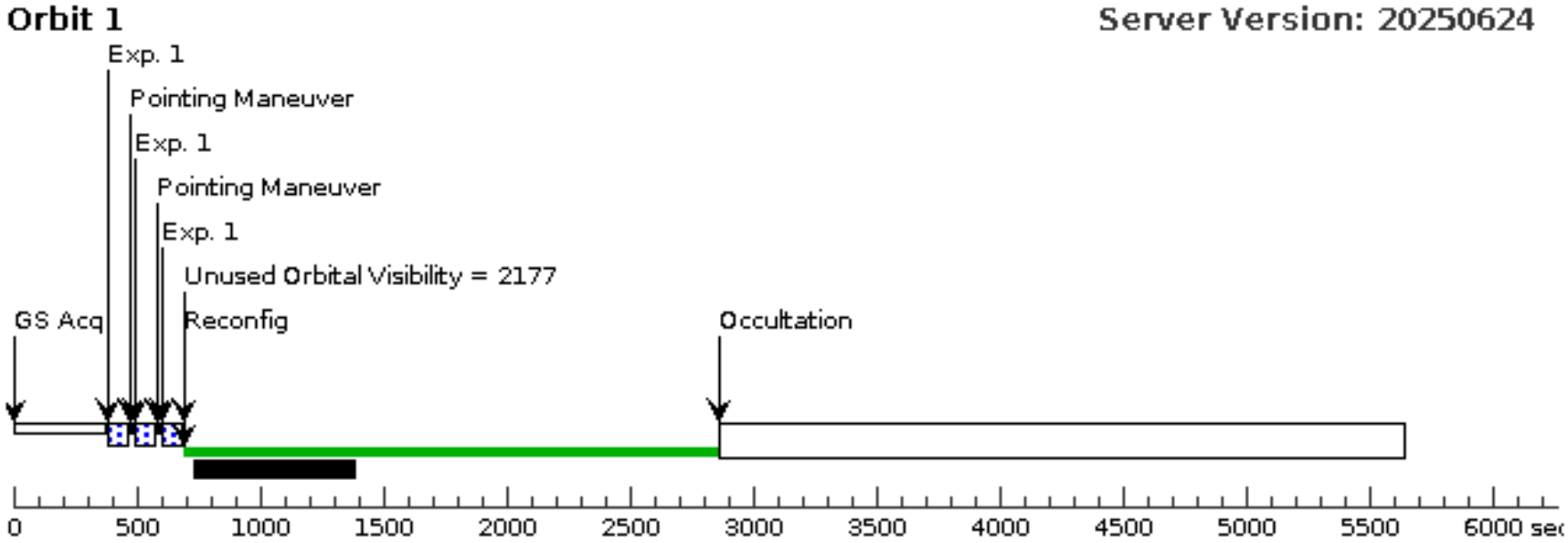
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AT2025ULZ	RA: 15 51 54.1711 (237.9757129d) Dec: +30 54 8.33 (30.90231d) Equinox: J2000		V=28	Reference Frame: ZTF

Comments:
Category=STAR
Description=[EJECTA, NEUTRON STAR]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) AT2025ULZ	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=10; SAMP-SEQ=SPARS5		Pattern 5, Exps 1-1 in IRKN (14) (5)	47.93923 Secs (143.818 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	*[1]*

Orbit Structure



Visit

Proposal 17450, IRKN (15), implementation Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(5)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

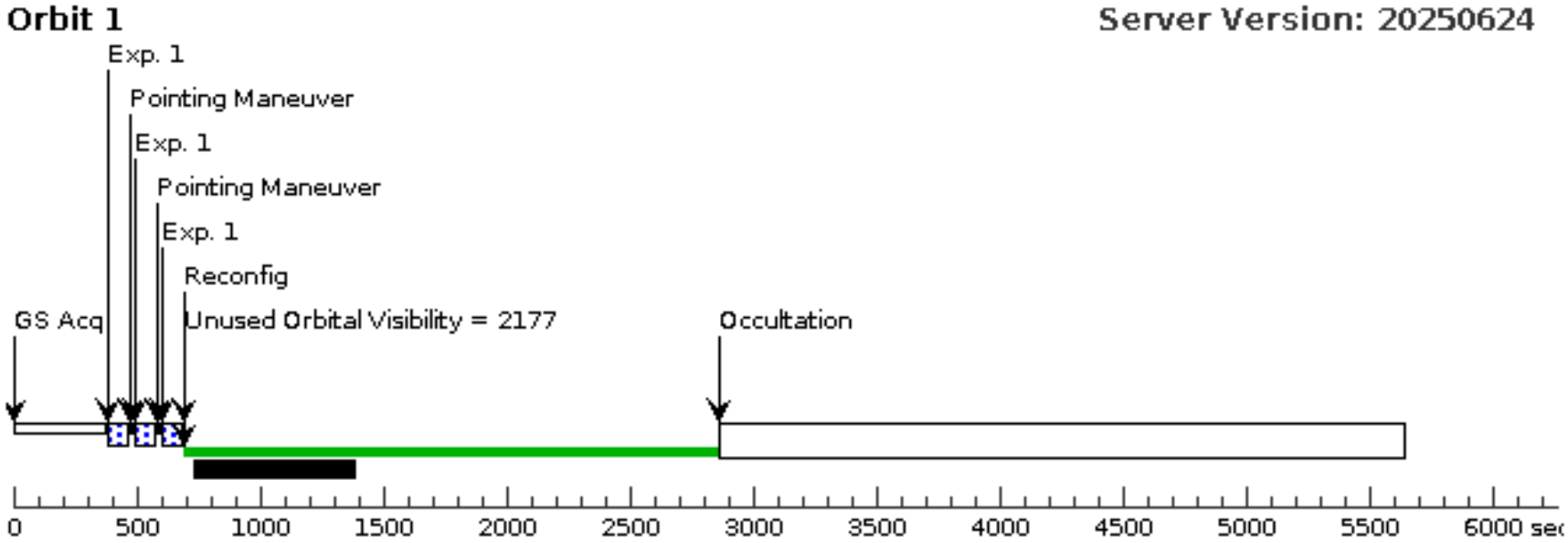
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AT2025ULZ	RA: 15 51 54.1711 (237.9757129d) Dec: +30 54 8.33 (30.90231d) Equinox: J2000		V=28	Reference Frame: ZTF

Comments:
Category=STAR
Description=[EJECTA, NEUTRON STAR]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) AT2025ULZ	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=SPARS5		Pattern 5, Exps 1-1 in IRKN (15) (5)	47.93923 Secs (143.818 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 17450, IRKN (16) Sat Aug 23 02:00:29 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(7)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=1.5 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

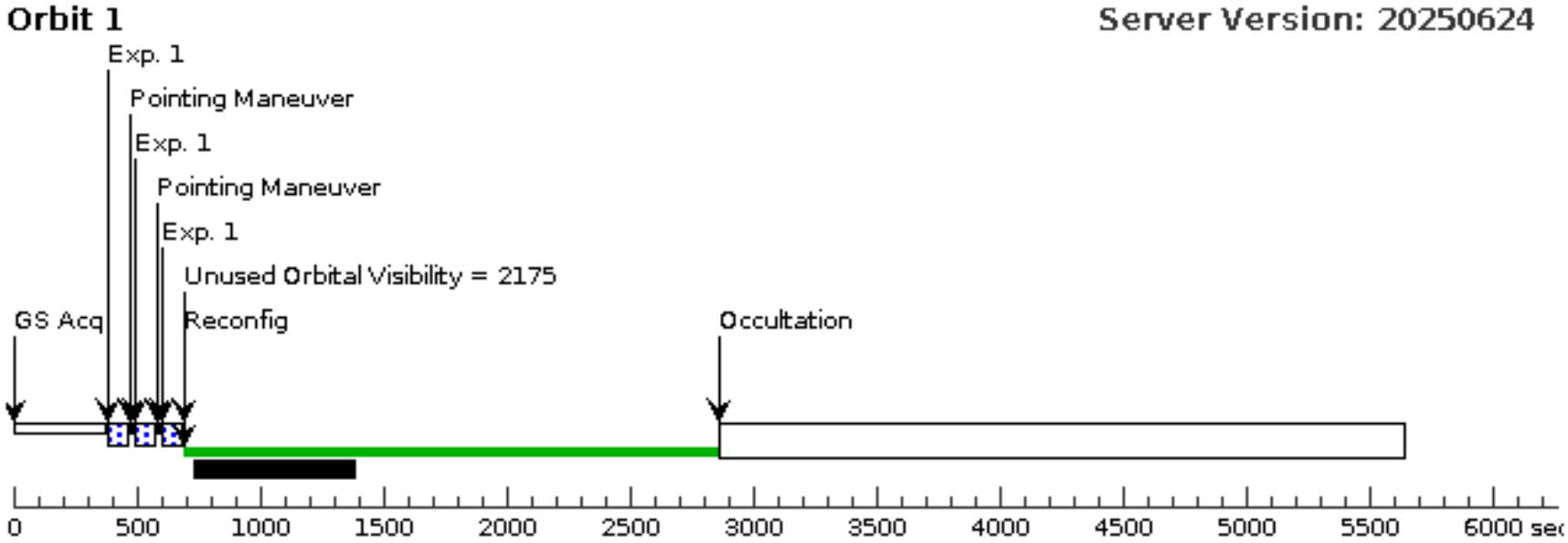
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AT2025ULZ	RA: 15 51 54.1711 (237.9757129d) Dec: +30 54 8.33 (30.90231d) Equinox: J2000		V=28	Reference Frame: ZTF

Comments:
Category=STAR
Description=[EJECTA, NEUTRON STAR]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) AT2025ULZ	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=10; SAMP-SEQ=SPARS5		Pattern 7, Exps 1-1 in IRKN (16) (7)	47.93923 Secs (143.818 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	*[1]*

Orbit Structure



Visit

Proposal 17450, IRKN (18) Sat Aug 23 02:00:30 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(7)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=1.5 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	AT2025ULZ	RA: 15 51 54.1711 (237.9757129d) Dec: +30 54 8.33 (30.90231d) Equinox: J2000		V=28	Reference Frame: ZTF

Comments:
Category=STAR
Description=[EJECTA, NEUTRON STAR]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) AT2025ULZ	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=SPARS5		Pattern 7, Exps 1-1 in IRKN (18) (7)	47.93923 Secs (143.818 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	*[1]*

Orbit Structure