



17806 - R-process kilonovae associated with merger-driven gamma-ray bursts

Cycle: 32, Proposal Category: GO

(Availability Mode: SUPPORTED)

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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) KN+GRB	WFC3/UVIS	1	16-Sep-2025 11:00:17.0	yes
02	(1) KN+GRB	WFC3/UVIS	1	16-Sep-2025 11:00:17.0	yes
03	(2) EP250207B	WFC3/UVIS	1	16-Sep-2025 11:00:17.0	yes
18	(2) EP250207B	WFC3/UVIS	1	16-Sep-2025 11:00:18.0	yes
14	(2) EP250207B	WFC3/UVIS	1	16-Sep-2025 11:00:18.0	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>
04	(1) KN+GRB	WFC3/UVIS	1	16-Sep-2025 11:00:18.0	yes
05	(1) KN+GRB	WFC3/UVIS	1	16-Sep-2025 11:00:19.0	yes
06	(1) KN+GRB	WFC3/UVIS	1	16-Sep-2025 11:00:19.0	yes
07	(1) KN+GRB	WFC3/IR WFC3/UVIS	1	16-Sep-2025 11:00:20.0	yes
08	(1) KN+GRB	WFC3/IR	1	16-Sep-2025 11:00:21.0	yes
09	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:21.0	yes
15	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:21.0	yes
10	(1) KN+GRB	WFC3/IR	1	16-Sep-2025 11:00:22.0	yes
11	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:22.0	yes
16	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:22.0	yes
12	(1) KN+GRB	WFC3/IR	1	16-Sep-2025 11:00:23.0	yes
13	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:23.0	yes
19	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:24.0	yes
17	(2) EP250207B	WFC3/IR	1	16-Sep-2025 11:00:24.0	yes

19 Total Orbits Used

ABSTRACT

The discovery of AT2017gfo, both prompt gamma-rays and a thermal kilonova (KN), associated with a binary neutron star (BNS) merger detected by aLIGO/AdV, GW170817, heralded the era of GW+EM multi-messenger astronomy. This landmark event confirmed both the association of some GRBs with compact binary mergers, and that neutron star material can be ejected in sufficient quantities to power a detectable radioactive transient. It opened a new window on long-standing problems in astrophysics, cosmology and fundamental physics, including the possibility that BNS and NSBH compact binary mergers are the dominant source of heavy r-process elements in the universe. However, the lack of success in identifying similar events in the O3 and O4a runs of the gravitational wave detector network highlighted that their rate is low in the nearby universe (e.g. $z < 0.1$), thus opportunities for study of the kilonova population, crucial to understanding their range of behaviour and heavy element yields, for example, will be infrequent. Here we propose a ToO campaign to follow the light curve of a kilonova discovered during cycle 32, coincident with a well localised

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GRB at $0.1 < z < 0.4$ but not a GW signal (which are the target of other proposals). HST has already made unique contributions to the follow-up of AT2017gfo and its off-axis relativistic jet, and also provided the primary evidence for the most compelling cases of KNe following short-GRBs. Our HST+XMM program is flexible to adapt for different possible scenarios, and will be crucial for understanding the diversity of EM emission from neutron star compact binary mergers, and providing the data to test increasingly sophisticated KN models.

OBSERVING DESCRIPTION

We intend to conduct comprehensive Optical to IR observations of a kilonova associated with a low redshift GRB, spanning four epochs (the last being a late time visit after the transient light has faded). This will include early UVIS and IR imaging with a range of three filters chosen at trigger time according to information available from early ground-based imaging.

Given the uncertainty in the field due to the limited number of detections we specify a range of possible observations, as explained in our phase I, which are described below. However, it will be necessary to update the phase II at the time of the submission. To avoid a very crowded phase II we do not include copies of all individual observations, and will duplicate to request multiple repeats of the same ones (which we will copy to a new phase II at the time of trigger).

The observations specified are:

U1 - 1 orbit F475W

U2 - 1 orbit F555W

U3 - 1 orbit F606W

U4 - 1 orbit F814W

U5 - 1 orbit F850LP

M1 - 1 orbit F475W/F606W/F814W

M2 - 1 orbit F606W/F140W

M3 - 1 orbit F105W/F160W

I1 - 1 orbit F105W

I2 - 1 orbit F110W

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I3 - 1 orbit F125W

I4 - 1 orbit F140W

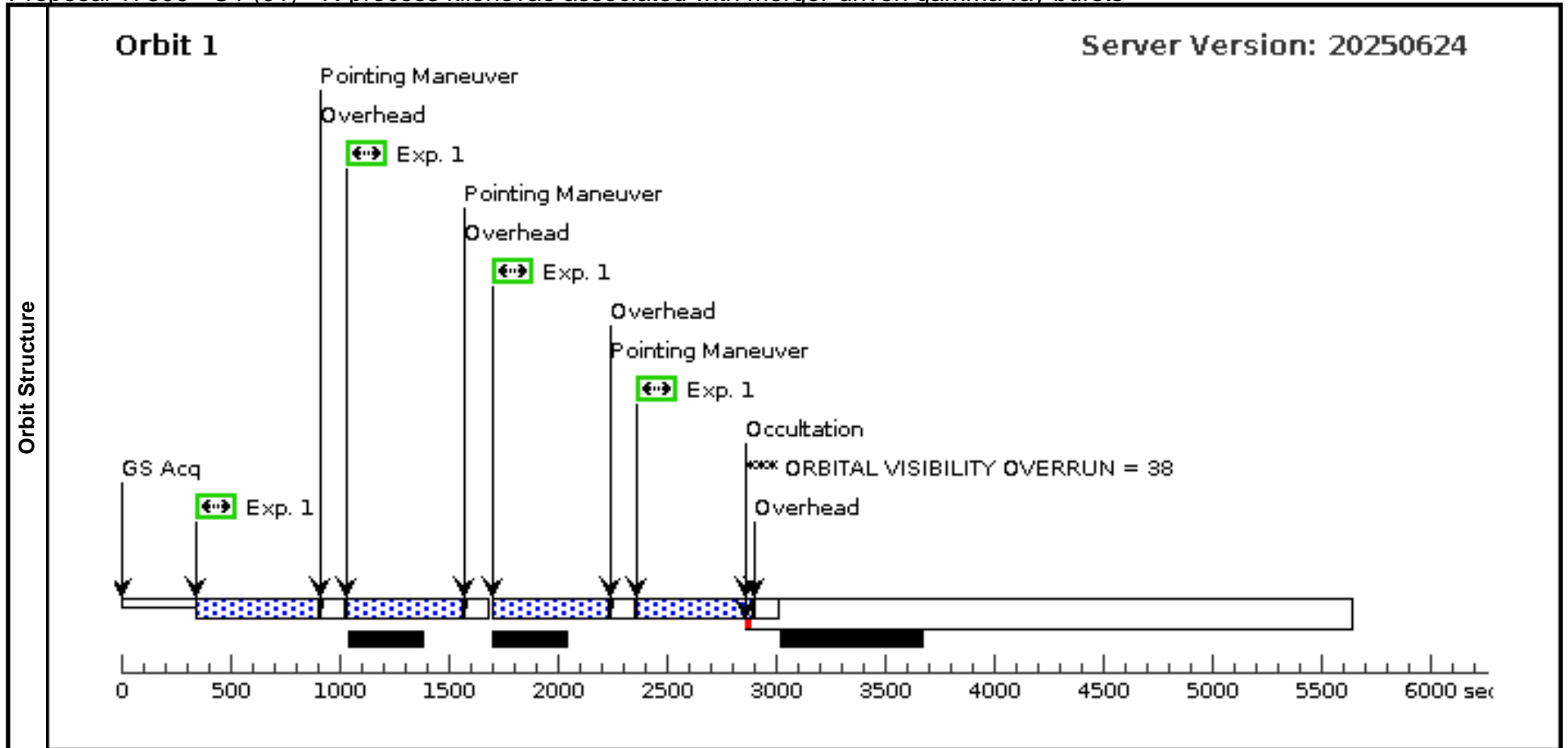
I5 - 1 orbit F160W

NB. We have specified both disruptive and non-disruptive turn-around times in the on-hold OBs, and will set the appropriate timing at trigger time. The final (4th) visit, and possibly the 3rd, will not be included in the disruptive activation.

Proposal 17806 - U1 (01) - R-process kilonovae associated with merger-driven gamma-ray bursts

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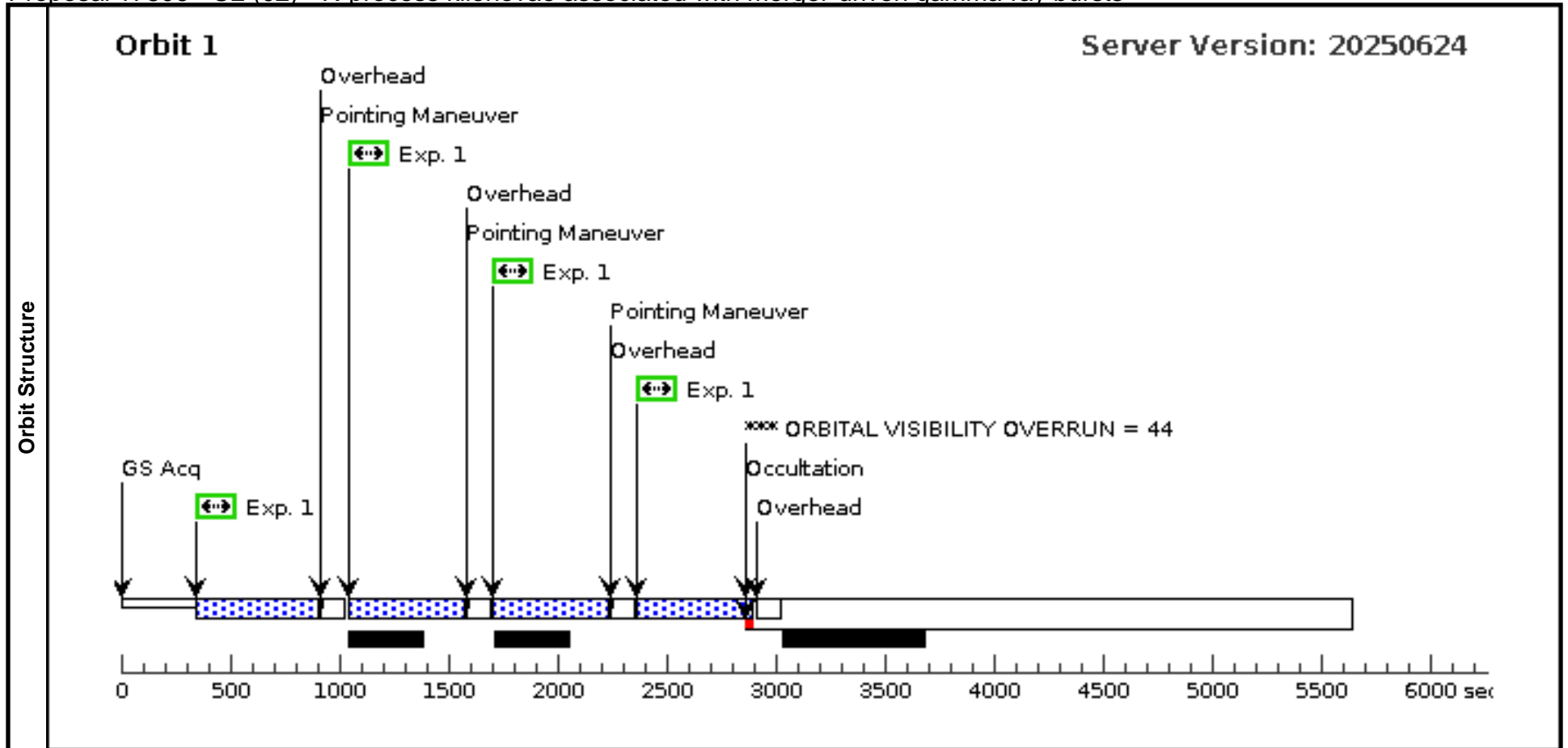
Visit	Proposal 17806, U1 (01), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 3.0D <i>On Hold Comments: Awaiting suitable GRB trigger</i>									
	(U1 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
	(2)	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)		
Generic Targets	#	Name	Criteria	Description						
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO; FLASH=10	POS TARG -60,-30	Pattern 2, Exps 1-1 in U1 (01) (2)	370 Secs (2112 Secs) [=>528.0 Secs (Pattern 1)] [=>528.0 Secs (Pattern 2)] [=>528.0 Secs (Pattern 3)] [=>528.0 Secs (Pattern 4)]	[1]	



Proposal 17806 - U2 (02) - R-process kilonovae associated with merger-driven gamma-ray bursts

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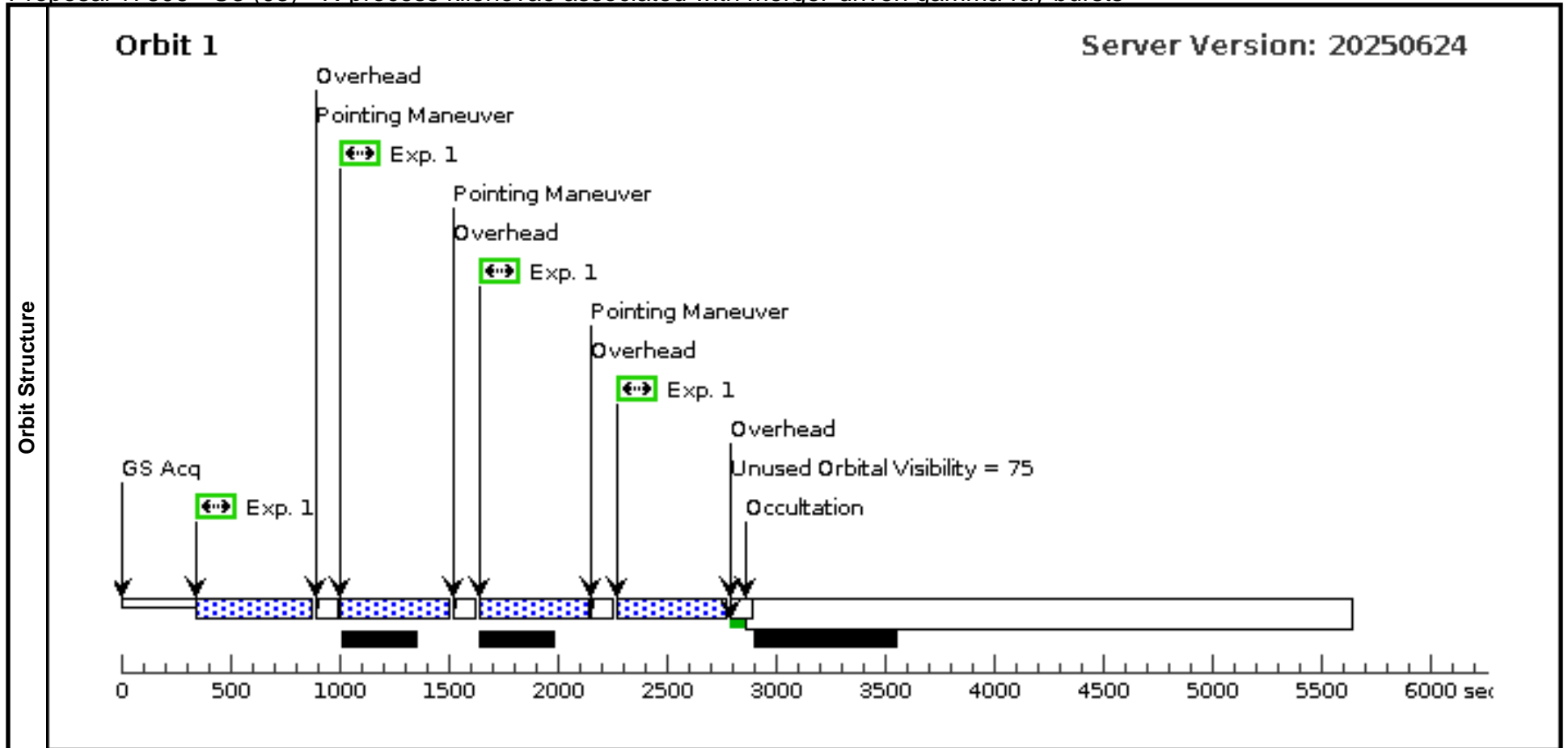
Visit	Proposal 17806, U2 (02), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; ON HOLD ; TOO RESPONSE TIME 180.0D <i>On Hold Comments: Awaiting suitable GRB trigger</i>									
	(U2 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
	(2)	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)		
Generic Targets	#	Name	Criteria	Description						
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS	F555W	CR-SPLIT=NO; FLASH=6			Pattern 2, Exps 1-1 in U2 (02) (2)	370 Secs (2124 Secs) [=>531.0 Secs (Pattern 1)] [=>531.0 Secs (Pattern 2)] [=>531.0 Secs (Pattern 3)] [=>531.0 Secs (Pattern 4)]	[1]



Proposal 17806 - U3 (03) - R-process kilonovae associated with merger-driven gamma-ray bursts

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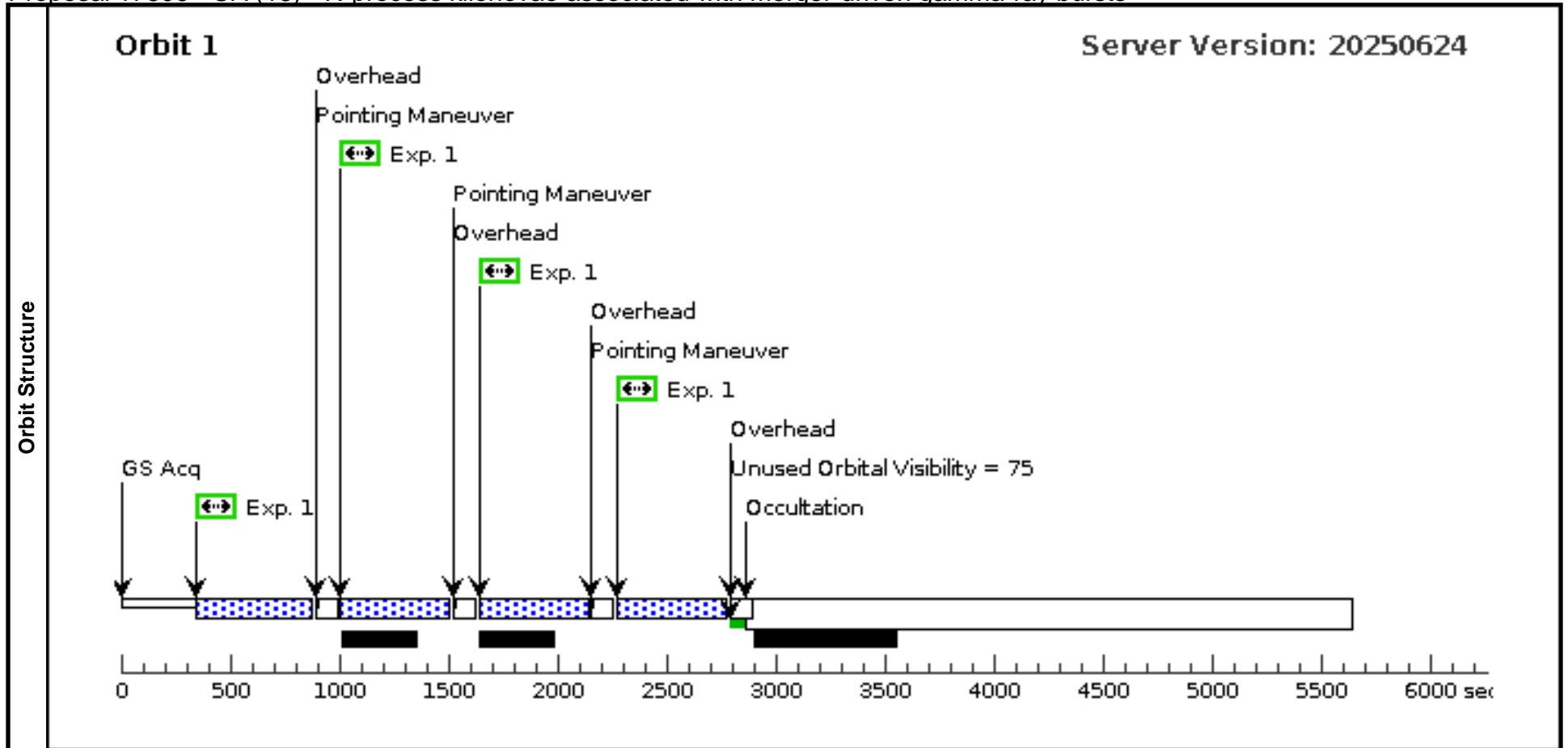
Visit	Proposal 17806, U3 (03), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
(2)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of 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)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000				V=25+/-1	Reference Frame: ICRS			
	<i>Comments:</i> Category=EXT-STAR Description=[GAMMA RAY BURSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(2) EP250207B	WFC3/UVIS, ACCUM, UVIS2	F606W	CR-SPLIT=NO	POS TARG -50,-25	Pattern 2, Exps 1-1 i n U3 (03) (2)	370 Secs (2020 Secs) [=>505.0 Secs (Pattern 1)] [=>505.0 Secs (Pattern 2)] [=>505.0 Secs (Pattern 3)] [=>505.0 Secs (Pattern 4)]		[1]



Proposal 17806 - UA (18) - R-process kilonovae associated with merger-driven gamma-ray bursts

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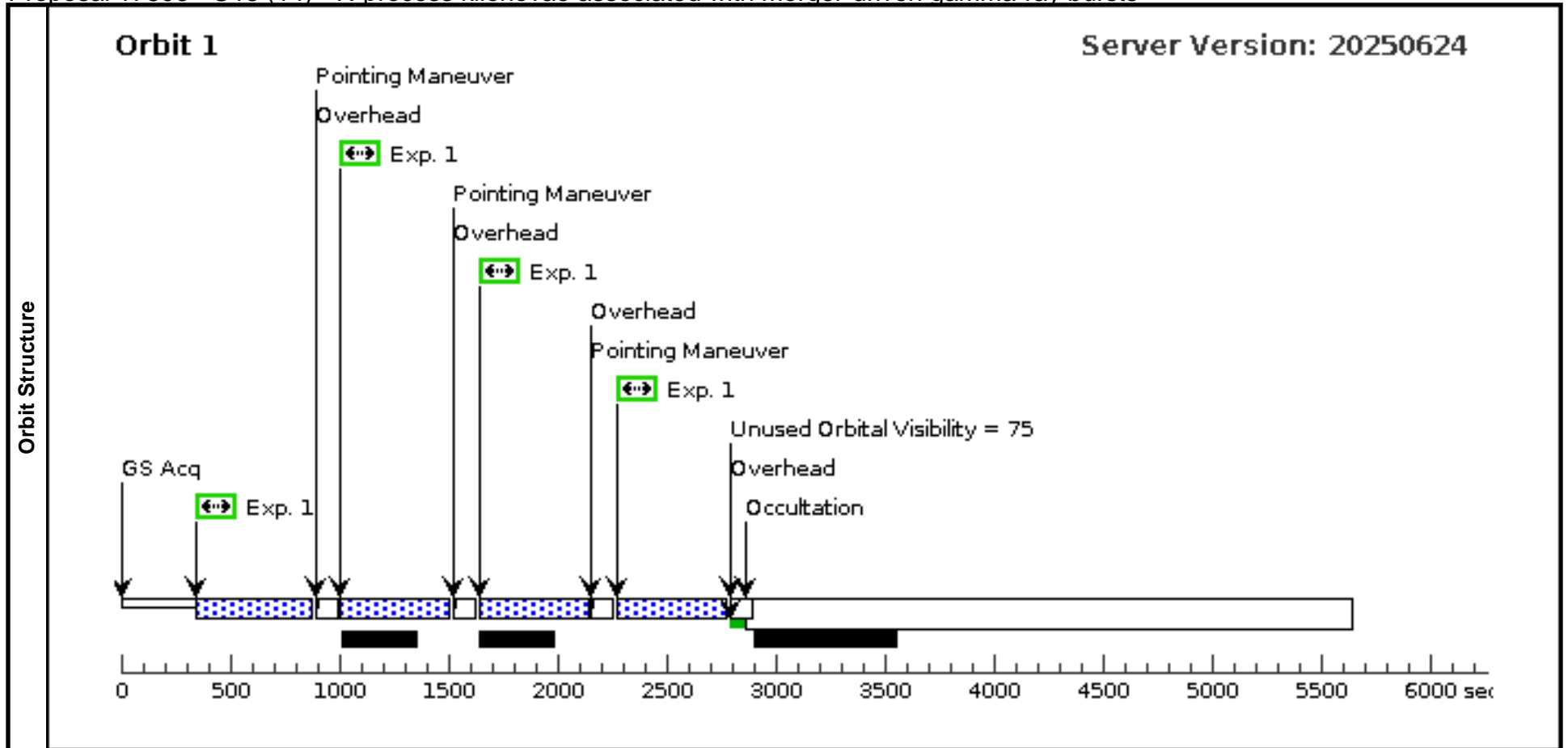
Visit	Proposal 17806, UA (18) Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; BEFORE 10-DEC-2025:00:00:00										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
(2)		Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 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)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000				V=25+/-1	Reference Frame: ICRS			
	<i>Comments:</i> Category=EXT-STAR Description=[GAMMA RAY BURSTER]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(2) EP250207B	WFC3/UVIS, ACCUM, UVIS2	F606W	CR-SPLIT=NO	POS TARG -50,-25	Pattern 2, Exps 1-1 in UA (18) (2)	370 Secs (2020 Secs) [=>505.0 Secs (Pattern 1)] [=>505.0 Secs (Pattern 2)] [=>505.0 Secs (Pattern 3)] [=>505.0 Secs (Pattern 4)]		[1]



Proposal 17806 - U13 (14) - R-process kilonovae associated with merger-driven gamma-ray bursts

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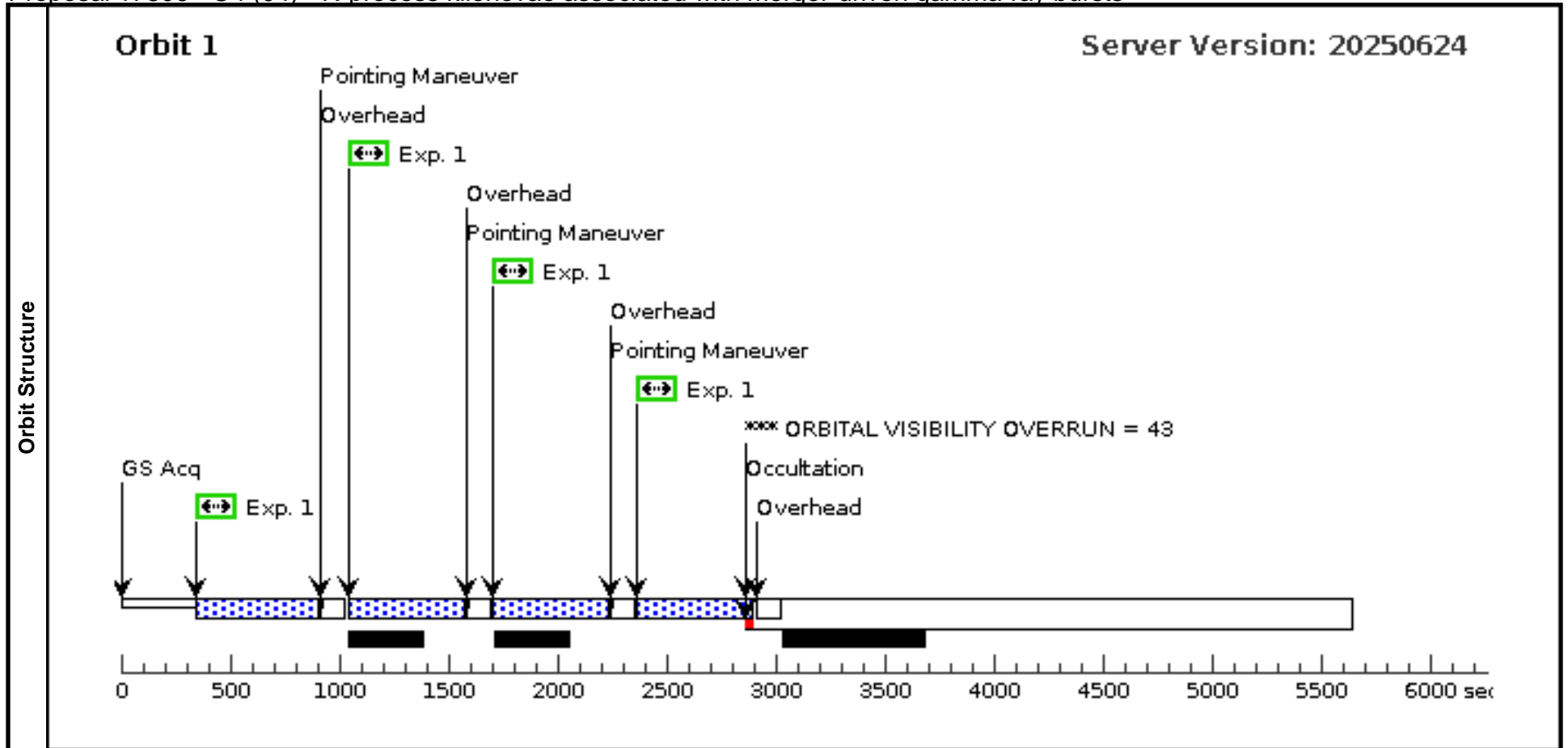
Visit	Proposal 17806, U13 (14), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; BEFORE 12-MAR-2025:00:00:00; TOO RESPONSE TIME 20.0D Comments: Duplicate of U3 (visit 03)										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
(2)		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)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000				V=25+/-1	Reference Frame: ICRS			
Comments: Category=EXT-STAR Description=[GAMMA RAY BURSTER]											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(2) EP250207B	WFC3/UVIS, ACCUM, UVIS2	F606W	CR-SPLIT=NO	POS TARG -50,-25	Pattern 2, Exps 1-1 in U13 (14) (2)	370 Secs (2020 Secs) [=>505.0 Secs (Pattern 1)] [=>505.0 Secs (Pattern 2)] [=>505.0 Secs (Pattern 3)] [=>505.0 Secs (Pattern 4)]		[1]



Proposal 17806 - U4 (04) - R-process kilonovae associated with merger-driven gamma-ray bursts

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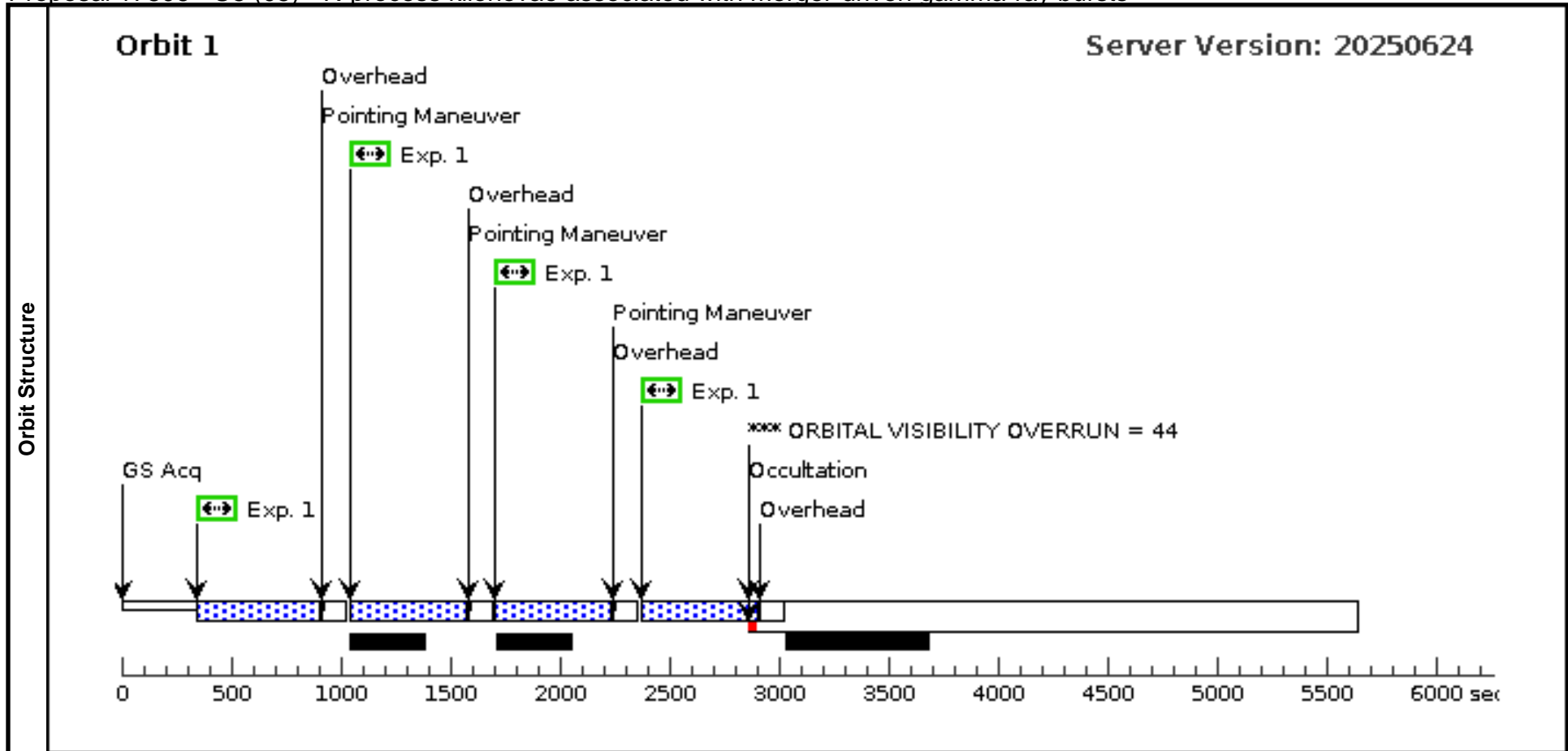
Visit	Proposal 17806, U4 (04), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; ON HOLD <i>On Hold Comments: Awaiting suitable GRB trigger</i>									
	(U4 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
	(2)	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)		
Generic Targets	#	Name	Criteria	Description						
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS	F814W	CR-SPLIT=NO; FLASH=8			Pattern 2, Exps 1-1 in U4 (04) (2)	370 Secs (2120 Secs) [=>530.0 Secs (Pattern 1)] [=>530.0 Secs (Pattern 2)] [=>530.0 Secs (Pattern 3)] [=>530.0 Secs (Pattern 4)]	[1]



Proposal 17806 - U5 (05) - R-process kilonovae associated with merger-driven gamma-ray bursts

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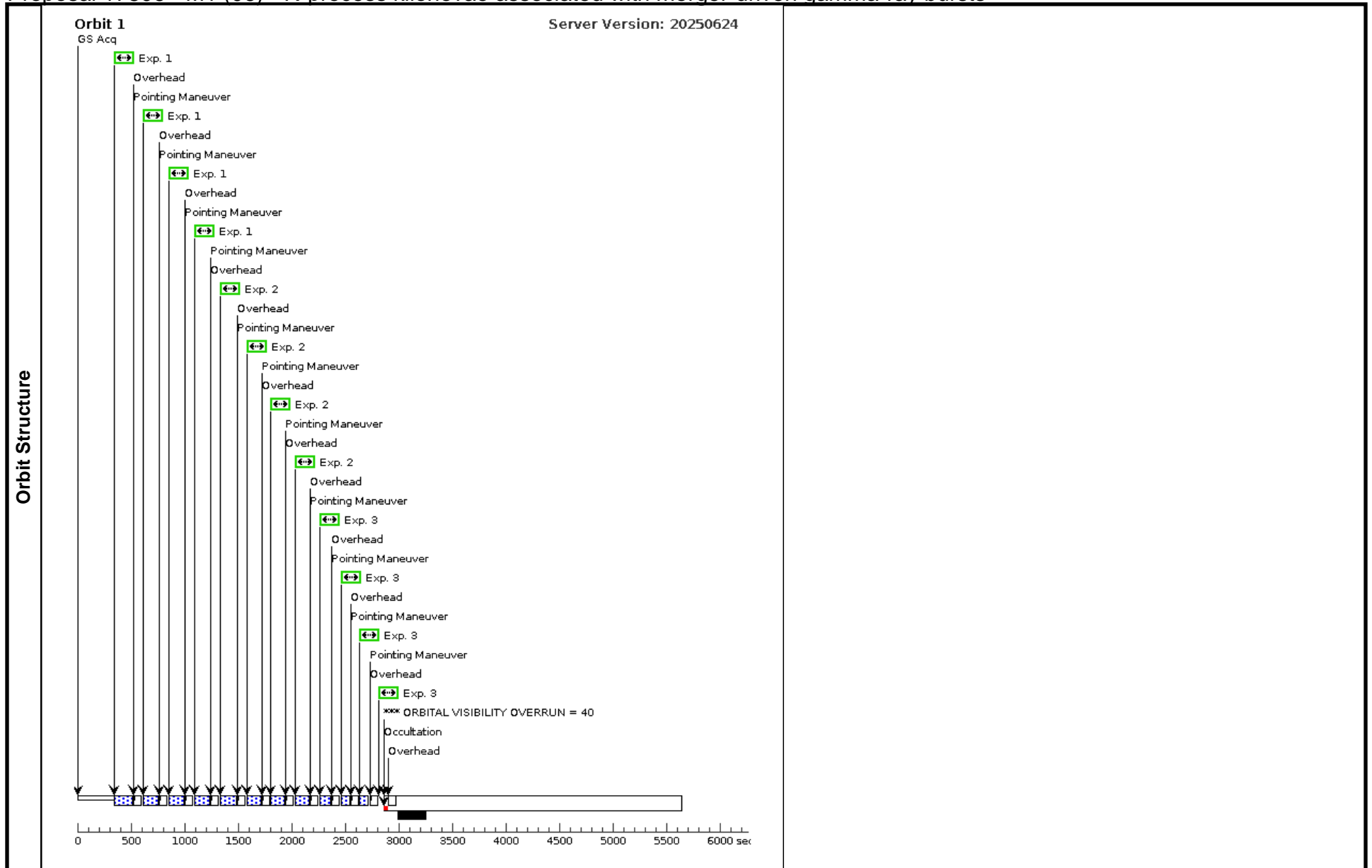
Visit	Proposal 17806, U5 (05), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; ON HOLD <i>On Hold Comments: Awaiting suitable GRB trigger</i>									
	(U5 (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
	(2)	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)		
Generic Targets	#	Name	Criteria	Description						
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS	F850LP	CR-SPLIT=NO; FLASH=16			Pattern 2, Exps 1-1 in U5 (05) (2)	370 Secs (2112 Secs) [=>528.0 Secs (Pattern 1)] [=>528.0 Secs (Pattern 2)] [=>528.0 Secs (Pattern 3)] [=>528.0 Secs (Pattern 4)]	[1]



Proposal 17806 - M1 (06) - R-process kilonovae associated with merger-driven gamma-ray bursts

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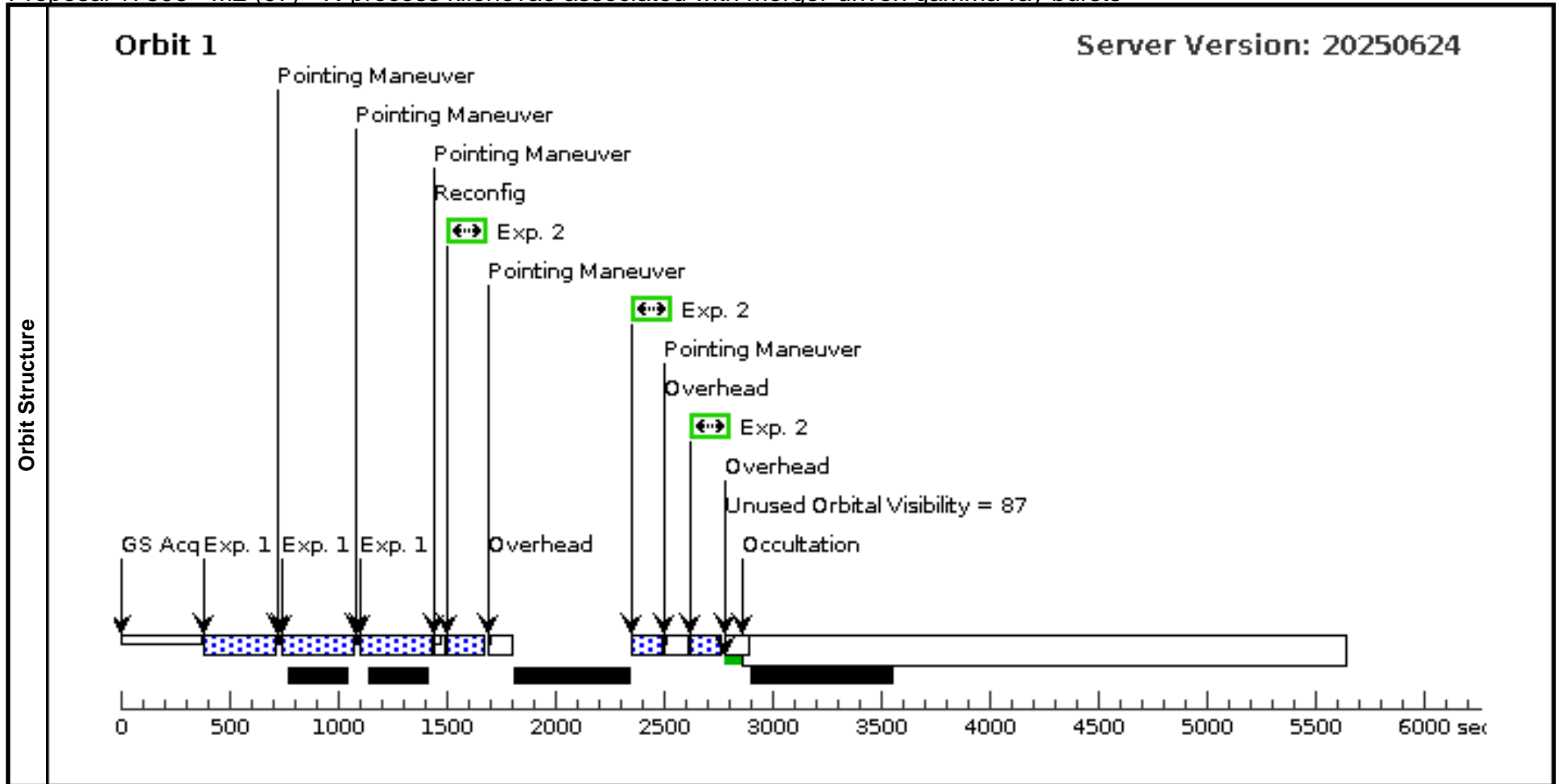
Visit	Proposal 17806, M1 (06), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%; ON HOLD <i>On Hold Comments: Awaiting suitable GRB trigger</i>										
	Diagnosics (M1 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
Patterns	#	Primary Pattern				Secondary Pattern				Exposures	
	(2)	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), (3)	
Generic Targets	#	Name	Criteria			Description					
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin			<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>					
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F475W	CR-SPLIT=NO; FLASH=17	POS TARG 0,0	Pattern 2, Exps 1-1 in M1 (06) (2)	148 Secs (560 Secs)			
								[==>140.0 Secs (Pattern 1)]		[1]	
								[==>140.0 Secs (Pattern 2)]			
								[==>140.0 Secs (Pattern 3)]			
								[==>140.0 Secs (Pattern 4)]			
2	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F814W	CR-SPLIT=NO; FLASH=17		Pattern 2, Exps 2-2 in M1 (06) (2)	135 Secs (508 Secs)				
							[==>127.0 Secs (Pattern 1)]		[1]		
							[==>127.0 Secs (Pattern 2)]				
							[==>127.0 Secs (Pattern 3)]				
							[==>127.0 Secs (Pattern 4)]				
3	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F606W	FLASH=17; CR-SPLIT=NO		Pattern 2, Exps 3-3 in M1 (06) (2)	85 Secs (308 Secs)				
							[==>77.0 Secs (Pattern 1)]		[1]		
							[==>77.0 Secs (Pattern 2)]				
							[==>77.0 Secs (Pattern 3)]				
							[==>77.0 Secs (Pattern 4)]				



Proposal 17806 - M2 (07) - R-process kilonovae associated with merger-driven gamma-ray bursts

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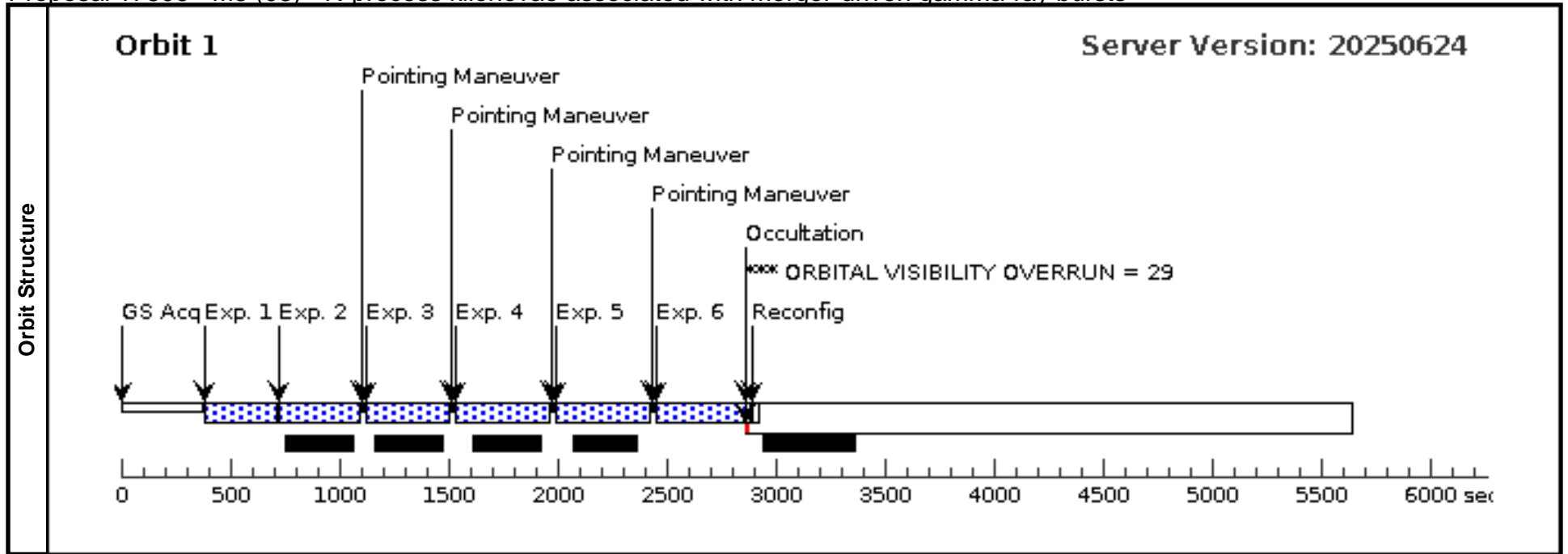
Visit	Proposal 17806, M2 (07), implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: SCHED 100%; ON HOLD On Hold Comments: Awaiting suitable GRB trigger									
Patterns	#	Primary Pattern				Secondary Pattern				Exposures
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false							(2)
(4)	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)	
Generic Targets	#	Name	Criteria	Description						
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F140W	NSAMP=11; SAMP-SEQ=STEP5 0			Pattern 4, Exps 1-1 in M2 (07) (4)	299.232481 Secs (897.697 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
2	(1) KN+GRB	WFC3/UVIS, ACCUM, UVIS2	F606W	FLASH=14; CR-SPLIT=NO			Pattern 3, Exps 2-2 in M2 (07) (3)	348 Secs (414 Secs) [=>138.0 Secs (Pattern 1)] [=>138.0 Secs (Pattern 2)] [=>138.0 Secs (Pattern 3)]	[1]	



Proposal 17806 - M3 (08) - R-process kilonovae associated with merger-driven gamma-ray bursts

Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, M3 (08), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; ON HOLD <i>On Hold Comments: Awaiting suitable GRB trigger</i>																					
	(M3 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN																					
Diagnostics																						
Generic Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Criteria</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>KN+GRB</td> <td>Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin</td> <td></td> </tr> <tr> <td colspan="4"><i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i></td> </tr> </tbody> </table>										#	Name	Criteria	Description	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin		<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>			
	#	Name	Criteria	Description																		
(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin																				
<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>																						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit												
	1		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=11; SAMP-SEQ=STEP5 0			299.232481 Secs (299.232 Secs) [==>]	[1]												
	2		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=STEP5 0			349.232932 Secs (349.233 Secs) [==>]	[1]												
	3		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=STEP5 0	POS TARG 0.451,0. 403			349.232932 Secs (349.233 Secs) [==>]	[1]											
	4		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=13; SAMP-SEQ=STEP5 0	POS TARG 0.902,0. 806			399.233383 Secs (399.233 Secs) [==>]	[1]											
	5		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP5 0	POS TARG 0.451,0. 403			399.233383 Secs (399.233 Secs) [==>]	[1]											
	6		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP5 0	POS TARG 0.902,0. 806			399.233383 Secs (399.233 Secs) [==>]	[1]											



Proposal 17806 - I1 (09) - R-process kilonovae associated with merger-driven gamma-ray bursts

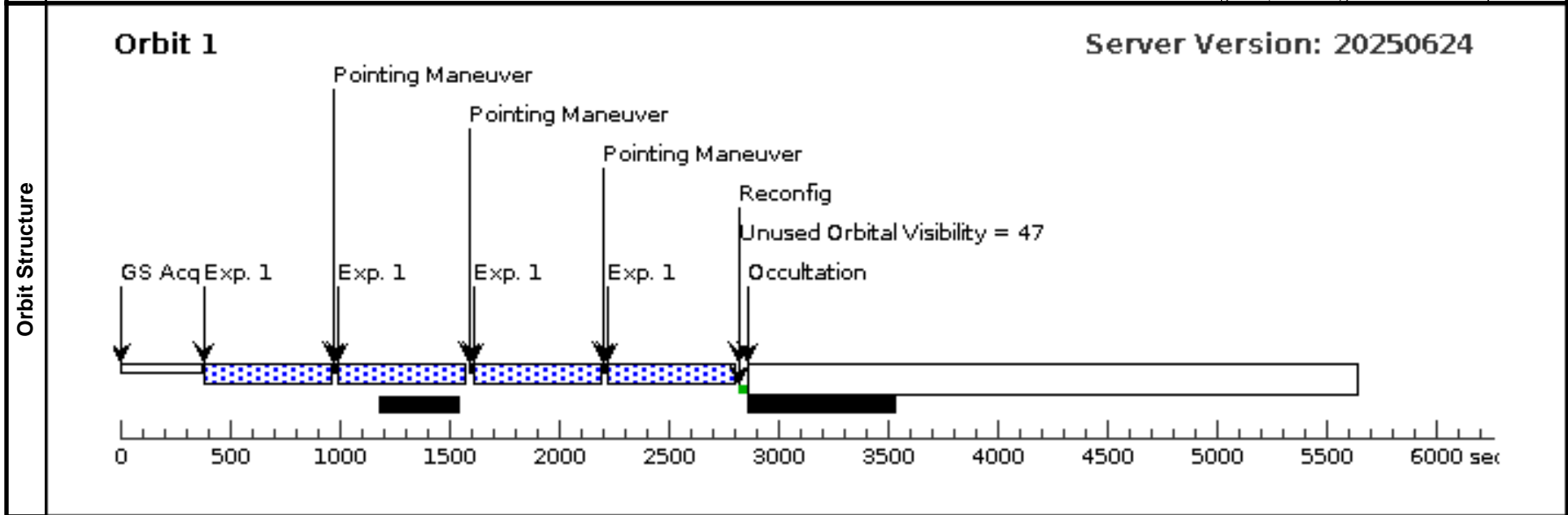
Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, I1 (09), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D		
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Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS
	<i>Comments:</i> Category=EXT-STAR Description=[GAMMA RAY BURSTER]					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS 50;		Pattern 1, Exps 1-1 in I1 (09) (1)	552.937252 Secs (2211.749 Secs)	
						NSAMP=12			[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]



Proposal 17806 - I11 (15) - R-process kilonovae associated with merger-driven gamma-ray bursts

Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, I11 (15), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; BEFORE 12-MAR-2025:00:00:00; TOO RESPONSE TIME 20.0D Comments: Duplicate of I1 (visit 09)		

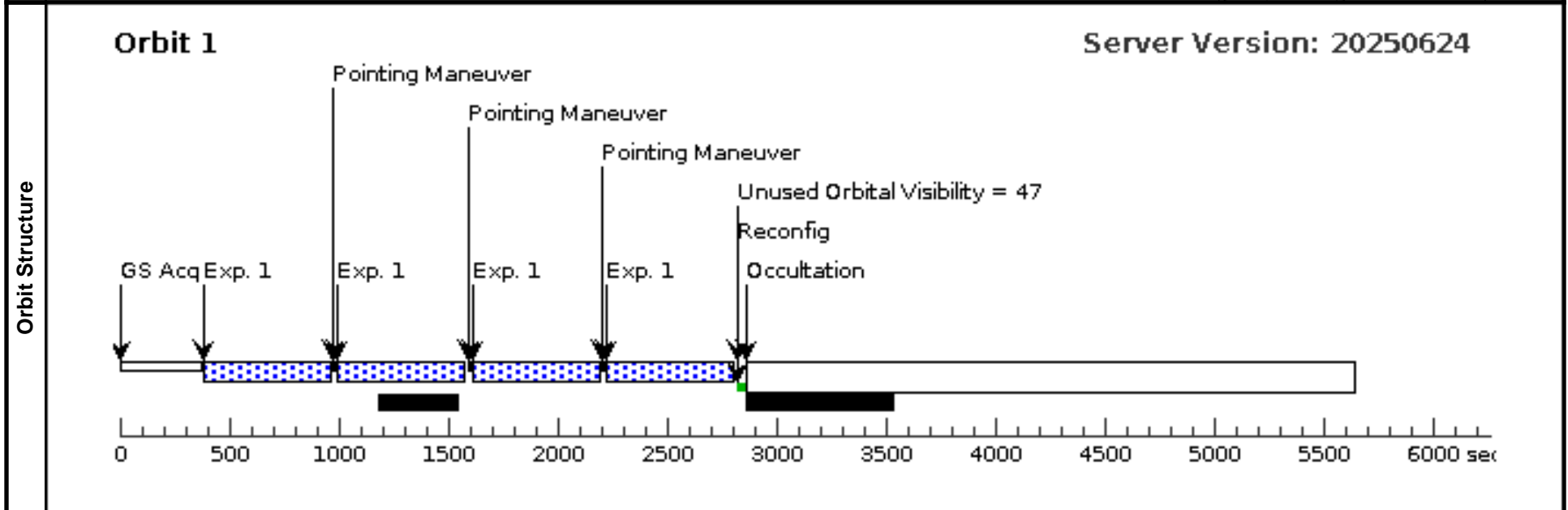
Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[GAMMA RAY BURSTER]

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS 50; NSAMP=12			Pattern 1, Exps 1-1 in I11 (15) (1)	552.937252 Secs (2211.749 Secs)

[==>(Pattern 1)]
[==>(Pattern 2)]
[==>(Pattern 3)]
[==>(Pattern 4)]



Proposal 17806 - I2 (10) - R-process kilonovae associated with merger-driven gamma-ray bursts

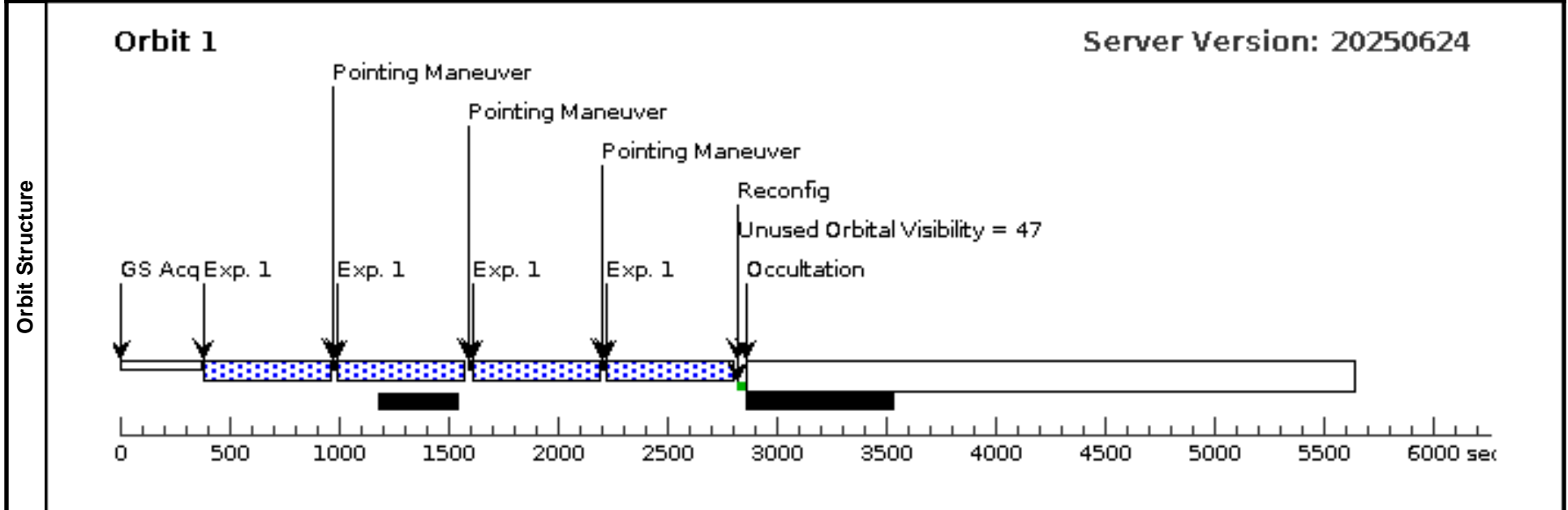
Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, I2 (10), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; ON HOLD <i>On Hold Comments: Awaiting suitable GRB trigger</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	
<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>				

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F110W	SAMP-SEQ=SPARS 50; NSAMP=12		Pattern 1, Exps 1-1 in I2 (10) (1)	552.937252 Secs (2211.749 Secs)	[1]
									[==>(Pattern 1)]	
									[==>(Pattern 2)]	
									[==>(Pattern 3)]	
									[==>(Pattern 4)]	



Proposal 17806 - I3 (11) - R-process kilonovae associated with merger-driven gamma-ray bursts

Tue Sep 16 15:00:25 GMT 2025

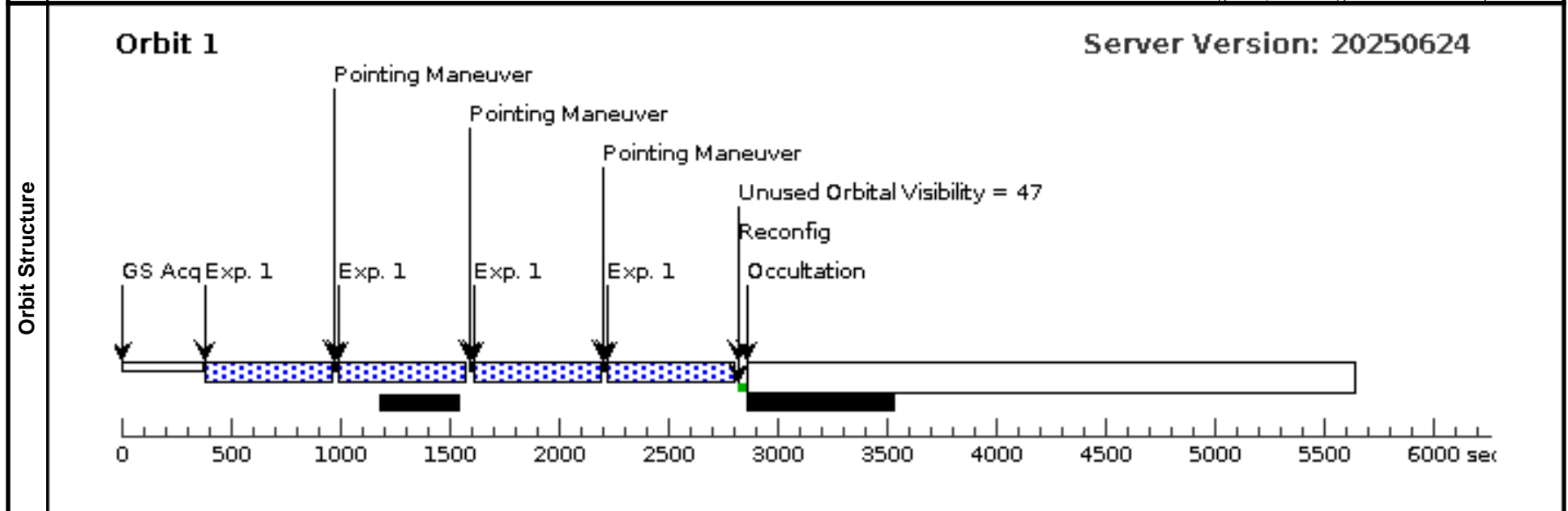
Visit	Proposal 17806, I3 (11), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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	

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS

Comments:
 Category=EXT-STAR
 Description=[GAMMA RAY BURSTER]

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=SPARS 50; NSAMP=12			Pattern 1, Exps 1-1 in I3 (11) (1)	552.937252 Secs (2211.749 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]



Proposal 17806 - I13 (16) - R-process kilonovae associated with merger-driven gamma-ray bursts

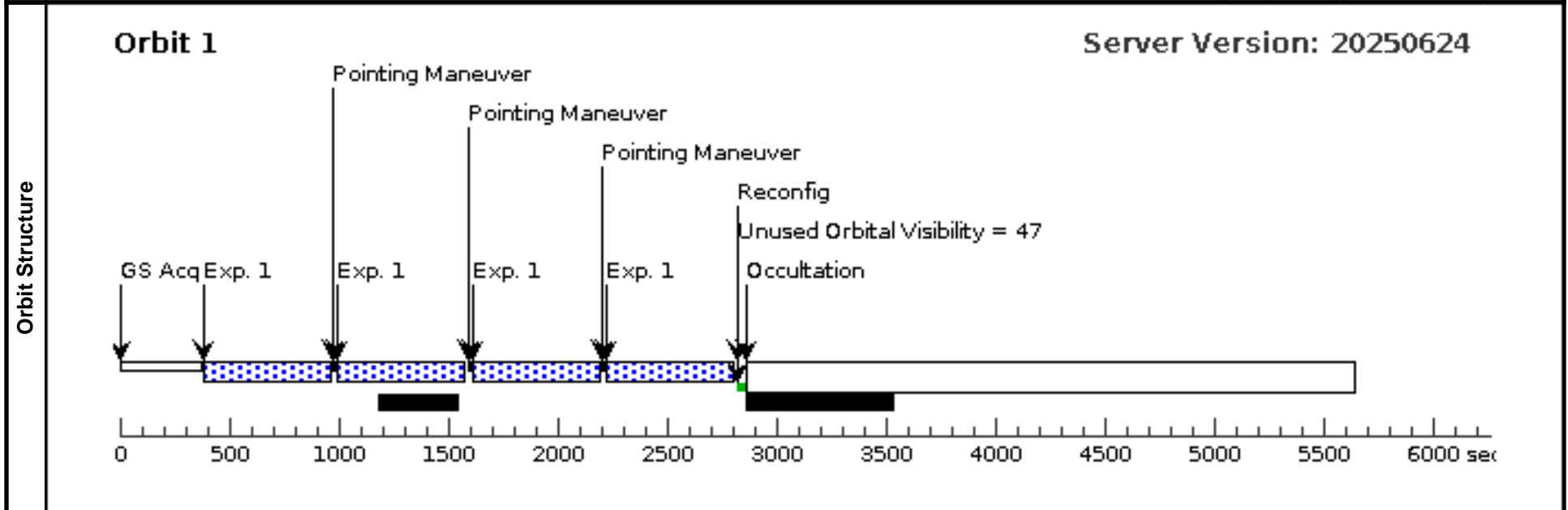
Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, I13 (16), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; BEFORE 12-MAR-2025:00:00:00; TOO RESPONSE TIME 20.0D <i>Comments: Duplicate of I3 (visit 11)</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS
	<i>Comments: Category=EXT-STAR Description=[GAMMA RAY BURSTER]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=SPARS 50; NSAMP=12		Pattern 1, Exps 1-1 in I13 (16) (1)	552.937252 Secs (2211.749 Secs)	
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]



Proposal 17806 - I4 (12) - R-process kilonovae associated with merger-driven gamma-ray bursts

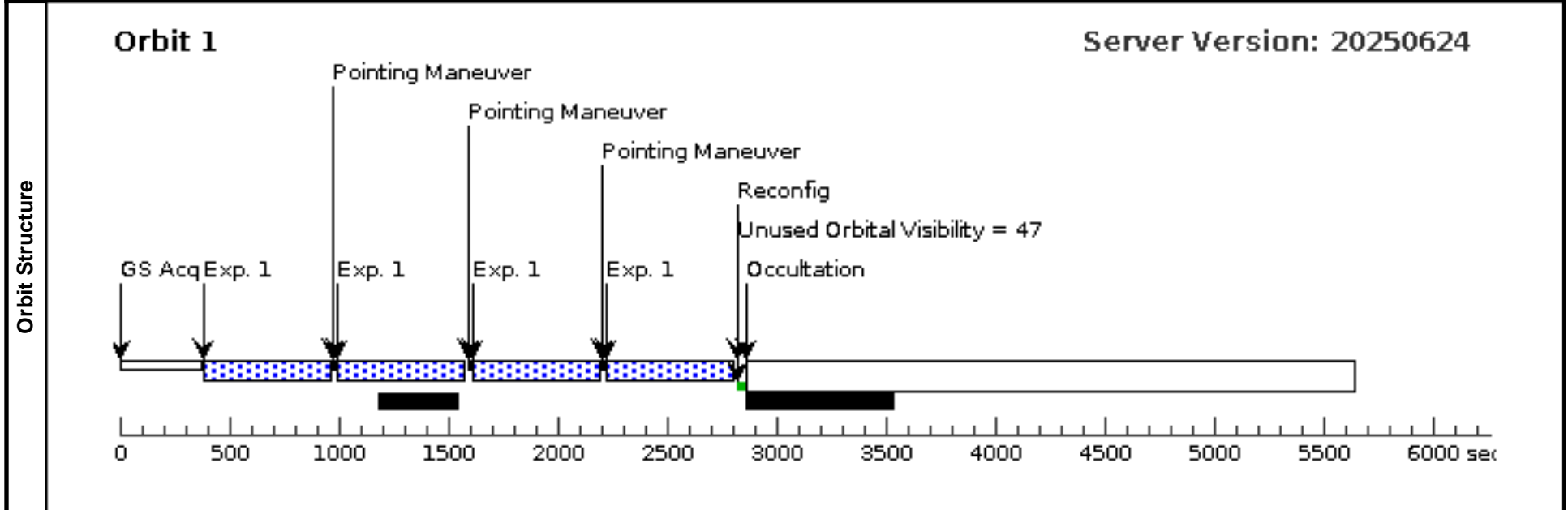
Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, I4 (12), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; ON HOLD <i>On Hold Comments: Awaiting suitable GRB trigger</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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
	(1)	KN+GRB	Candidate kilonova accompanying GRB at $0.1 < z < 0.4$ with evidence of merger origin	
	<i>Comments: Evidence in favour of merger origin could be short duration, or long duration but in a location unassociated with recent star formation, for example.</i>			

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) KN+GRB	WFC3/IR, MULTIACCUM, IR	F140W	SAMP-SEQ=SPARS 50; NSAMP=12		Pattern 1, Exps 1-1 in I4 (12) (1)	552.937252 Secs (2211.749 Secs)	
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]



Proposal 17806 - I5 (13) - R-process kilonovae associated with merger-driven gamma-ray bursts

Tue Sep 16 15:00:25 GMT 2025

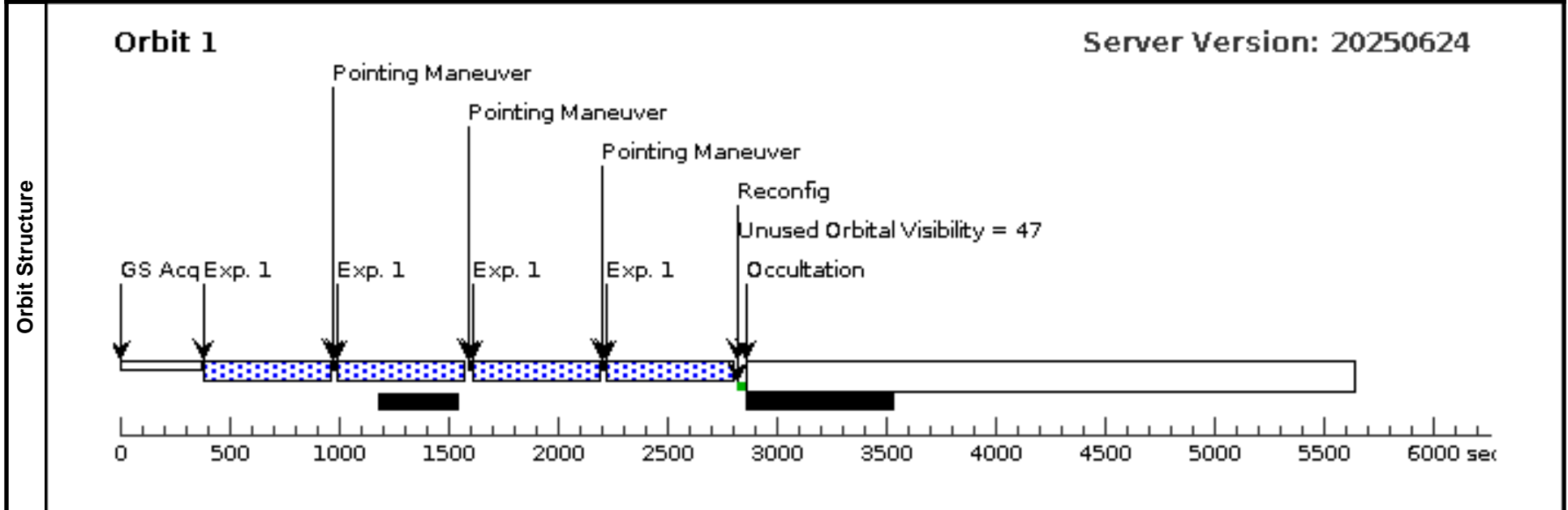
Visit	Proposal 17806, I5 (13), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; TOO RESPONSE TIME 3.0D		
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Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN 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	

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS

Comments:
 Category=EXT-STAR
 Description=[GAMMA RAY BURSTER]

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=12			Pattern 1, Exps 1-1 in I5 (13) (1)	552.937252 Secs (2211.749 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]



Proposal 17806 - IA (19) - R-process kilonovae associated with merger-driven gamma-ray bursts

Tue Sep 16 15:00:25 GMT 2025

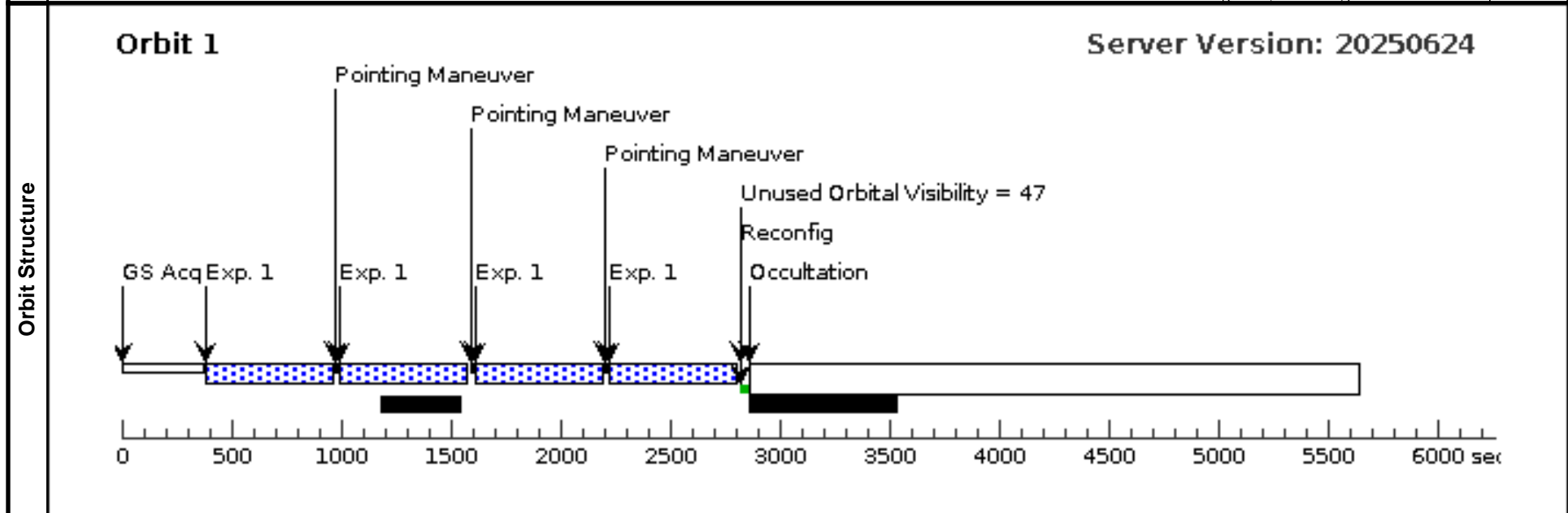
Visit	Proposal 17806, IA (19)		
	Diagnostic Status: No Diagnostics		
	Scientific Instruments: WFC3/IR		
	Special Requirements: SCHED 100%; BEFORE 10-DEC-2025:00:00:00		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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	

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[GAMMA RAY BURSTER]

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=12		Pattern 1, Exps 1-1 in IA (19) (1)	552.937252 Secs (2211.749 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]



Proposal 17806 - I15 (17) - R-process kilonovae associated with merger-driven gamma-ray bursts

Tue Sep 16 15:00:25 GMT 2025

Visit	Proposal 17806, I15 (17), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: SCHED 100%; BEFORE 12-MAR-2025:00:00:00; TOO RESPONSE TIME 20.0D <i>Comments: Duplicate of I5 (visit 13)</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	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)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	EP250207B	RA: 11 10 3.2100 (167.5133750d) Dec: -07 52 7.20 (-7.86867d) Equinox: J2000		V=25+/-1	Reference Frame: ICRS

Comments: Category=EXT-STAR Description=[GAMMA RAY BURSTER]

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) EP250207B	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=12		Pattern 1, Exps 1-1 in I15 (17) (1)	552.937252 Secs (2211.749 Secs)	[1]

