



# 17507 - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Cycle: 31, Proposal Category: GO  
(Availability Mode: SUPPORTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>
<b>Mr. Wynn Vicente Jacobson-Galan (PI) (Contact)</b>	<b>California Institute of Technology</b>
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Dr. Raffaella Margutti (CoI)	University of California - Berkeley
Prof. Ryan Chornock (CoI)	University of California - Berkeley
Dr. Charles Kilpatrick (CoI)	Northwestern University
Kyle Davis (CoI)	University of California - Santa Cruz
Mr. Qinan Wang (CoI)	The Johns Hopkins University
Dr. Suvi Gezari (CoI)	Space Telescope Science Institute
Dr. Matthew Ryan Siebert (CoI)	Space Telescope Science Institute
Prof. Ryan Foley (CoI)	University of California - Santa Cruz
Dr. Ori Dosovitz Fox (CoI)	Space Telescope Science Institute

## 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	(8) SN2024BCH CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:17.0	yes
R1	(11) SN2024FAQ CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:19.0	yes

Proposal 17507 (STScI Edit Number: 2, Created: Tuesday, October 15, 2024, 7:00:27AM Eastern Standard Time) - Overview

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
02	(12) SN2024ISS CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:20.0	yes
03	(13) SN2024PSO CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:21.0	yes
04	(14) 2024RYV CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:22.0	yes
05	(15) 2024TVI CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:24.0	yes
06	(16) SN2024XRX (18) SN2024XRX-OFFSET CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:25.0	yes
07	(16) SN2024XRX (18) SN2024XRX-OFFSET CCDFLAT	STIS/CCD	3	15-Oct-2024 08:00:26.0	yes

24 Total Orbits Used

**ABSTRACT**

The ultraviolet (UV) phase space of type II supernovae (SNe II) in the first week after explosion is almost entirely unconstrained. Intriguingly, the UV contains some of the most crucial information about both the most local circumstellar environment around the red supergiant progenitor prior to explosion as well as encodes the complexities of density, ionization and temperature in the outermost SN ejecta. Ultra-rapid or "flash" spectroscopy of young core-collapse supernovae ( $t < 1$  week) enables the detection of narrow emission lines that arise from shock ionization of local circumstellar material (CSM), a direct tracer of the progenitor environment ( $< 10 R_{\text{star}}$ ). Here we propose UV/optical spectral observations with the HST STIS CCD through the Flex Thursday ToO program to obtain up to 7 spectra of SNe II in the first week after explosion. This program will increase the sample size of extremely young SN II with UV spectroscopy by more than a factor of 3, thus enabling robust constraints to be made on the diversity of red supergiant atmospheres and mass loss as well as SN II ejecta structure through spectral modeling with radiative transfer code CMFGEN. Furthermore, these observations have the potential to detect the UV narrow line signatures (aka. IIn-like or "flash" features) of CSM interaction in a SN II.

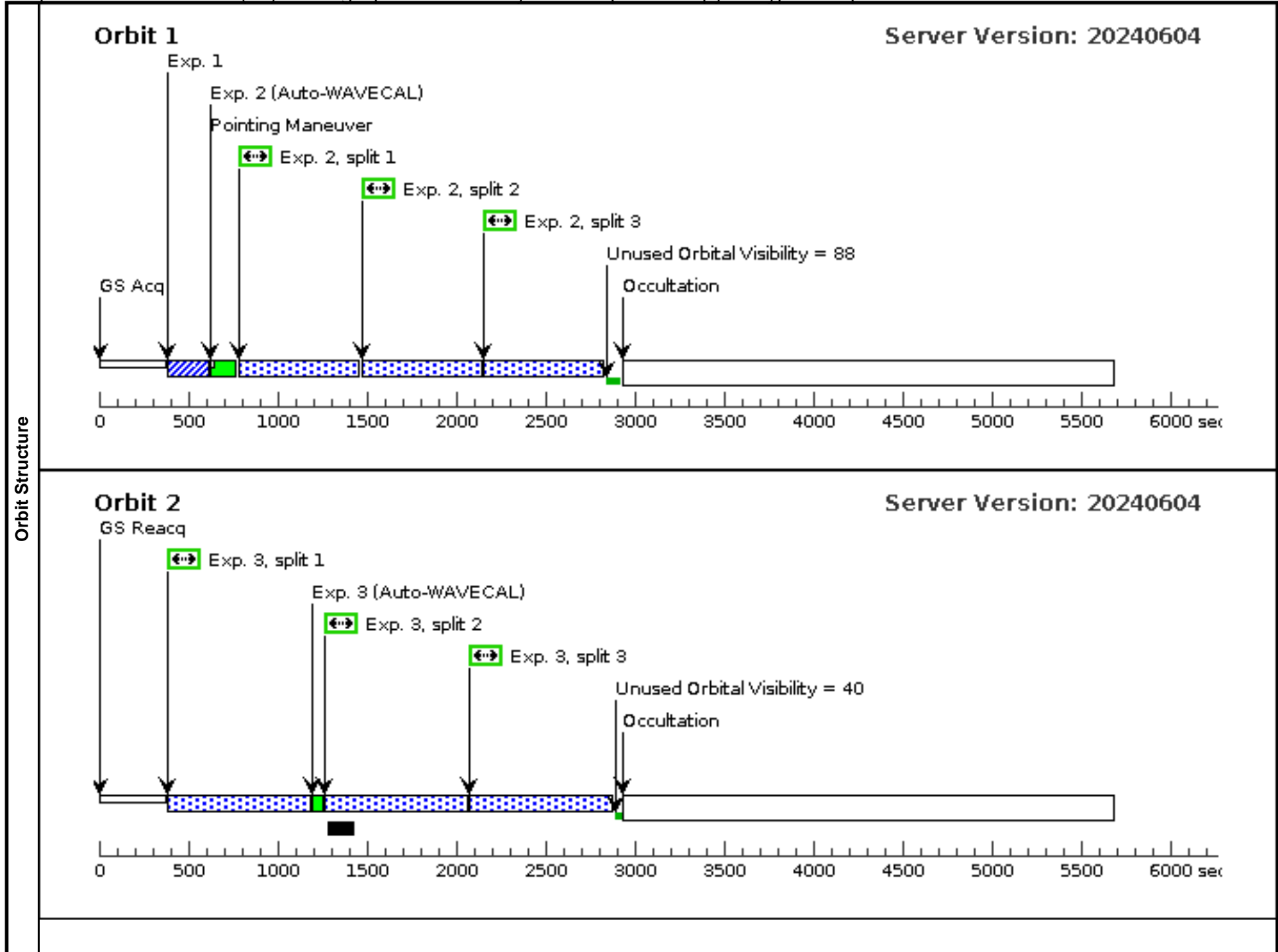
**OBSERVING DESCRIPTION**

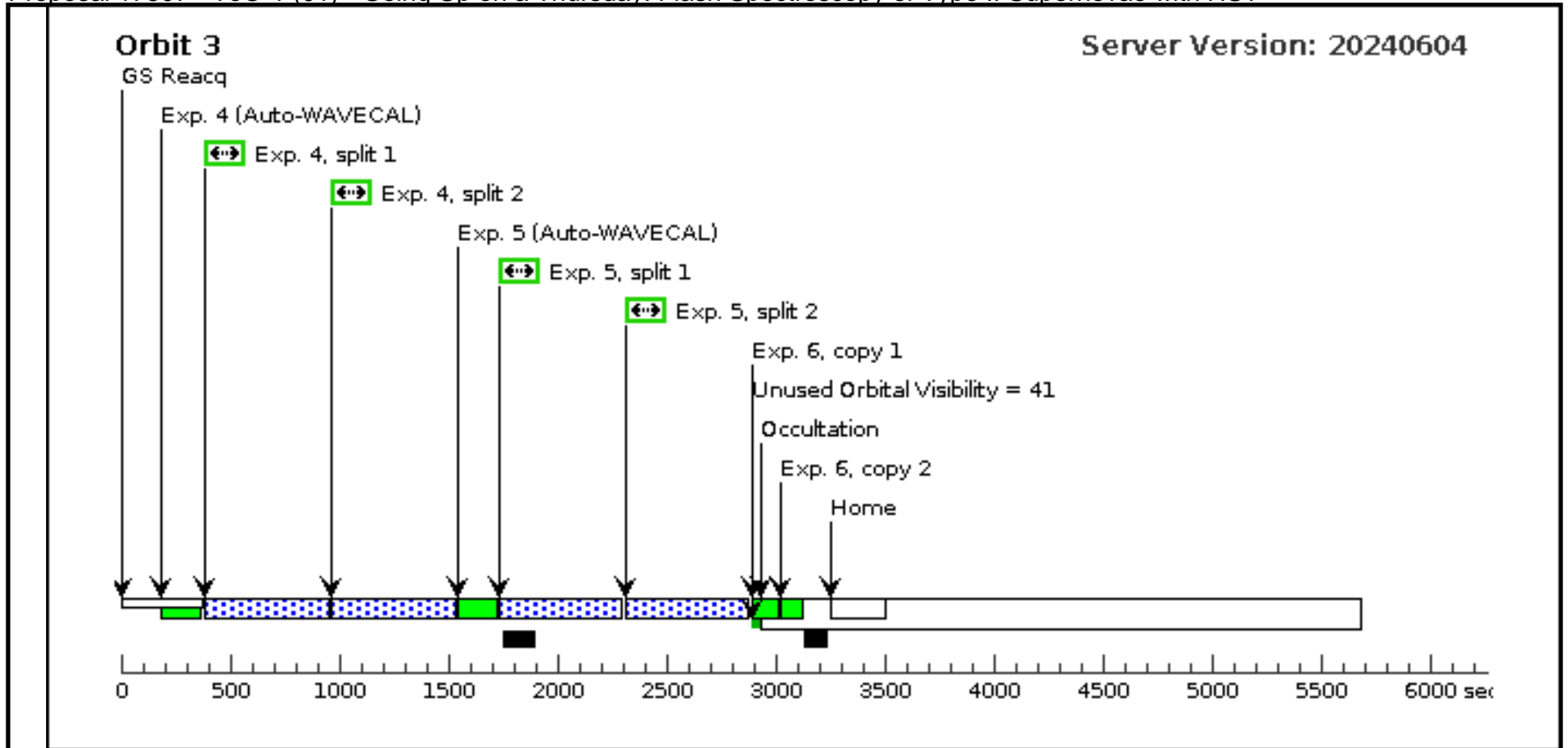
ToO program through flex thursday

Proposal 17507 - ToO-1 (01) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Tue Oct 15 12:00:27 GMT 2024

<b>Visit</b>	<b>Proposal 17507, ToO-1 (01), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ON HOLD ; TOO FLEX DAY <i>On Hold Comments: Activate upon discovery of first viable target</i>									
	(ToO-1 (01)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-1 (01)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-1 (01)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS									
<b>Diagnosics</b>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(8)	SN2024BCH	RA: 10 21 49.7400 (155.4572500d) Dec: +56 55 40.43 (56.92790d) Equinox: J2000		V=14	Reference Frame: ICRS				
<i>Comments: Highest priority target for February Flex thursday trigger</i> Category=STAR Description=[SUPERNOVA TYPE II] Extended=NO										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(8) SN2024BCH		STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs)	
									[==>]	[1]
	2	(8) SN2024BCH		STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1925 Secs (1925 Secs)	
									[==>(Split 1)]	
									[==>(Split 2)]	[1]
									[==>(Split 3)]	
3	(8) SN2024BCH		STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			2295 Secs (2295 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[2]	
								[==>(Split 3)]		
4	(8) SN2024BCH		STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1065 Secs (1065 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
5	(8) SN2024BCH		STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1060 Secs (1060 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
6	CCDFLAT		STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				[==>(Copy 1)]		
								[==>(Copy 2)]	[3]	

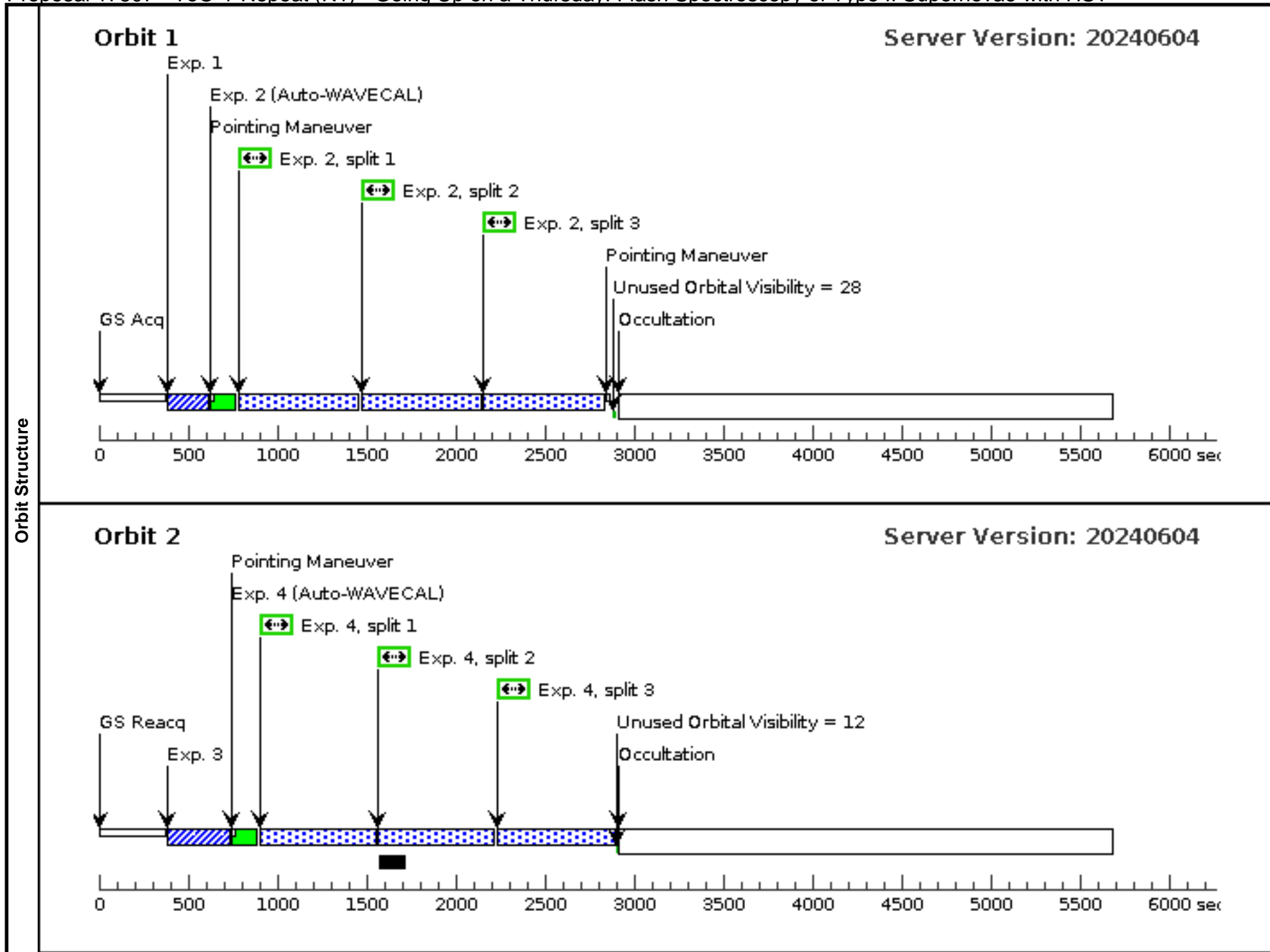


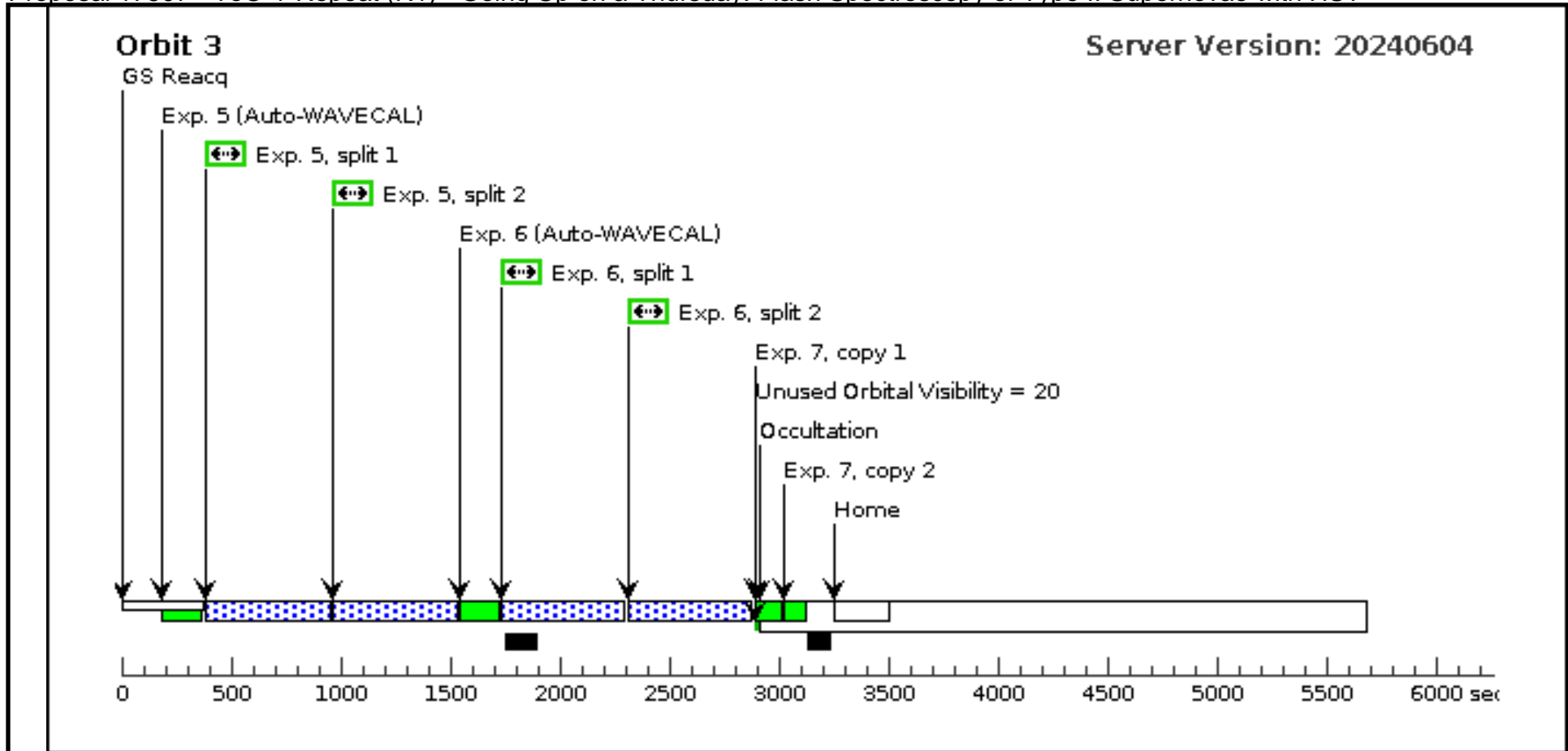


Proposal 17507 - ToO-1-Repeat (R1) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Tue Oct 15 12:00:27 GMT 2024

<b>Visit</b>	<b>Proposal 17507, ToO-1-Repeat (R1), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; TOO FLEX DAY									
	(ToO-1-Repeat (R1)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-1-Repeat (R1)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-1-Repeat (R1)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(11)	SN2024FAQ	RA: 15 44 29.7600 (236.1240000d) Dec: +40 21 23.57 (40.35655d) Equinox: J2000		V=18	Reference Frame: ICRS				
Comments: Category=STAR Description=[SUPERNOVA TYPE II]										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(11) SN2024FAQ	STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs)	
									[==>]	[1]
	2		(11) SN2024FAQ	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1925 Secs (1925 Secs)	
									[==>(Split 1)]	
									[==>(Split 2)]	[1]
									[==>(Split 3)]	
	3		(11) SN2024FAQ	STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs)	
								[==>]	[2]	
4		(11) SN2024FAQ	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1860 Secs (1860 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[2]	
								[==>(Split 3)]		
5		(11) SN2024FAQ	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1065 Secs (1065 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
6		(11) SN2024FAQ	STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1060 Secs (1060 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
7		CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				[==>(Copy 1)]		
								[==>(Copy 2)]	[3]	

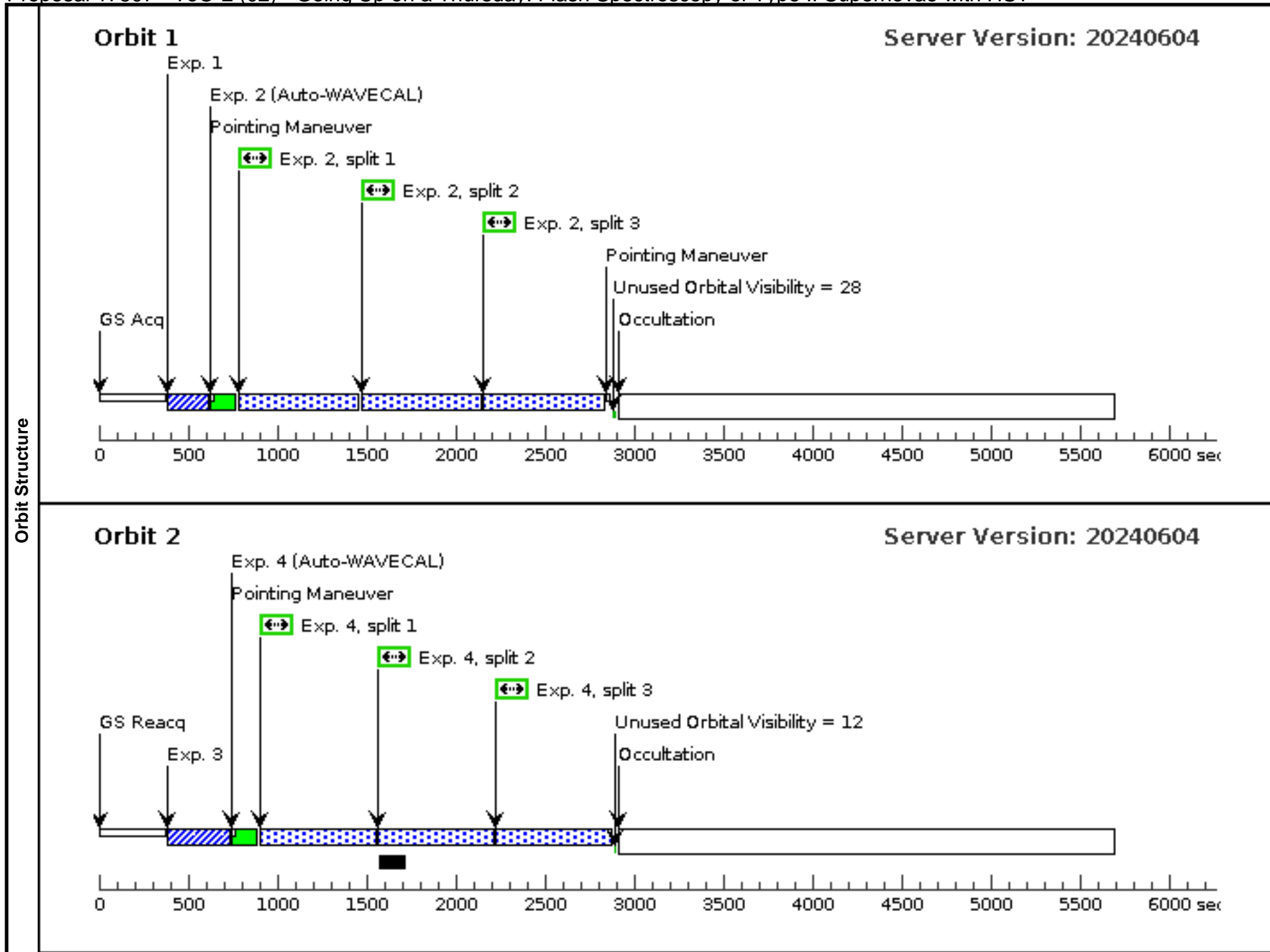


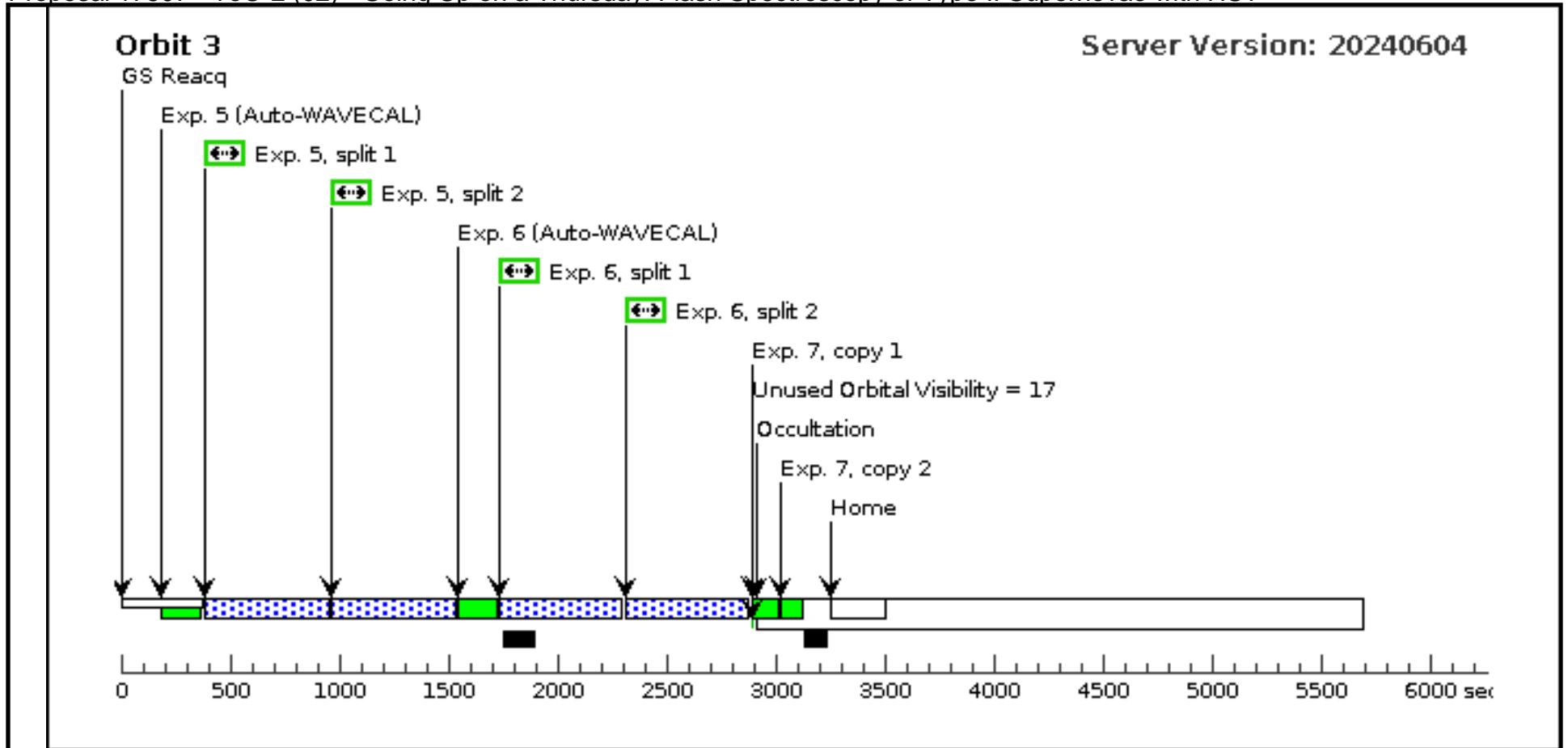


Proposal 17507 - ToO-2 (02) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

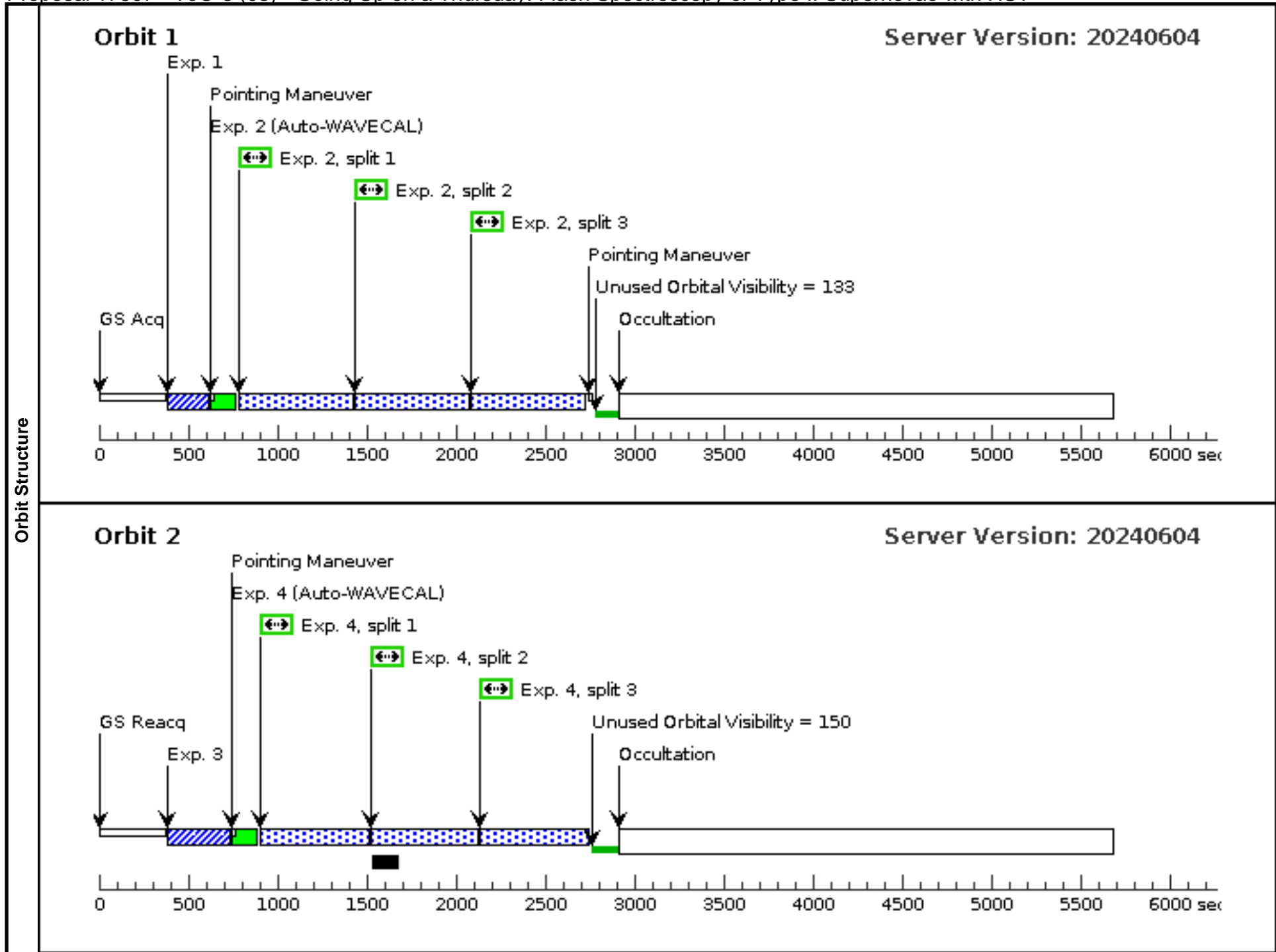
Tue Oct 15 12:00:27 GMT 2024

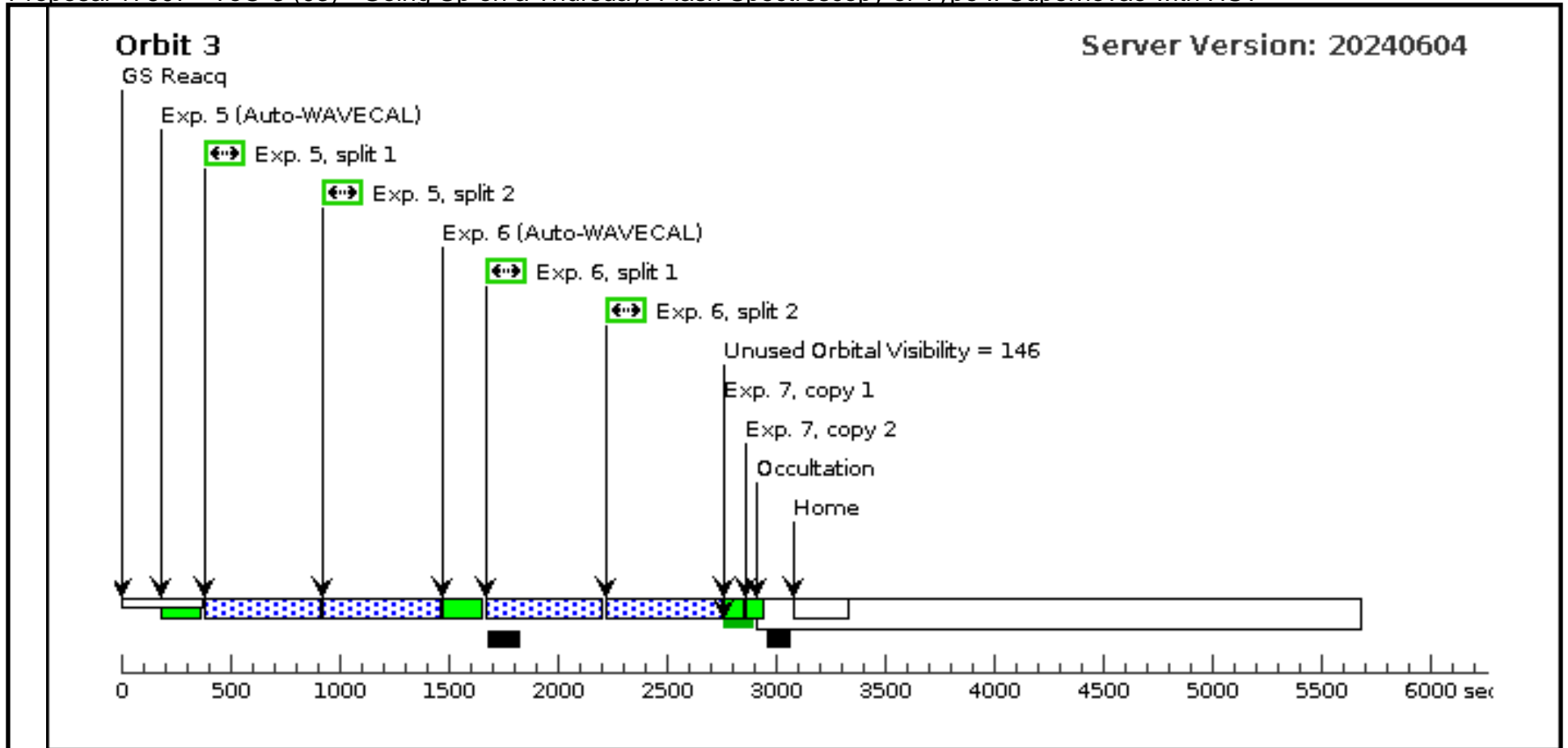
Visit	<b>Proposal 17507, ToO-2 (02), completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ON HOLD ; TOO FLEX DAY <i>On Hold Comments: Activate upon discovery of first viable target</i>									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(12)	SN2024ISS	RA: 12 59 6.1400 (194.7755833d) Dec: +28 48 42.67 (28.81185d) Equinox: J2000		V=18	Reference Frame: ICRS				
	<i>Comments:</i> Category=STAR Description=[SUPERNOVA TYPE II]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(12) SN2024ISS		STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs)	
									[==>]	[1]
	2	(12) SN2024ISS		STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1923 Secs (1923 Secs)	
									[==>(Split 1)]	
									[==>(Split 2)]	[1]
									[==>(Split 3)]	
	3	(12) SN2024ISS		STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs)	
								[==>]	[2]	
4	(12) SN2024ISS		STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1857 Secs (1857 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[2]	
								[==>(Split 3)]		
5	(12) SN2024ISS		STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1065 Secs (1065 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
6	(12) SN2024ISS		STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1060 Secs (1060 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
7	CCDFLAT		STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				[==>(Copy 1)]		
								[==>(Copy 2)]	[3]	









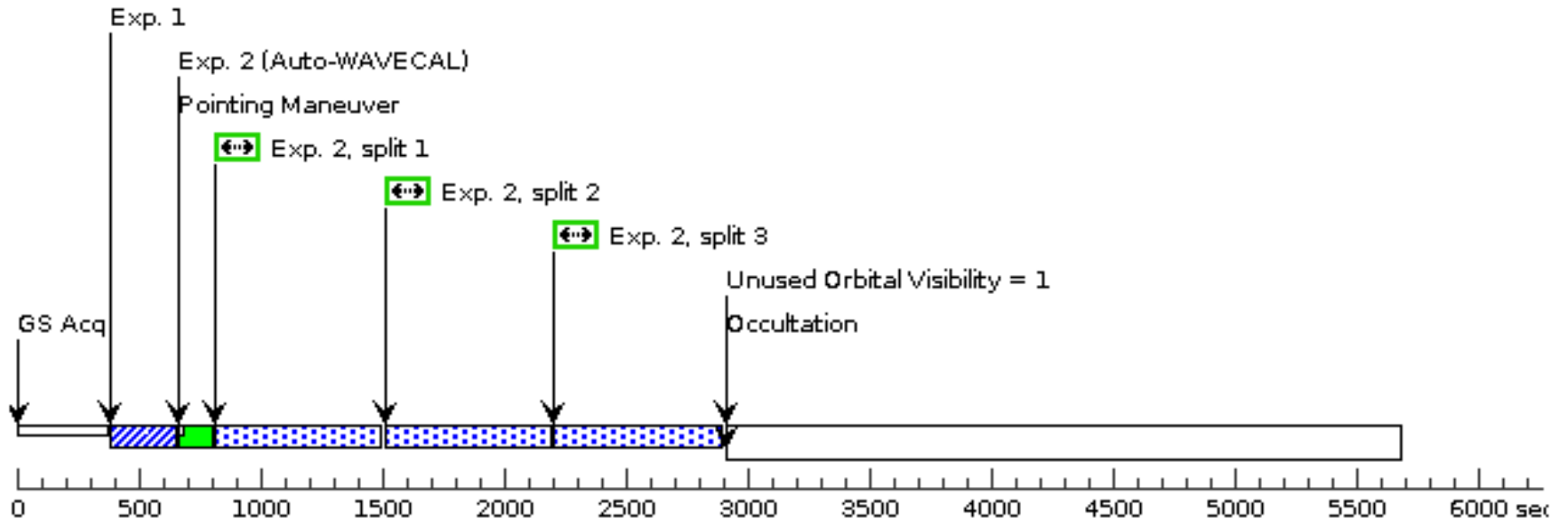


Proposal 17507 - ToO-4 (04) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Tue Oct 15 12:00:28 GMT 2024

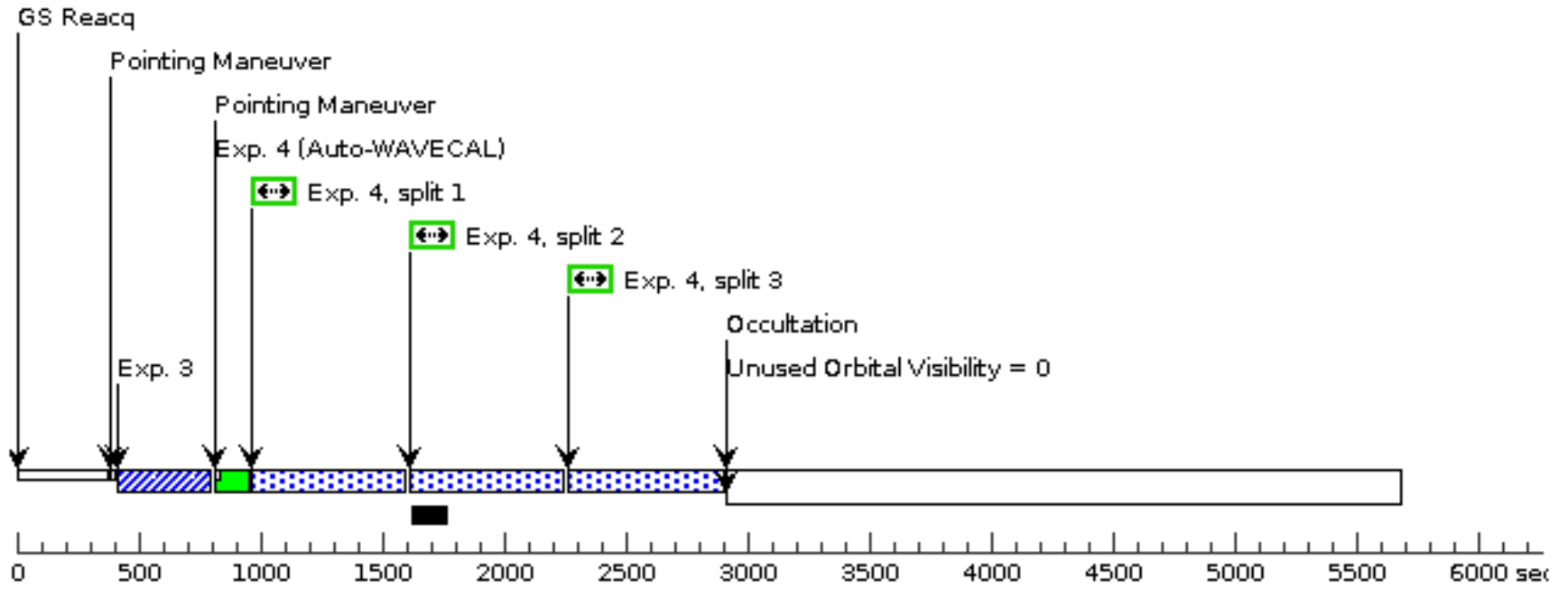
<b>Visit</b>	<b>Proposal 17507, ToO-4 (04), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ON HOLD ; TOO FLEX DAY <i>On Hold Comments: Activate upon discovery of first viable target</i>									
	(ToO-4 (04)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-4 (04)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-4 (04)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-4 (04)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-4 (04)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(14)	2024RYV	RA: 00 25 29.9900 (6.3749583d) Dec: +20 14 34.90 (20.24303d) Equinox: J2000		V=18	Reference Frame: ICRS				
<i>Comments: Category=STAR Description=[SUPERNOVA TYPE II]</i>										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(14) 2024RYV	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs)	
									[==>]	[1]
	2		(14) 2024RYV	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1955 Secs (1955 Secs)	
									[==>(Split 1)]	
									[==>(Split 2)]	[1]
									[==>(Split 3)]	
	3		(14) 2024RYV	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs)	
								[==>]	[2]	
4		(14) 2024RYV	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1803 Secs (1803 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[2]	
								[==>(Split 3)]		
5		(14) 2024RYV	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1072 Secs (1072 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
6		(14) 2024RYV	STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1072 Secs (1072 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
7		CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				25 Secs X 2 (50 Secs)		
								[==>(Copy 1)]		
								[==>(Copy 2)]	[3]	

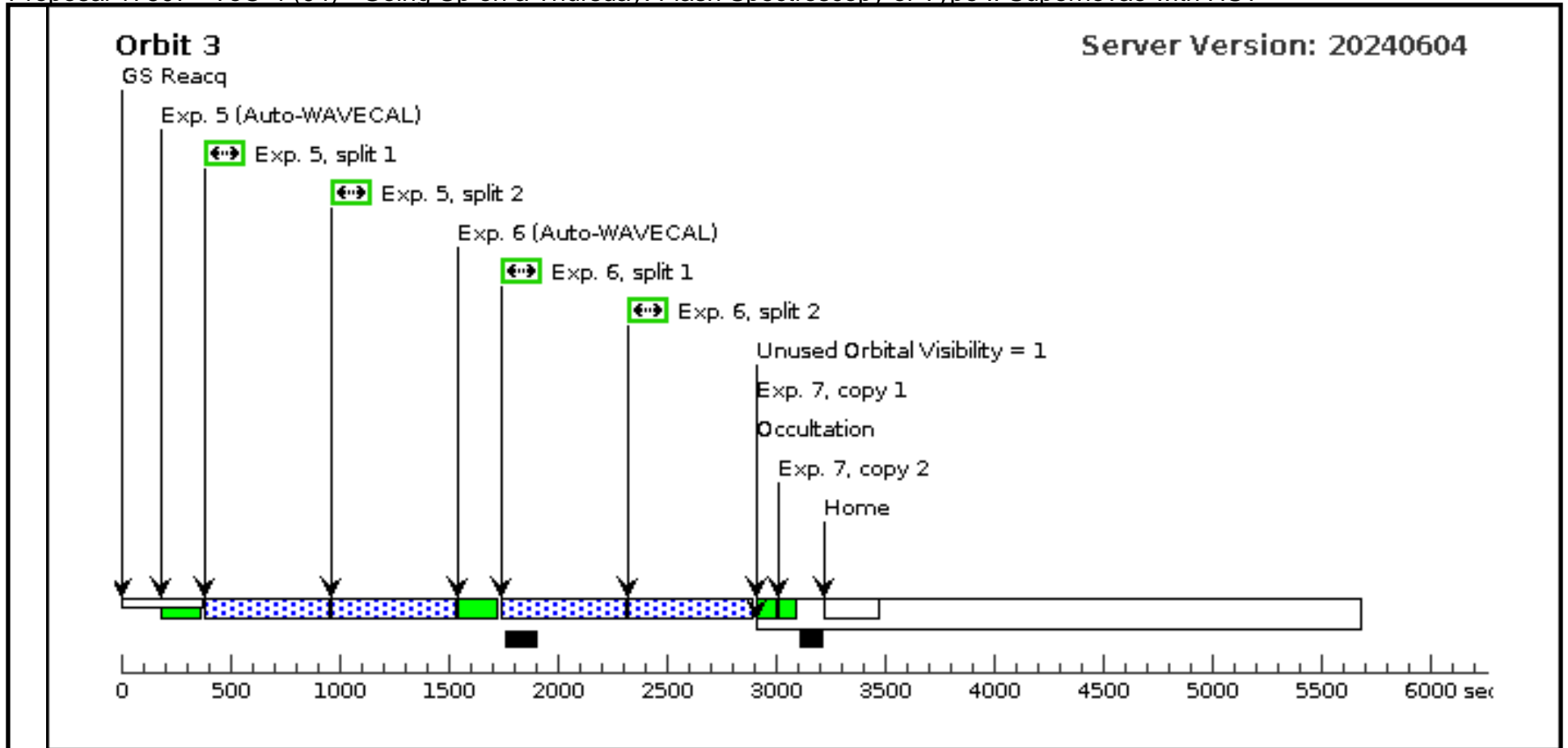
Orbit 1



Orbit Structure

### Orbit 2



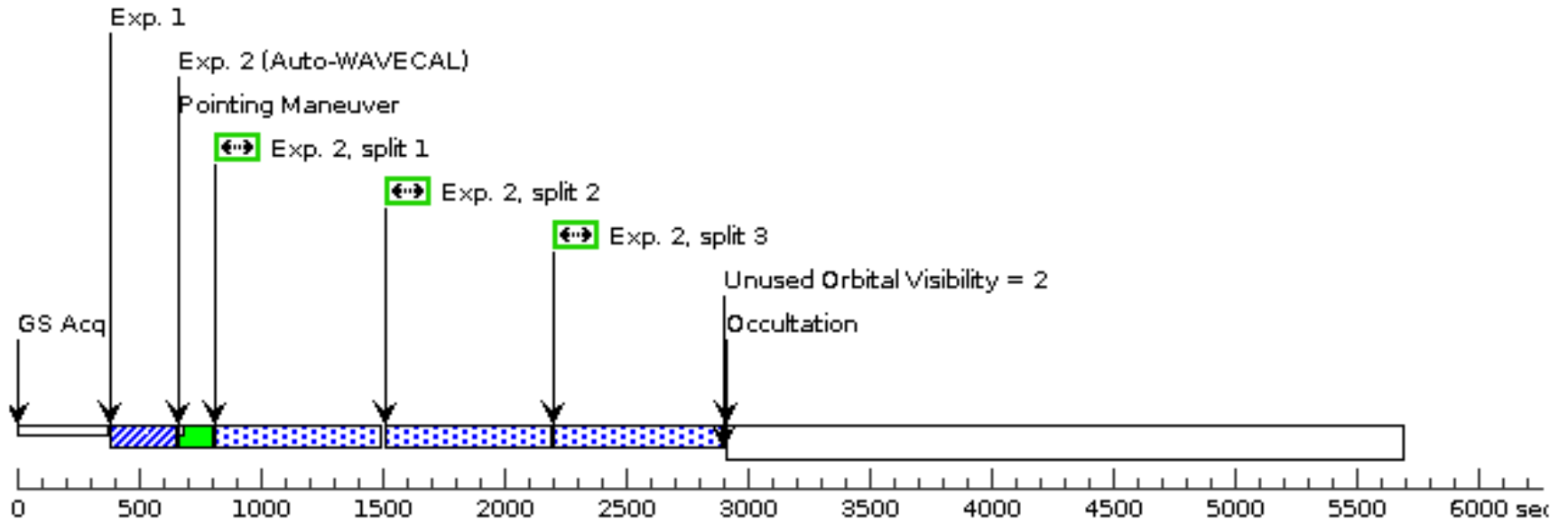


Proposal 17507 - ToO-5 (05) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Tue Oct 15 12:00:28 GMT 2024

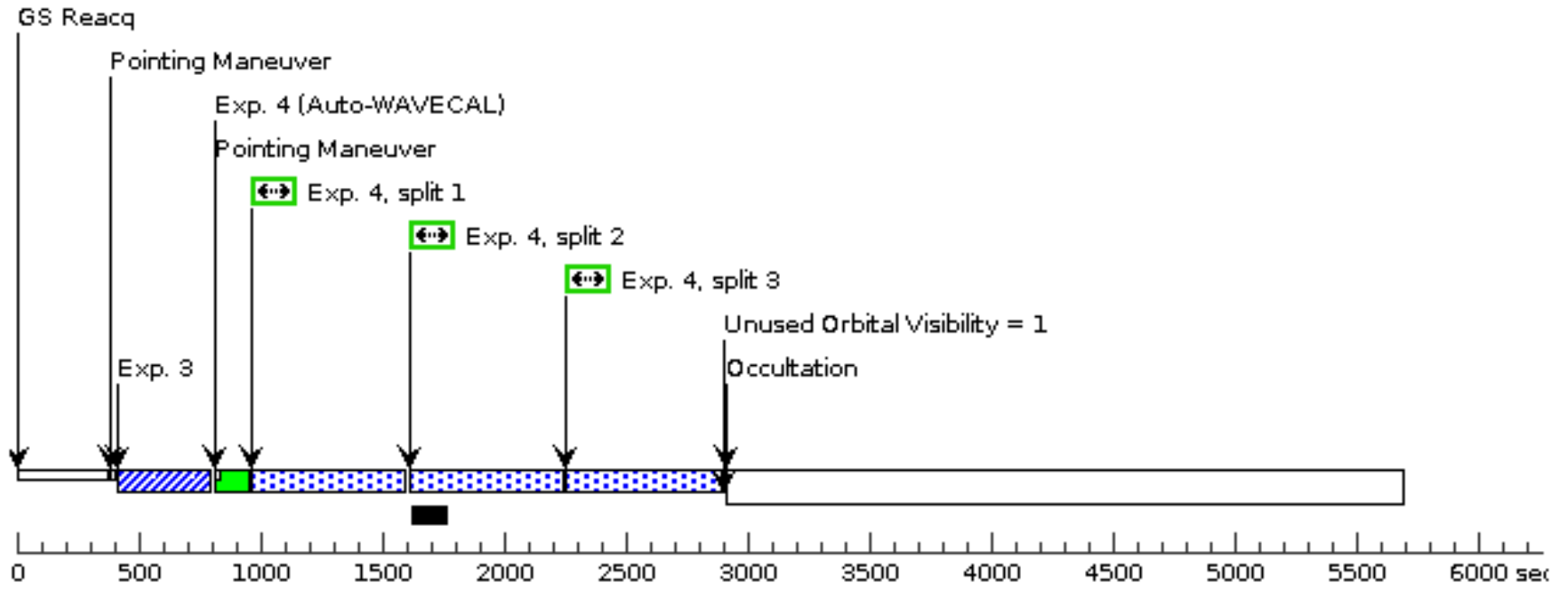
<b>Visit</b>	<b>Proposal 17507, ToO-5 (05), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ON HOLD ; TOO FLEX DAY <i>On Hold Comments: Activate upon discovery of first viable target</i>									
	(ToO-5 (05)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-5 (05)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(15)	2024TVI	RA: 23 15 10.7800 (348.7949167d) Dec: -27 54 54.44 (-27.91512d) Equinox: J2000		V=18	Reference Frame: ICRS				
<i>Comments:</i> Category=STAR Description=[SUPERNOVA TYPE II]										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(15) 2024TVI	(15) 2024TVI	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs)	
									[==>]	[1]
	2	(15) 2024TVI	(15) 2024TVI	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1953 Secs (1953 Secs)	
									[==>(Split 1)]	
									[==>(Split 2)]	[1]
									[==>(Split 3)]	
	3	(15) 2024TVI	(15) 2024TVI	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs)	
								[==>]	[2]	
4	(15) 2024TVI	(15) 2024TVI	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1800 Secs (1800 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[2]	
								[==>(Split 3)]		
5	(15) 2024TVI	(15) 2024TVI	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1070 Secs (1070 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
6	(15) 2024TVI	(15) 2024TVI	STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1070 Secs (1070 Secs)		
								[==>(Split 1)]		
								[==>(Split 2)]	[3]	
7	CCDFLAT	CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				25 Secs X 2 (50 Secs)		
								[==>(Copy 1)]		
								[==>(Copy 2)]	[3]	

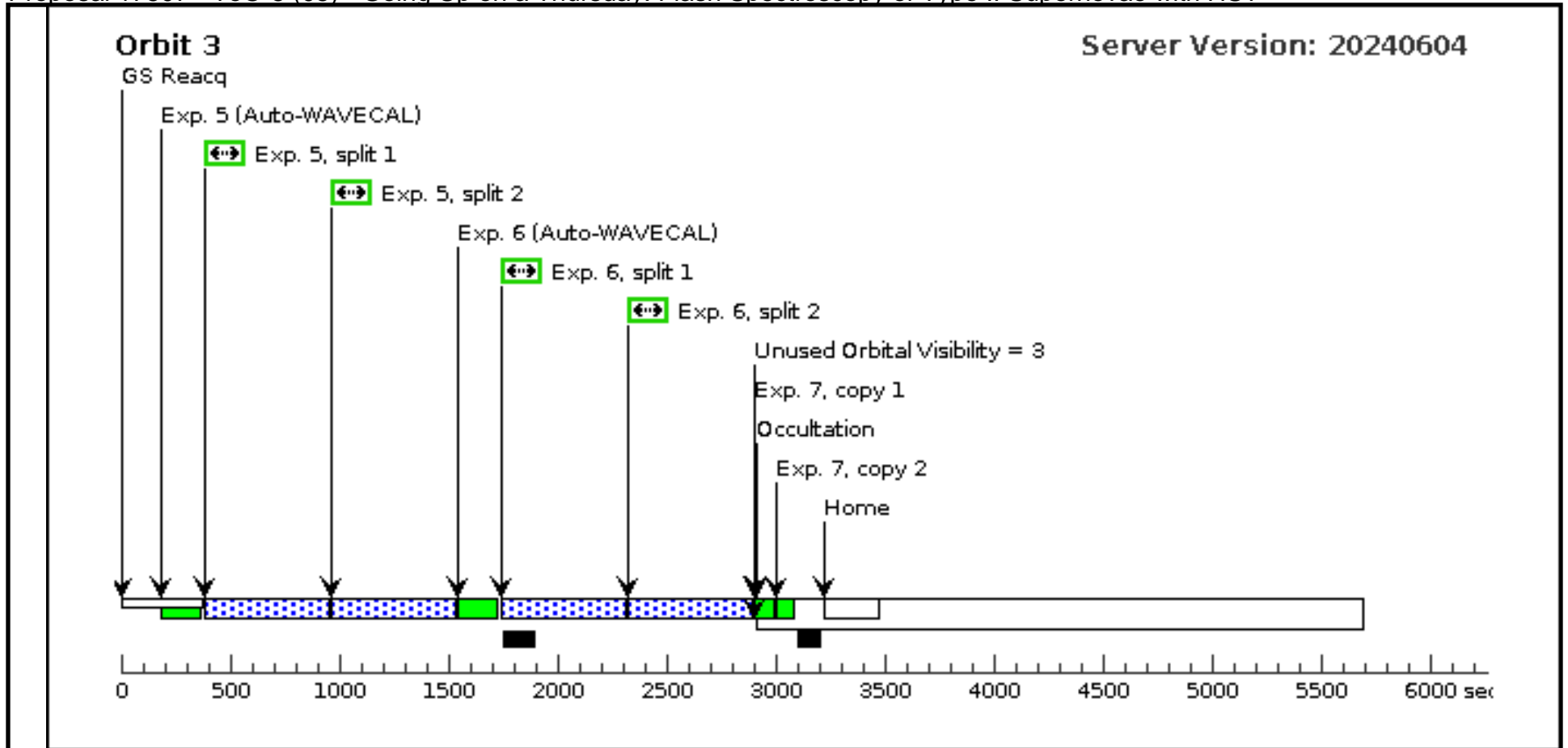
**Orbit 1**



Orbit Structure

### Orbit 2



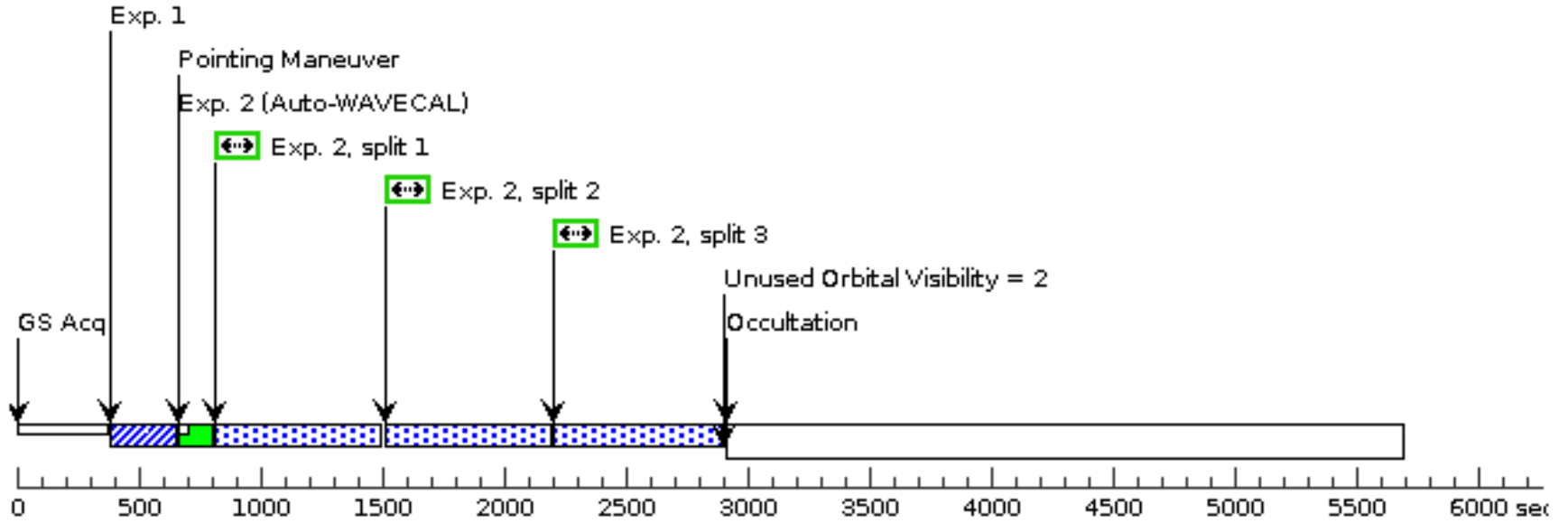


Proposal 17507 - ToO-6 (06) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Tue Oct 15 12:00:28 GMT 2024

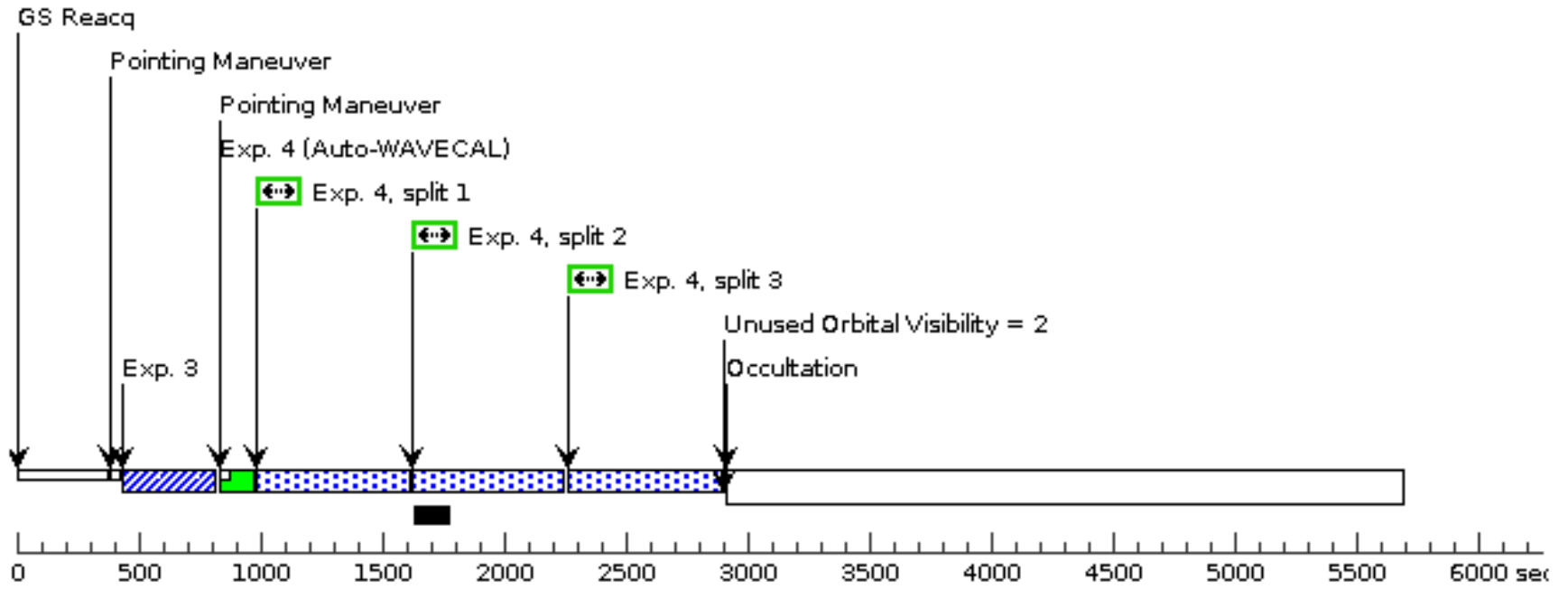
<b>Visit</b>	<b>Proposal 17507, ToO-6 (06), implementation</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ON HOLD ; TOO FLEX DAY <i>On Hold Comments: Activate upon discovery of first viable target</i>									
	(ToO-6 (06)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-6 (06)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-6 (06)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-6 (06)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-6 (06)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(16)	SN2024XRX	RA: 01 30 50.0500 (22.7085417d) Dec: +25 54 57.46 (25.91596d) Equinox: J2000		V=18	Reference Frame: ICRS				
Comments: Category=STAR Description=[SUPERNOVA TYPE II]										
(18)	SN2024XRX-OFFSET	RA: 01 30 48.8990 (22.7037458d) Dec: +25 55 44.45 (25.92901d) Equinox: J2000		V=16.0	Reference Frame: ICRS					
Comments: Category=STAR Description=[SUPERNOVA TYPE II]										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(18) SN2024XRX-O FFSET	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1953 Secs (1953 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
	3		(18) SN2024XRX-O FFSET	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[2]
	4		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1780 Secs (1780 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[2]
	5		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1070 Secs (1070 Secs) [==>(Split 1)] [==>(Split 2)]	[3]
	6		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1070 Secs (1070 Secs) [==>(Split 1)] [==>(Split 2)]	[3]
7		CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				25 Secs X 2 (50 Secs) [==>(Copy 1)] [==>(Copy 2)]	[3]	

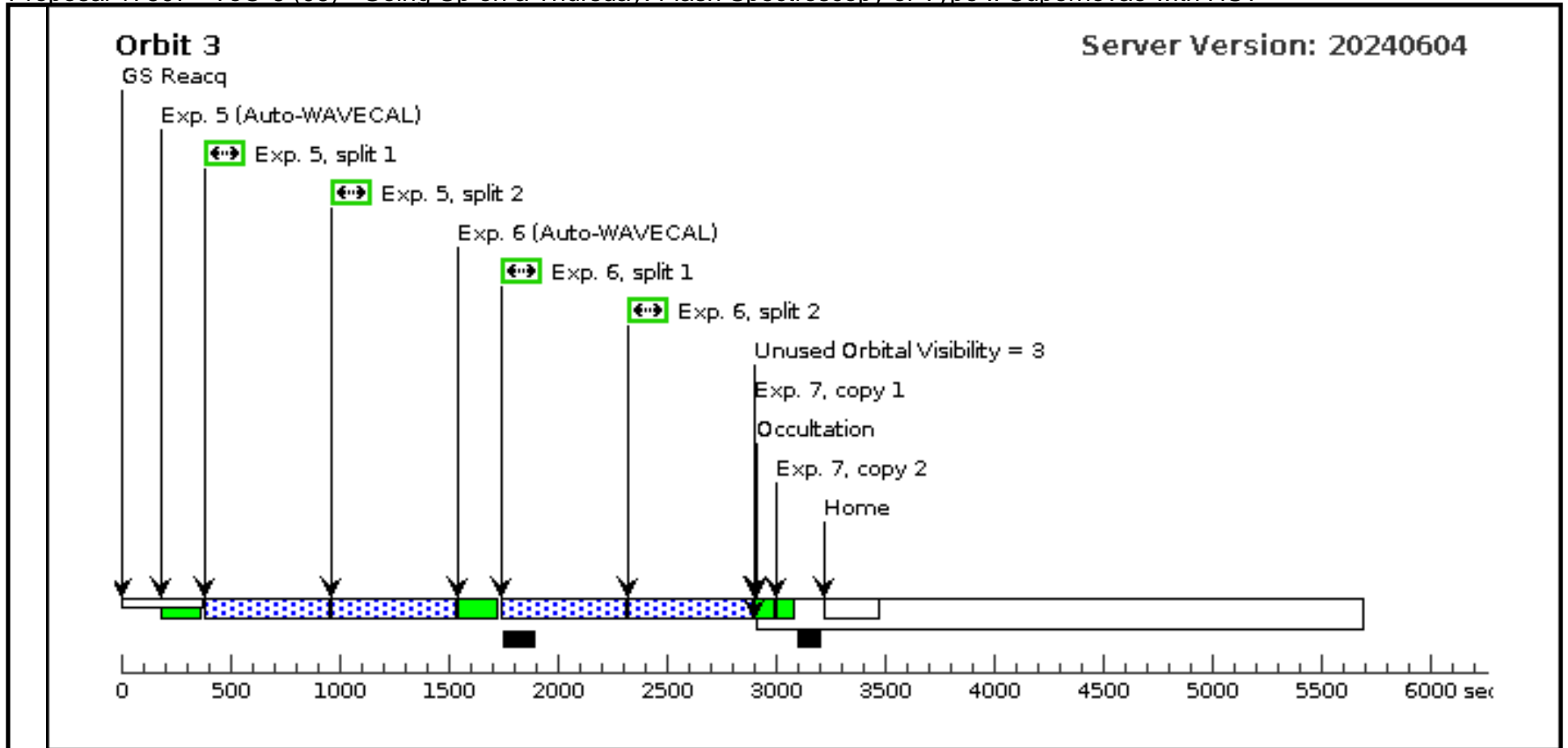
Orbit 1



Orbit Structure

### Orbit 2



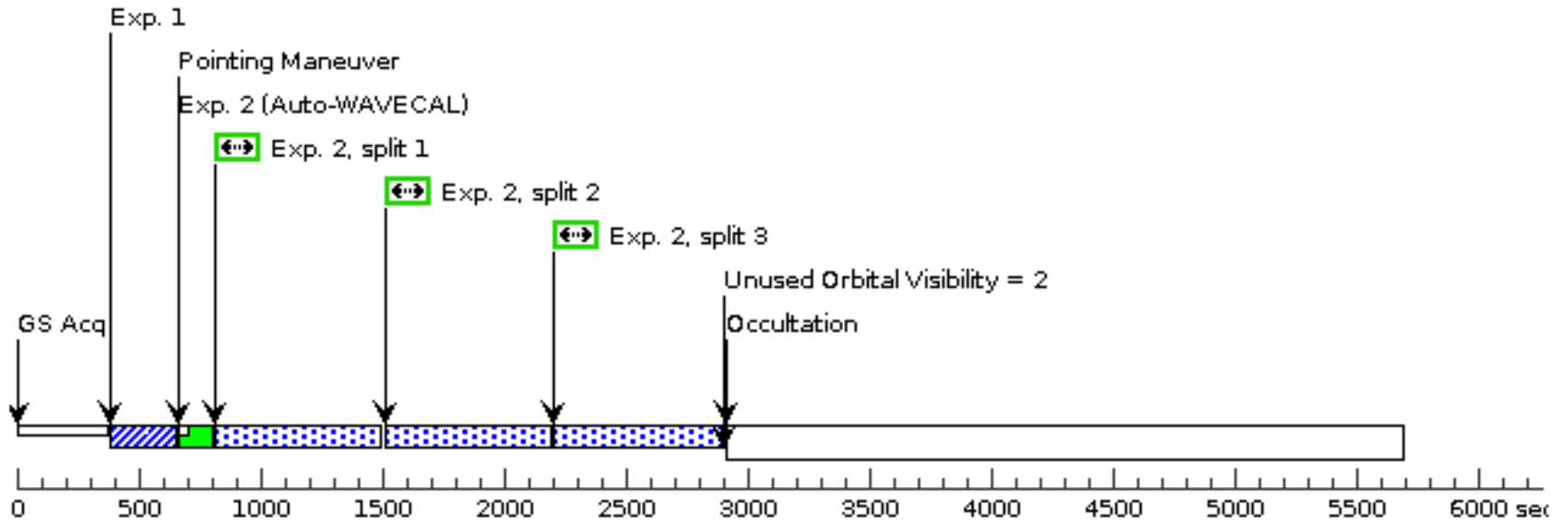


Proposal 17507 - ToO-7 (07) - Going Up on a Thursday: Flash Spectroscopy of Type II Supernovae with HST

Tue Oct 15 12:00:28 GMT 2024

<b>Visit</b>	<b>Proposal 17507, ToO-7 (07), implementation</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD Special Requirements: SCHED 100%; ON HOLD ; TOO FLEX DAY <i>On Hold Comments: Activate upon discovery of first viable target</i>									
	(ToO-7 (07)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-7 (07)) Warning (Orbit Planner): STIS CCDFLAT EXPOSURE EXCEEDS MAXIMUM EXPOSURE TIME (ToO-7 (07)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-7 (07)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS (ToO-7 (07)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(16)	SN2024XRX	RA: 01 30 50.0500 (22.7085417d) Dec: +25 54 57.46 (25.91596d) Equinox: J2000		V=18	Reference Frame: ICRS				
Comments: Category=STAR Description=[SUPERNOVA TYPE II]										
(18)	SN2024XRX-OFFSET	RA: 01 30 48.8990 (22.7037458d) Dec: +25 55 44.45 (25.92901d) Equinox: J2000		V=16.0	Reference Frame: ICRS					
Comments: Category=STAR Description=[SUPERNOVA TYPE II]										
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(18) SN2024XRX-O FFSET	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[1]
	2		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1953 Secs (1953 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
	3		(18) SN2024XRX-O FFSET	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) [==>]	[2]
	4		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G230LB 2375 A	CR-SPLIT=3			1780 Secs (1780 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[2]
	5		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=2			1070 Secs (1070 Secs) [==>(Split 1)] [==>(Split 2)]	[3]
	6		(16) SN2024XRX	STIS/CCD, ACCUM, 52X0.2E1	G750L 7751 A	CR-SPLIT=2			1070 Secs (1070 Secs) [==>(Split 1)] [==>(Split 2)]	[3]
7		CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				25 Secs X 2 (50 Secs) [==>(Copy 1)] [==>(Copy 2)]	[3]	

Orbit 1



Orbit Structure

**Orbit 2**

