17205 - Explosions in Real-Time: Rapid UV Supernova Flash Spectroscopy

Cycle: 30, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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Dr. Nora Linn Strotjohann (CoI)	Weizmann Institute of Science
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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	(2) SN2023IXF CCDFLAT	STIS/CCD	5	20-May-2023 13:00:22.0	yes
02	(2) SN2023IXF CCDFLAT	STIS/CCD	5	20-May-2023 13:00:26.0	yes
03	(2) SN2023IXF CCDFLAT	STIS/CCD	5	20-May-2023 13:00:29.0	yes
04	(2) SN2023IXF CCDFLAT	STIS/CCD	4	20-May-2023 13:00:31.0	yes
05	(2) SN2023IXF CCDFLAT	STIS/CCD	3	20-May-2023 13:00:33.0	yes

22 Total Orbits Used

ABSTRACT

Rapid UV spectroscopy of an infant supernova explosion offers compelling science returns and can only be carried out by HST. UV spectra provide a unique insight into the first days of the explosion, a way to determine the initial metallicity and surface composition of the exploding star as well as a probe of the final year of mass loss leading to the terminal SN event, tracing the final stages of pre-explosion stellar evolution. Constraining such progenitor properties of SNe could pave the path to answer the 2020 Decadal Survey question on what powers the diversity of explosive phenomena across the elecromagnetic spectrum. This is only possible with HST in rapid ToO mode. A successful campaign to study an infant stellar explosion in the UV from its very start would benefit from preparations undertaken by STScI.

OBSERVING DESCRIPTION

This rapid ToO necessitates a disruption of regular HST operations, we propose to make full use of this disruption, and undertake a series of 5 visits.

The first visit should occur as soon as operationally possible. Therefore ideally we would want to have an activation time of 2-3 days after trigger. However, in case this is not possible, in some cases we would be able to achieve our science goals even with a 5 day activation time.

We fiducially suggest visits 2 and 3 that to be spaced at about 10 and 20 hours after visit 1 (i.e a 10 hour cadence from the first visit). However, the exact spacing will depend on HST tecnical constraints, and a more relaxed and uneven cadance between all 3 first visits is possible with a range between 10-24 hours between visits, optimized to avoid SAA and that conforms to scheduling constraints, and should provide useful science as well.

Within the first 3 visits we plan a 5-orbit sequence interspersing a joint optical blue (G430L) and red (G750L) orbit among 4 UV (G230LB) orbits. This will allow to monitor the UV evolution of the spectrum on an orbit timescale.
Should there be a critical operational need for shorter visits, we would be able to compliment a 4-orbit UV-only visit with high quality spectra from ground instruments.

In the next 2 visits we propose to have the B/R visit at the end of 2-3 consecutive UV orbits (longer UV and shorter optical exposures with time), based on previous work showing that within days the UV emission drops, while the optical is on the rise. Visits 4-5 then follow 2 - 3 and 4 - 5 days later, with the goal of mapping the CSM distribution by observing the UV lines disappear. These late visits will be shorter (4 and 3 orbits, of which one split among B and R grisms in each visit), as their main goal could be achieved using just the strongest lines.

Visit

Proposal 17205, Discovery (01), implementation Sat May 20 17:00:34 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: SCHED 100%; BEFORE 23-MAY-2023:00:00:00; TOO RESPONSE TIME 2.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4), (5)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			
(2)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(7), (8)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=2	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			

Fixed Targets

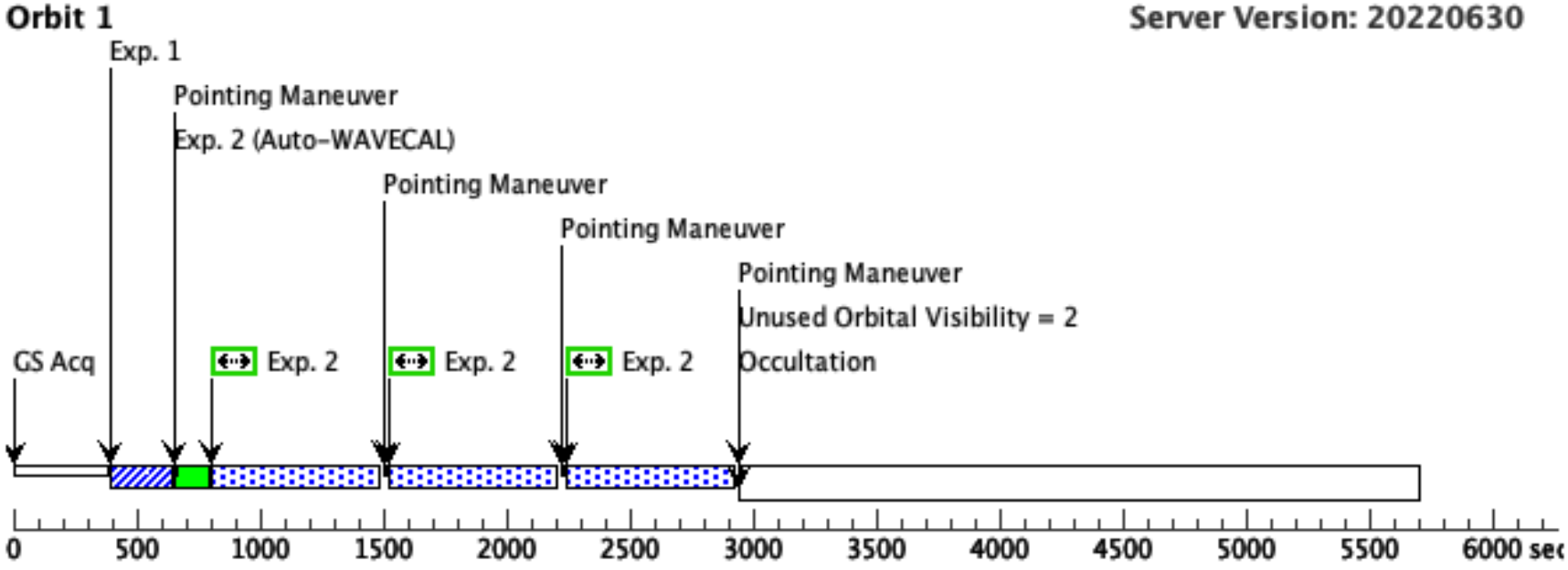
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SN2023IXF	RA: 14 03 38.5550 (210.9106458d)	Redshift: 0.0008	V=14+/-0.2	Reference Frame: ICRS
		Dec: +54 18 42.09 (54.31169d)			
		Equinox: J2000			

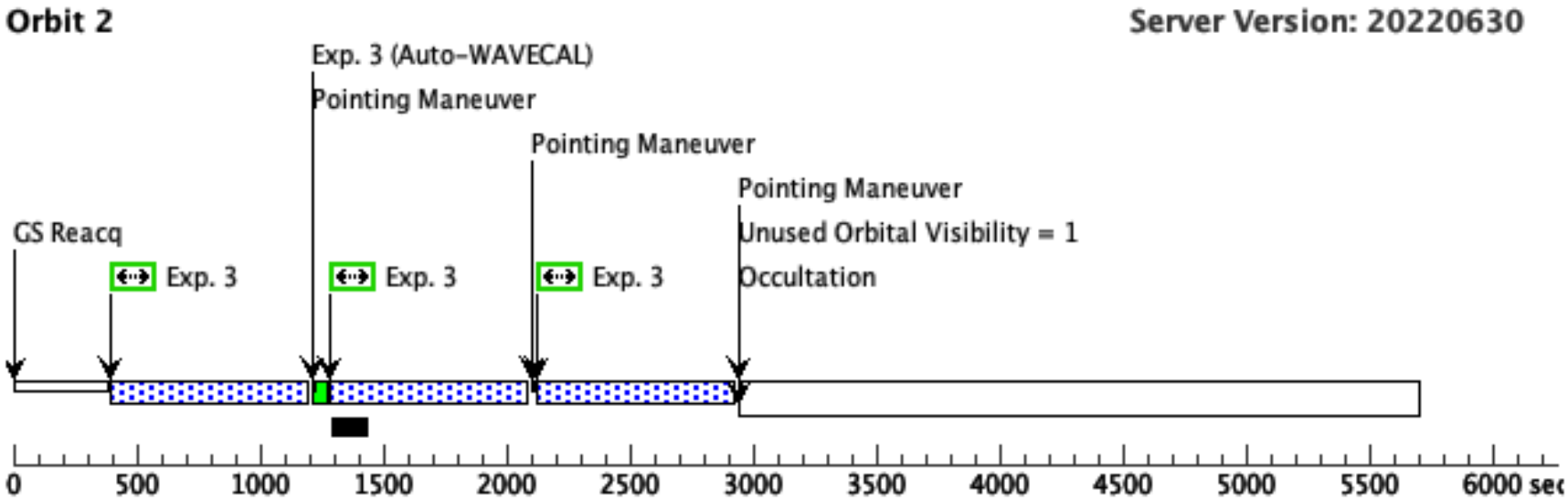
Comments: This is a once in a decade nearby SN.
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]
Extended=NO

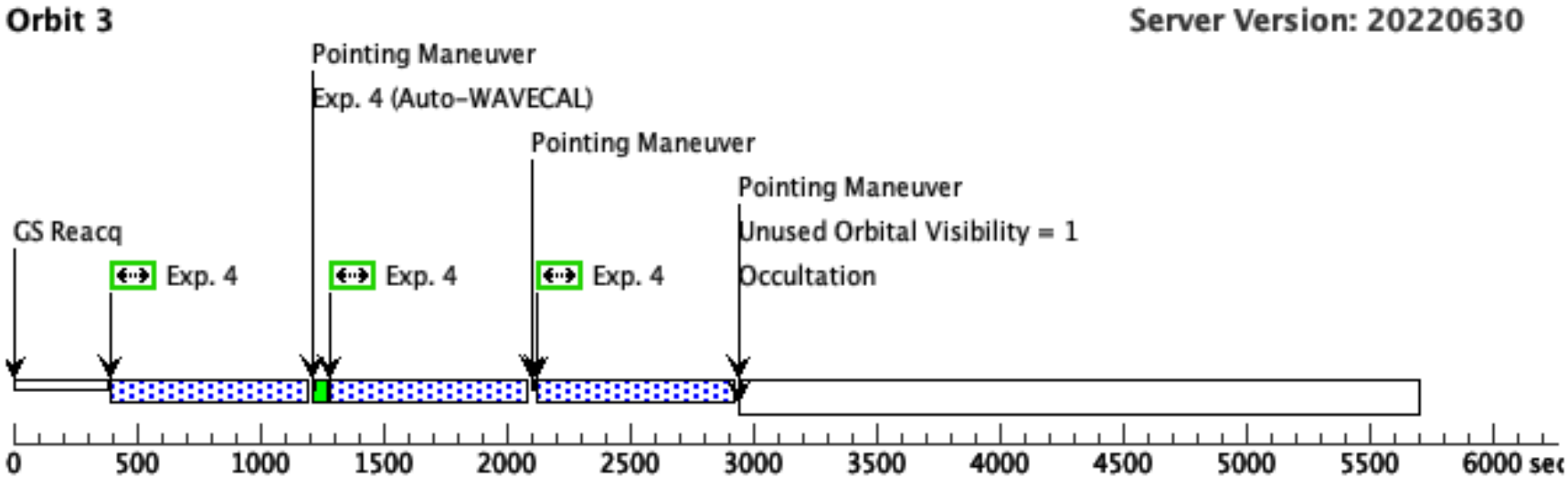
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	UV1 (STIS.ta.1810483)	(2) SN2023IXF	STIS/CCD, ACQ, 50CCD	MIRROR	ACQTYPE=POINT			0.5 Secs (0.5 Secs) *[==>]*	***[1]***
2	UV1 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 2-2 in Discovery (01) (1)	700 Secs (1944 Secs) *[==>648.0 Secs (Pattern 1)]* *[==>648.0 Secs (Pattern 2)]* *[==>648.0 Secs (Pattern 3)]*	***[1]***
3	UV2 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 3-3 in Discovery (01) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[2]***
4	UV3 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 4-4 in Discovery (01) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[3]***
5	UV4 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 5-5 in Discovery (01) (1)	700 Secs (2304 Secs) *[==>768.0 Secs (Pattern 1)]* *[==>768.0 Secs (Pattern 2)]* *[==>768.0 Secs (Pattern 3)]*	***[4]***
6	fringe flat	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[5]***
7	R (STIS.sp.1811681)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 7-7 in Discovery (01) (2)	500 Secs (984 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>492.0 Secs (Pattern 2)]*	***[5]***
8	B (STIS.sp.1811679)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 8-8 in Discovery (01) (2)	500 Secs (1066 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>574.0 Secs (Pattern 2)]*	***[5]***

Orbit Structure



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Pointing Maneuver
Pointing Maneuver
GS Reacq
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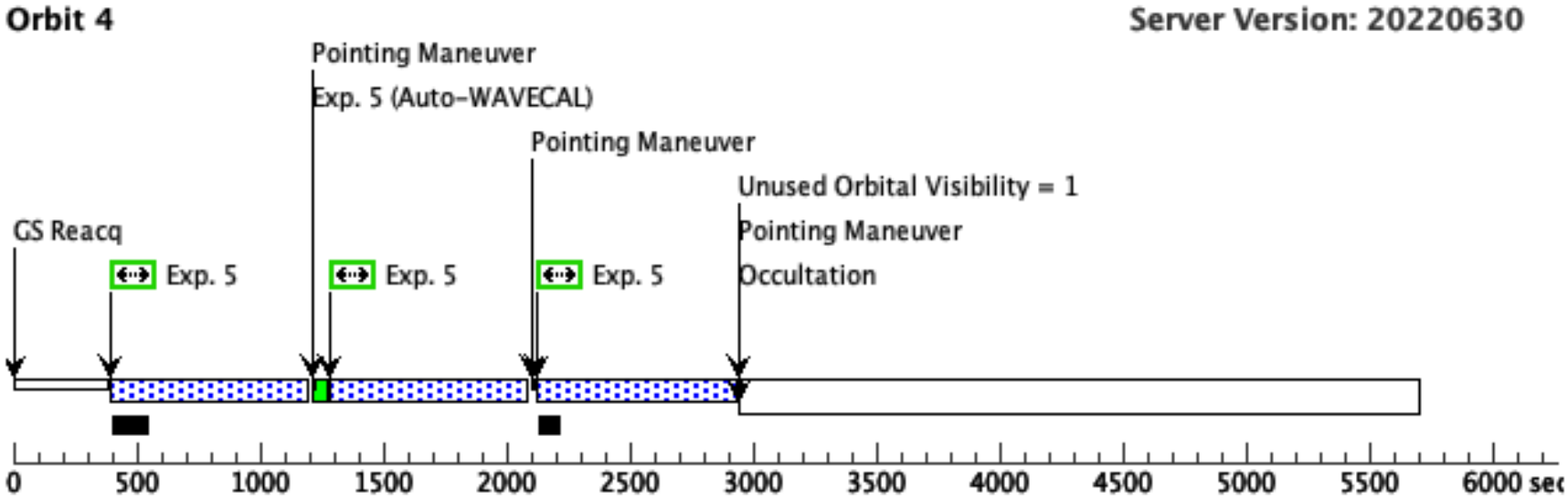
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GS Reacq
Pointing Maneuver
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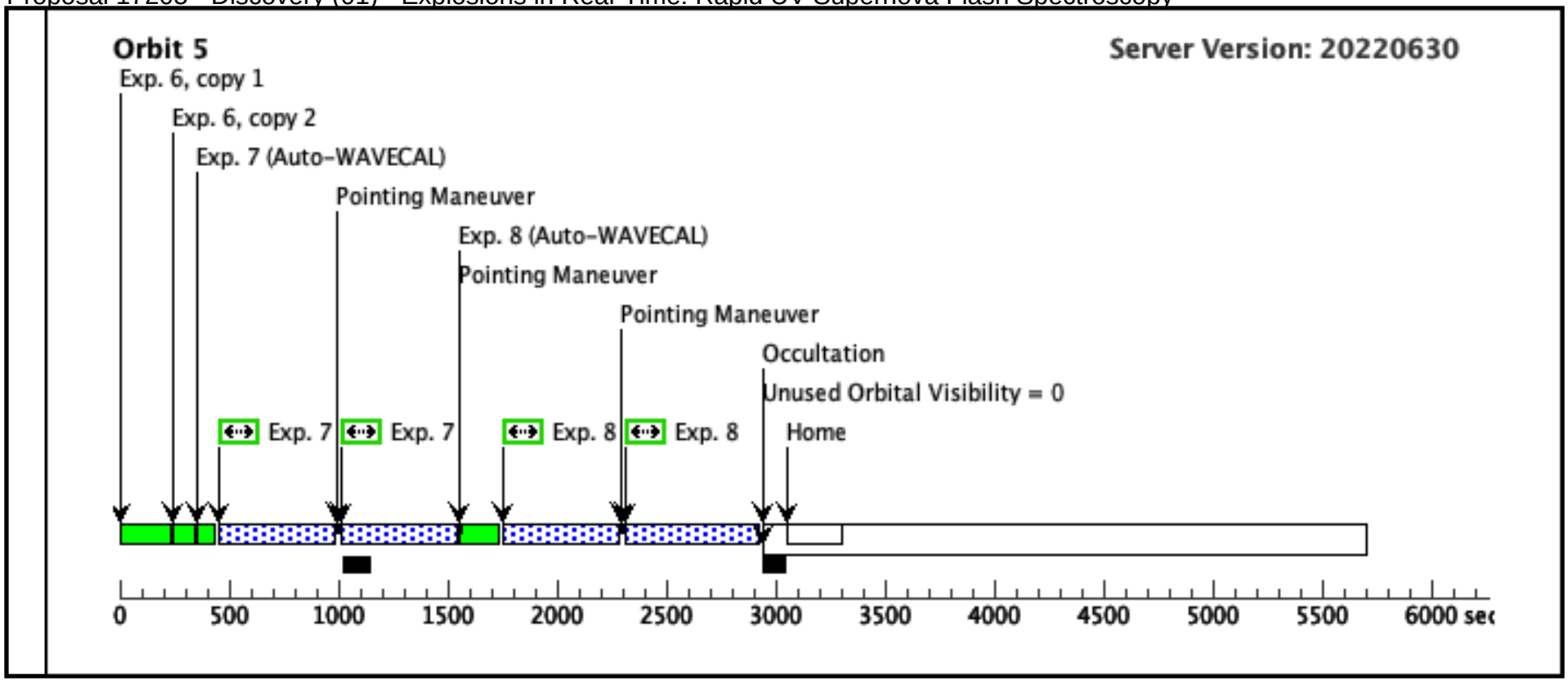
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Pointing Maneuver
Exp. 8 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Occultation
Unused Orbital Visibility = 0
Exp. 7
Exp. 7
Exp. 8
Exp. 8
Home
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500
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2000
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3500
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5500
6000 sec

Visit

Proposal 17205, Followup 1 (02), implementation Sat May 20 17:00:35 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: SCHED 100%; TOO RESPONSE TIME 2.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4), (5)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			
(2)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(7), (8)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=2	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			

Fixed Targets

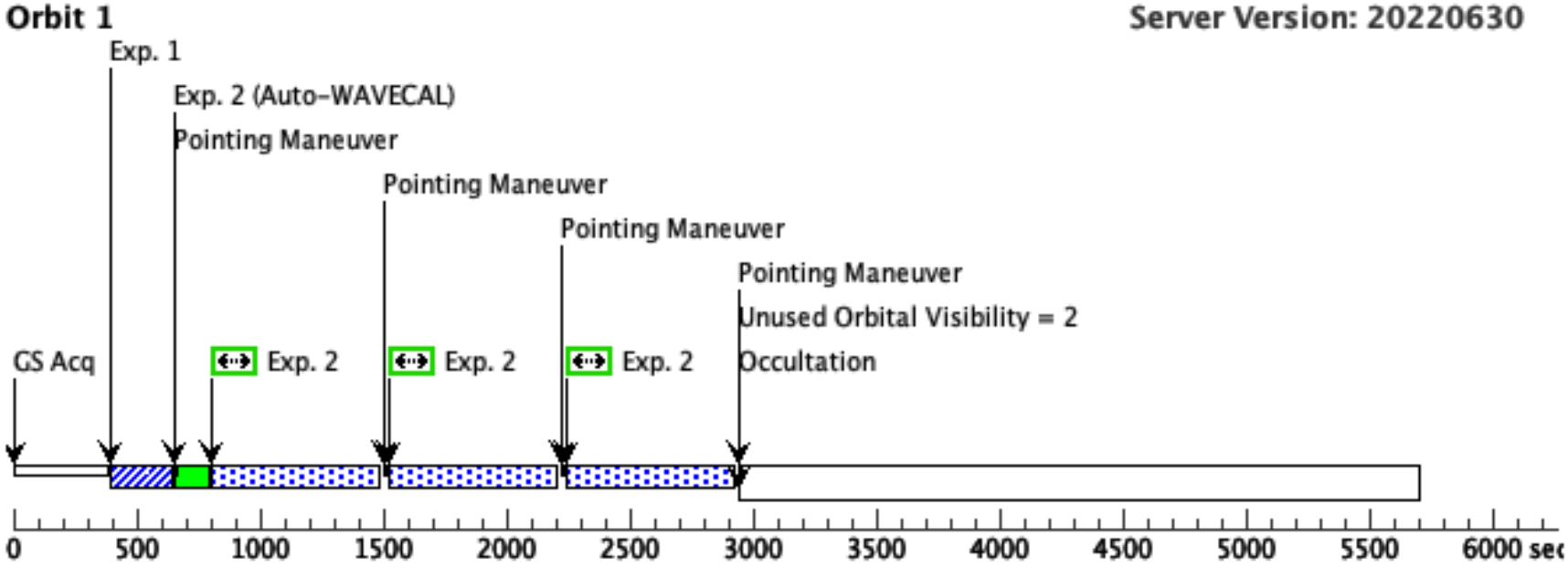
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SN2023IXF	RA: 14 03 38.5550 (210.9106458d)	Redshift: 0.0008	V=14+/-0.2	Reference Frame: ICRS
		Dec: +54 18 42.09 (54.31169d)			
		Equinox: J2000			

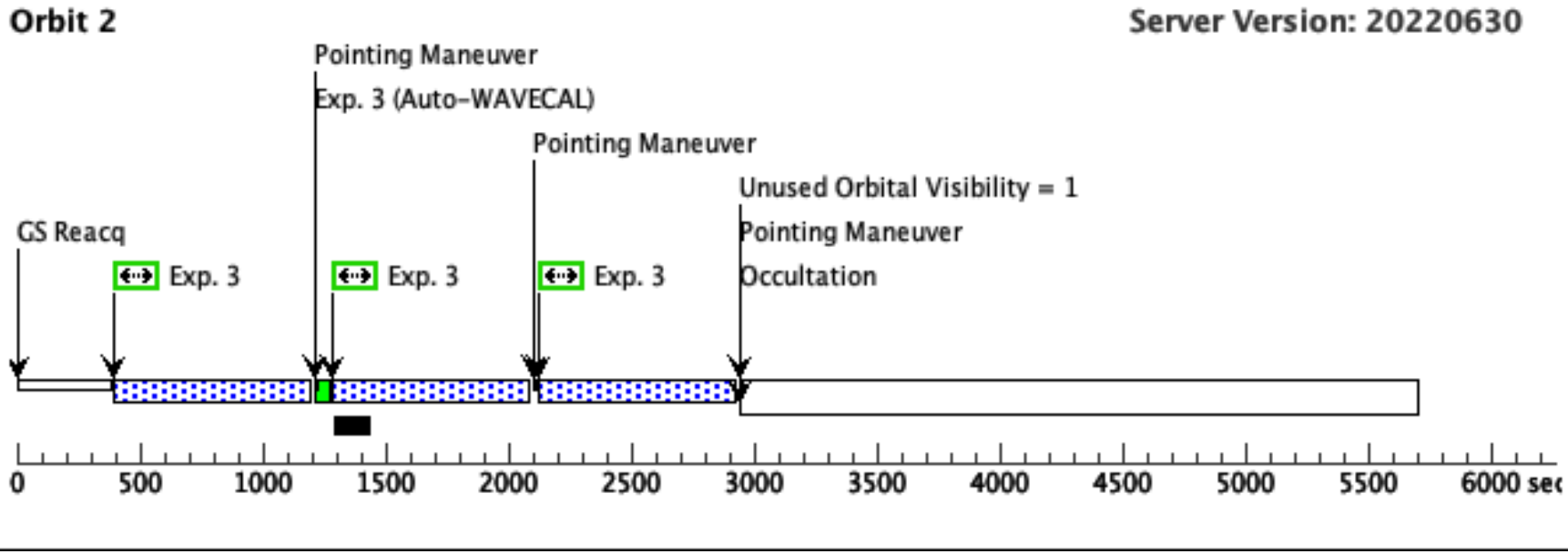
Comments: This is a once in a decade nearby SN.
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]
Extended=NO

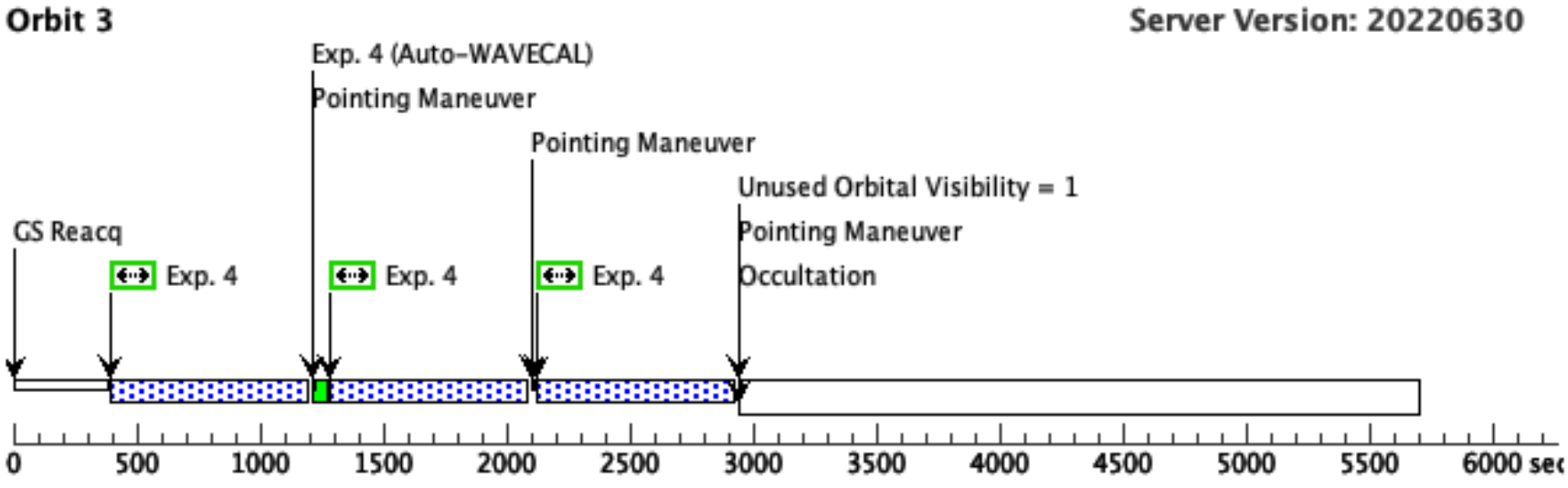
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	UV1 (STIS.ta.181 0483)	(2) SN2023IXF	STIS/CCD, ACQ, 50CCD	MIRROR	ACQTYPE=POINT			0.5 Secs (0.5 Secs) *[==>]*	***[1]***
2	UV1 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 2-2 in Followup 1 (02) (1)	700 Secs (1944 Secs) *[==>648.0 Secs (Pattern 1)]* *[==>648.0 Secs (Pattern 2)]* *[==>648.0 Secs (Pattern 3)]*	***[1]***
3	UV2 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 3-3 in Followup 1 (02) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[2]***
4	UV3 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 4-4 in Followup 1 (02) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[3]***
5	UV4 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 5-5 in Followup 1 (02) (1)	700 Secs (2304 Secs) *[==>768.0 Secs (Pattern 1)]* *[==>768.0 Secs (Pattern 2)]* *[==>768.0 Secs (Pattern 3)]*	***[4]***
6	fringe flat	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[5]***
7	R (STIS.sp.18 11681)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 7-7 in Followup 1 (02) (2)	500 Secs (984 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>492.0 Secs (Pattern 2)]*	***[5]***
8	B (STIS.sp.18 11679)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 8-8 in Followup 1 (02) (2)	500 Secs (1066 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>574.0 Secs (Pattern 2)]*	***[5]***

Orbit Structure



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Pointing Maneuver
Occultation
GS Reacq
Exp. 4
Exp. 4
Exp. 4
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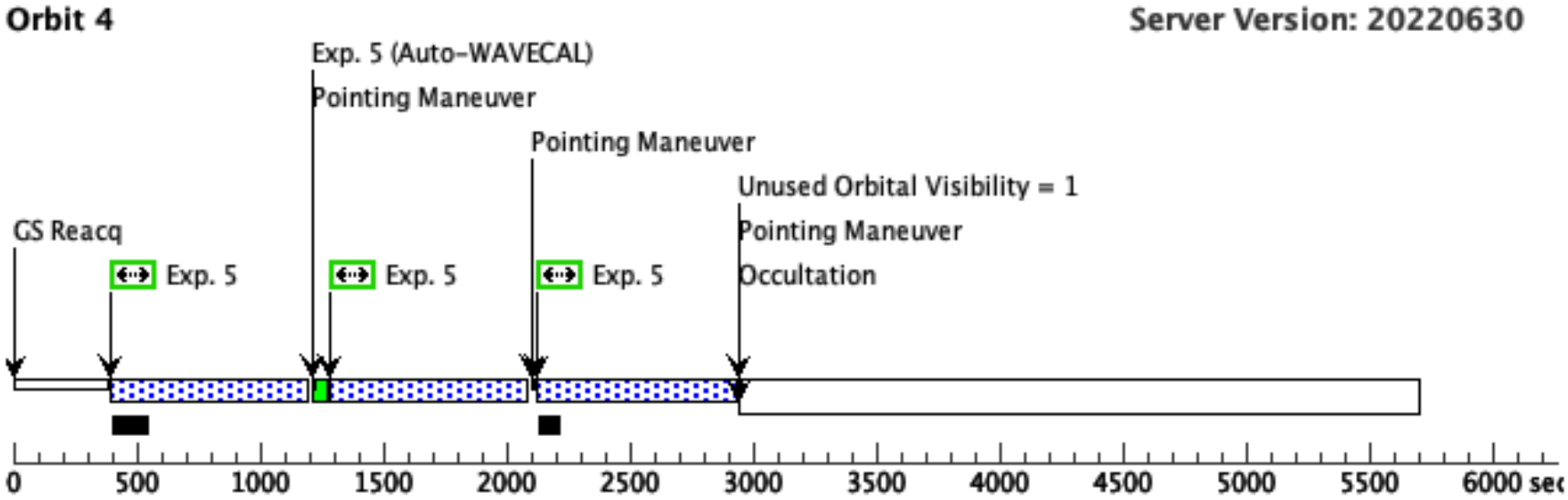
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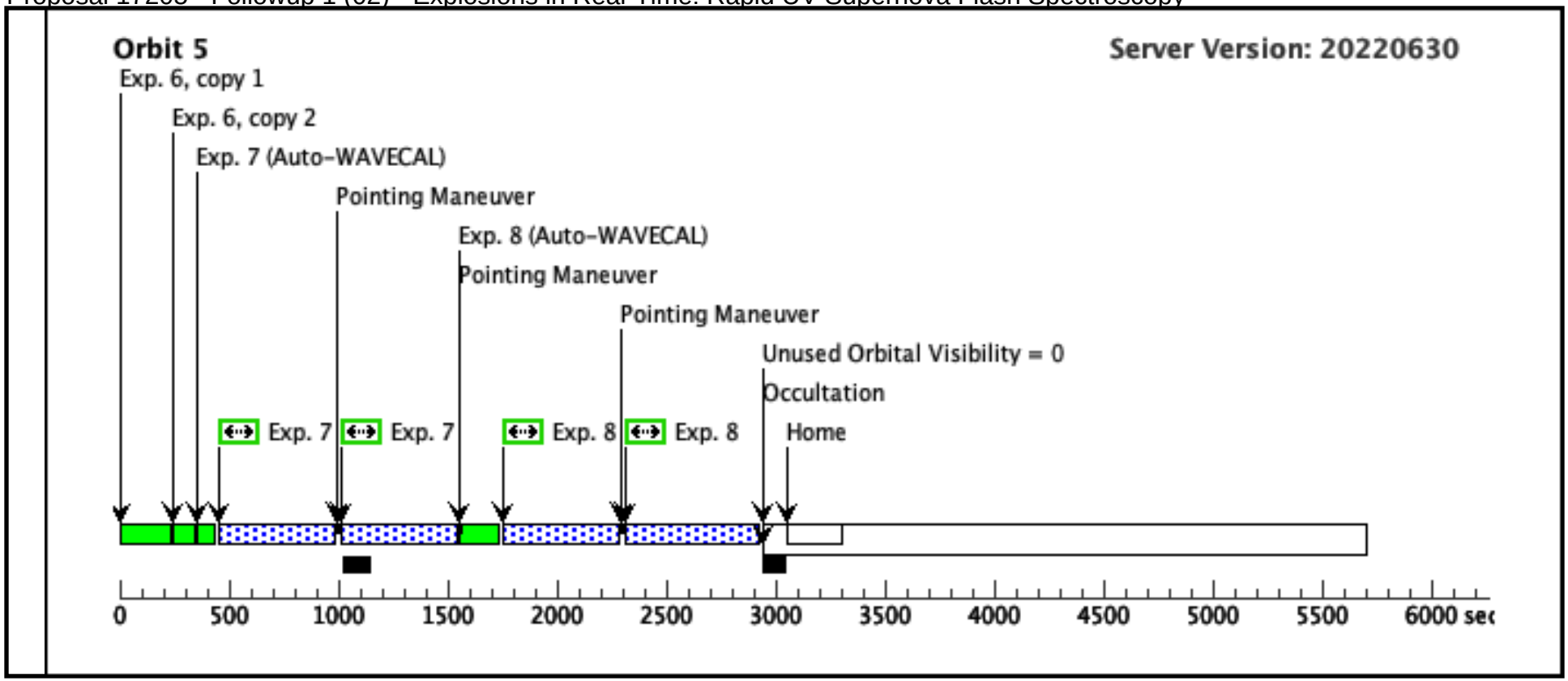
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Pointing Maneuver
Exp. 8 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 0
Occultation
Exp. 7
Exp. 7
Exp. 8
Exp. 8
Home
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6000 sec

Visit

Proposal 17205, Followup 2 (03), implementation Sat May 20 17:00:35 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: SCHED 100%; TOO RESPONSE TIME 2.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4), (5)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			
(2)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(7), (8)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=2	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			

Fixed Targets

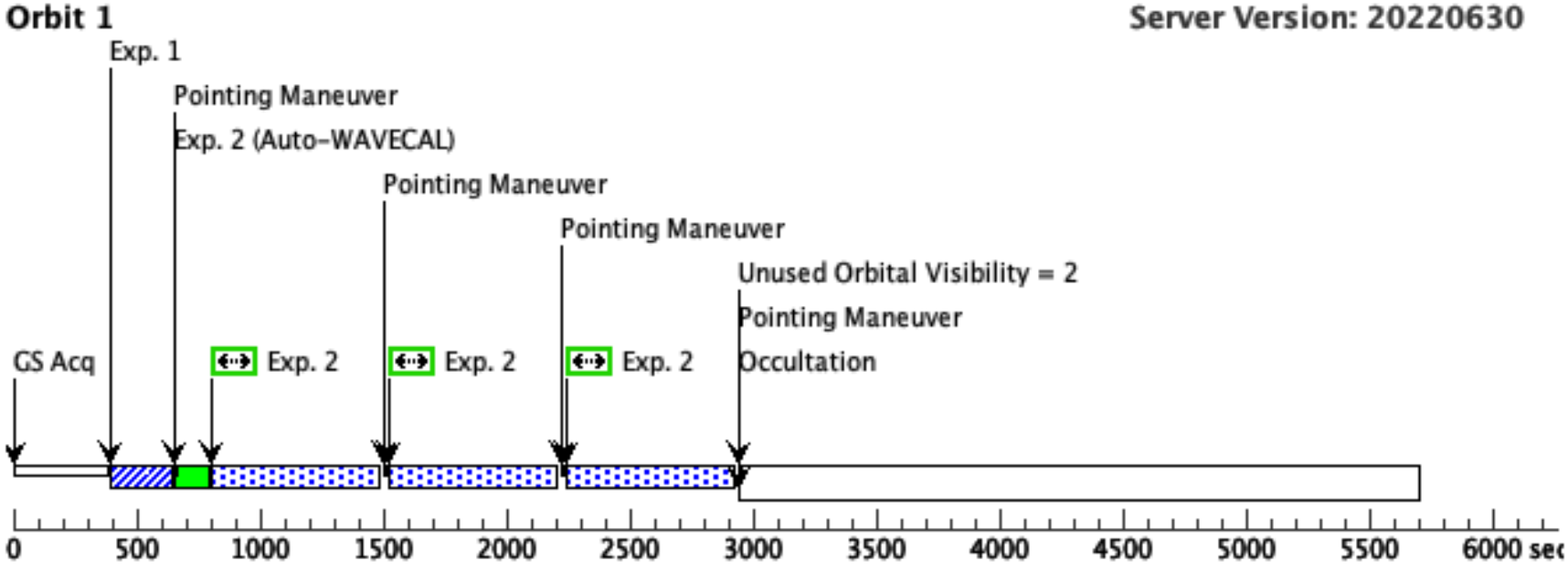
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SN2023IXF	RA: 14 03 38.5550 (210.9106458d)	Redshift: 0.0008	V=14+/-0.2	Reference Frame: ICRS
		Dec: +54 18 42.09 (54.31169d)			
		Equinox: J2000			

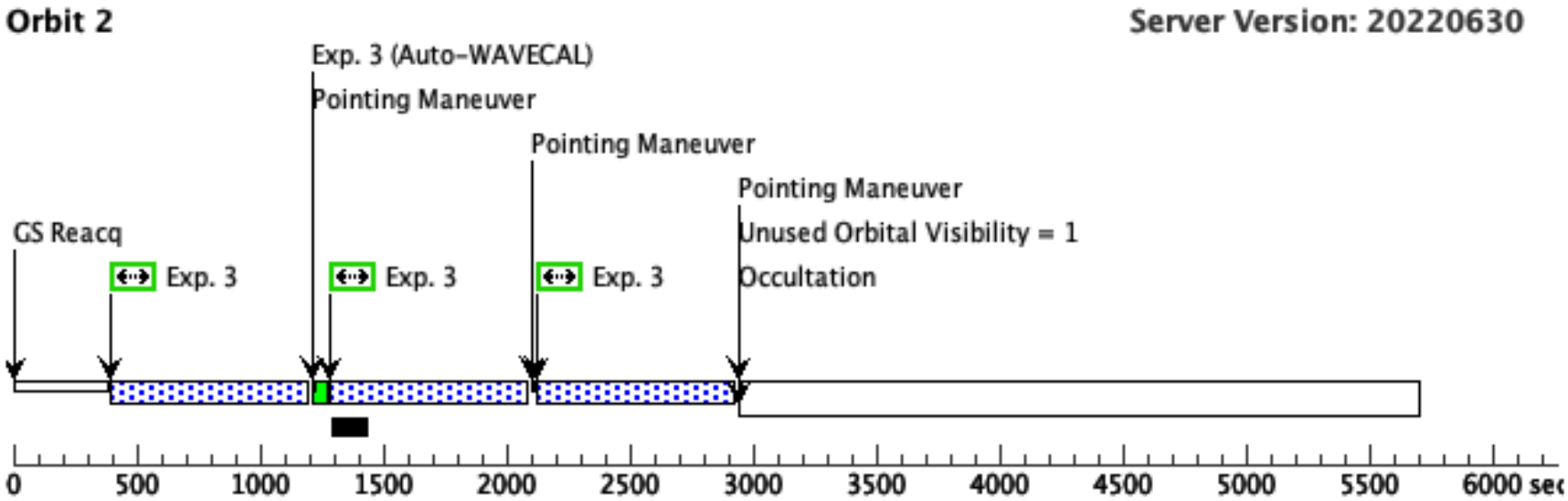
Comments: This is a once in a decade nearby SN.
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]
Extended=NO

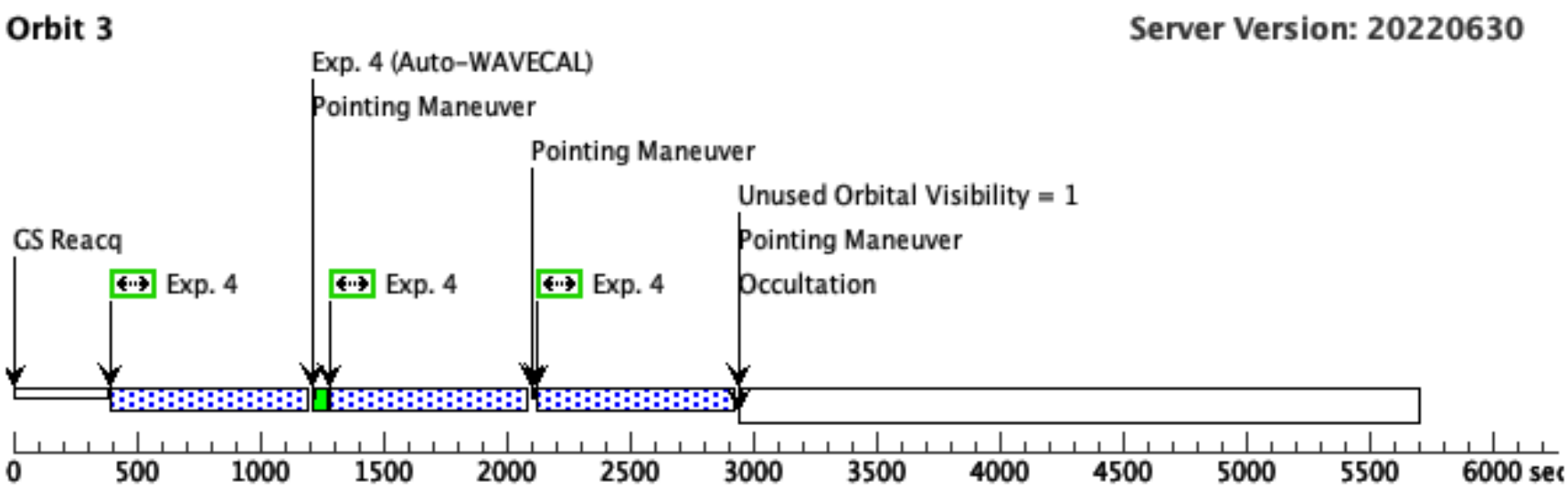
Exposures

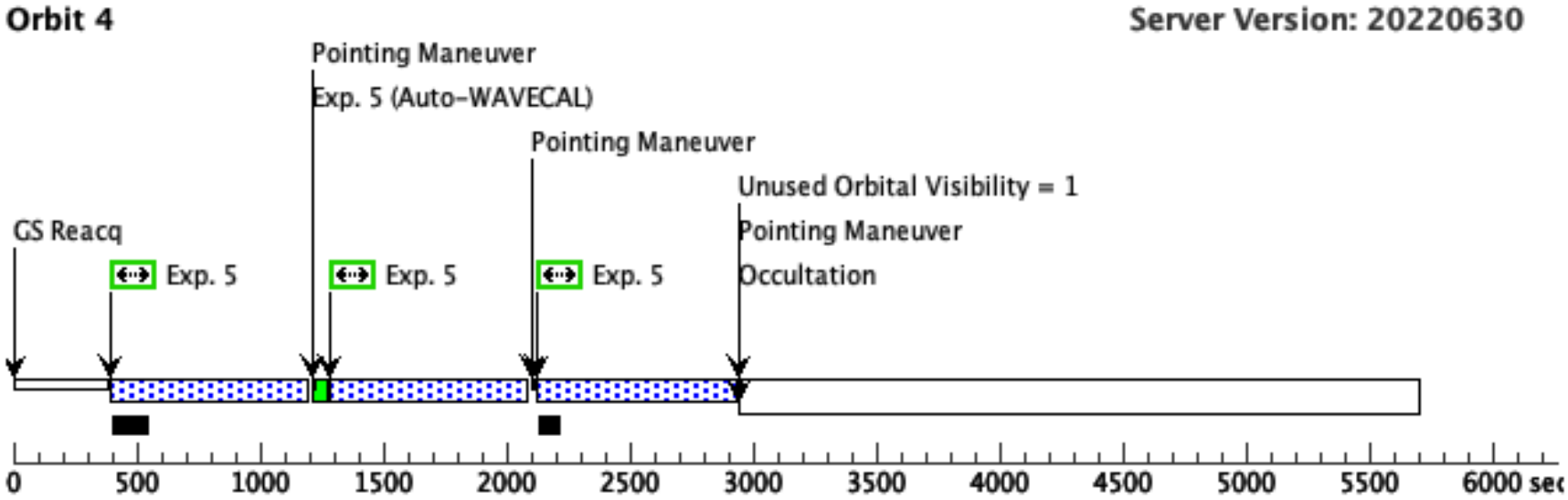
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	UV1 (STIS.ta.181 0483)	(2) SN2023IXF	STIS/CCD, ACQ, 50CCD	MIRROR	ACQTYPE=POINT			0.5 Secs (0.5 Secs) *[==>]*	***[1]***
2	UV1 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 2-2 in Followup 2 (03) (1)	700 Secs (1944 Secs) *[==>648.0 Secs (Pattern 1)]* *[==>648.0 Secs (Pattern 2)]* *[==>648.0 Secs (Pattern 3)]*	***[1]***
3	UV2 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 3-3 in Followup 2 (03) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[2]***
4	UV3 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 4-4 in Followup 2 (03) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[3]***
5	UV4 (STIS.sp.18 11764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 5-5 in Followup 2 (03) (1)	700 Secs (2304 Secs) *[==>768.0 Secs (Pattern 1)]* *[==>768.0 Secs (Pattern 2)]* *[==>768.0 Secs (Pattern 3)]*	***[4]***
6	fringe flat	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[5]***
7	R (STIS.sp.18 11681)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 7-7 in Followup 2 (03) (2)	500 Secs (984 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>492.0 Secs (Pattern 2)]*	***[5]***
8	B (STIS.sp.18 11679)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 8-8 in Followup 2 (03) (2)	500 Secs (1066 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>574.0 Secs (Pattern 2)]*	***[5]***

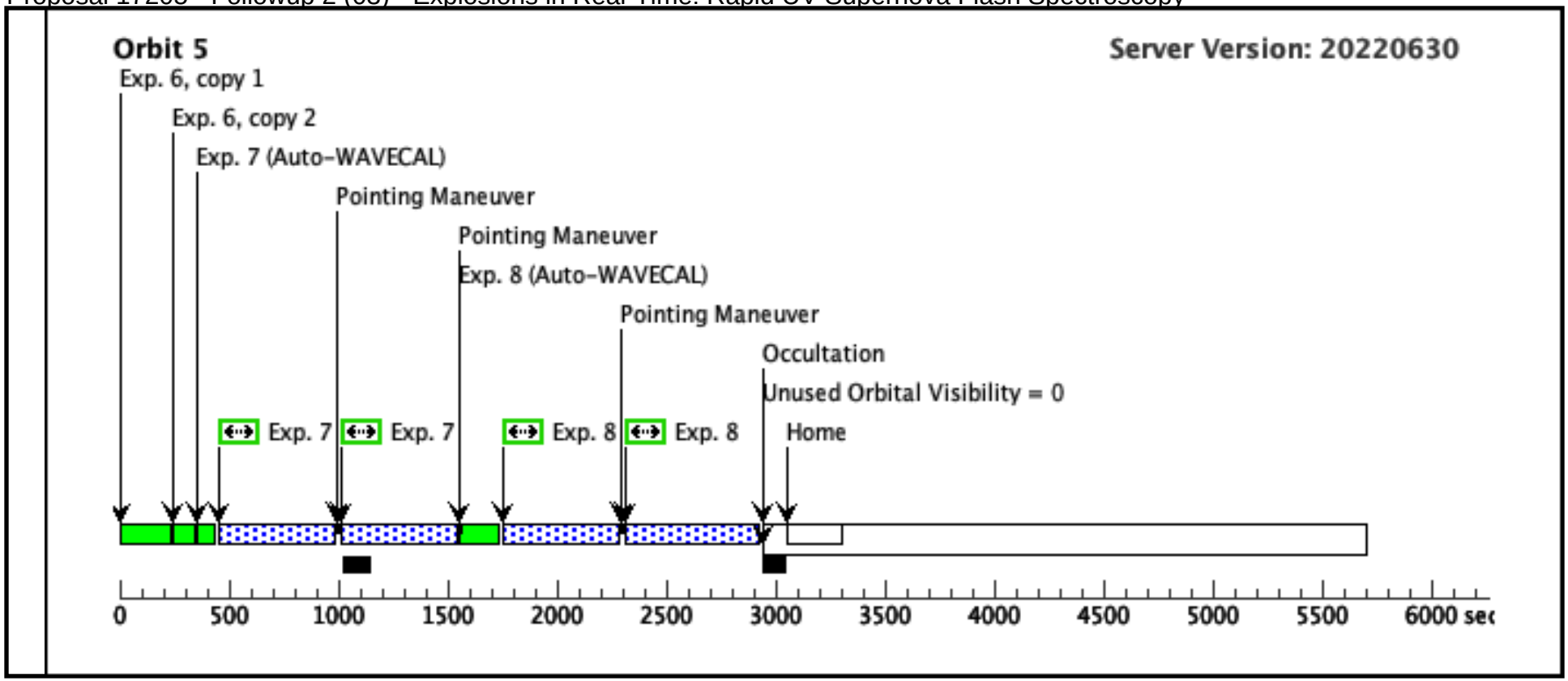
Orbit Structure






Orbit 3
Server Version: 20220630
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 1
Pointing Maneuver
Occultation
GS Reacq
Exp. 4
Exp. 4
Exp. 4
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 4
Server Version: 20220630
Pointing Maneuver
Exp. 5 (Auto-WAVECAL)
Pointing Maneuver
Unused Orbital Visibility = 1
Pointing Maneuver
Occultation
GS Reacq
Exp. 5
Exp. 5
Exp. 5
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 5
Server Version: 20220630
Exp. 6, copy 1
Exp. 6, copy 2
Exp. 7 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Exp. 8 (Auto-WAVECAL)
Pointing Maneuver
Occultation
Unused Orbital Visibility = 0
Exp. 7
Exp. 7
Exp. 8
Exp. 8
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17205, Followup 3 (04), implementation Sat May 20 17:00:35 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: SCHED 100%; TOO RESPONSE TIME 2.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			
(2)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(6), (7)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=2	Angle Between Sides=		
	Point Spacing=0.5	Center Pattern=false		
	Line Spacing=			

Fixed Targets

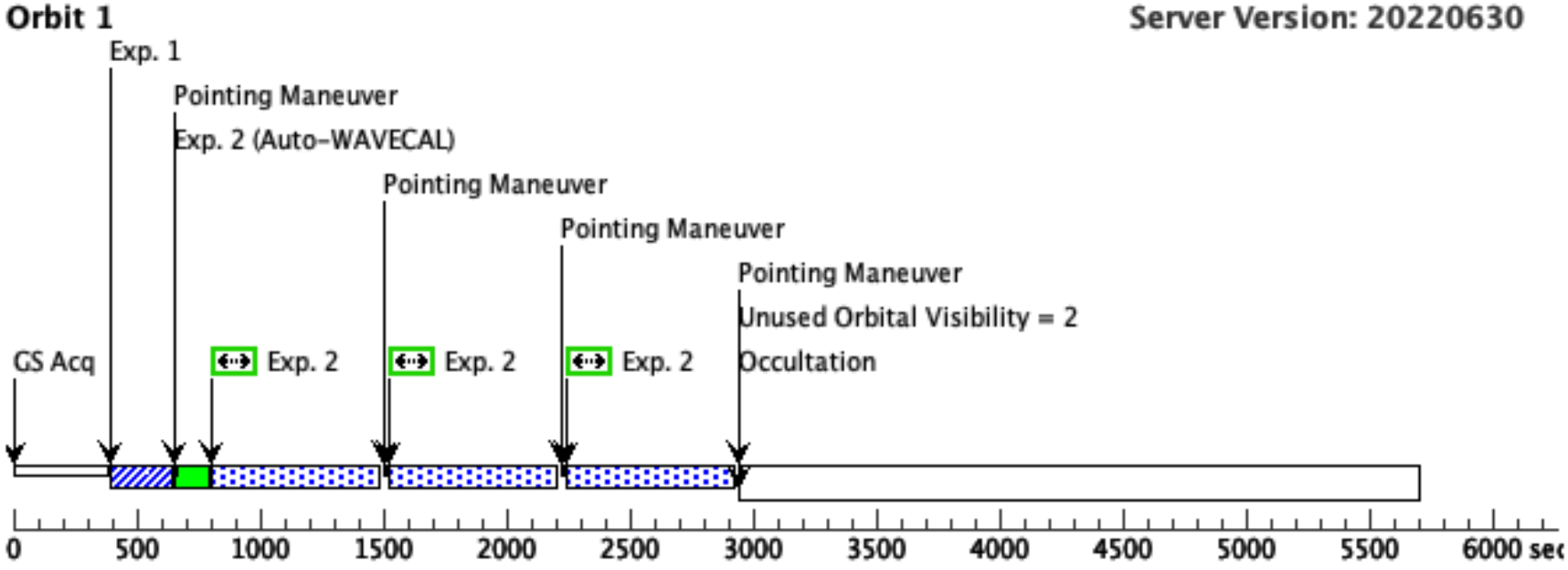
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SN2023IXF	RA: 14 03 38.5550 (210.9106458d)	Redshift: 0.0008	V=14+/-0.2	Reference Frame: ICRS
		Dec: +54 18 42.09 (54.31169d)			
		Equinox: J2000			

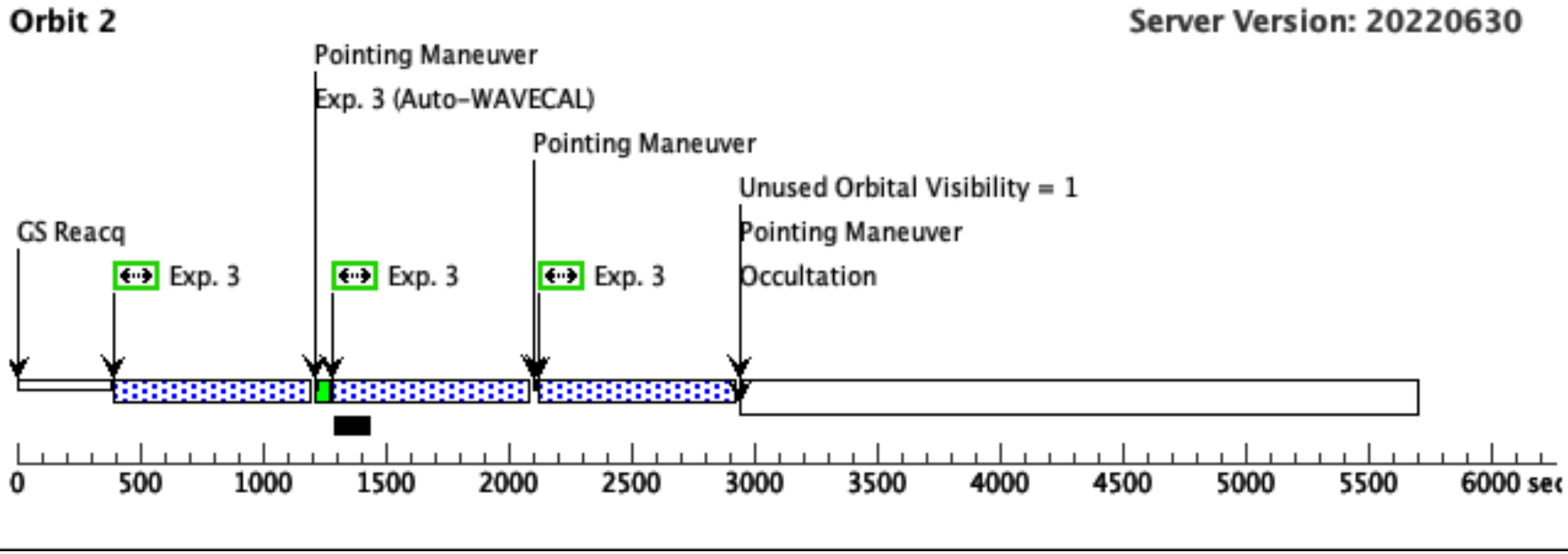
Comments: This is a once in a decade nearby SN.
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]
Extended=NO

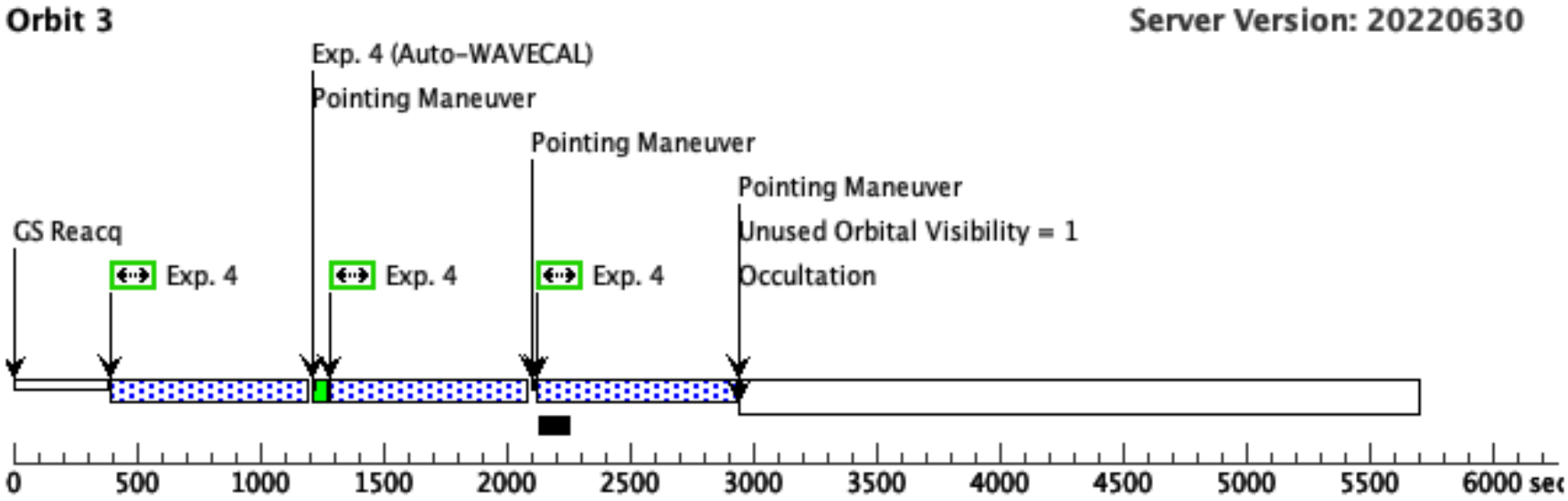
Exposures

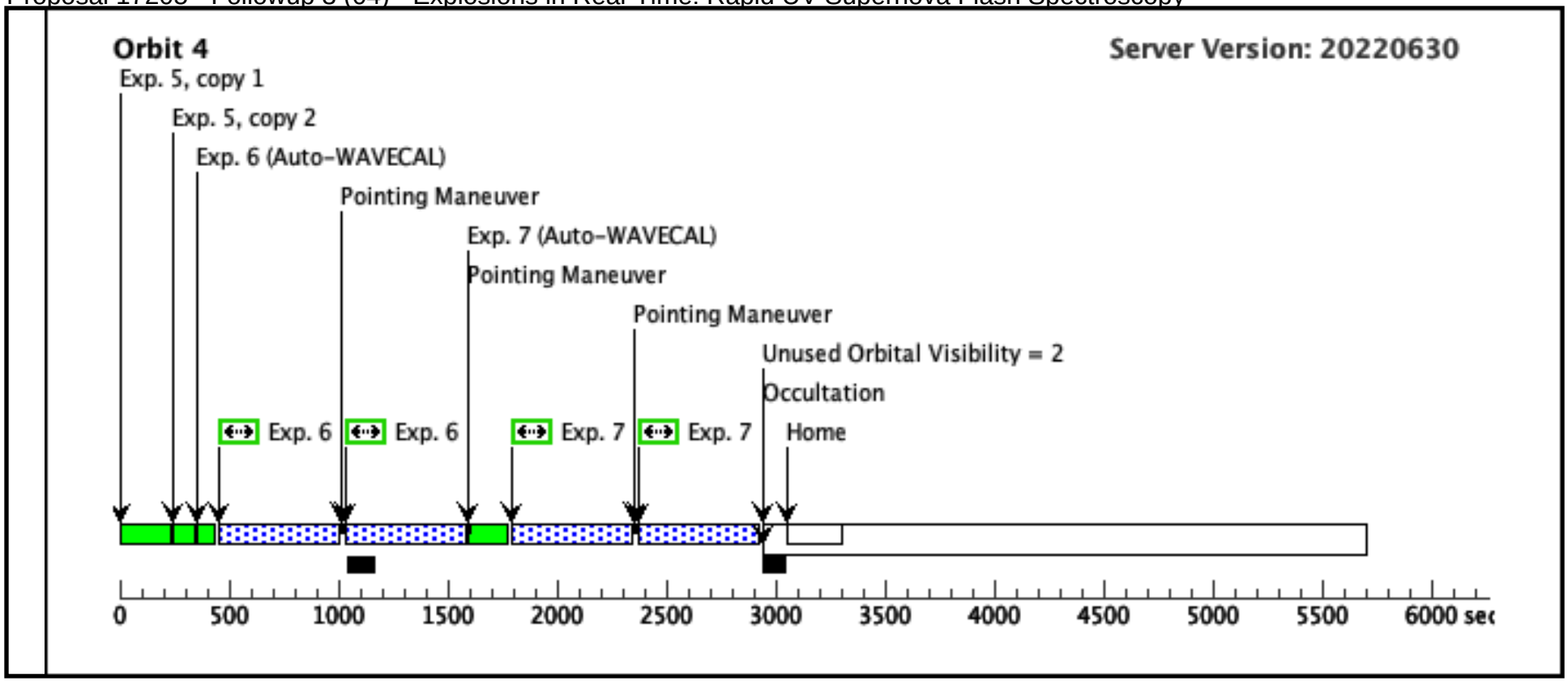
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	UV1 (STIS.ta.1810483)	(2) SN2023IXF	STIS/CCD, ACQ, 50CCD	MIRROR	ACQTYPE=POINT			0.5 Secs (0.5 Secs) *[==>]*	***[1]***
2	UV1 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 2-2 in Followup 3 (04) (1)	700 Secs (1944 Secs) *[==>648.0 Secs (Pattern 1)]* *[==>648.0 Secs (Pattern 2)]* *[==>648.0 Secs (Pattern 3)]*	***[1]***
3	UV2 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 3-3 in Followup 3 (04) (1)	700 Secs (2307 Secs) *[==>769.0 Secs (Pattern 1)]* *[==>769.0 Secs (Pattern 2)]* *[==>769.0 Secs (Pattern 3)]*	***[2]***
4	UV3 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 4-4 in Followup 3 (04) (1)	700 Secs (2304 Secs) *[==>768.0 Secs (Pattern 1)]* *[==>768.0 Secs (Pattern 2)]* *[==>768.0 Secs (Pattern 3)]*	***[3]***
5	fringe flat	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[4]***
6	R (STIS.sp.1811681)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 6-6 in Followup 3 (04) (2)	500 Secs (1024 Secs) *[==>512.0 Secs (Pattern 1)]* *[==>512.0 Secs (Pattern 2)]*	***[4]***
7	B (STIS.sp.1811679)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 7-7 in Followup 3 (04) (2)	500 Secs (1024 Secs) *[==>512.0 Secs (Pattern 1)]* *[==>512.0 Secs (Pattern 2)]*	***[4]***

Orbit Structure






Orbit 3
Server Version: 20220630
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 1
Occultation
GS Reacq
Exp. 4
Exp. 4
Exp. 4
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 4
Server Version: 20220630
Exp. 5, copy 1
Exp. 5, copy 2
Exp. 6 (Auto-WAVECAL)
Pointing Maneuver
Exp. 7 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 2
Occultation
Exp. 6
Exp. 6
Exp. 7
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17205, Followup 4 (05), implementation Sat May 20 17:00:35 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: SCHED 100%; TOO RESPONSE TIME 2.0D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT Purpose=DITHER Number Of Points=3 Point Spacing=0.5 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=90.0 Angle Between Sides= Center Pattern=false		(2), (3)
(2)	Pattern Type=STIS-ALONG-SLIT Purpose=DITHER Number Of Points=2 Point Spacing=0.5 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=90.0 Angle Between Sides= Center Pattern=false		(5), (6)

Fixed Targets

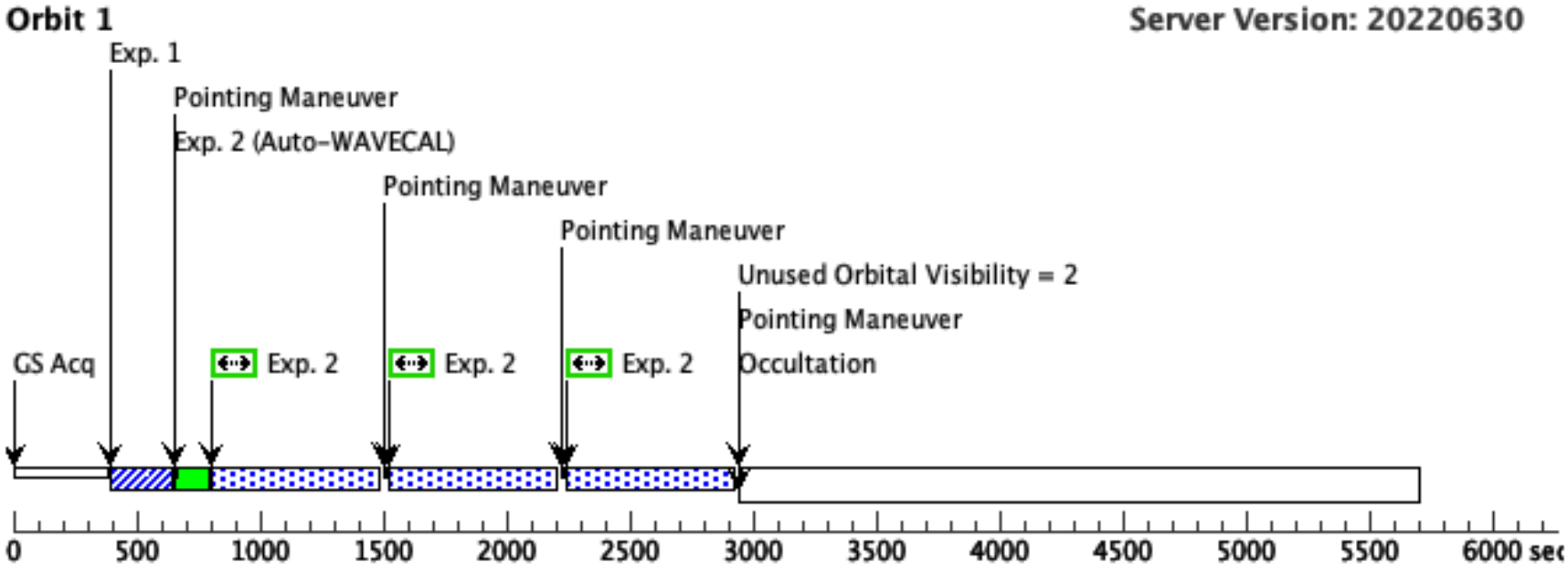
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SN2023IXF	RA: 14 03 38.5550 (210.9106458d) Dec: +54 18 42.09 (54.31169d) Equinox: J2000	Redshift: 0.0008	V=14+/-0.2	Reference Frame: ICRS

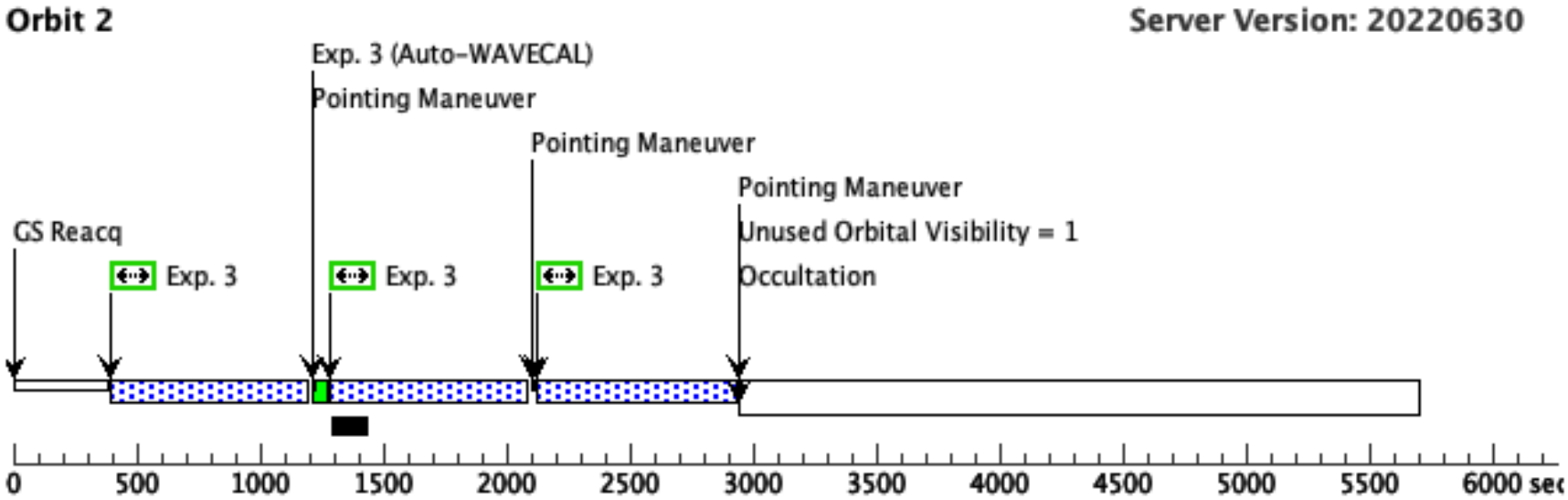
Comments: This is a once in a decade nearby SN.
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]
Extended=NO

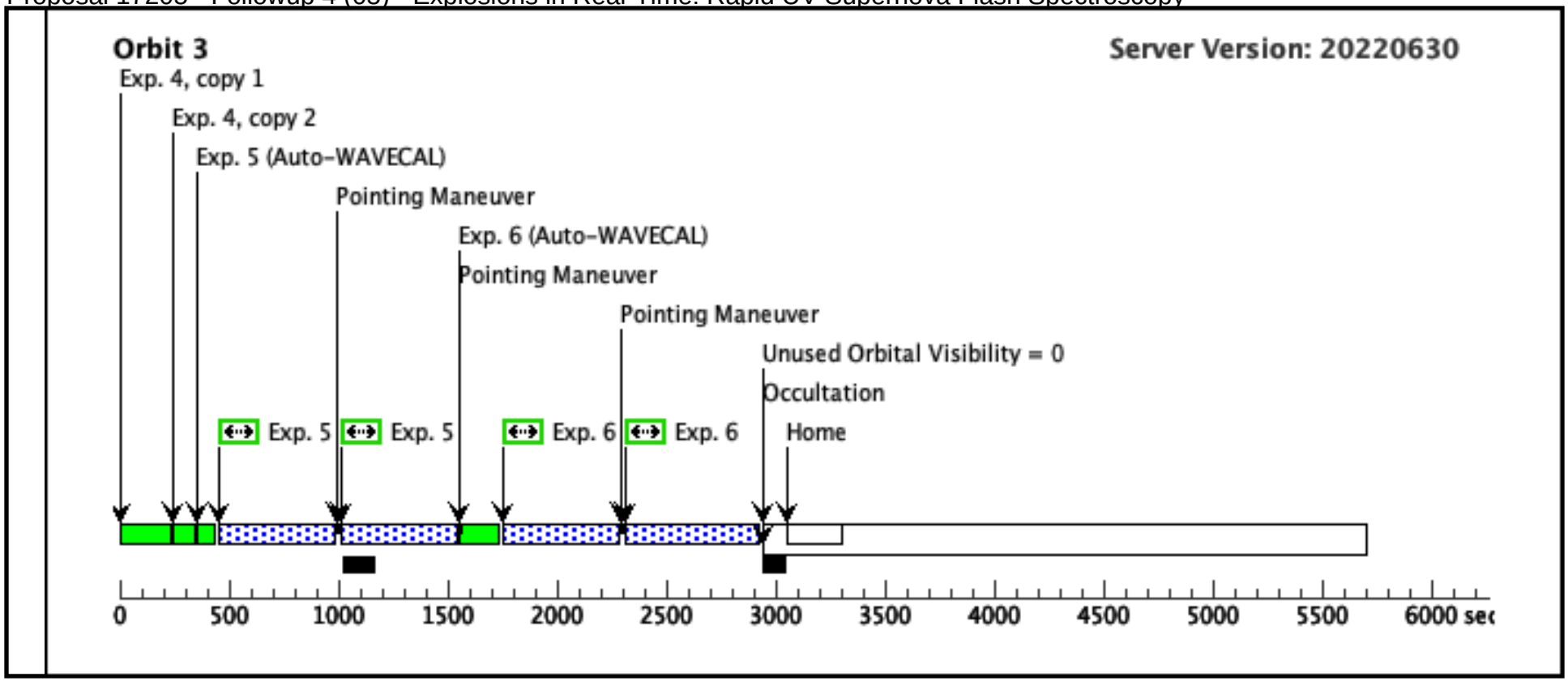
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	UV1 (STIS.ta.1810483)	(2) SN2023IXF	STIS/CCD, ACQ, 50CCD	MIRROR	ACQTYPE=POINT			0.5 Secs (0.5 Secs) *[==>]*	***[1]***
2	UV1 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 2-2 in Followup 4 (05) (1)	700 Secs (1944 Secs) *[==>648.0 Secs (Pattern 1)]* *[==>648.0 Secs (Pattern 2)]* *[==>648.0 Secs (Pattern 3)]*	***[1]***
3	UV2 (STIS.sp.1811764)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G230LB 2375 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 1, Exps 3-3 in Followup 4 (05) (1)	700 Secs (2304 Secs) *[==>768.0 Secs (Pattern 1)]* *[==>768.0 Secs (Pattern 2)]* *[==>768.0 Secs (Pattern 3)]*	***[2]***
4	fringe flat	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[3]***
5	R (STIS.sp.1811681)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 5-5 in Followup 4 (05) (2)	500 Secs (984 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>492.0 Secs (Pattern 2)]*	***[3]***
6	B (STIS.sp.1811679)	(2) SN2023IXF	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	BINAXIS1=1; CR-SPLIT=NO		Pattern 2, Exps 6-6 in Followup 4 (05) (2)	500 Secs (1066 Secs) *[==>492.0 Secs (Pattern 1)]* *[==>574.0 Secs (Pattern 2)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20220630
Exp. 4, copy 1
Exp. 4, copy 2
Exp. 5 (Auto-WAVECAL)
Pointing Maneuver
Exp. 6 (Auto-WAVECAL)
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 0
Occultation
Exp. 5
Exp. 5
Exp. 6
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec