16264 - LensWatch: Time Delay Measurement of a Multiply-Imaged Supernova

Cycle: 28, Proposal Category: GO

(Availability Mode: SUPPORTED)

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
11	(3) LENSED-SN-1	WFC3/IR	1	11-Jan-2024 17:00:26.0	yes
12	(3) LENSED-SN-1	WFC3/IR	1	11-Jan-2024 17:00:27.0	yes
13	(3) LENSED-SN-1	WFC3/IR	1	11-Jan-2024 17:00:27.0	yes
14	(3) LENSED-SN-1	WFC3/IR	1	11-Jan-2024 17:00:28.0	yes
15	(3) LENSED-SN-1	WFC3/IR	1	11-Jan-2024 17:00:29.0	yes
16	(4) SNZWICKY	WFC3/IR WFC3/UVIS	1	11-Jan-2024 17:00:30.0	yes
17	(4) SNZWICKY	WFC3/IR WFC3/UVIS	1	11-Jan-2024 17:00:31.0	yes
18	(3) LENSED-SN-1	WFC3/IR	1	11-Jan-2024 17:00:32.0	yes
31	(9) REQUIEM2-TARGET	WFC3/IR	6	11-Jan-2024 17:00:34.0	yes
32	(9) REQUIEM2-TARGET	WFC3/IR	8	11-Jan-2024 17:00:38.0	yes

22 Total Orbits Used

ABSTRACT

By measuring the time delay between any pair of gravitationally lensed images, we can constrain the expansion rate of the universe and test dark energy models. Variable quasars have been used in this way with great success, and it is now possible to extend this technique to gravitationally

lensed supernovae (SNe). These targets are especially promising because their predictable light curves can deliver precise time delay measurements in a relatively short period. Existing surveys have a realistic chance of discovering at least one new lensed SN within the next 1-3 years. This long-term target of opportunity program will provide the high-resolution follow-up imaging that is critical for measuring a lensed SN time delay. This program will enable a time delay measurement with uncertainty of approximately +-3 days, leading to a new measurement of H0 with a precision of 5-10% for a flat LambdaCDM cosmology---comparable to the best constraints achieved with lensed quasars. Future wide-field surveys (e.g., LSST, WFIRST) could deliver hundreds of lensed SN time delays, but the sample size will be limited by follow-up resources. This pilot study is an important step to establish lensed SNe as a competitive cosmological tool in the coming wide-field survey era.

OBSERVING DESCRIPTION

When a lensed SN candidate is discovered, this ToO program will provide a follow-up campaign to measure the time delay. We will trigger a ToO (either disruptive or non-disruptive, depending on the situation), activating a series of approximately 16 HST visits, totaling up to 22 orbits of broad- and medium-band imaging. The exact specification of these visits will be determined based on the sky location, visibility, redshift, the gravitational lens, the SN itself, and the availability of other follow-up resources. For the initial Phase II submission we provide a range of plausible configurations including all of the expected instrument+filter combinations.

In each visit we will include 2 to 3 filters of ACS or WFC3 imaging, with no parallel instrument. The dither pattern will be selected to optimize the sampling of the SN and lens, and may need to be adjusted from the defaults specified in the initial phase II submission. Every visit will include well-defined time constraints to ensure fairly even sampling of the SN light curve. We will generally be able to provide scheduling flexibility on the order of +-3 days for each visit, along with a minimum separation between visits. For some possible targets we will include medium-band WFC3-IR imaging, paired with complementary broad-band imaging in visits that will have harder time constraints to ensure that the medium- and broad-band imaging is approximately coincident in time.

Visit

Proposal 16264, WFC3 F110W/F160W (11), failed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%

Comments: 3 short WFC3-IR F110W and 3 short WFC3-IR F160W exposures of new source in MACS-J2129 field.

Diagnostics

(WFC3 F110W/F160W (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

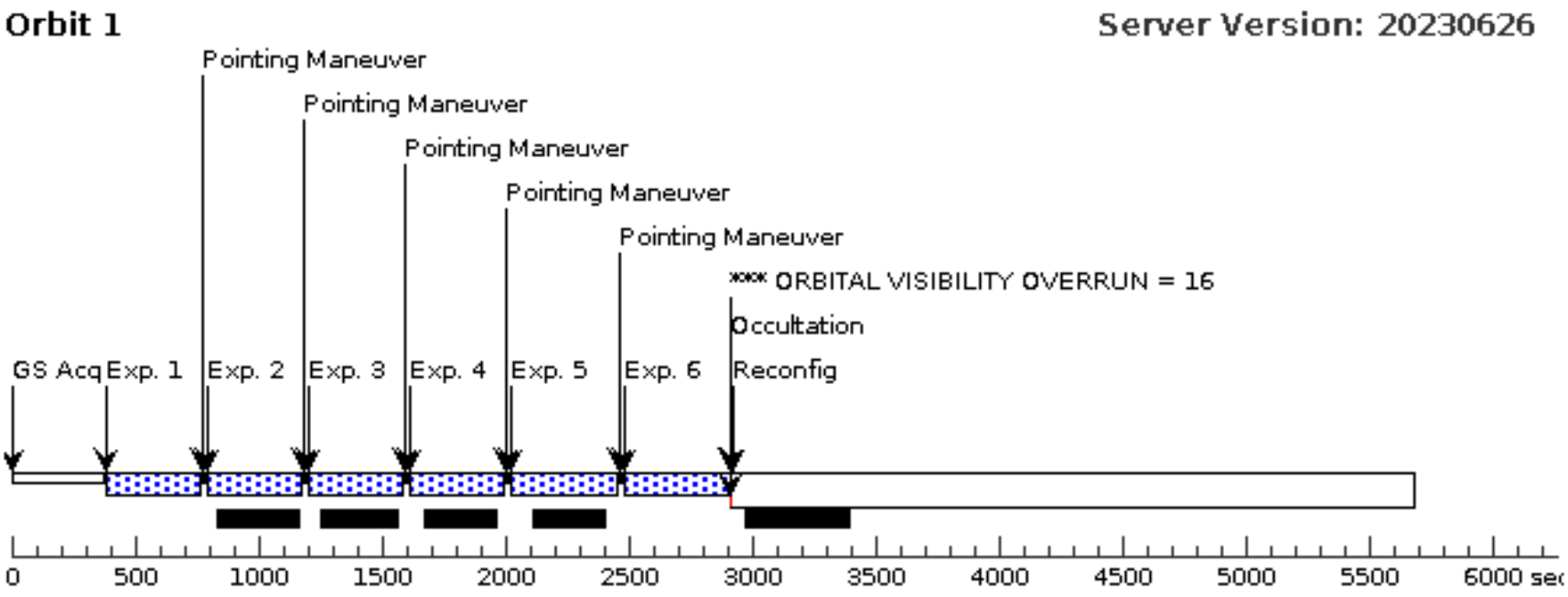
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LENSED-SN-1	RA: 21 29 40.1969 (322.4174871d) Dec: +00 05 24.62 (.09017d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0,0	Sequence 1-6 Non-Int in WFC3 F110W/F160W (11)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
2	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0.451,0.403	Sequence 1-6 Non-Int in WFC3 F110W/F160W (11)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
3	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .474,.424	Sequence 1-6 Non-Int in WFC3 F110W/F160W (11)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
4	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .925,.827	Sequence 1-6 Non-Int in WFC3 F110W/F160W (11)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
5	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 1.376,1.230	Sequence 1-6 Non-Int in WFC3 F110W/F160W (11)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***
6	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 0.902,0.806	Sequence 1-6 Non-Int in WFC3 F110W/F160W (11)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16264, WFC3 F110W/F160W (12), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; AFTER 11 BY 10 D TO 14 D

Comments: 3 short WFC3-IR F110W and 3 short WFC3-IR F160W exposures of new source in MACS-J2129 field.

Diagnostics

(WFC3 F110W/F160W (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

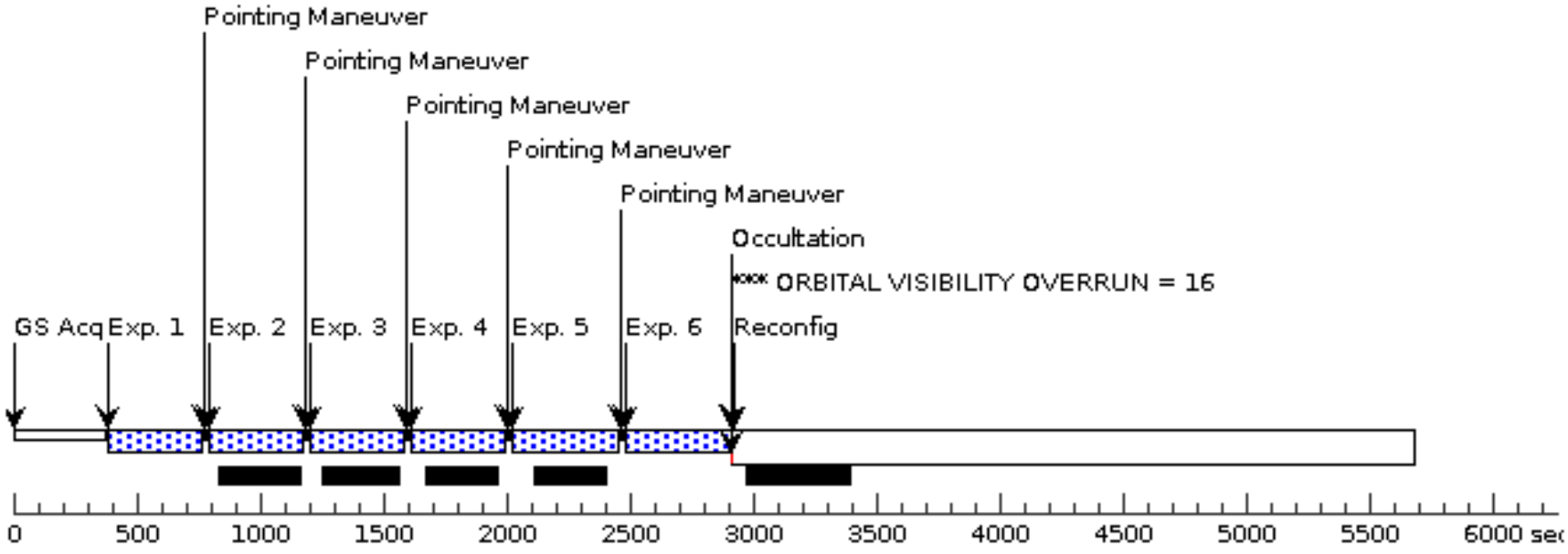
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LENSED-SN-1	RA: 21 29 40.1969 (322.4174871d) Dec: +00 05 24.62 (.09017d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0,0	Sequence 1-6 Non-Int in WFC3 F110W/F160W (12)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
2	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0.451,0.403	Sequence 1-6 Non-Int in WFC3 F110W/F160W (12)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
3	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .474,.424	Sequence 1-6 Non-Int in WFC3 F110W/F160W (12)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
4	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .925,.827	Sequence 1-6 Non-Int in WFC3 F110W/F160W (12)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
5	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 1.376,1.230	Sequence 1-6 Non-Int in WFC3 F110W/F160W (12)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***
6	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 0.902,0.806	Sequence 1-6 Non-Int in WFC3 F110W/F160W (12)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16264, WFC3 F110W/F160W (13), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; AFTER 12 BY 10 D TO 14 D

Comments: 3 short WFC3-IR F110W and 3 short WFC3-IR F160W exposures of new source in MACS-J2129 field.

Diagnostics

(WFC3 F110W/F160W (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

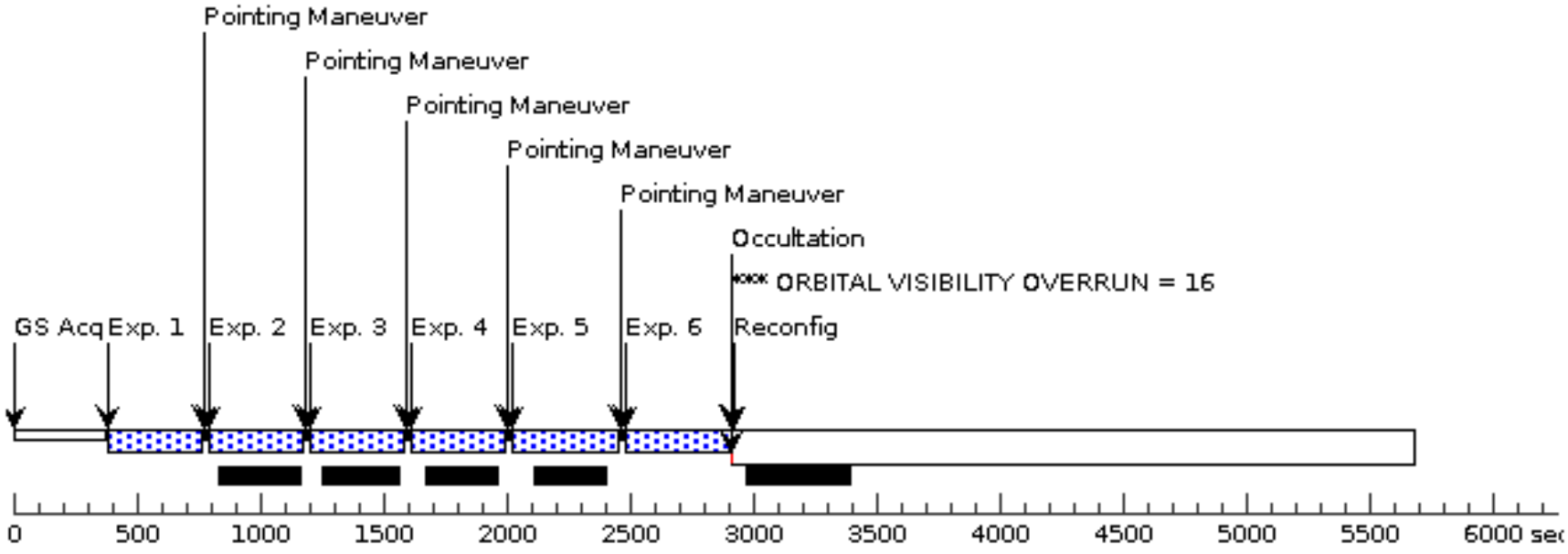
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LENSED-SN-1	RA: 21 29 40.1969 (322.4174871d) Dec: +00 05 24.62 (.09017d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0,0	Sequence 1-6 Non-Int in WFC3 F110W/F160W (13)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
2	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0.451,0.403	Sequence 1-6 Non-Int in WFC3 F110W/F160W (13)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
3	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .474,.424	Sequence 1-6 Non-Int in WFC3 F110W/F160W (13)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
4	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .925,.827	Sequence 1-6 Non-Int in WFC3 F110W/F160W (13)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
5	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 1.376,1.230	Sequence 1-6 Non-Int in WFC3 F110W/F160W (13)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***
6	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 0.902,0.806	Sequence 1-6 Non-Int in WFC3 F110W/F160W (13)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16264, WFC3 F110W/F160W (14), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; AFTER 13 BY 10 D TO 14 D

Comments: 3 short WFC3-IR F110W and 3 short WFC3-IR F160W exposures of new source in MACS-J2129 field.

Diagnostics

(WFC3 F110W/F160W (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

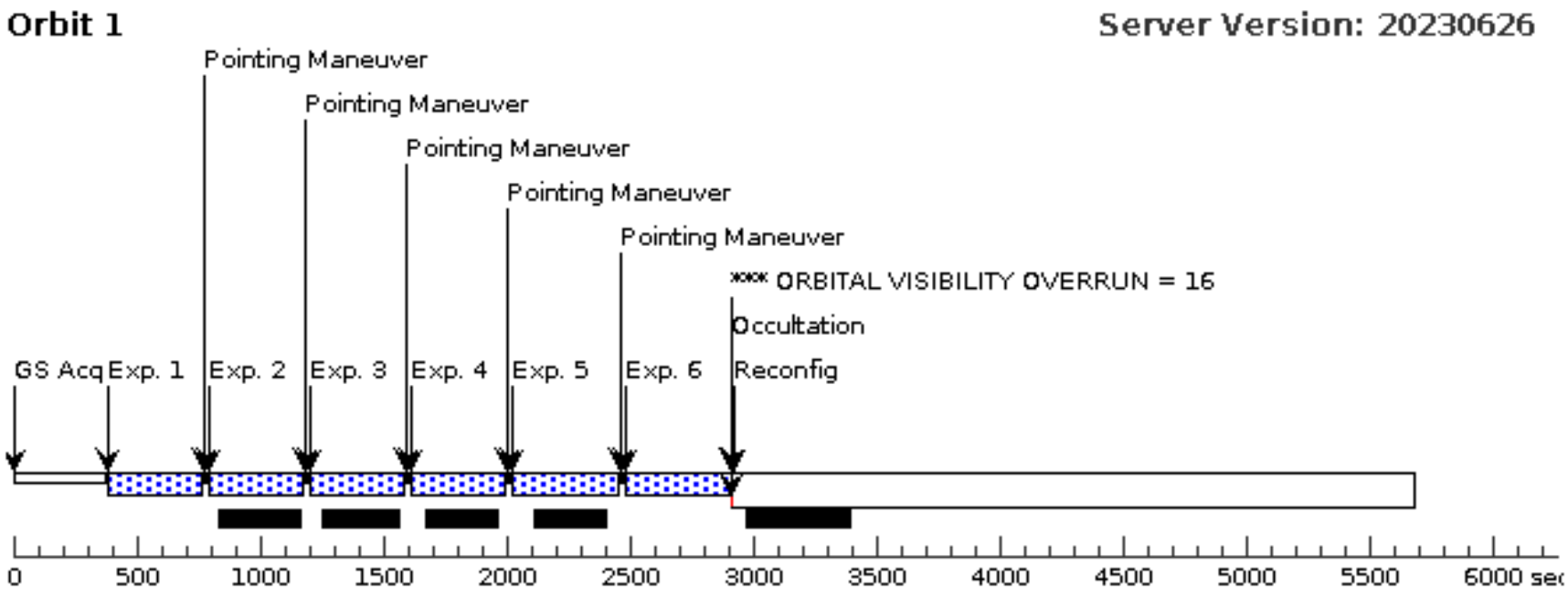
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LENSED-SN-1	RA: 21 29 40.1969 (322.4174871d) Dec: +00 05 24.62 (.09017d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0,0	Sequence 1-6 Non-Int in WFC3 F110W/F160W (14)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
2	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0.451,0.403	Sequence 1-6 Non-Int in WFC3 F110W/F160W (14)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
3	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .474,.424	Sequence 1-6 Non-Int in WFC3 F110W/F160W (14)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
4	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .925,.827	Sequence 1-6 Non-Int in WFC3 F110W/F160W (14)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
5	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 1.376,1.230	Sequence 1-6 Non-Int in WFC3 F110W/F160W (14)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***
6	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 0.902,0.806	Sequence 1-6 Non-Int in WFC3 F110W/F160W (14)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16264, WFC3 F110W/F160W (15), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; AFTER 14 BY 10 D TO 14 D

Comments: 3 short WFC3-IR F110W and 3 short WFC3-IR F160W exposures of new source in MACS-J2129 field.

Diagnostics

(WFC3 F110W/F160W (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

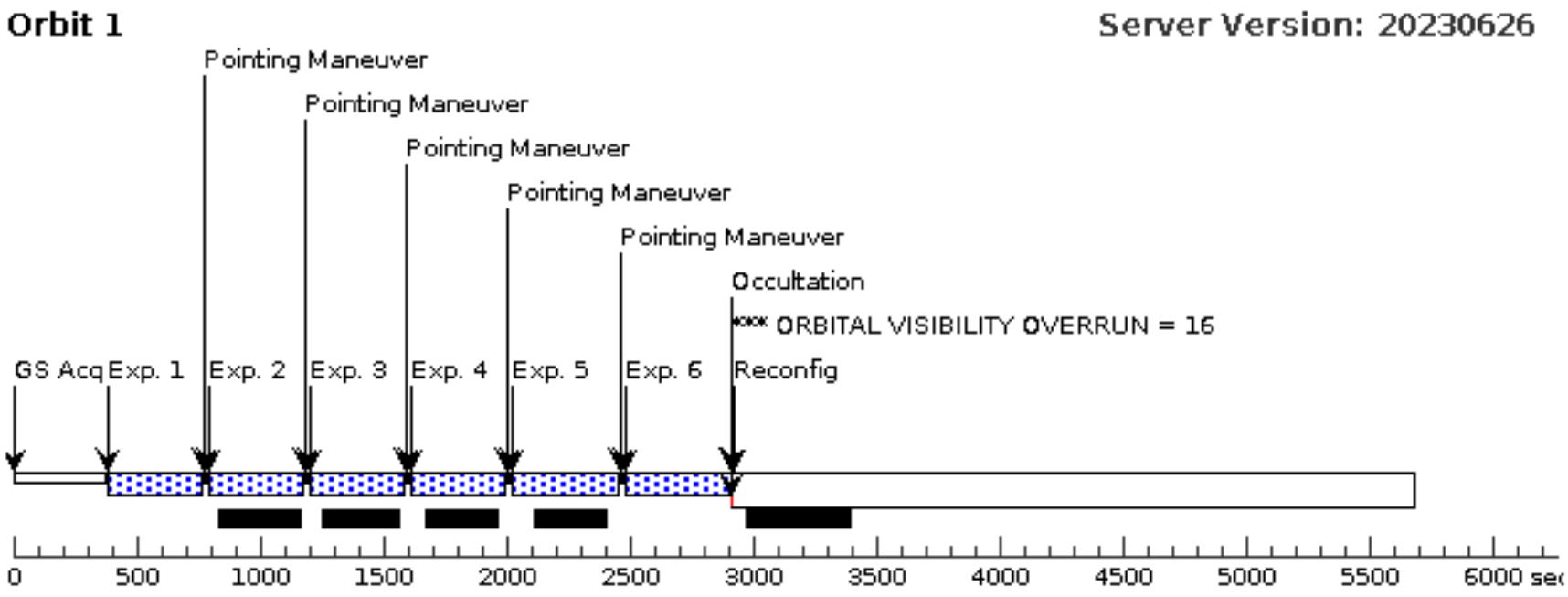
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LENSED-SN-1	RA: 21 29 40.1969 (322.4174871d) Dec: +00 05 24.62 (.09017d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0,0	Sequence 1-6 Non-Int in WFC3 F110W/F160W (15)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
2	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0.451,0.403	Sequence 1-6 Non-Int in WFC3 F110W/F160W (15)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
3	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .474,.424	Sequence 1-6 Non-Int in WFC3 F110W/F160W (15)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
4	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .925,.827	Sequence 1-6 Non-Int in WFC3 F110W/F160W (15)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
5	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 1.376,1.230	Sequence 1-6 Non-Int in WFC3 F110W/F160W (15)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***
6	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 0.902,0.806	Sequence 1-6 Non-Int in WFC3 F110W/F160W (15)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16264, ZWICKY-1 (16), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%; TOO RESPONSE TIME 7.0D

Diagnostics

(ZWICKY-1 (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(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		(4)
(7)	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		(1-3)

Fixed Targets

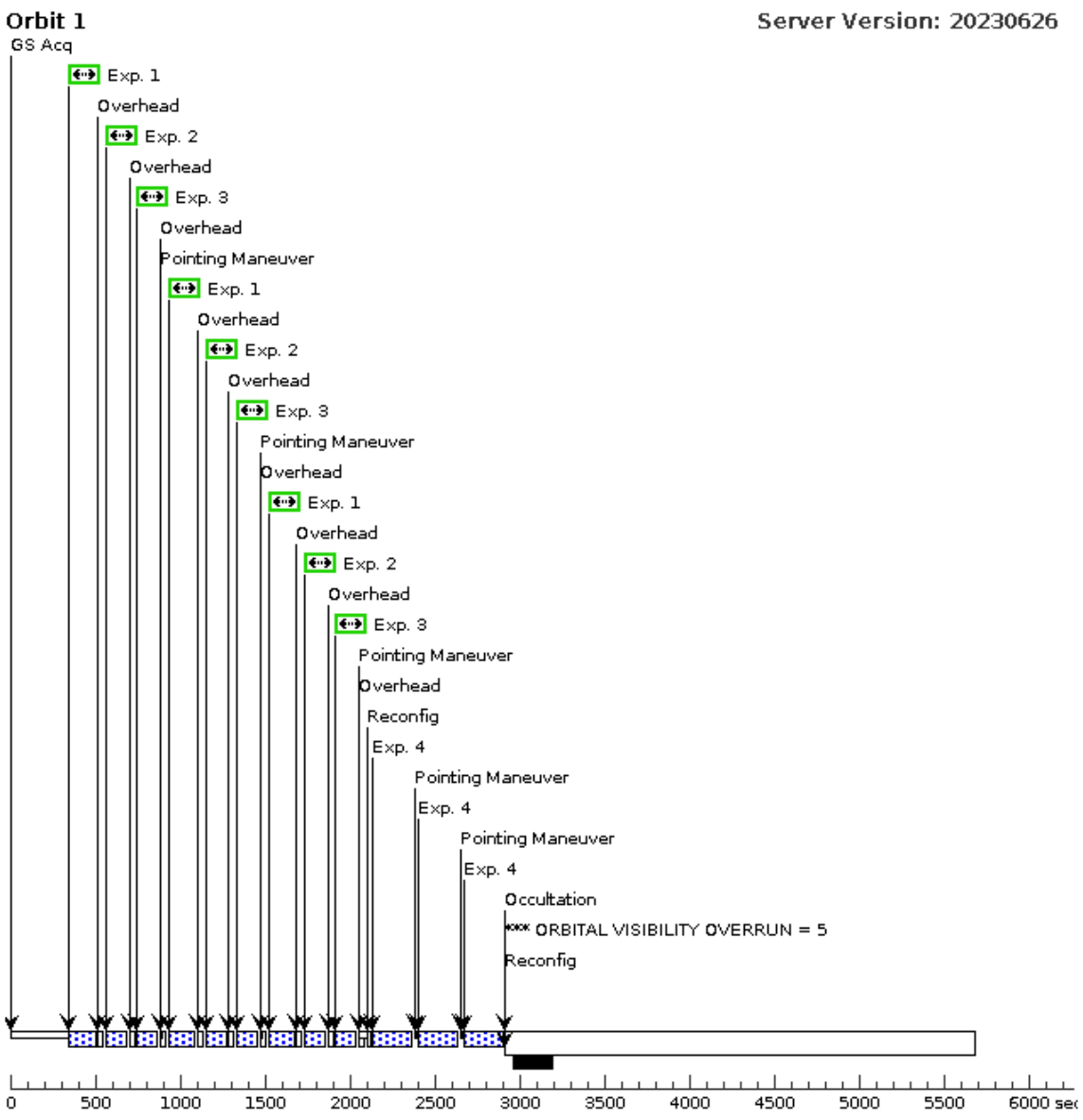
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SNZWICKY	RA: 17 35 44.3178 (263.9346575d) Dec: +04 49 56.90 (4.83247d) Equinox: J2000		V=20+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA TYPE IA]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F475W	(4) SNZWICKY	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=15		Pattern 7, Exps 1-3 in ZWICKY-1 (16) (7)	42 Secs (378 Secs) *[==>126.0 Secs (Pattern 1)]* *[==>126.0 Secs (Pattern 2)]* *[==>126.0 Secs (Pattern 3)]*	***[1]***
2	F625W	(4) SNZWICKY	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=15		Pattern 7, Exps 1-3 in ZWICKY-1 (16) (7)	13 Secs (291 Secs) *[==>97.0 Secs (Pattern 1)]* *[==>97.0 Secs (Pattern 2)]* *[==>97.0 Secs (Pattern 3)]*	***[1]***
3	F814W	(4) SNZWICKY	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	FLASH=15		Pattern 7, Exps 1-3 in ZWICKY-1 (16) (7)	20 Secs (312 Secs) *[==>104.0 Secs (Pattern 1)]* *[==>104.0 Secs (Pattern 2)]* *[==>104.0 Secs (Pattern 3)]*	***[1]***
4	F160W	(4) SNZWICKY	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG null,0	Pattern 4, Exps 4-4 in ZWICKY-1 (16) (4)	207.144286 Secs (621.433 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***

Orbit Structure



Proposal 16264 - ZWICKY-2 (17) - LensWatch: Time Delay Measurement of a Multiply-Imaged Supernova

Visit

Proposal 16264, ZWICKY-2 (17), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: SCHED 100%; SAME ORIENT AS 16; AFTER 16 BY 180 D TO 365 D; TOO RESPONSE TIME 7.0D

Diagnostics

(ZWICKY-2 (17)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(ZWICKY-2 (17)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(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		(4)
(7)	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		(1-3)

Fixed Targets

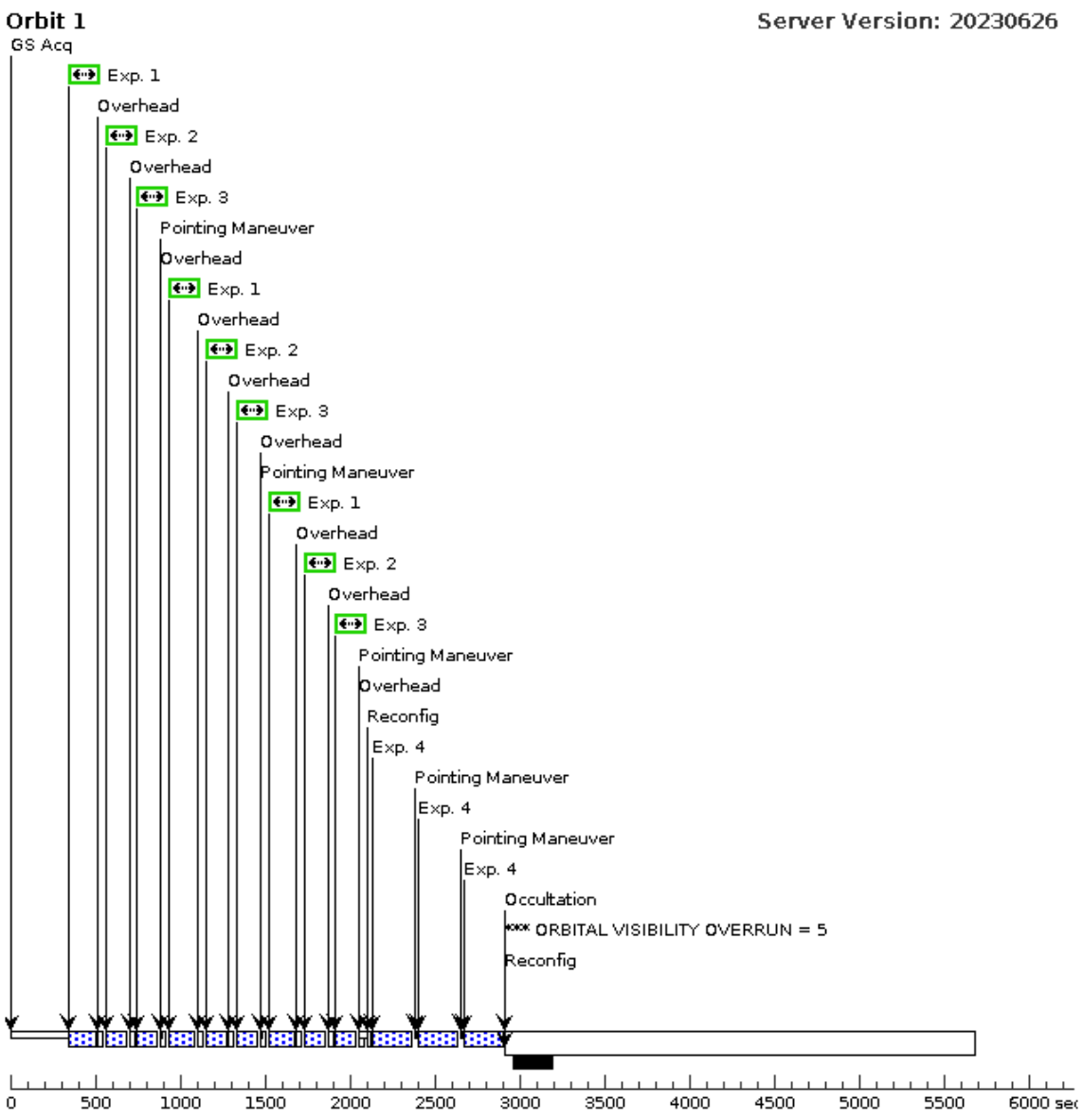
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SNZWICKY	RA: 17 35 44.3178 (263.9346575d) Dec: +04 49 56.90 (4.83247d) Equinox: J2000		V=20+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA TYPE IA]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F475W	(4) SNZWICKY	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=15		Pattern 7, Exps 1-3 in ZWICKY-2 (17) (7)	42 Secs (378 Secs) *[==>126.0 Secs (Pattern 1)]* *[==>126.0 Secs (Pattern 2)]* *[==>126.0 Secs (Pattern 3)]*	***[1]***
2	F625W	(4) SNZWICKY	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=15		Pattern 7, Exps 1-3 in ZWICKY-2 (17) (7)	13 Secs (291 Secs) *[==>97.0 Secs (Pattern 1)]* *[==>97.0 Secs (Pattern 2)]* *[==>97.0 Secs (Pattern 3)]*	***[1]***
3	F814W	(4) SNZWICKY	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	FLASH=15		Pattern 7, Exps 1-3 in ZWICKY-2 (17) (7)	20 Secs (312 Secs) *[==>104.0 Secs (Pattern 1)]* *[==>104.0 Secs (Pattern 2)]* *[==>104.0 Secs (Pattern 3)]*	***[1]***
4	F160W	(4) SNZWICKY	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG null,0	Pattern 4, Exps 4-4 in ZWICKY-2 (17) (4)	207.144286 Secs (621.433 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 16264, WFC3 F110W/F160W (18), failed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; AFTER 15 BY 10 D TO 14 D

Comments: 3 short WFC3-IR F110W and 3 short WFC3-IR F160W exposures of new source in MACS-J2129 field.

Diagnostics

(WFC3 F110W/F160W (18)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

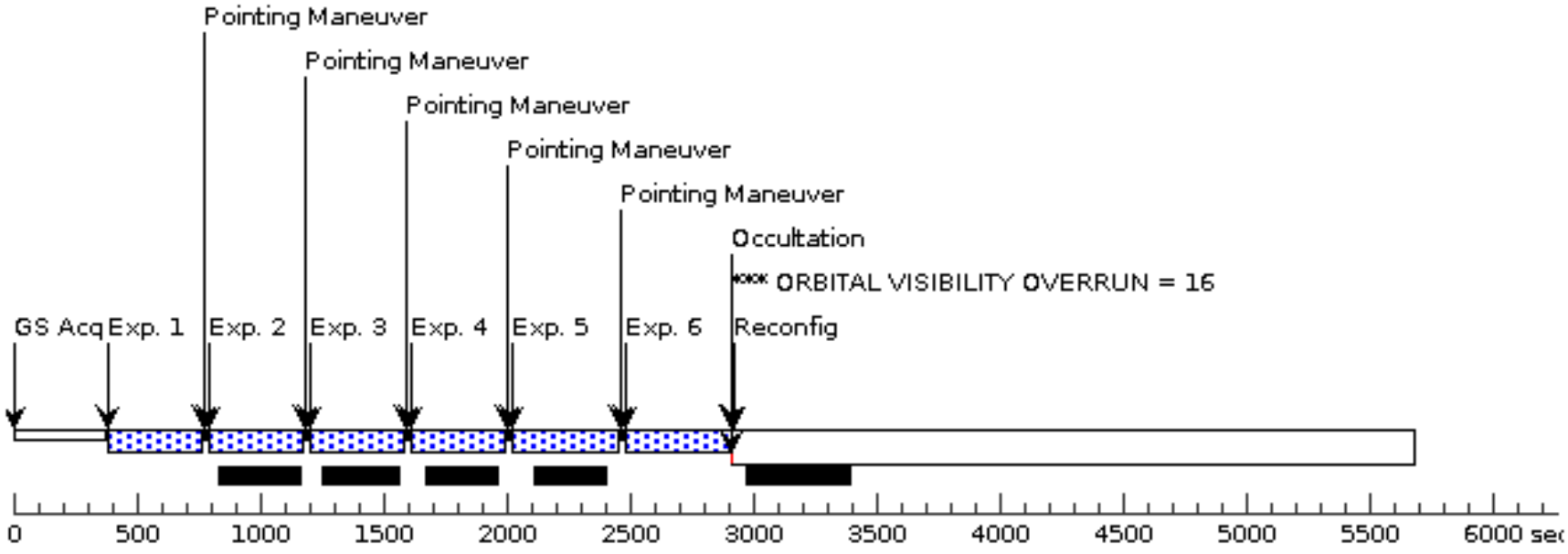
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	LENSED-SN-1	RA: 21 29 40.1969 (322.4174871d) Dec: +00 05 24.62 (.09017d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0,0	Sequence 1-6 Non-Int in WFC3 F110W/F160W (18)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
2	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG 0.451,0.403	Sequence 1-6 Non-Int in WFC3 F110W/F160W (18)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
3	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .474,.424	Sequence 1-6 Non-Int in WFC3 F110W/F160W (18)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
4	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP50	POS TARG .925,.827	Sequence 1-6 Non-Int in WFC3 F110W/F160W (18)	349.232932 Secs (349.233 Secs) *[==>]*	***[1]***
5	F110W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 1.376,1.230	Sequence 1-6 Non-Int in WFC3 F110W/F160W (18)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***
6	F160W	(3) LENSED-SN-1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=STEP50	POS TARG 0.902,0.806	Sequence 1-6 Non-Int in WFC3 F110W/F160W (18)	399.233383 Secs (399.233 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16264, Requiem2-E1 (31), completed Thu Jan 11 22:00:39 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; BETWEEN 12-DEC-2023:00:00:00 AND 20-DEC-2023:00:00:00

Comments: 3 filters, 4 point dither pattern. Pointing is off-center from the target in an attempt to catch guide stars, but if we could move it slightly more towards the center without issue that would be great.

Diagnostics

(Requiem2-E1 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E1 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E1 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E1 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E1 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E1 (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	REQUIEM2-TARGET	RA: 01 38 5.2520 (24.5218833d) Dec: -21 55 20.41 (-21.92234d) Equinox: J2000		V=25	Reference Frame: ICRS

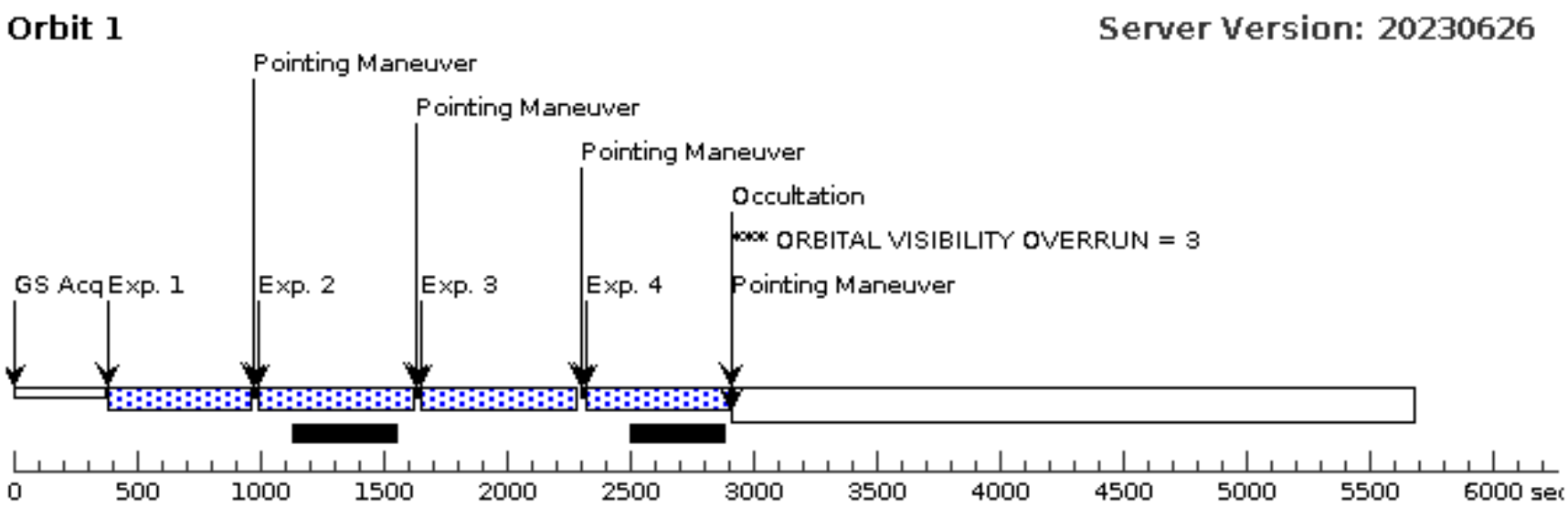
Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

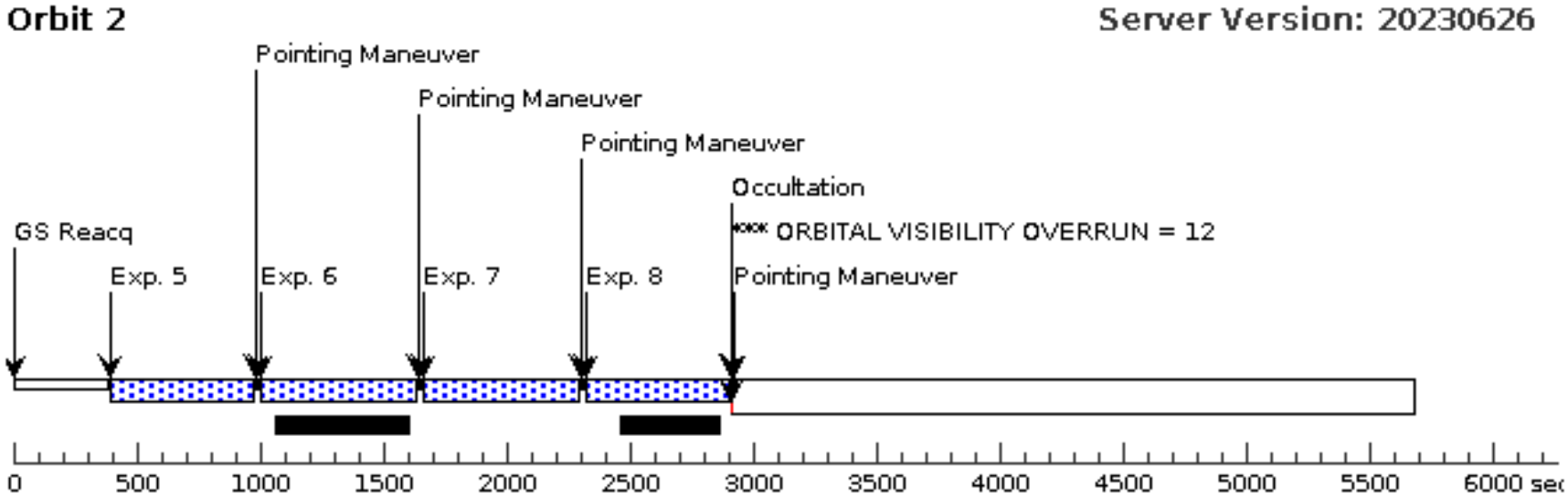
Exposures

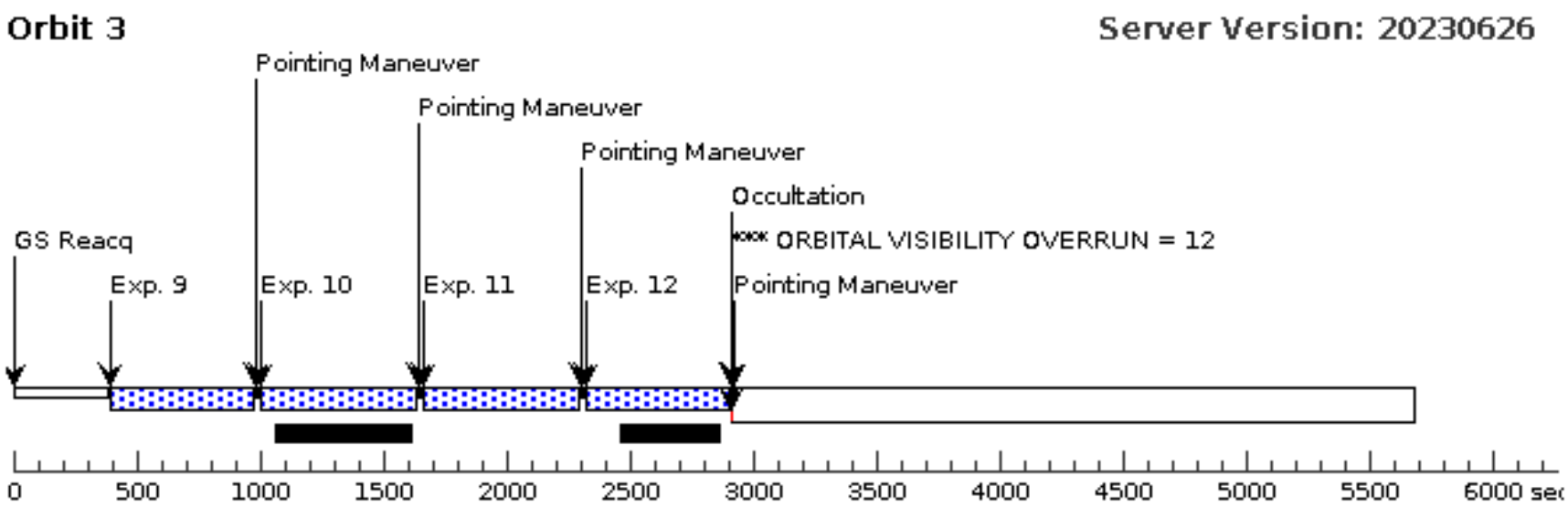
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(WFC3IR.im.1897379)	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 1-4 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[1]***
Comments: 4-point dither pattern, adjusting exposures to fill orbit.									
2		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 1-4 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[1]***
3		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 1-4 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[1]***
4		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 1-4 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[1]***
5	(WFC3IR.im.1897379)	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 5-8 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[2]***
Comments: 4-point dither pattern, adjusting exposures to fill orbit.									
6		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 5-8 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[2]***
7		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 5-8 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[2]***
8		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 5-8 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[2]***
9		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 9-12 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[3]***
10		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 9-12 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[3]***
11		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 9-12 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[3]***
12		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 9-12 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[3]***
13		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 13-16 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[4]***
14		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 13-16 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[4]***
15		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 13-16 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[4]***

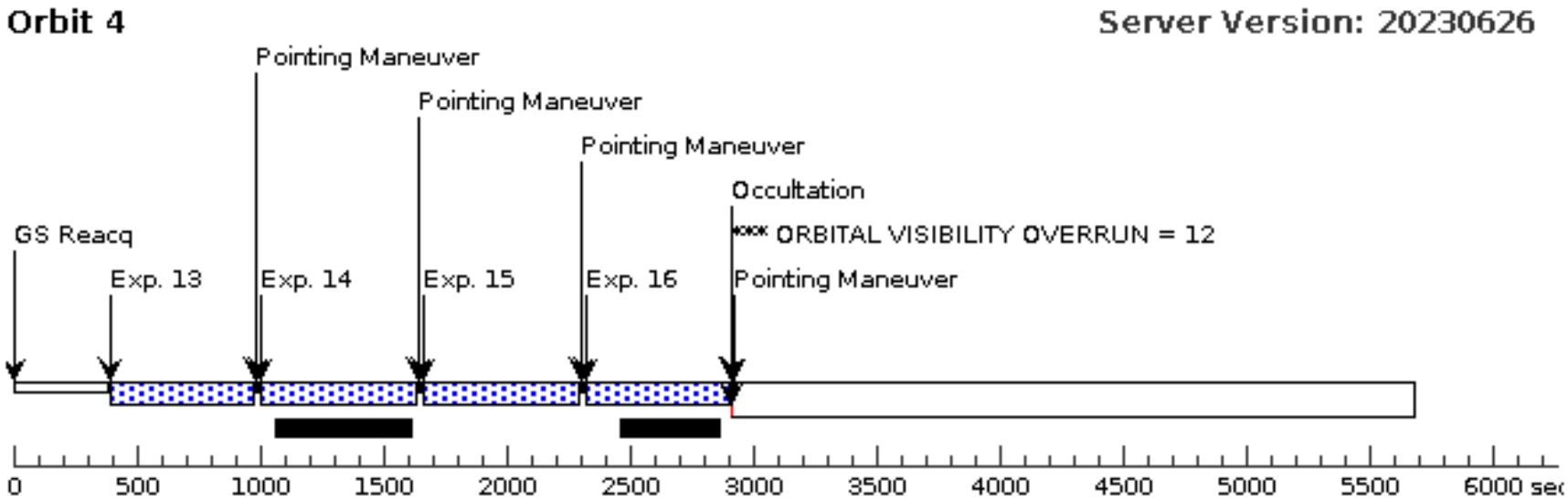
	16	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 13-16 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[4]***
	17	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 17-20 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[5]***
	18	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 17-20 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[5]***
	19	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 17-20 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[5]***
	20	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 17-20 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[5]***
	21	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 21-24 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[6]***
	22	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 21-24 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[6]***
	23	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 21-24 Non-Int in Requiem2-E1 (31)	599.231134 Secs (599.231 Secs) *[==>]*	***[6]***
	24	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 21-24 Non-Int in Requiem2-E1 (31)	552.937252 Secs (552.937 Secs) *[==>]*	***[6]***

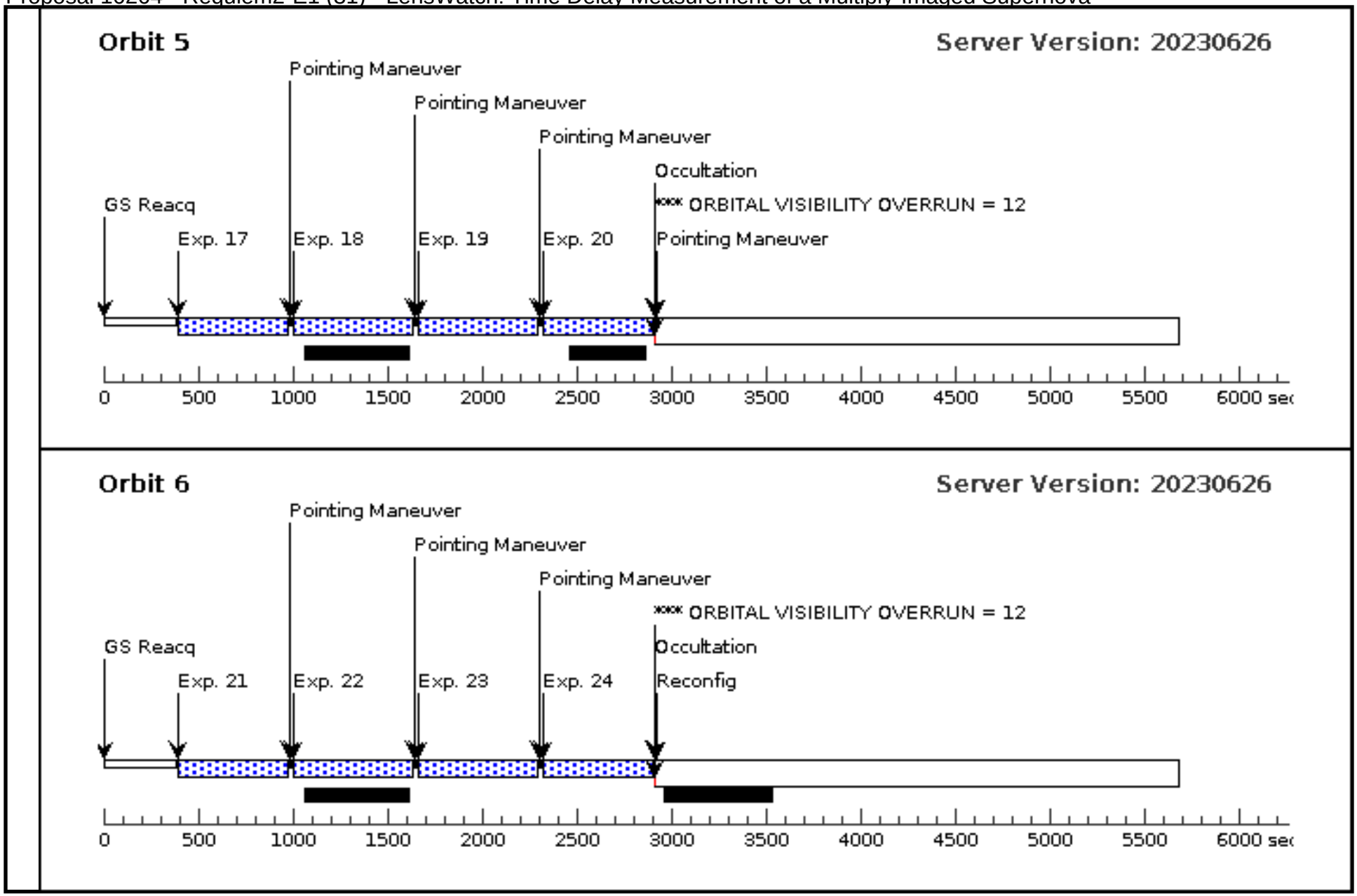
Orbit Structure






Orbit 3
Server Version: 20230626
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Occultation
GS Reacq
*** ORBITAL VISIBILITY OVERRUN = 12
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 4
Server Version: 20230626
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Occultation
GS Reacq
*** ORBITAL VISIBILITY OVERRUN = 12
Exp. 13
Exp. 14
Exp. 15
Exp. 16
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 5
Server Version: 20230626
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Occultation
*** ORBITAL VISIBILITY OVERRUN = 12
GS Reacq
Exp. 17
Exp. 18
Exp. 19
Exp. 20
Pointing Maneuver
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 6
Server Version: 20230626
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
*** ORBITAL VISIBILITY OVERRUN = 12
Occultation
GS Reacq
Exp. 21
Exp. 22
Exp. 23
Exp. 24
Reconfig
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16264, Requiem2-E2 (32), pi Thu Jan 11 22:00:40 GMT 2024

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; BETWEEN 26-DEC-2023:00:00:00 AND 01-MAR-2024:00:00:00

Comments: 3 filters, 4 point dither pattern. Pointing is off-center from the target in an attempt to catch guide stars, but if we could move it slightly more towards the center without issue that would be great.

Diagnostics

(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(Requiem2-E2 (32)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	REQUIEM2-TARGET	RA: 01 38 5.2520 (24.5218833d) Dec: -21 55 20.41 (-21.92234d) Equinox: J2000		V=25	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(WFC3IR.im.1897379)	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 1-4 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[1]***
Comments: 4-point dither pattern, adjusting exposures to fill orbit.									
2		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 1-4 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[1]***
3		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 1-4 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[1]***
4		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 1-4 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[1]***
5	(WFC3IR.im.1897379)	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 5-8 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[2]***
Comments: 4-point dither pattern, adjusting exposures to fill orbit.									
6		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 5-8 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[2]***
7		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 5-8 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[2]***
8		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 5-8 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[2]***
9		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 9-12 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[3]***
10		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 9-12 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[3]***
11		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 9-12 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[3]***
12		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 9-12 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[3]***
13		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 13-16 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[4]***
14		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 13-16 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[4]***
15		(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 13-16 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[4]***

	16	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 13-16 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[4]***
	17	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 17-20 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[5]***
	18	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 17-20 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[5]***
	19	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 17-20 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[5]***
	20	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 17-20 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[5]***
	21	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 21-24 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[6]***
	22	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 21-24 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[6]***
	23	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 21-24 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[6]***
	24	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 21-24 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[6]***
	25	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 25-28 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[7]***
	26	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 25-28 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[7]***
	27	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 25-28 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[7]***
	28	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 25-28 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[7]***
	29	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG 0,0	Sequence 29-32 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[8]***
	30	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .542,.182	Sequence 29-32 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[8]***
	31	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=10; SAMP-SEQ=STEP200	POS TARG .339,.485	Sequence 29-32 Non-Int in Requiem2-E2 (32)	599.231134 Secs (599.231 Secs) *[==>]*	***[8]***

	32	(9) REQUIEM2-TARGET	WFC3/IR, MULTIACCUM, IR	F105W	NSAMP=12; SAMP-SEQ=SPARS50	POS TARG -.203,.303	Sequence 29-32 Non-Int in Requiem2-E2 (32)	552.937252 Secs (552.937 Secs) *[==>]*	***[8]***

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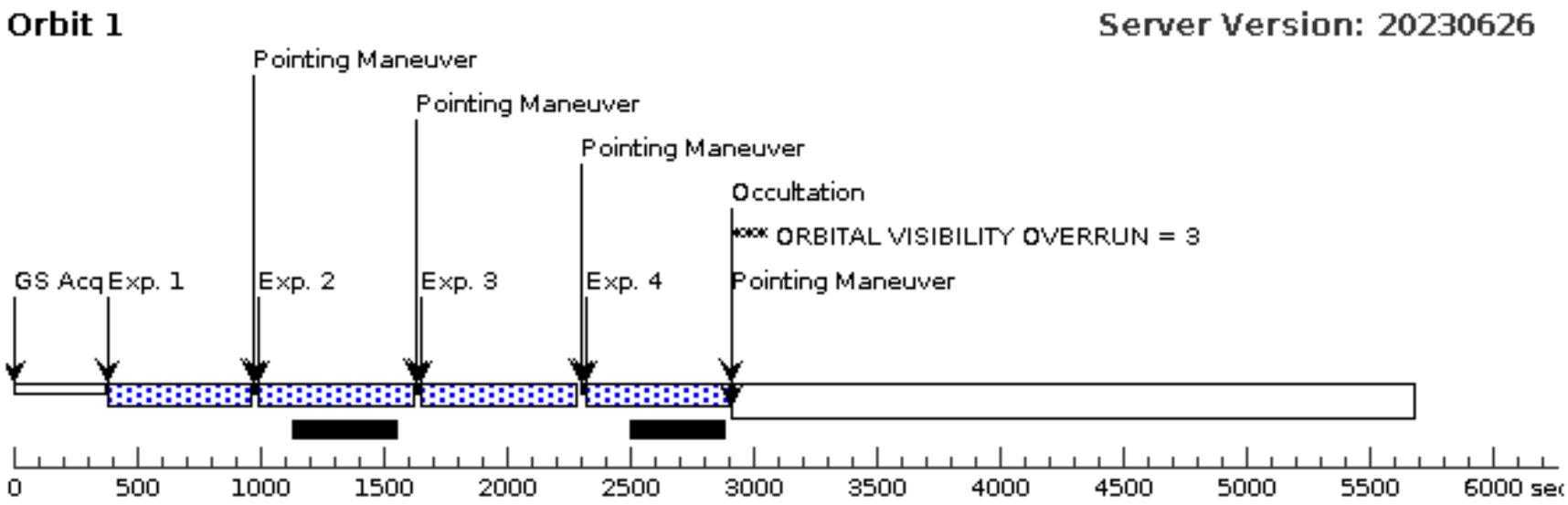

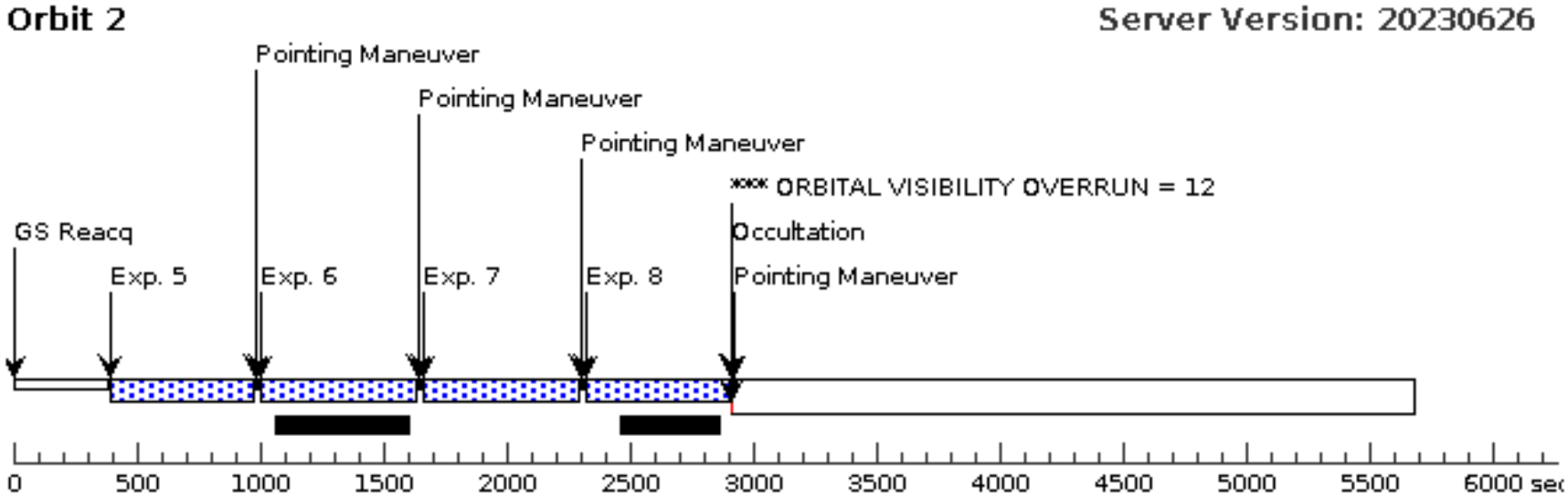

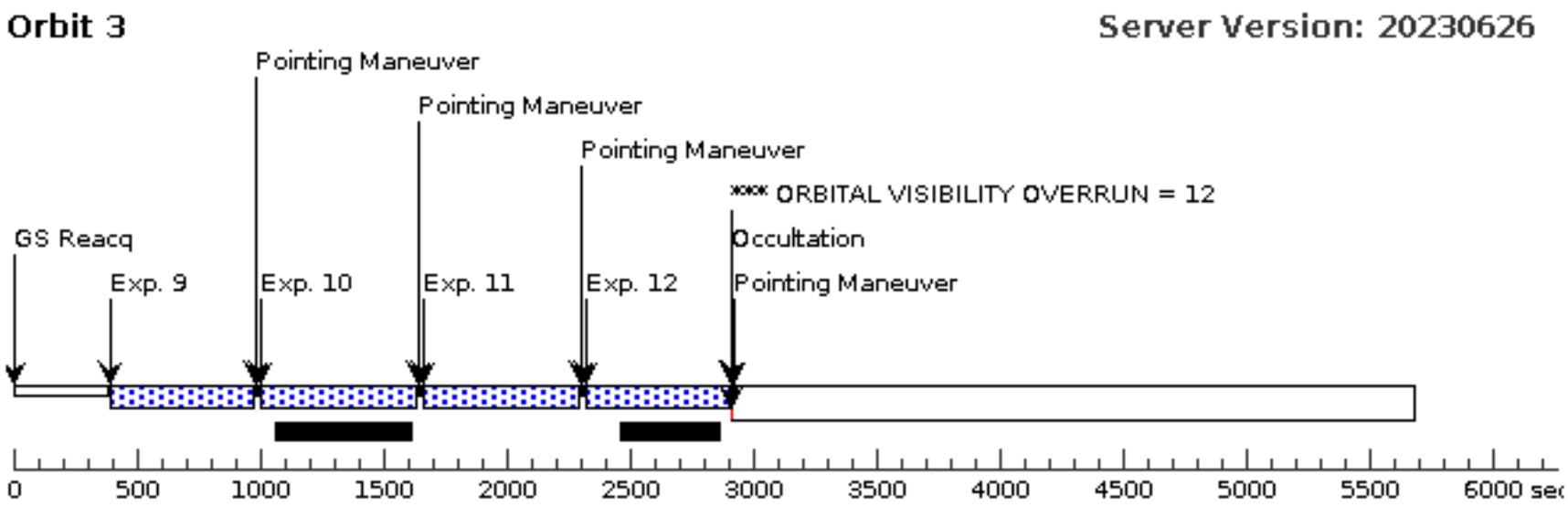
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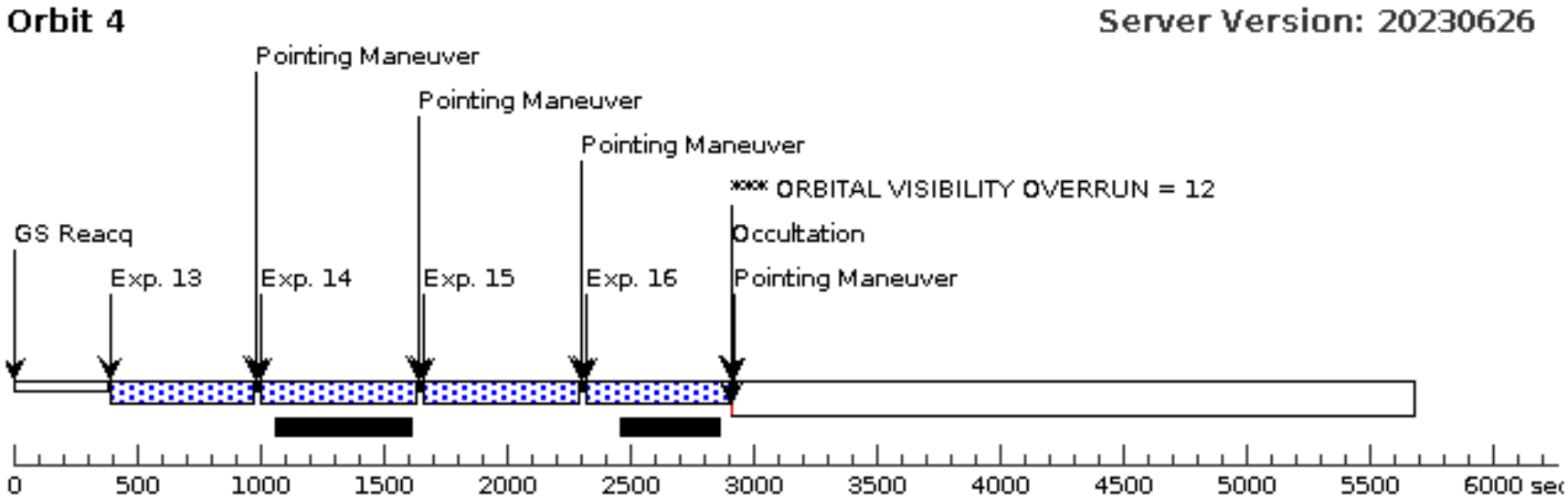
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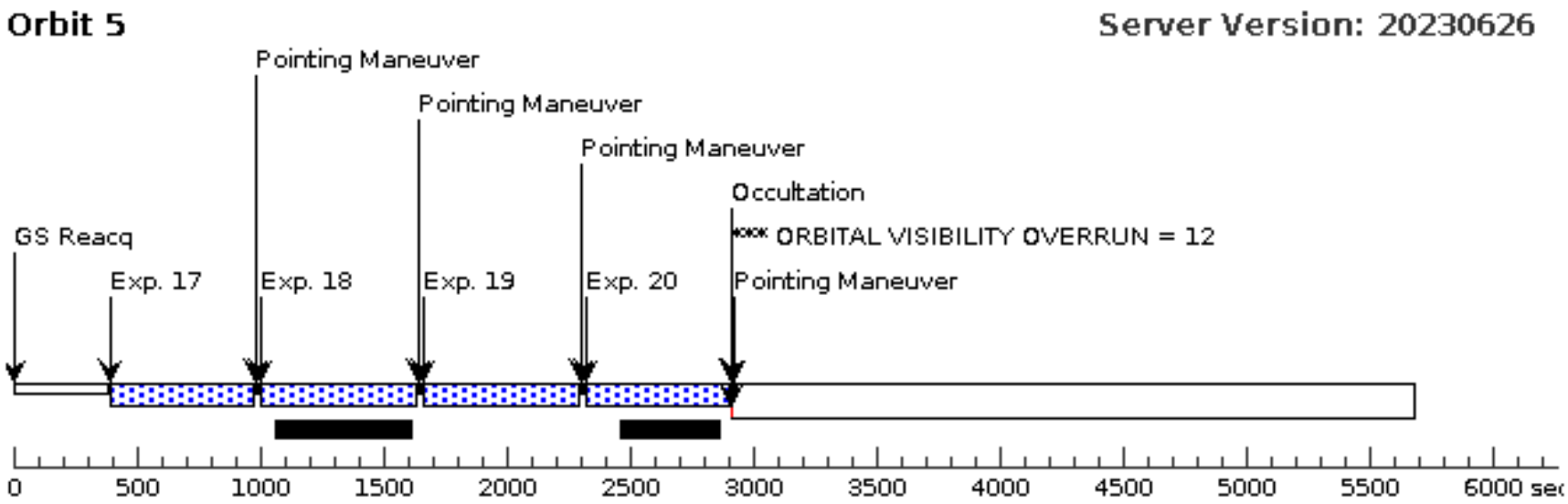
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Occultation
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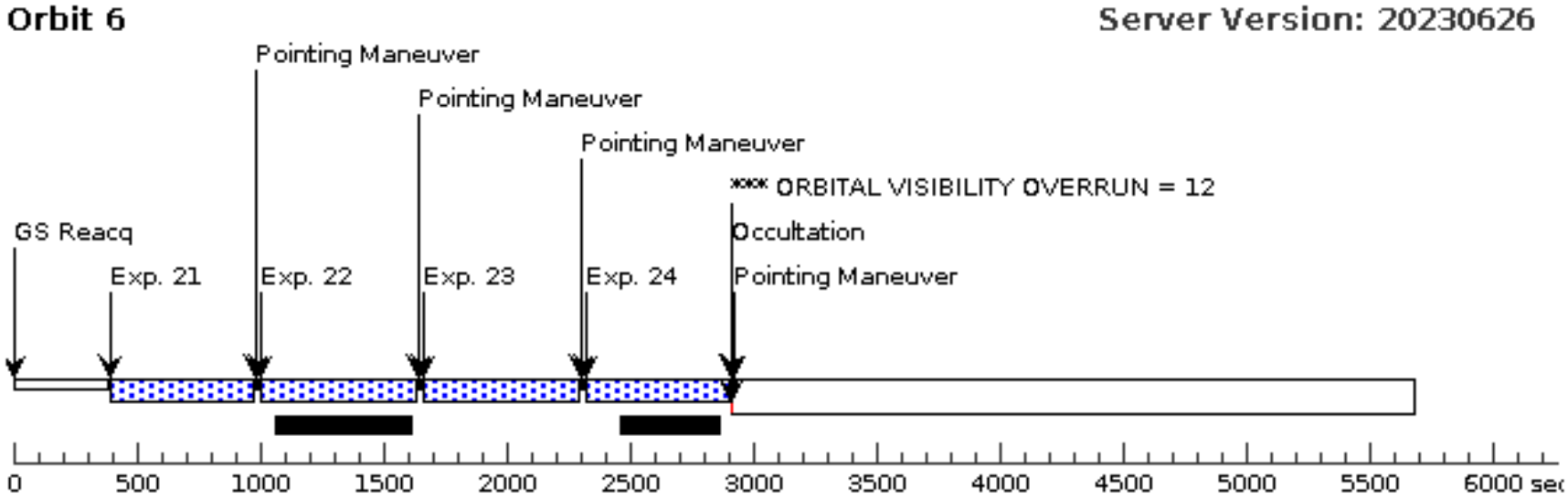
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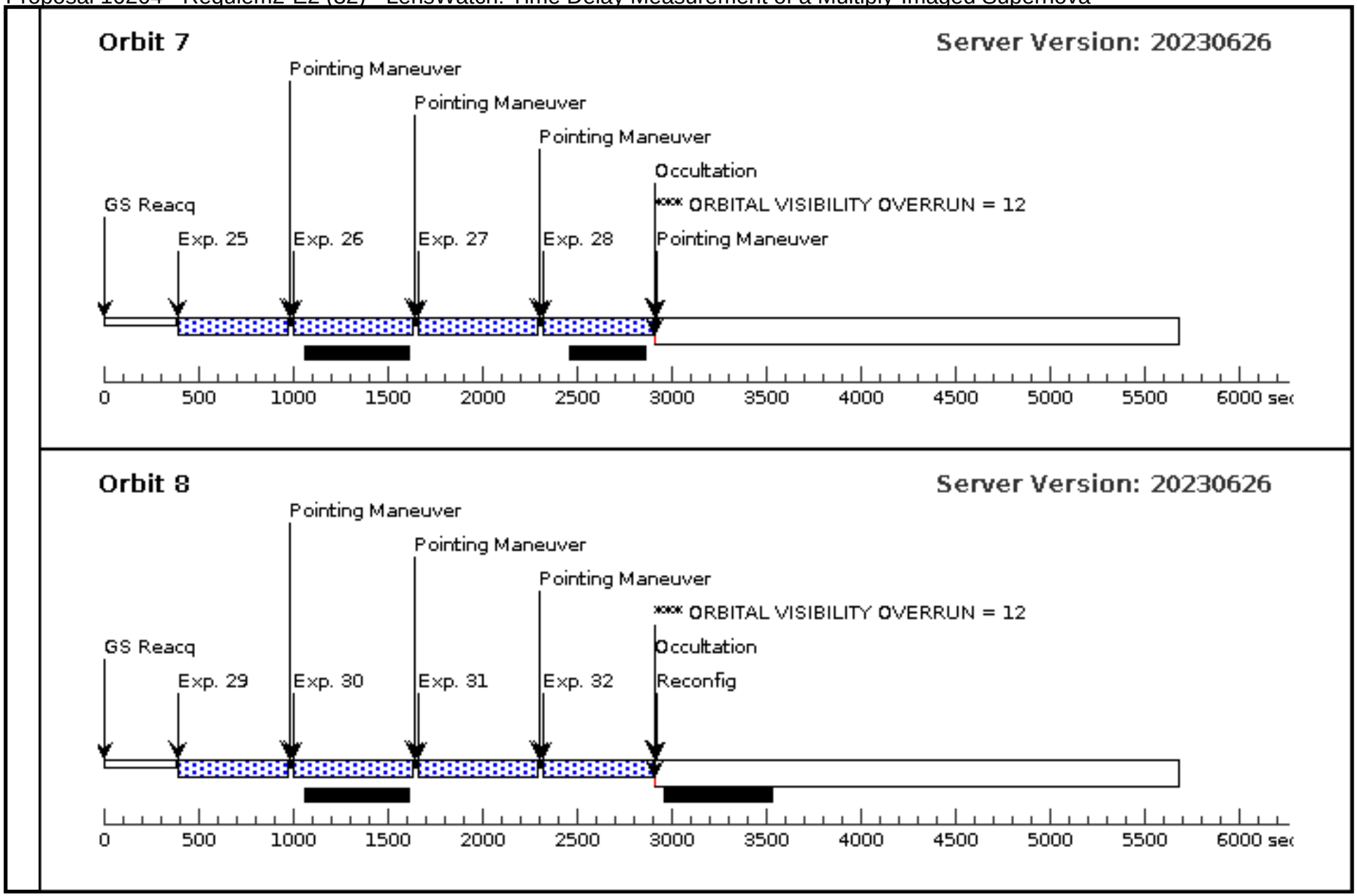
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Exp. 28
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