



## 16497 - The Near-Infrared Plateau of Type Ia Supernovae

Cycle: 28, Proposal Category: GO

(Availability Mode: SUPPORTED)

### INVESTIGATORS

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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) SN2020EES	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:35.0	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>
02	(1) SN2020EES	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:36.0	yes
03	(2) SN2020UXZ	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:37.0	yes
04	(2) SN2020UXZ	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:39.0	yes
05	(3) SN2020UDY	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:39.0	yes
06	(3) SN2020UDY	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:40.0	yes
07	(4) SN2020KYG	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:41.0	yes
08	(4) SN2020KYG	WFC3/IR WFC3/UVIS	1	06-Aug-2021 14:00:42.0	yes

8 Total Orbits Used

## **ABSTRACT**

We ask for 8 WFC3 orbits to observe four Type Ia supernovae (SNe Ia) when they are ~230-430 days past maximum light. At these phases, normal SNe Ia have been shown to undergo a plateau phase in the near-infrared (NIR) while continuing to decline in the optical. Our sample consists of two normal SNe Ia and two peculiar SNe Iax. With two visits per SN during this phase range, we will use observations in F125W (J), F160W (H), F336W (U), and F350LP (optical) to: (1) confirm the J-band plateau for normal SNe Ia; (2) test whether the plateau is caused by scattering of photons from the UV/optical to the NIR; (3) test whether SNe Iax also exhibit a NIR plateau; and (4) detect the surviving white dwarf progenitors of SNe Iax. At late times, observations drive theory, and ours will help shed light on the progenitor and explosion physics of both normal SNe Ia and their peculiar Iax cousins.

## **OBSERVING DESCRIPTION**

## Proposal 16497 (STScI Edit Number: 2, Created: Friday, August 6, 2021 at 1:00:42 PM Eastern Standard Time) - Overview

We will use WFC3 to observe four Type Ia supernovae with two visits to each supernova. Every visit will be composed of a single orbit. SNe 2020hvf and 2020uxz are brighter than 2020udy and 2020kyg. The brighter supernovae will be observed with four filters: WFC3/UVIS F350LP and F336W and WFC3/IR F125W and F160W. For the fainter supernovae, we will drop the F336W filter. The IR observations use a 3pt dither. In orbits that include both F336W and F350LP, we will use a 2pt dither (to limit overheads). In orbits where we only use F350LP, we will use a 3pt dither instead. Each visit has been given a time window of ~11 days to increase the scheduleability of the observations. The same is true for the total exposure time per orbit.; for two of our targets (2020uxz and 2020udy), we do not make full use of the orbits in order to maximize their scheduleability.

The observations from the first visit to each supernova will be reduced and analyzed immediately in order to try and localize the supernova and measure its brightness in all filters. This will inform any potential changes to the filter loadout and exposure times for the second visit (e.g., if the supernova does not appear in a certain filter or is expected to drop out in that filter, we may choose to shift the exposure time into another filter in which the supernova will definitely be visible).

We chose WFC3 UVIS1-2k2k subrasters for the FOV, but only because the UVIS1 full FOV (which we usually use) seemed to cost too much in overhead. For each target, the specific subraster (e.g., 2k2a or 2k2d) was chosen to capture as much of the host galaxy as possible in the FOV, while still including the target itself.

Proposal 16497 - SN 2020ees - Visit 1 (01) - The Near-Infrared Plateau of Type Ia Supernovae

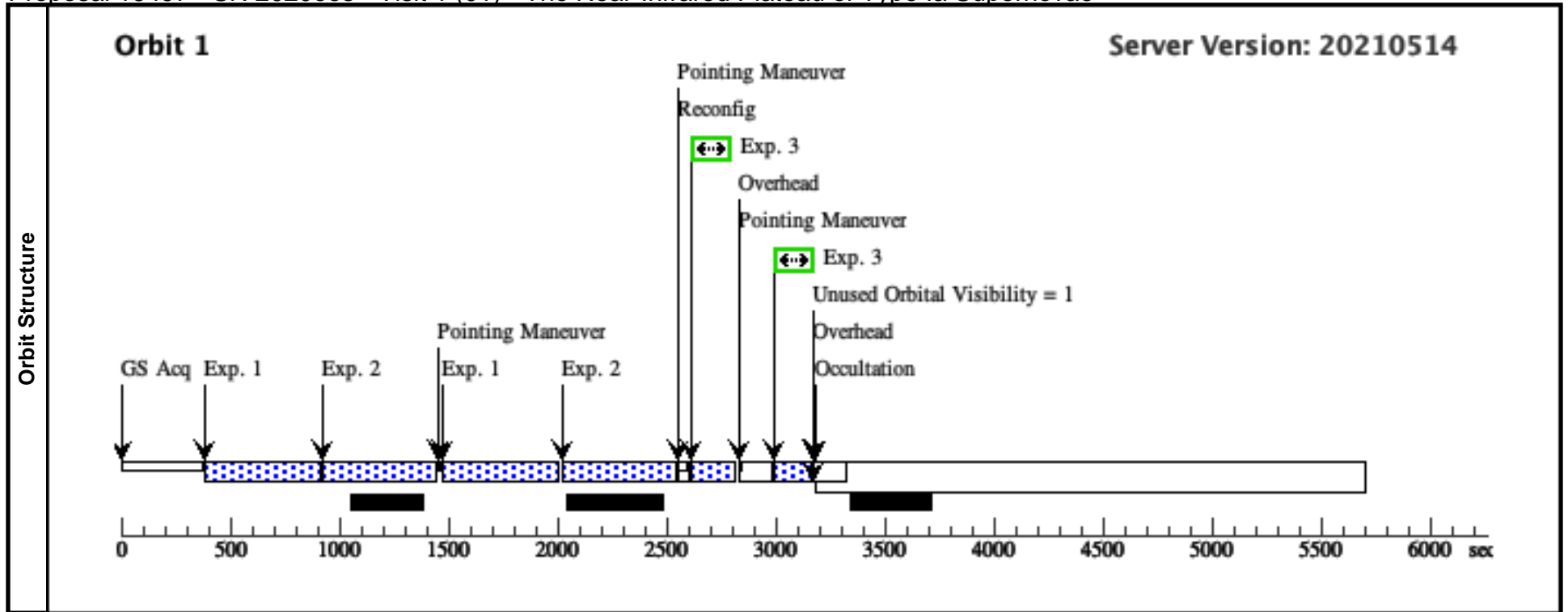
Fri Aug 06 18:00:42 GMT 2021

<b>Visit</b>	<b>Proposal 16497, SN 2020ees - Visit 1 (01), completed</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: WFC3/IR, WFC3/UVIS		
	Special Requirements: BETWEEN 23-APR-2021:00:00:00 AND 03-MAY-2021:00:00:00		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1-2)
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(3)

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	SN2020EES	RA: 13 27 15.1800 (201.8132500d) Dec: +32 02 0.70 (32.03353d) Equinox: J2000		V=25.7+/-0.5	Reference Frame: ICRS
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]						

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) SN2020EES		WFC3/IR, MULTIACCUM, IR-UVIS	F160W	NSAMP=11; SAMP-SEQ=SPAR S50	GS ACQ SCENARI O BASE1B3	Pattern 2, Exps 1-2 in SN 2020ees - Visit 1 (01) (2)	502.936801 Secs (1005.874 Secs)	
									[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	(1) SN2020EES		WFC3/IR, MULTIACCUM, IR-UVIS	F125W	NSAMP=11; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 in SN 2020ees - Visit 1 (01) (2)	502.936801 Secs (1005.874 Secs)	
								[==>(Pattern 1)] [==>(Pattern 2)]	[1]	
3	(1) SN2020EES		WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F350LP			Pattern 3, Exps 3-3 in SN 2020ees - Visit 1 (01) (3)	167 Secs (334 Secs)		
								[==>(Pattern 1)] [==>(Pattern 2)]	[1]	



Proposal 16497 - SN 2020ees - Visit 2 (02) - The Near-Infrared Plateau of Type Ia Supernovae

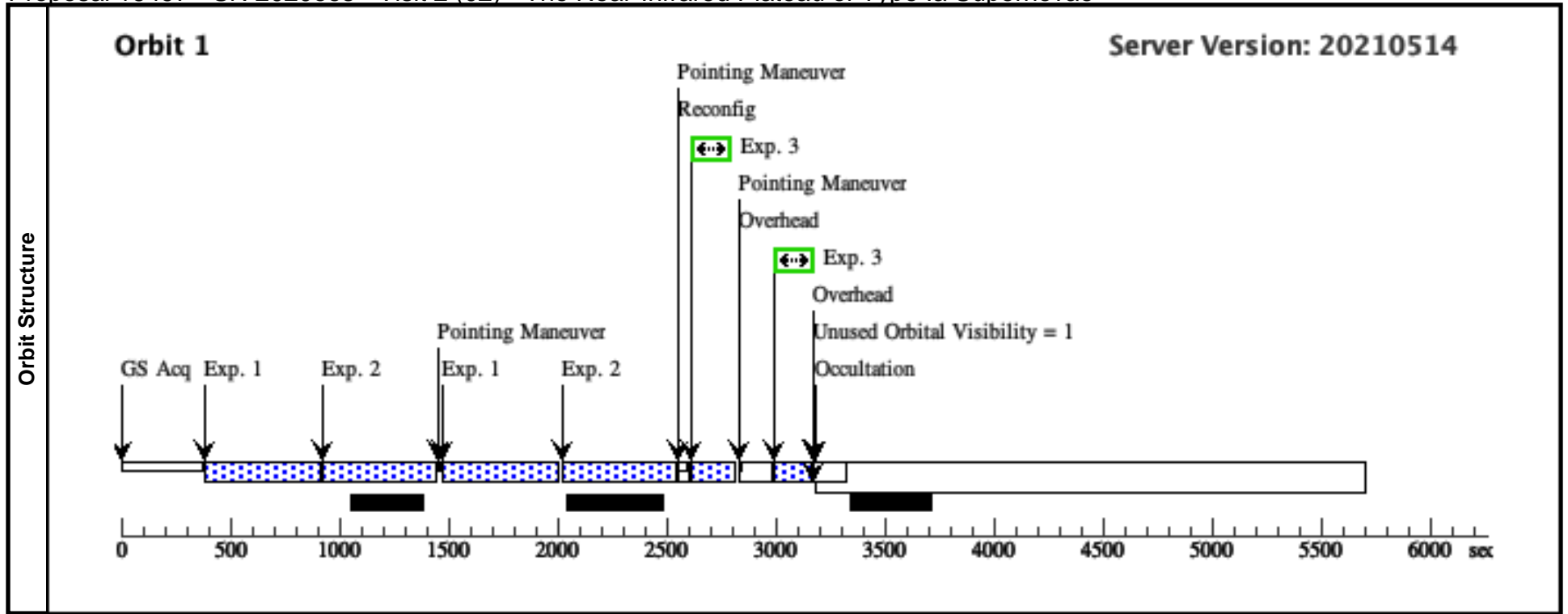
Fri Aug 06 18:00:42 GMT 2021

<b>Visit</b>	<b>Proposal 16497, SN 2020ees - Visit 2 (02), scheduled</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: WFC3/IR, WFC3/UVIS		
	Special Requirements: BEFORE 20-AUG-2021:00:00:00		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures	
	(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1-2)
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(3)

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	SN2020EES	RA: 13 27 15.1800 (201.8132500d) Dec: +32 02 0.70 (32.03353d) Equinox: J2000		V=25.7+/-0.5	Reference Frame: ICRS
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]						

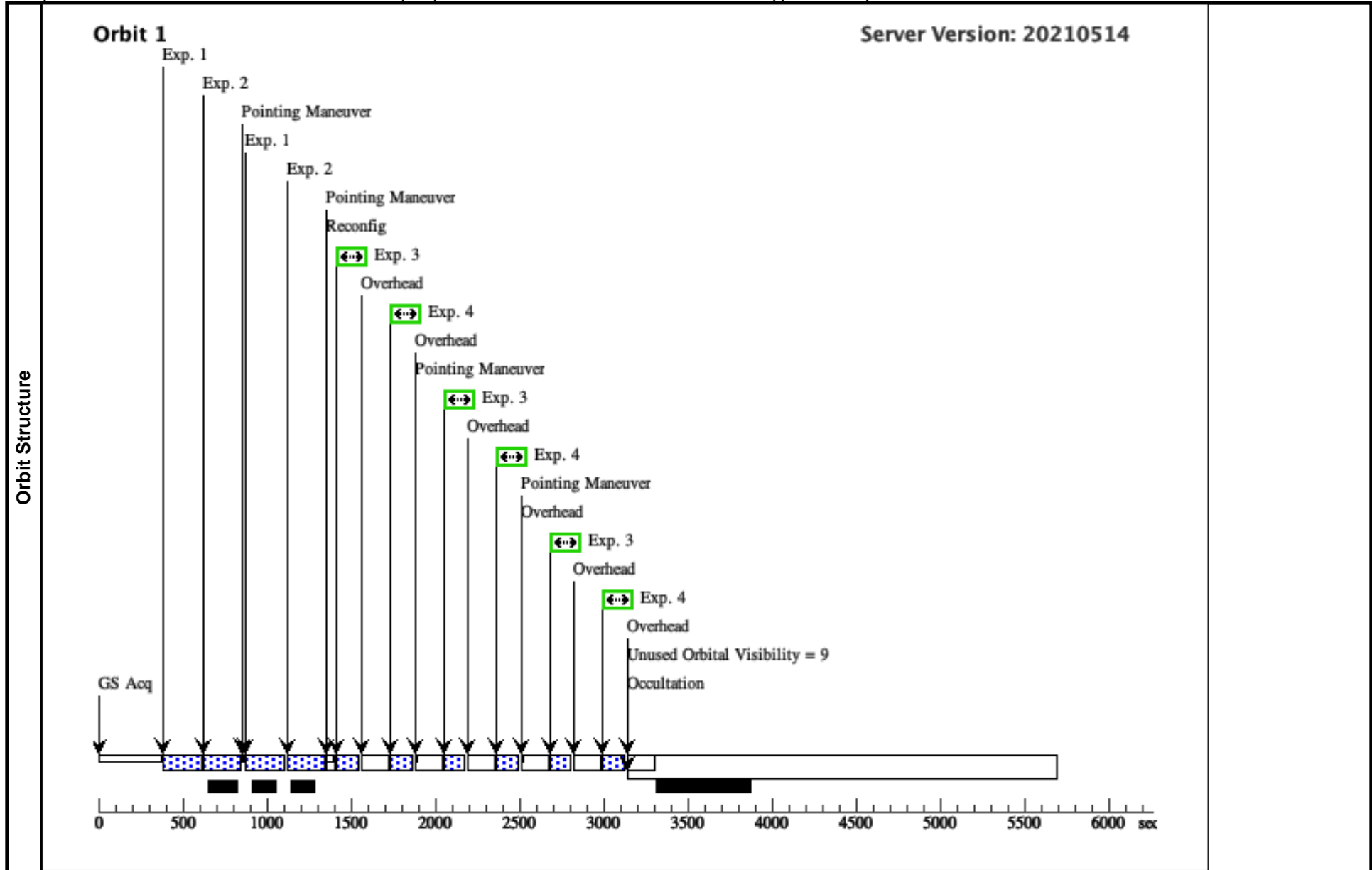
<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) SN2020EES	(1) SN2020EES	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	NSAMP=11; SAMP-SEQ=SPAR S50	GS ACQ SCENARI O BASE1B3	Pattern 2, Exps 1-2 i n SN 2020ees - Visit 2 (02) (2)	502.936801 Secs (1005.874 Secs)	
									[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	(1) SN2020EES	(1) SN2020EES	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	NSAMP=11; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 i n SN 2020ees - Visit 2 (02) (2)	502.936801 Secs (1005.874 Secs)	
								[==>(Pattern 1)] [==>(Pattern 2)]	[1]	
3	(1) SN2020EES	(1) SN2020EES	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F350LP			Pattern 3, Exps 3-3 i n SN 2020ees - Visit 2 (02) (3)	167 Secs (334 Secs)		
								[==>(Pattern 1)] [==>(Pattern 2)]	[1]	



Proposal 16497 - SN 2020uxz - Visit 1 (03) - The Near-Infrared Plateau of Type Ia Supernovae

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Visit	<b>Proposal 16497, SN 2020uxz - Visit 1 (03), completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BETWEEN 09-JUN-2021:00:00:00 AND 19-JUN-2021:00:00:00									
	#	Primary Pattern	Secondary Pattern	Exposures						
Patterns	(1)	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		(3-4)						
	(2)	Pattern Type=WFC3-IR-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1-2)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	SN2020UXZ	RA: 01 24 6.8700 (21.0286250d) Dec: +12 55 17.30 (12.92147d) Equinox: J2000		V=21.1+/-0.3	Reference Frame: ICRS				
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) SN2020UXZ	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	NSAMP=5; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 i n SN 2020uxz - Visit 1 (03) (2)	202.934095 Secs (405.868 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2		(2) SN2020UXZ	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	NSAMP=5; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 i n SN 2020uxz - Visit 1 (03) (2)	202.934095 Secs (405.868 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3		(2) SN2020UXZ	WFC3/UVIS, ACCUM, UVIS2-2K2D-SUB	F350LP	FLASH=7		Pattern 1, Exps 3-4 i n SN 2020uxz - Visit 1 (03) (1)	100 Secs (300 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	4		(2) SN2020UXZ	WFC3/UVIS, ACCUM, UVIS2-2K2D-SUB	F336W	FLASH=11		Pattern 1, Exps 3-4 i n SN 2020uxz - Visit 1 (03) (1)	108 Secs (324 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]



Proposal 16497 - SN 2020uxz - Visit 2 (04) - The Near-Infrared Plateau of Type Ia Supernovae

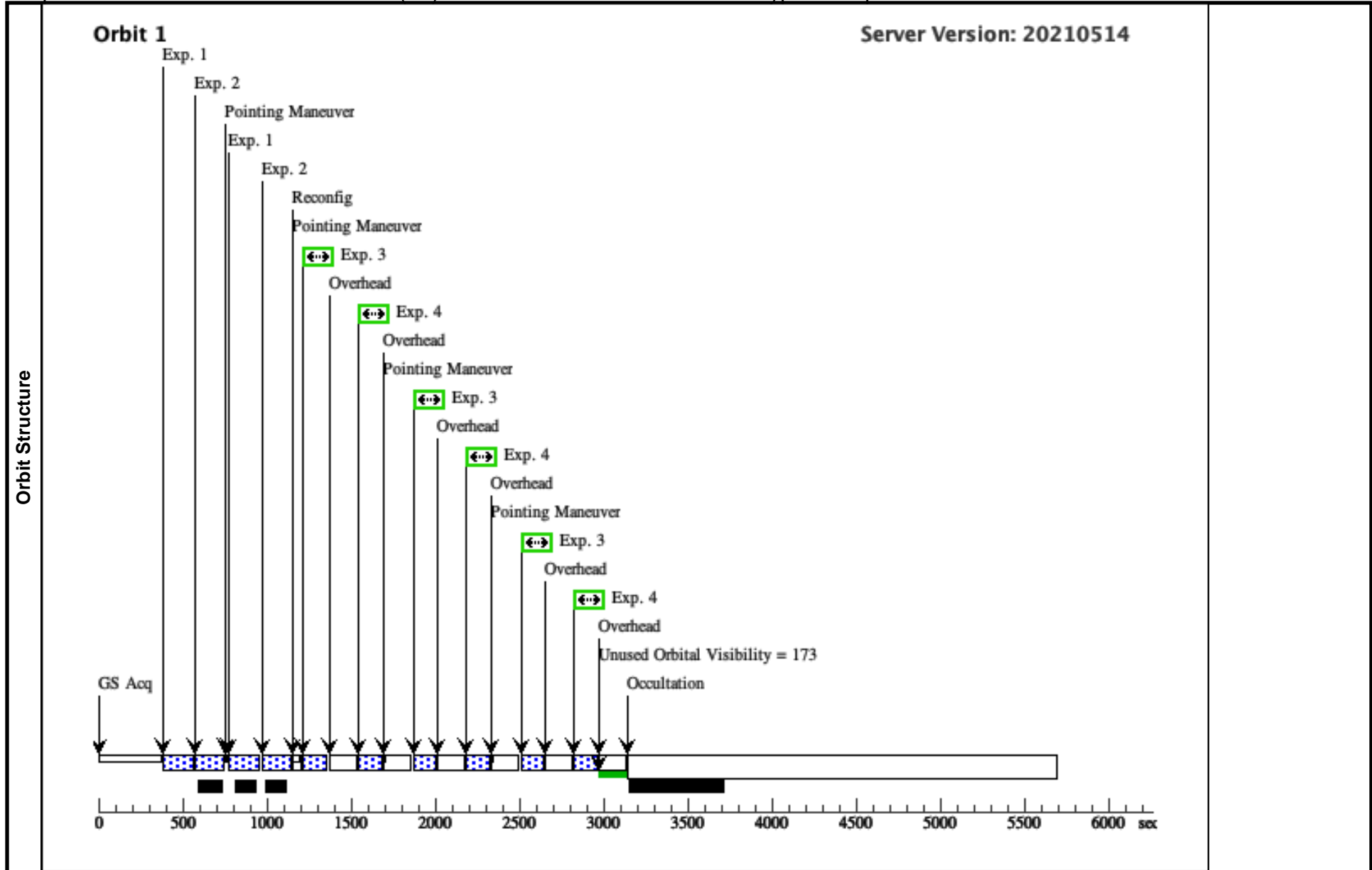
Fri Aug 06 18:00:43 GMT 2021

<b>Visit</b>	<b>Proposal 16497, SN 2020uxz - Visit 2 (04), scheduling</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: WFC3/IR, WFC3/UVIS		
	Special Requirements: BETWEEN 26-SEP-2021:00:00:00 AND 06-OCT-2021:00:00:00		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures	
	(1)	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		(3-4)
	(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(1-2)

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	SN2020UXZ	RA: 01 24 6.8700 (21.0286250d) Dec: +12 55 17.30 (12.92147d) Equinox: J2000		V=21.1+/-0.3	Reference Frame: ICRS
	<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]					

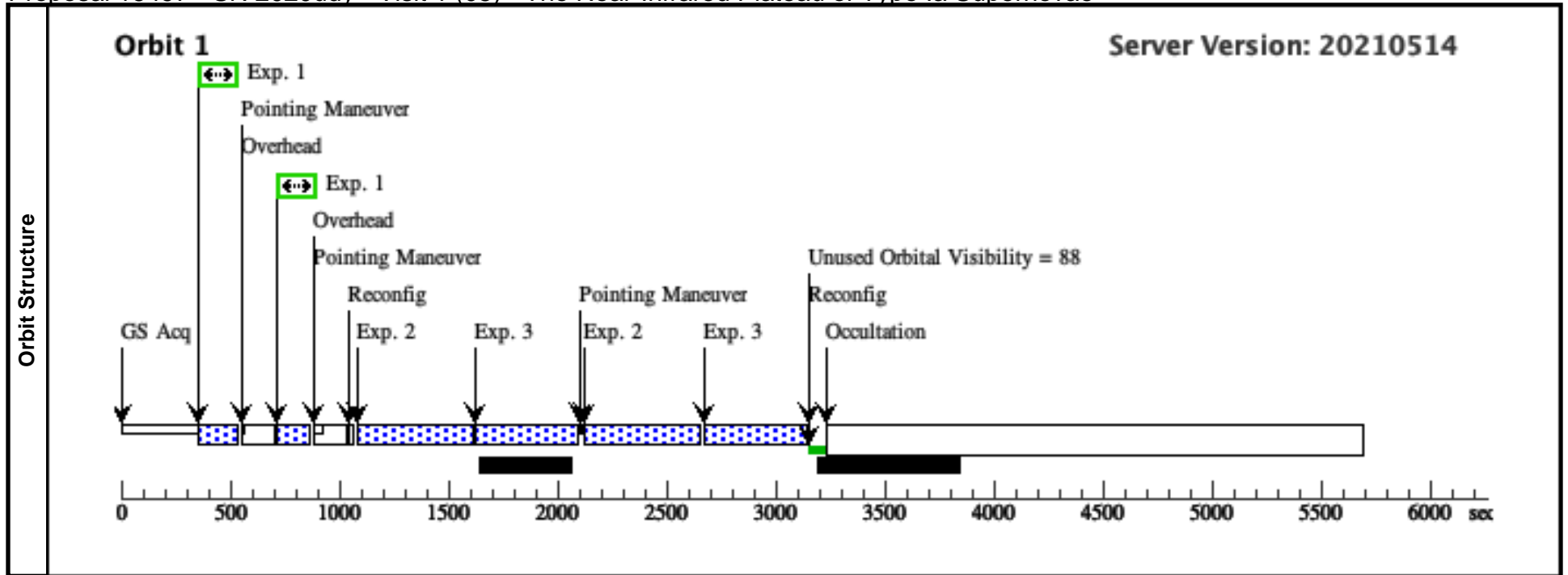
<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) SN2020UXZ	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	NSAMP=4; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 in SN 2020uxz - Visit 2 (04) (2)	152.933644 Secs (305.867 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	2		(2) SN2020UXZ	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	NSAMP=4; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 in SN 2020uxz - Visit 2 (04) (2)	152.933644 Secs (305.867 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	3		(2) SN2020UXZ	WFC3/UVIS, ACCUM, UVIS2-2K2D-SUB	F350LP	FLASH=6		Pattern 1, Exps 3-4 in SN 2020uxz - Visit 2 (04) (1)	110 Secs (330 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	4		(2) SN2020UXZ	WFC3/UVIS, ACCUM, UVIS2-2K2D-SUB	F336W	FLASH=11		Pattern 1, Exps 3-4 in SN 2020uxz - Visit 2 (04) (1)	110 Secs (330 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 16497 - SN 2020udy - Visit 1 (05) - The Near-Infrared Plateau of Type Ia Supernovae

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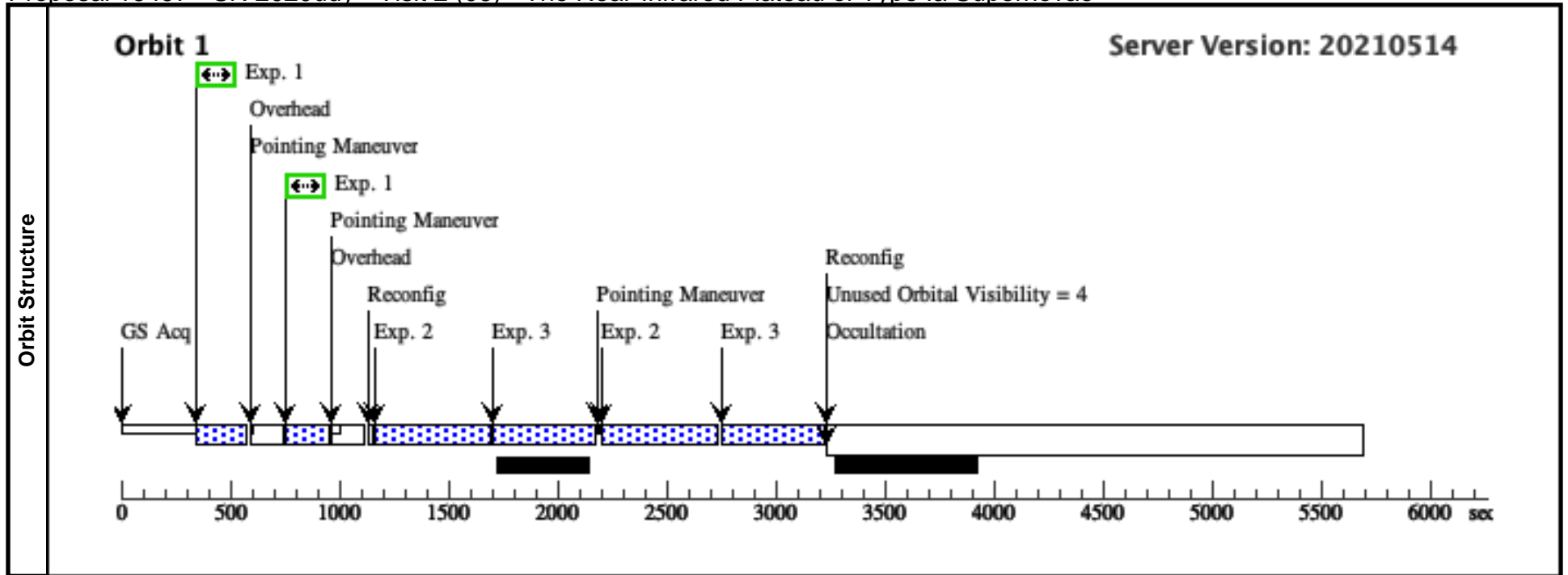
Visit	<b>Proposal 16497, SN 2020udy - Visit 1 (05), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BEFORE 10-SEP-2021:00:00:00									
	#	Primary Pattern	Secondary Pattern	Exposures						
Patterns	(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)						
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	SN2020UDY	RA: 02 06 49.3400 (31.7055833d) Dec: +44 35 15.30 (44.58758d) Equinox: J2000		V=24.0+/-0.3	Reference Frame: ICRS				
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) SN2020UDY	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP		GS ACQ SCENARIO BASE1BE	Pattern 3, Exps 1-1 in SN 2020udy - Visit 1 (05) (3)	150 Secs (300 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	2		(3) SN2020UDY	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	SAMP-SEQ=SPARS 50; NSAMP=11		Pattern 2, Exps 2-3 in SN 2020udy - Visit 1 (05) (2)	502.936801 Secs (1005.874 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	3		(3) SN2020UDY	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	SAMP-SEQ=SPARS 50; NSAMP=10		Pattern 2, Exps 2-3 in SN 2020udy - Visit 1 (05) (2)	452.93635 Secs (905.873 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]



Proposal 16497 - SN 2020udy - Visit 2 (06) - The Near-Infrared Plateau of Type Ia Supernovae

Fri Aug 06 18:00:43 GMT 2021

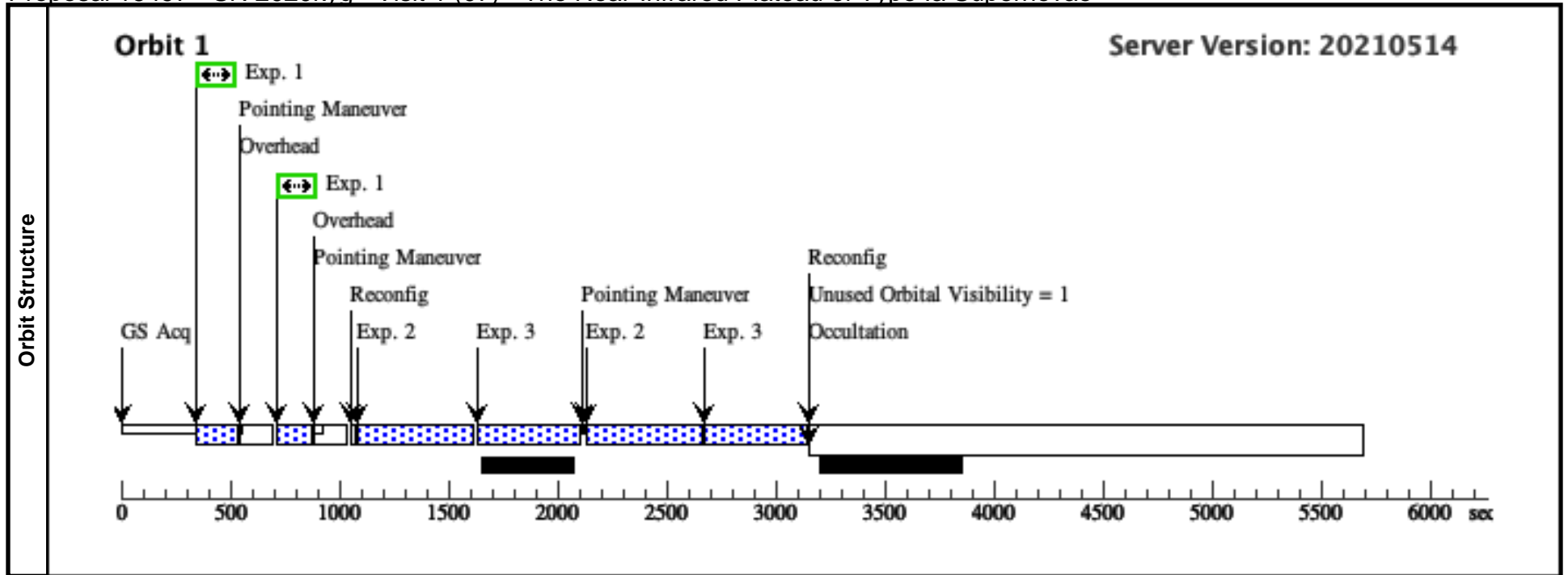
Visit	<b>Proposal 16497, SN 2020udy - Visit 2 (06), implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BETWEEN 06-DEC-2021:00:00:00 AND 20-DEC-2021:00:00:00									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
(2)		Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)					
(3)		Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	SN2020UDY	RA: 02 06 49.3400 (31.7055833d) Dec: +44 35 15.30 (44.58758d) Equinox: J2000		V=24.0+/-0.3	Reference Frame: ICRS				
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) SN2020UDY	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP			Pattern 3, Exps 1-1 in SN 2020udy - Visit 2 (06) (3)	200 Secs (400 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	2		(3) SN2020UDY	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	SAMP-SEQ=SPARS 50; NSAMP=11		Pattern 2, Exps 2-3 in SN 2020udy - Visit 2 (06) (2)	502.936801 Secs (1005.874 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	3		(3) SN2020UDY	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	SAMP-SEQ=SPARS 50; NSAMP=10		Pattern 2, Exps 2-3 in SN 2020udy - Visit 2 (06) (2)	452.93635 Secs (905.873 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]



Proposal 16497 - SN 2020kyg - Visit 1 (07) - The Near-Infrared Plateau of Type Ia Supernovae

Fri Aug 06 18:00:43 GMT 2021

Visit	<b>Proposal 16497, SN 2020kyg - Visit 1 (07), completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BETWEEN 21-APR-2021:00:00:00 AND 01-MAY-2021:00:00:00									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
(2)		Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)					
(3)		Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	SN2020KYG	RA: 13 11 39.6200 (197.9150833d) Dec: +22 54 55.80 (22.91550d) Equinox: J2000		V=27.0+/-0.3	Reference Frame: ICRS				
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(4) SN2020KYG	WFC3/UVIS, ACCUM, UVIS2-2K2D-SUB	F350LP			Pattern 3, Exps 1-1 in SN 2020kyg - Visit 1 (07) (3)	158 Secs (316 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	2		(4) SN2020KYG	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	SAMP-SEQ=SPARS 50; NSAMP=11		Pattern 2, Exps 2-3 in SN 2020kyg - Visit 1 (07) (2)	502.936801 Secs (1005.874 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	3		(4) SN2020KYG	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	SAMP-SEQ=SPARS 50; NSAMP=10		Pattern 2, Exps 2-3 in SN 2020kyg - Visit 1 (07) (2)	452.93635 Secs (905.873 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]



Proposal 16497 - SN 2020kyg - Visit 2 (08) - The Near-Infrared Plateau of Type Ia Supernovae

Fri Aug 06 18:00:43 GMT 2021

Visit	<b>Proposal 16497, SN 2020kyg - Visit 2 (08), completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BETWEEN 31-JUL-2021:00:00:00 AND 10-AUG-2021:00:00:00									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
(2)		Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.636 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)					
(3)		Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	SN2020KYG	RA: 13 11 39.6200 (197.9150833d) Dec: +22 54 55.80 (22.91550d) Equinox: J2000		V=27.0+/-0.3	Reference Frame: ICRS				
<i>Comments:</i> Category=EXT-STAR Description=[SUPERNOVA TYPE IA]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(4) SN2020KYG	WFC3/UVIS, ACCUM, UVIS2-2K2D-SUB	F350LP			Pattern 3, Exps 1-1 in SN 2020kyg - Visit 2 (08) (3)	158 Secs (316 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	2		(4) SN2020KYG	WFC3/IR, MULTIACCUM, IR-UVIS	F160W	SAMP-SEQ=SPARS 50; NSAMP=10		Pattern 2, Exps 2-3 in SN 2020kyg - Visit 2 (08) (2)	452.93635 Secs (905.873 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	3		(4) SN2020KYG	WFC3/IR, MULTIACCUM, IR-UVIS	F125W	SAMP-SEQ=SPARS 50; NSAMP=11		Pattern 2, Exps 2-3 in SN 2020kyg - Visit 2 (08) (2)	502.936801 Secs (1005.874 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]

