17813 - A Deep Search for the Surviving Companion to the SN 2016gkg Progenitor

Cycle: 32, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
Dr. Ori Dosovitz Fox (PI) (Contact)	**Space Telescope Science Institute**
Dr. Jennifer Andrews (CoI)	NOIRLab - Gemini North (HI)
Dr. Kyra Azalee Bostroem (CoI)	University of Arizona
Maria Drout (CoI) (CSA Member)	University of Toronto
Prof. Alex V. Filippenko (CoI)	University of California - Berkeley
Dr. Patrick Kelly (CoI)	University of Minnesota - Twin Cities
Dr. Dan Milisavljevic (CoI)	Purdue University
Prof. Selma E. de Mink (CoI) (ESA Member)	Max Planck Institute for Astrophysics
Dr. Stuart Ryder (CoI)	Macquarie University
Dr. Nathan Smith (CoI)	University of Arizona
Dr. Niharika Sravan (CoI)	Drexel University
Dr. Schuyler D. Van Dyk (CoI)	California Institute of Technology
Dr. Benjamin F. Williams (CoI)	University of Washington
Dr. Emmanouil Zapartas (CoI) (ESA Member)	FORTH - Institute of Astrophysics
Dr. WeiKang Zheng (CoI)	University of California - Berkeley
Dr. Sebastian Gomez (CoI)	University of Texas at Austin
Dr. Justin Pierel (CoI)	Space Telescope Science Institute
Dr. Melissa Shahbandeh (CoI)	Space Telescope Science Institute
Dr. Armin Rest (CoI)	Space Telescope Science Institute

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:15.0	yes
02	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:15.0	yes
03	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:15.0	yes
04	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:16.0	yes
06	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:16.0	yes
07	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:16.0	yes
08	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:16.0	yes
09	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:17.0	yes
10	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:17.0	yes
11	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:17.0	yes
12	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:17.0	yes
13	(1) SN-2016GKG	WFC3/UVIS	1	04-Sep-2025 14:00:18.0	yes
05	(2) SN-2023MUT	WFC3/UVIS	1	04-Sep-2025 14:00:18.0	yes

13 Total Orbits Used

ABSTRACT

Binary physics is an area of growing interest given the implications on a wide range of stellar systems, including merger sources for gravitational waves. Identification of progenitors to stripped-envelope supernovae (SESNe) offers a direct approach to constraining binary evolution scenarios. While the pathway by which SESN progenitor stars lose their envelope remains ambiguous (single vs. binary models), growing evidence suggests most SESN progenitors (>50%) are in binary systems. In just the past few years, the number of direct detections of surviving companions has grown to five. While exciting, the sample is still too small to make statistically meaningful conclusions about either the population or the binary physics itself. Increasing the sample size is slow given the small number of viable candidates, which means that each new data point is significant. Here we propose deep WFC3/UVIS optical+UV observations of the only relevant target for Cycle 32: SN 2016gkg at <26 Mpc. Similar to other companion searches, we aim to detect or place meaningful limits on any surviving companion. We also include one orbit to obtain F555W astrometry on the recent SESN 2023mut for potential future follow-up studies. This experiment will take advantage of HST's unique UV capabilities and will help build a statistically significant sample that will affect our fundamental understanding of binary evolution. The combined low likelihood of future

events and HST's expected lifetime make these observations all the more critical.

OBSERVING DESCRIPTION

WFC3:

- Use entire array to aquire fiducial stars for alignment purposes
- Use 512_UVIS2_CTE aperture to minimize photon transfer losses
- When scheduled, please have CS contact PI to finalize pos_tag based on final orientation

- EXPTIME (actual):
  - -SN iPTF13bvn (12 orbits)
    - -F336W (17500 s)
    - -F555W (13500 s)
- FLASH = varies with aim of minimizing photon transfer losses and read noise
  - Here is the situation:
    - *We are trying to detect a single, very faint source (surviving star from a supernova). We only care about one position, not the entire field.
    - *We have placed the pointing in the center of the UVIS2-512C-CTE aperture, so that will help with the CTE.
    - *We are not sure what the background from the galaxy looks like, but it may contribute to the flux slightly (or not at all).
    - *It is easy to adjust the Flash value in APT to turn the warning off, but we are hoping we aren't adding too much noise unnecessarily, as this source is faint.

-For dithering, we use 5 different POS TARGS instead

Impact of Gyros

We have considered the impact of reduced gyro operations on our program, which has 12 orbits requested. We were able to successfully reduce this target to 4 visits, each with 3 orits per visit. The only condition is that all filters must be obtained in the same orientation for several reasons, including time variablility and optimized sampling and reductions. Therefore, we have added the constraint that all be scheduled within 1 day of each other.

Visit

Proposal 17813, iPTF16gkg (01), scheduling Thu Sep 04 18:00:18 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

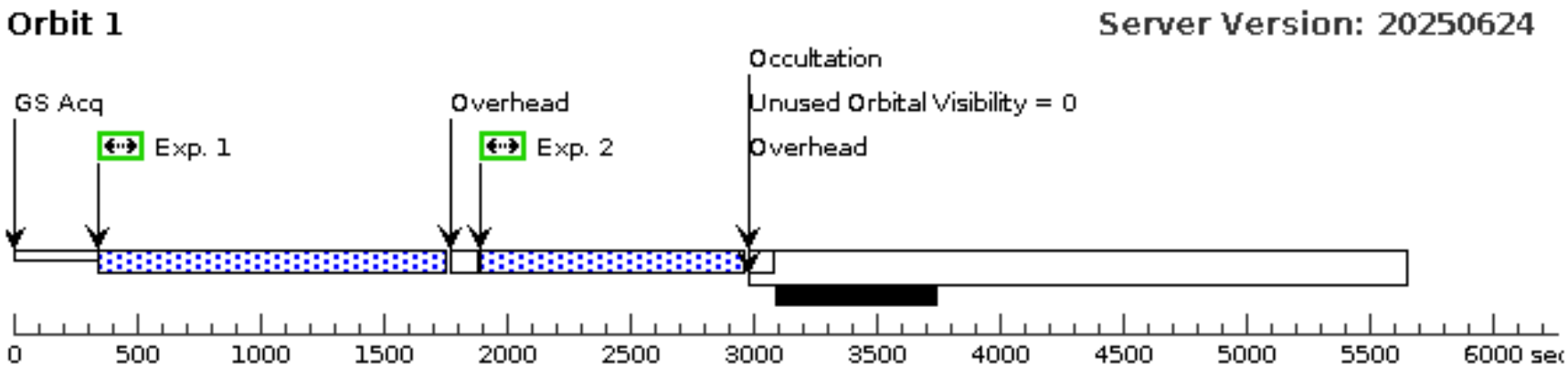
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 0,0		2500 Secs (1385 Secs) *[==>1385.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 0,0		2500 Secs (1052 Secs) *[==>1052.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (02) Thu Sep 04 18:00:18 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

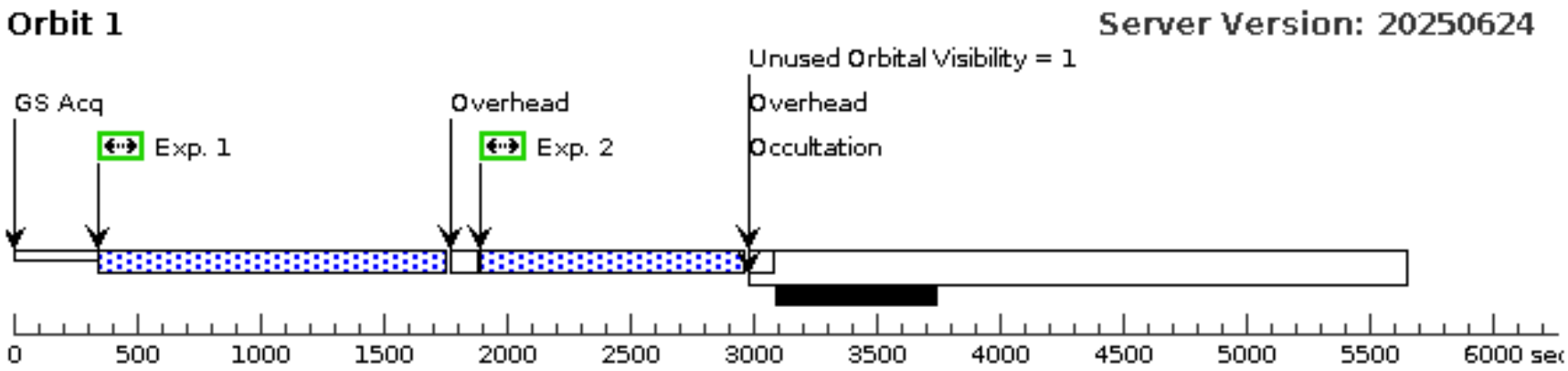
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 0.1719,0.1970		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	*[1]*
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 0.1719,0.1970		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (03)

Thu Sep 04 18:00:18 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

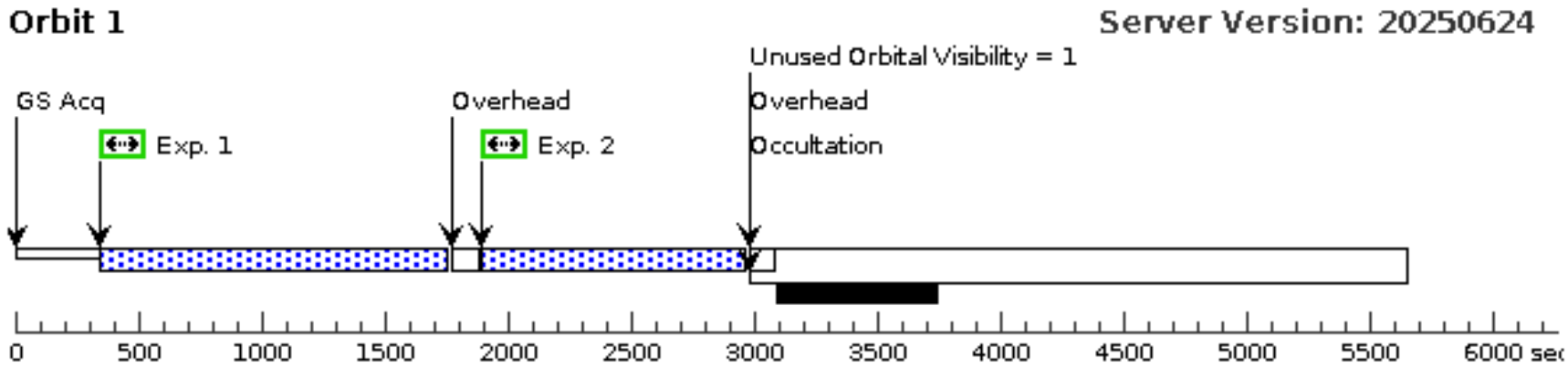
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 0.3437,0.3542		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 0.3437,0.3542		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (04) Thu Sep 04 18:00:18 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

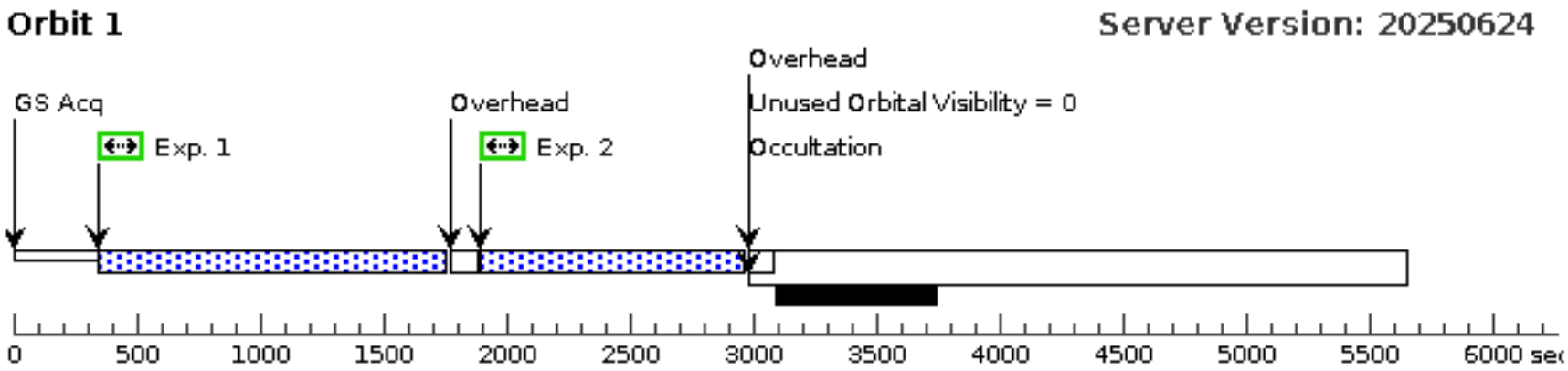
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 1,0		2500 Secs (1385 Secs) *[==>1385.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 1,0		2500 Secs (1052 Secs) *[==>1052.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (06)

Thu Sep 04 18:00:18 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

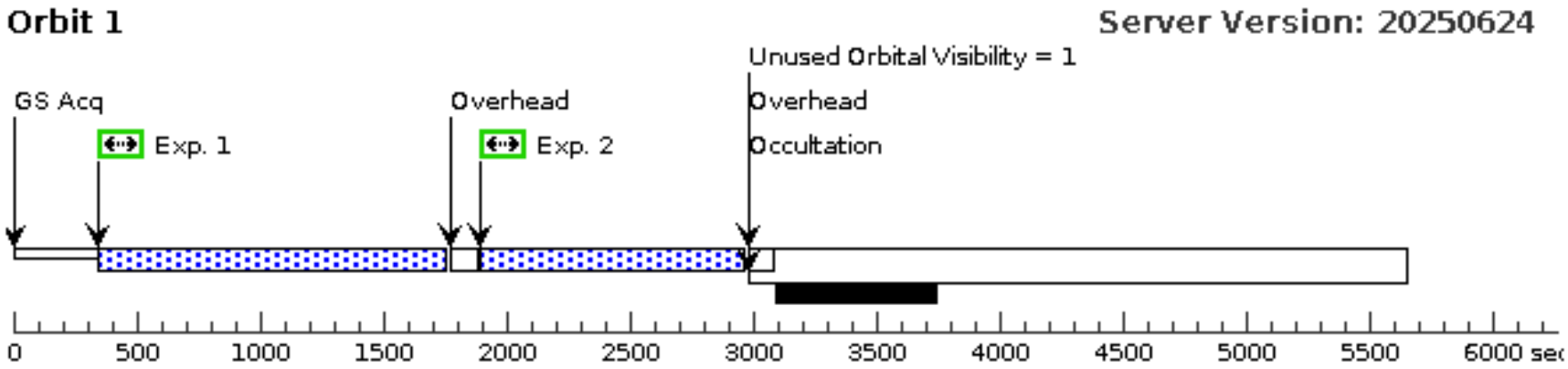
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 1.1719,0 .1970		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 1.1719,0 .1970		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (07) Thu Sep 04 18:00:18 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

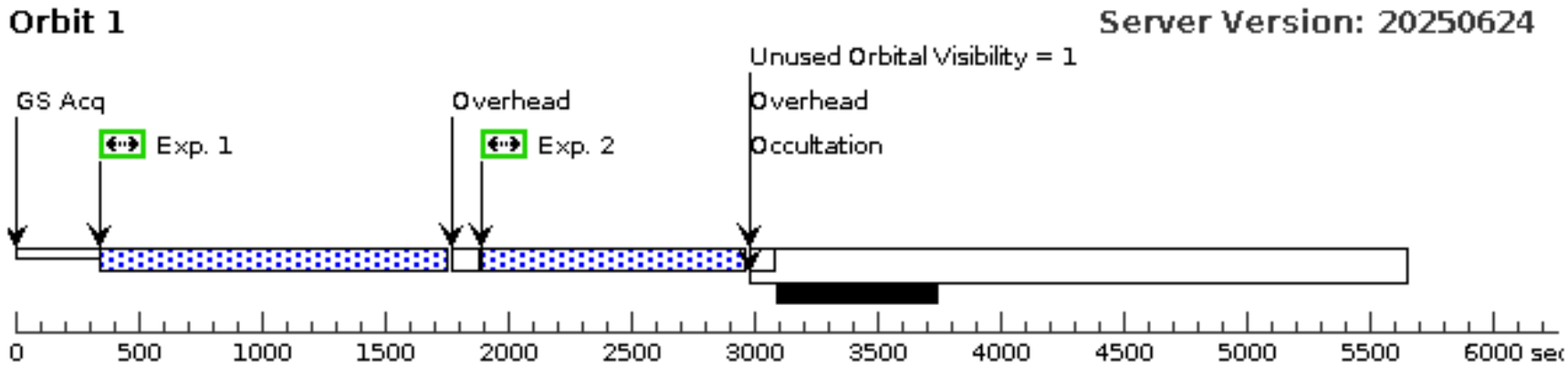
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 1.3437,0.3542		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 1.3437,0.3542		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (08)

Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

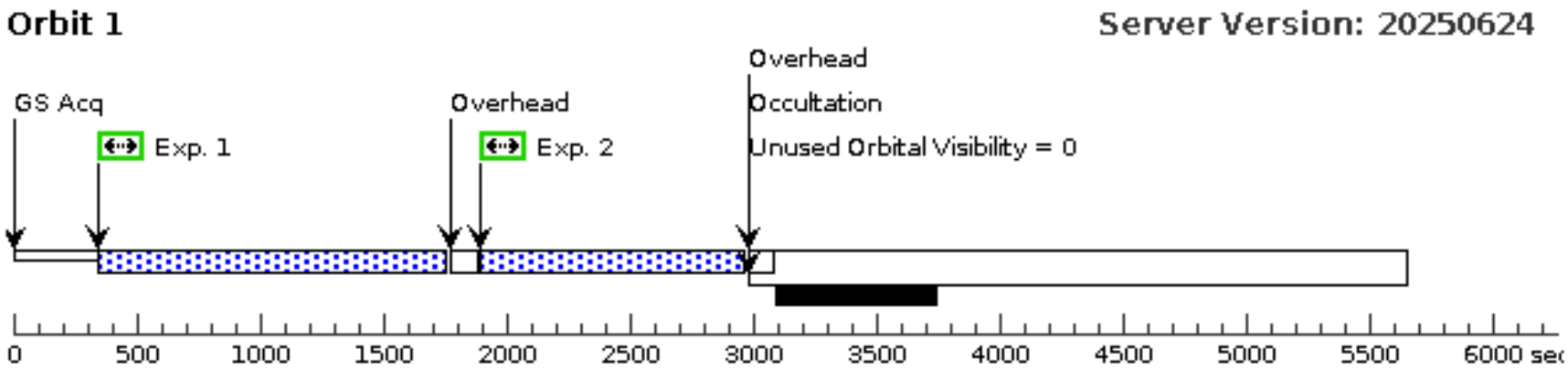
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 0,1		2500 Secs (1385 Secs) *[==>1385.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 0,1		2500 Secs (1052 Secs) *[==>1052.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (09) Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

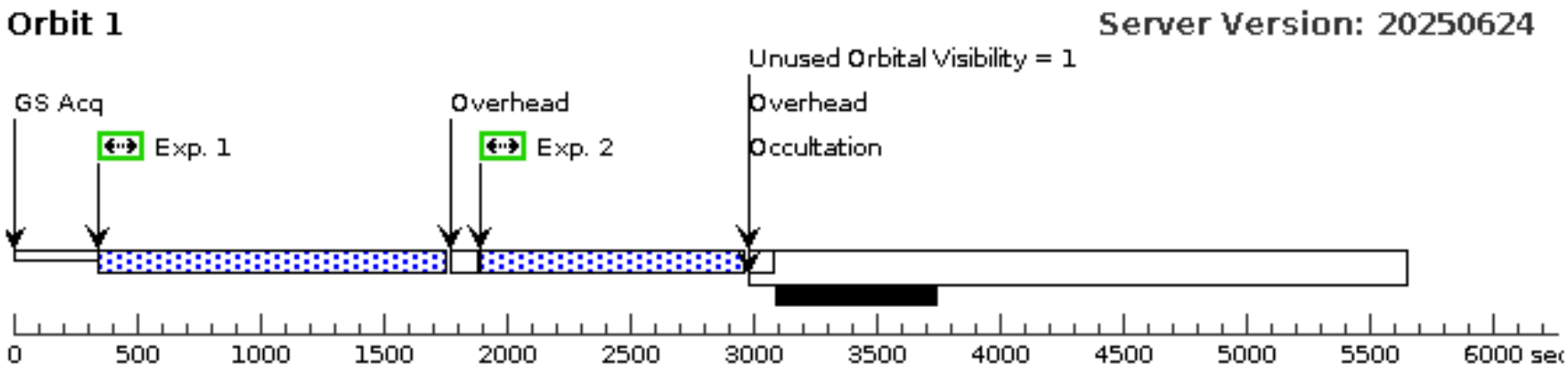
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 0.1719,1.1970		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	*[1]*
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 0.1719,1.1970		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (10) Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

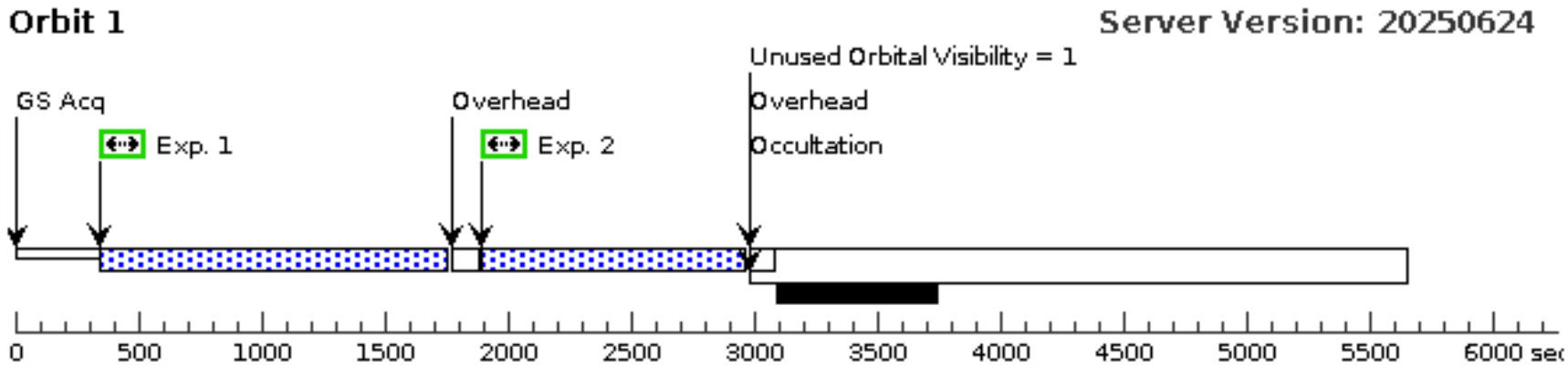
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 0.3437,1.3542		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 0.3437,1.3542		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (11) Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

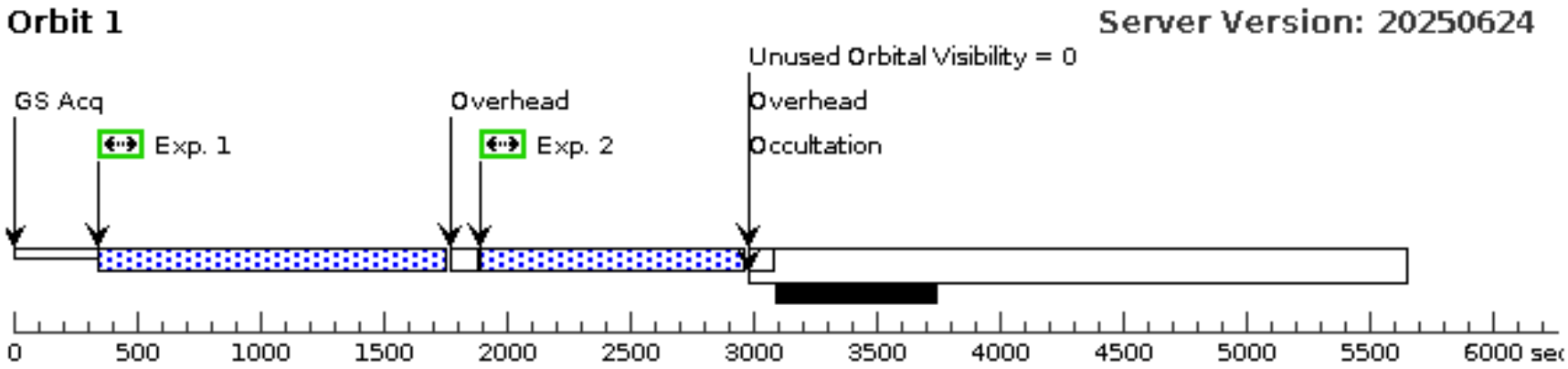
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 1,1		2500 Secs (1385 Secs) *[==>1385.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 1,1		2500 Secs (1052 Secs) *[==>1052.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (12)

Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Fixed Targets

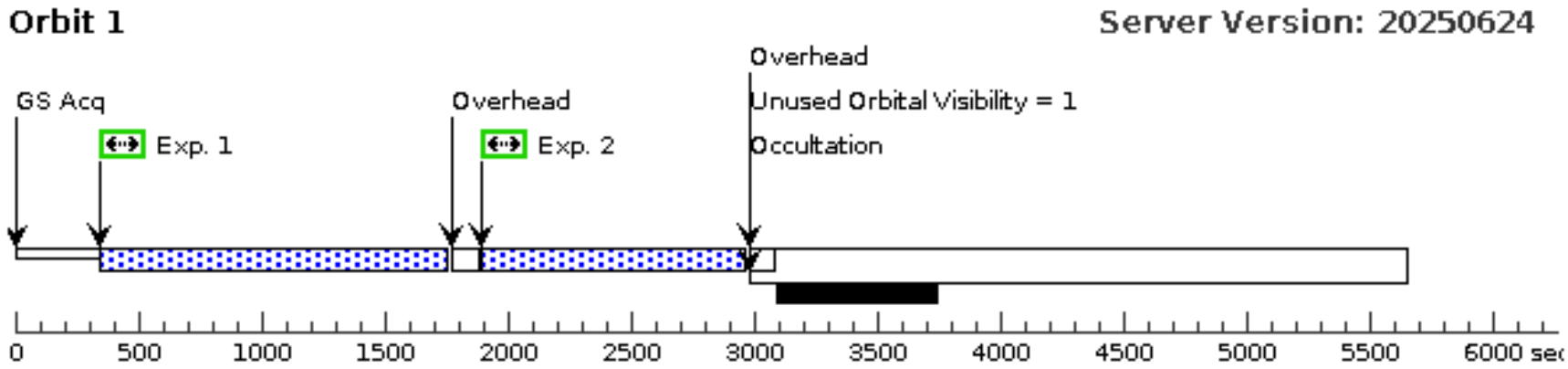
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 1.1719,1.1970		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 1.1719,1.1970		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, iPTF16gkg (13) Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: GROUP 13,01,02,03,04,06,07,08,09,10,11,12 WITHIN 7D

Fixed Targets

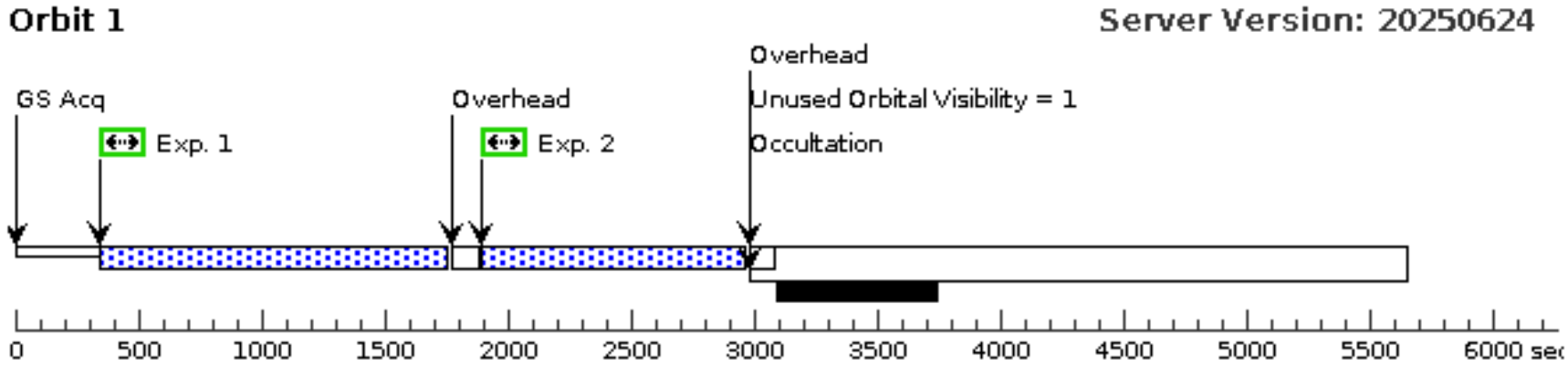
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-2016GKG	RA: 01 34 14.4400 (23.5601667d) Dec: -29 26 24.22 (-29.44006d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F336W (WFC3UVIS.im.1448769)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=12	POS TARG 1.3437,1.3542		2500 Secs (1383 Secs) *[==>1383.0 Secs]*	 ***[1]***
2	F555W (WFC3UVIS.im.1452352)	(1) SN-2016GKG	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F555W		POS TARG 1.3437,1.3542		2500 Secs (1053 Secs) *[==>1053.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 17813, SN2023mut (05), completed Thu Sep 04 18:00:19 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Diagnostics

(SN2023mut (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SN-2023MUT	RA: 04 48 34.3480 (72.1431167d) Dec: +00 14 48.31 (.24675d) Equinox: J2000	Epoch of Position: 2000	V=25	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=EXT-STAR
Description=[SUPERNOVA TYPE IB]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F555W	(2) SN-2023MUT	WFC3/UVIS, ACCUM, UVIS2	F555W	FLASH=4		Pattern 1, Exps 1-1 in SN2023mut (05) (1)	700 Secs (2221 Secs) *[==>555.0 Secs (Pattern 1)]* *[==>555.0 Secs (Pattern 2)]* *[==>555.0 Secs (Pattern 3)]* *[==>556.0 Secs (Pattern 4)]*	***[1]***

Orbit Structure