18399 - Characterisation of exocomets in the 49 Cet system

Cycle: 34, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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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	(1) 49-CET WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	31-Jul-2026 19:00:28.0	yes
02	(1) 49-CET WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	31-Jul-2026 19:00:30.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
03	(1) 49-CET WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	31-Jul-2026 19:00:32.0	yes
04	(1) 49-CET WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	31-Jul-2026 19:00:33.0	yes
05	(1) 49-CET WAVE	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	31-Jul-2026 19:00:35.0	yes

15 Total Orbits Used

ABSTRACT

49 Ceti is a young (40 Myr) A1V star hosting a prominent debris disc and standing as one of only three systems where spectroscopic signatures of transiting exocomets have been confirmed. Previous HST observations revealed strong exocomet absorption in carbon lines (C II, C IV), but the absence of simultaneous coverage of refractory species (Mg II, Fe II) prevented any measurement of the volatile-to-refractory content of these objects, leaving their composition and formation history unconstrained.

We propose to obtain high-resolution UV spectra of 49 Cet at five distinct epochs with HST/STIS, covering the full 1250-2900 A range at resolving power > 100,000. Each visit consists of 3 sequential orbits using the E140H and E230H gratings, providing simultaneous access to volatile tracers (C I, C II, C IV, O I) and refractory species (such as Fe II and Mg II). These observations will allow us to: (1) characterise the physical properties of 49 Cet exocomets (dynamics, distance to the star, ionisation state) and assess how these properties are shaped by the high stellar luminosity; (2) measure their elemental C/Fe ratios, which will yield valuable insight into their formation location and nature; and (3) test whether exocomet evaporation can explain the replenishment of the observed carbon-rich gaseous disc. This programme will deliver a complete characterisation of exocomets in the 49 Ceti system, opening a new window into the properties of small bodies across the diversity of extrasolar systems and how they can contribute to redistribute volatiles throughout planetary systems.

OBSERVING DESCRIPTION

The goal of HST program 18399 is to determine the physical and chemical properties of exocomets in the 49 Cet system.

The observing strategy consists of obtaining 5 high-resolution spectra of 49 Cet at different epochs, each separated by at least 10 days. At each epoch, we expect to detect a small number of exocomet gas tails transiting the star, typically 0-3. The absorption signatures of these exocomets will be observed in numerous atomic species, including carbon, oxygen, iron, and magnesium. These observations will provide constraints on the bulk composition of exocomets in the 49 Cet system, as well as on the physical processes governing exocomet evolution around hot stars (Teff = 9000 K).

Each visit will consist of 3 consecutive HST orbits using the STIS instrument. To cover the full 1280-2900 wavelength range, the exposures are distributed as follows:

- Orbit 1: A single exposure with the FUV/MAMA/E140H grating at the i1380 central wavelength, covering lines of C I, C II, O I, and Si IV. A long exposure time (Texp = 1900s) is required to compensate for the low stellar flux at these wavelengths. This observation is divided into 5 sub-exposures, allowing us to monitor the temporal evolution of the detected exocomet signatures.

- Orbit 2: Two exposures:
  - FUV/MAMA/E140H at the c1598 central wavelength (Texp = 1600s, divided into 4 sub-exposures), covering Si II, C I, IV, and Al II.
  - NUV/MAMA/E230H at the c1763 central wavelength (Texp = 600s), covering Fe II and Al III.

- Orbit 3: Four exposures (Texp = 420s each), all with the NUV/MAMA/E230H grating:
  - c2013, covering C I, Cr II, and Zn II.
  - c2263, covering Ni II and Fe II.
  - c2513, covering Fe I and Fe II.
  - c2763, covering Fe II, Mg I, and Mg II.

The E140H and E230H gratings provide a resolving power > 100,000, enabling the absorption signatures of individual transiting exocomets to be resolved in great detail. All observations will be obtained through the 0.2"x0.2" aperture. The maximum count rates predicted by the ETC are approximately 100,000 cts/s, well below the STIS brightness limit for non-variable targets. The expected S/N per resolution element ranges from 40 to 60 across the observed spectral range.

Visit

Proposal 18399, Visit 01 Fri Jul 31 23:00:36 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: (none)

Fixed Targets

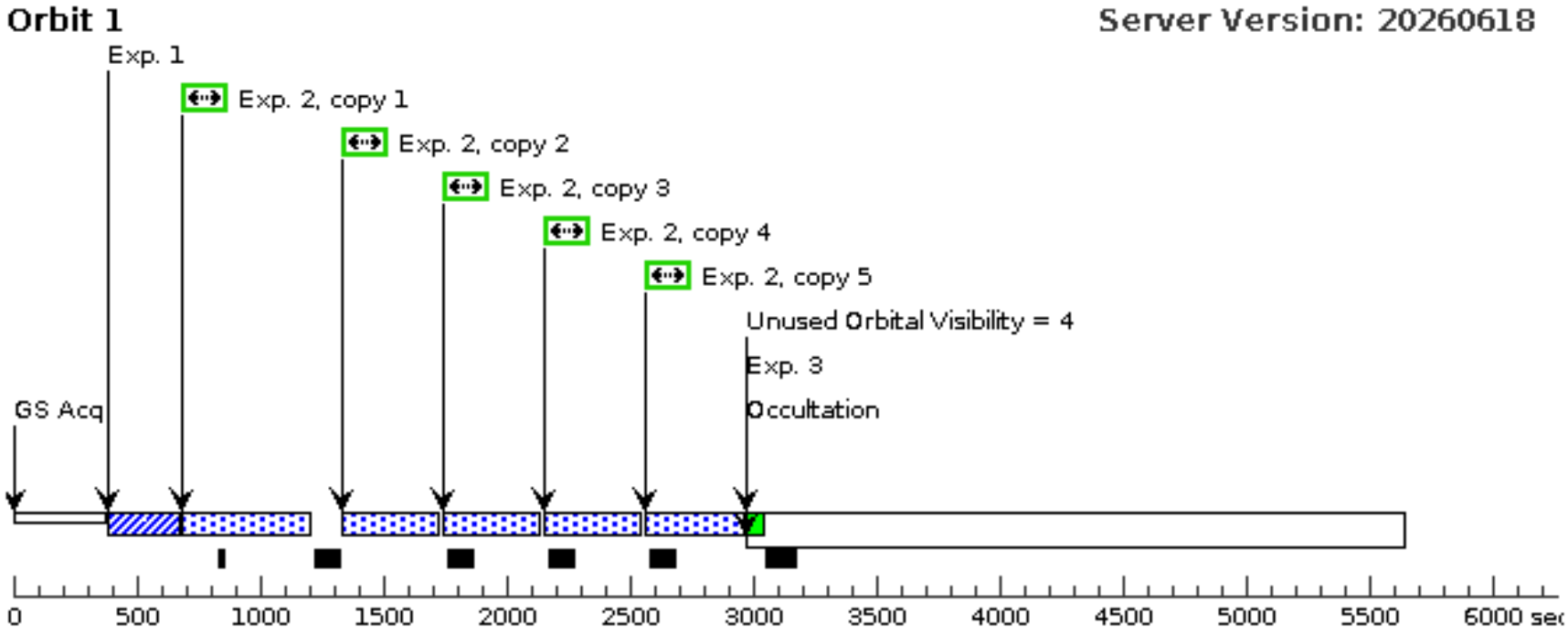
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	49-CET	RA: 01 34 37.7786 (23.6574108d) Dec: -15 40 34.90 (-15.67636d) Equinox: J2000	Proper Motion RA: 94.351 mas/yr Proper Motion Dec: -3.130 mas/yr Parallax: 0.0174725" Epoch of Position: 2000	V=5.607	Reference Frame: ICRS

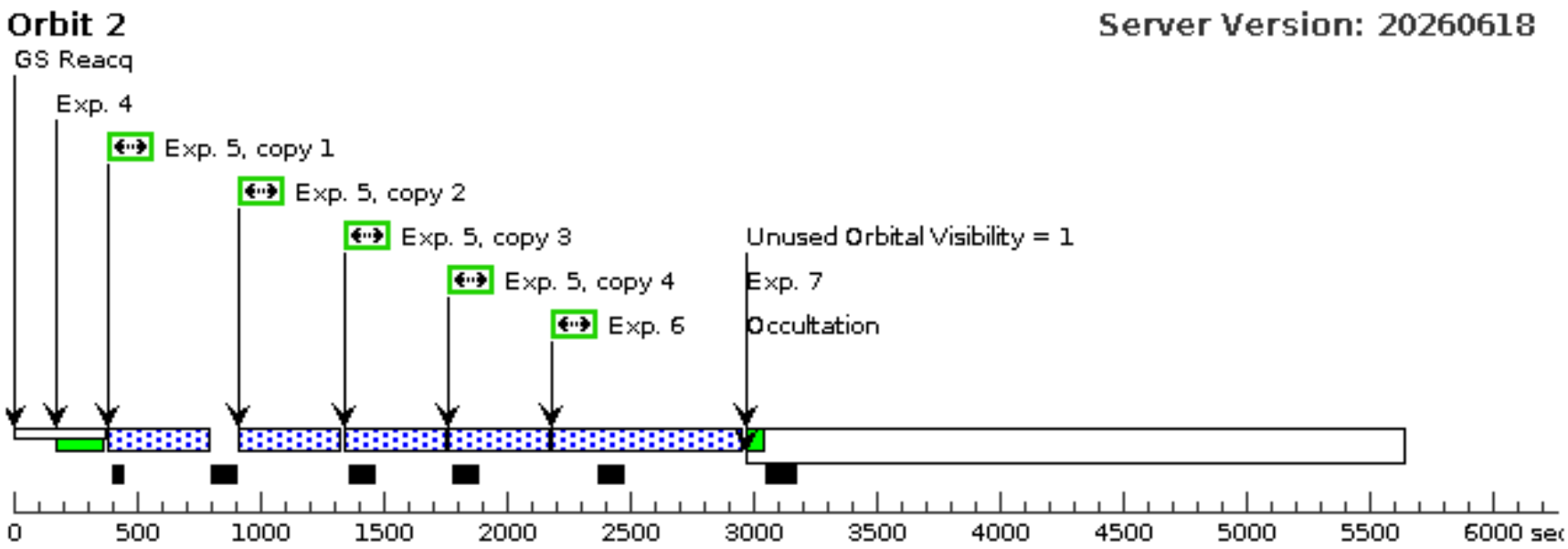
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[A0-A3 V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.2360951)	(1) 49-CET	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-3 Non-Int in Visit 01	0.2 Secs (0.2 Secs) *[==>]*	***[1]***
2	Obs 1380 (STIS.sp.2360953)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A	WAVECAL=NO		Sequence 1-3 Non-Int in Visit 01	400 Secs X 5 (1925 Secs) *[==>385.0 Secs (Copy 1)]* *[==>385.0 Secs (Copy 2)]* *[==>385.0 Secs (Copy 3)]* *[==>385.0 Secs (Copy 4)]* *[==>385.0 Secs (Copy 5)]*	***[1]***
3	Wavecal 1380	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A			Sequence 1-3 Non-Int in Visit 01	*[==>]*	***[1]***
4	Wavecal 1598	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A			Sequence 4-7 Non-Int in Visit 01	*[==>]*	***[2]***
5	Obs 1598 (STIS.sp.2360954)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 01	400 Secs X 4 (1596 Secs) *[==>399.0 Secs (Copy 1)]* *[==>399.0 Secs (Copy 2)]* *[==>399.0 Secs (Copy 3)]* *[==>399.0 Secs (Copy 4)]*	***[2]***
6	Obs 1763 (STIS.sp.2360956)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 01	600 Secs (599 Secs) *[==>599.0 Secs]*	***[2]***
7	Wavecal 1763	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A			Sequence 4-7 Non-Int in Visit 01	*[==>]*	***[2]***
8	Wavecal 2013	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 01	*[==>]*	***[3]***
9	Obs 2013 (STIS.sp.2360959)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 01	420 Secs (420 Secs) *[==>]*	***[3]***
10	Obs 2263 (STIS.sp.2360960)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 01	420 Secs (420 Secs) *[==>]*	***[3]***
11	Wavecal 2263	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 01	*[==>]*	***[3]***
12	Obs 2513 (STIS.sp.2360961)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 01	420 Secs (420 Secs) *[==>]*	***[3]***
13	Wavecal 2513	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A			Sequence 8-15 Non-Int in Visit 01	*[==>]*	***[3]***
14	Obs 2762 (STIS.sp.2360964)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 01	420 Secs (420 Secs) *[==>]*	***[3]***
15	Wavecal 2762	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A			Sequence 8-15 Non-Int in Visit 01	*[==>]*	***[3]***

Orbit Structure

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Exp. 6
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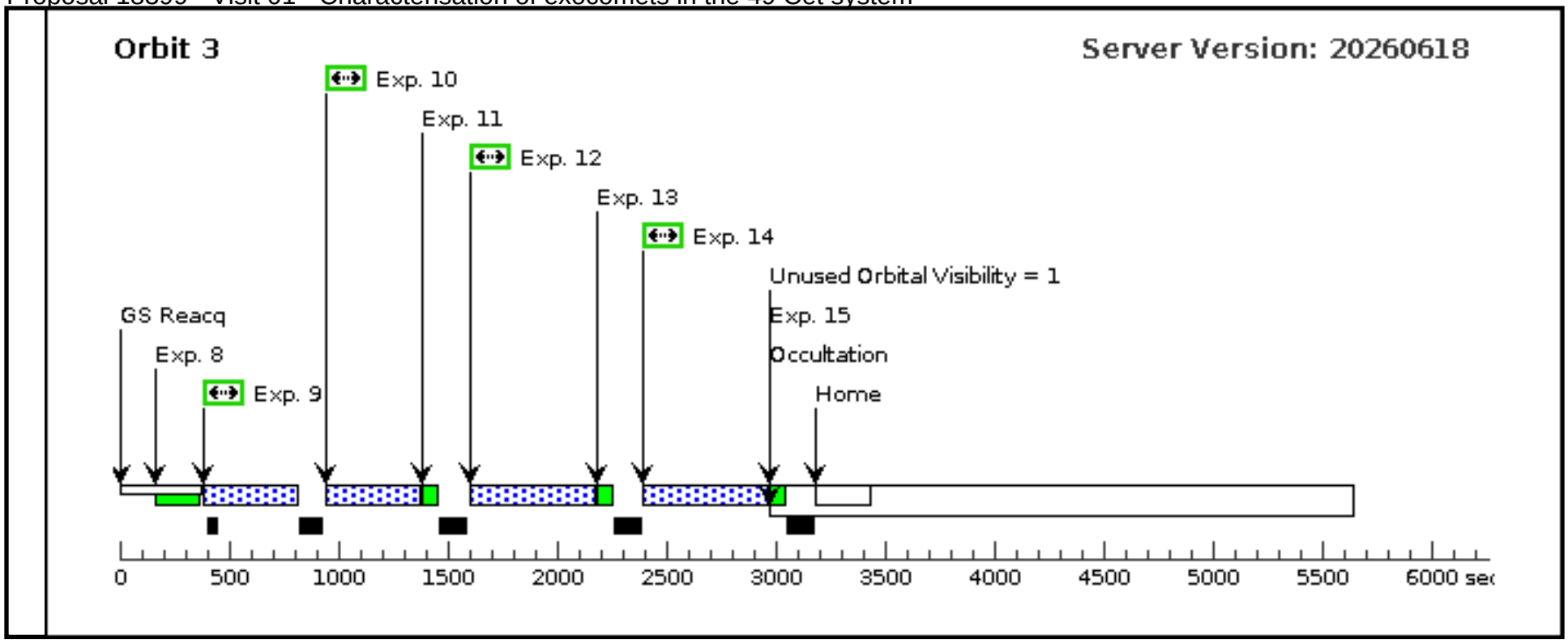
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Exp. 13
Exp. 14
Unused Orbital Visibility = 1
GS Reacq
Exp. 15
Exp. 8
Occultation
Exp. 9
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5000
5500
6000 sec

Visit

Proposal 18399, Visit 02 Fri Jul 31 23:00:36 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: AFTER_01 BY 10 D TO 500 D

Fixed Targets

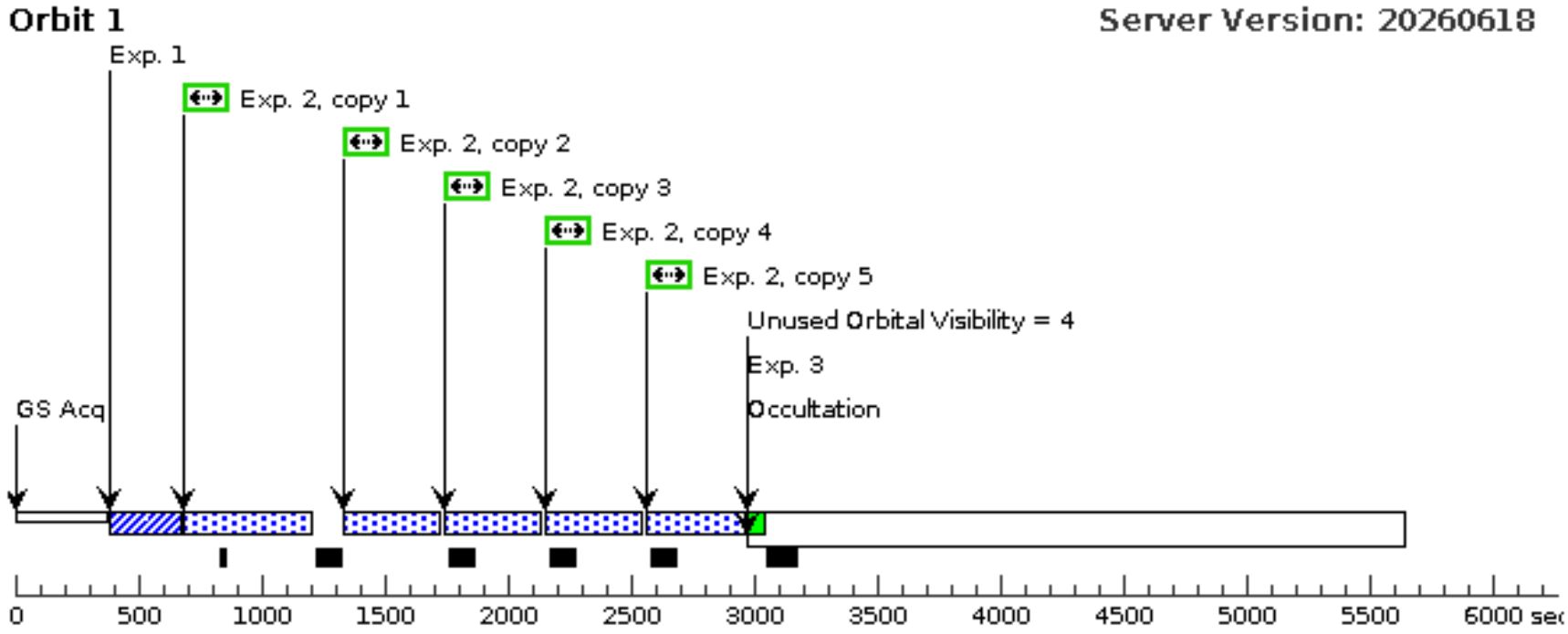
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	49-CET	RA: 01 34 37.7786 (23.6574108d) Dec: -15 40 34.90 (-15.67636d) Equinox: J2000	Proper Motion RA: 94.351 mas/yr Proper Motion Dec: -3.130 mas/yr Parallax: 0.0174725" Epoch of Position: 2000	V=5.607	Reference Frame: ICRS

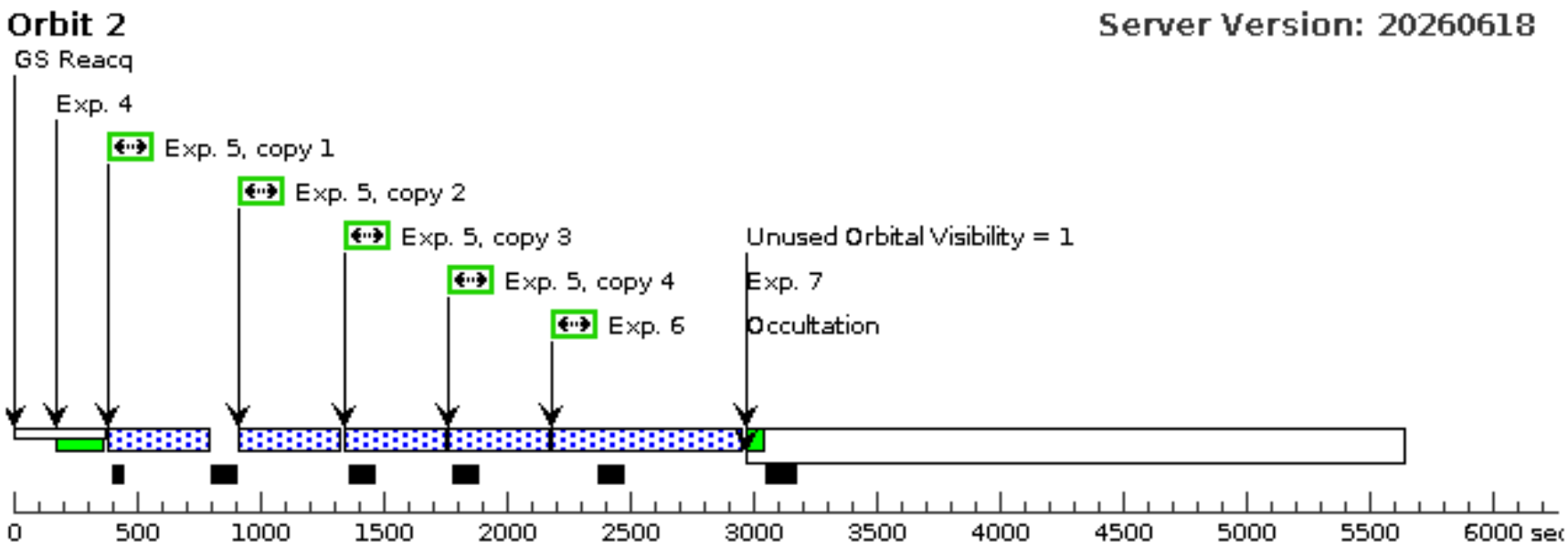
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[A0-A3 V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.2360951)	(1) 49-CET	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-3 Non-Int in Visit 02	0.2 Secs (0.2 Secs) *[==>]*	***[1]***
2	Obs 1380 (STIS.sp.2360953)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A	WAVECAL=NO		Sequence 1-3 Non-Int in Visit 02	400 Secs X 5 (1925 Secs) *[==>385.0 Secs (Copy 1)]* *[==>385.0 Secs (Copy 2)]* *[==>385.0 Secs (Copy 3)]* *[==>385.0 Secs (Copy 4)]* *[==>385.0 Secs (Copy 5)]*	***[1]***
3	Wavecal 1380	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A			Sequence 1-3 Non-Int in Visit 02	*[==>]*	***[1]***
4	Wavecal 1598	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A			Sequence 4-7 Non-Int in Visit 02	*[==>]*	***[2]***
5	Obs 1598 (STIS.sp.2360954)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 02	400 Secs X 4 (1596 Secs) *[==>399.0 Secs (Copy 1)]* *[==>399.0 Secs (Copy 2)]* *[==>399.0 Secs (Copy 3)]* *[==>399.0 Secs (Copy 4)]*	***[2]***
6	Obs 1763 (STIS.sp.2360956)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 02	600 Secs (599 Secs) *[==>599.0 Secs]*	***[2]***
7	Wavecal 1763	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A			Sequence 4-7 Non-Int in Visit 02	*[==>]*	***[2]***
8	Wavecal 2013	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 02	*[==>]*	***[3]***
9	Obs 2013 (STIS.sp.2360959)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 02	420 Secs (420 Secs) *[==>]*	***[3]***
10	Obs 2263 (STIS.sp.2360960)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 02	420 Secs (420 Secs) *[==>]*	***[3]***
11	Wavecal 2263	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 02	*[==>]*	***[3]***
12	Obs 2513 (STIS.sp.2360961)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 02	420 Secs (420 Secs) *[==>]*	***[3]***
13	Wavecal 2513	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A			Sequence 8-15 Non-Int in Visit 02	*[==>]*	***[3]***
14	Obs 2762 (STIS.sp.2360964)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 02	420 Secs (420 Secs) *[==>]*	***[3]***
15	Wavecal 2762	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A			Sequence 8-15 Non-Int in Visit 02	*[==>]*	***[3]***

Orbit Structure

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Exp. 5, copy 4
Exp. 6
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Exp. 7
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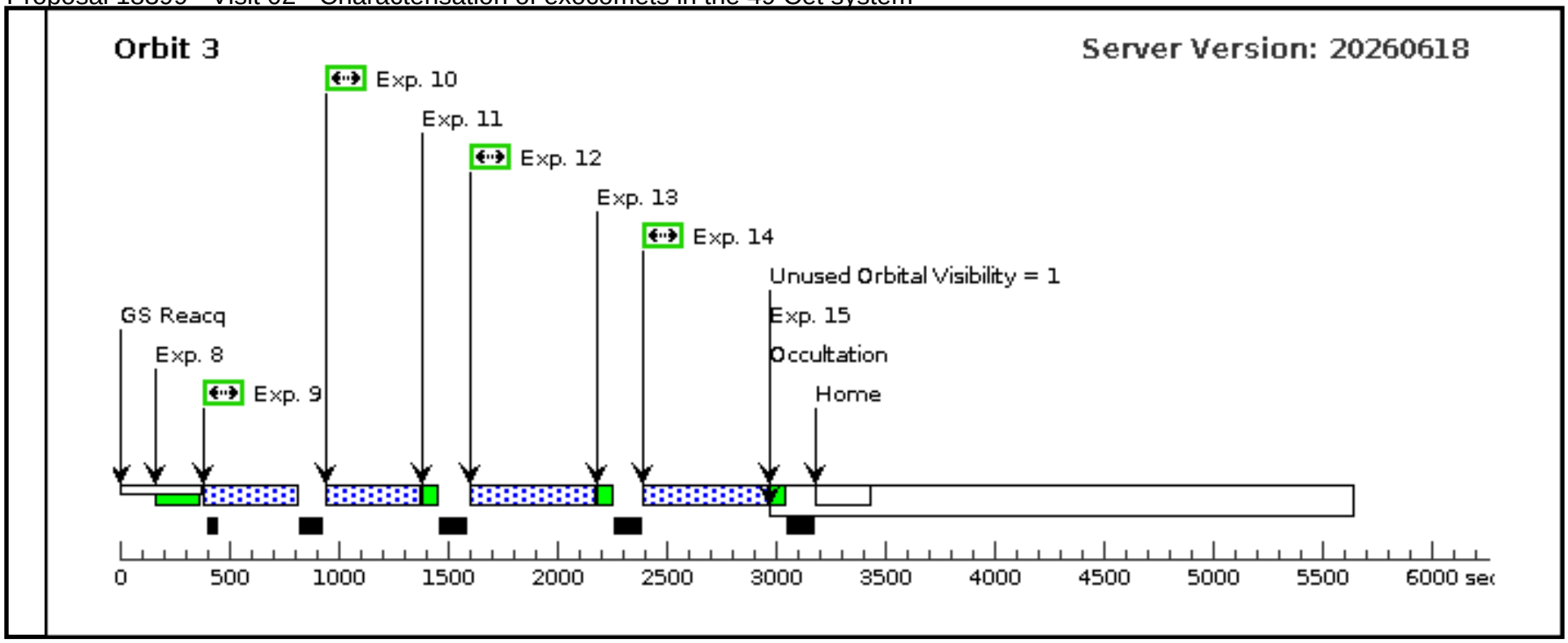
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Exp. 14
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Exp. 8
Exp. 9
Occultation
Home
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500
1000
1500
2000
2500
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3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18399, Visit 03 Fri Jul 31 23:00:36 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: AFTER_02 BY 10 D TO 500 D

Fixed Targets

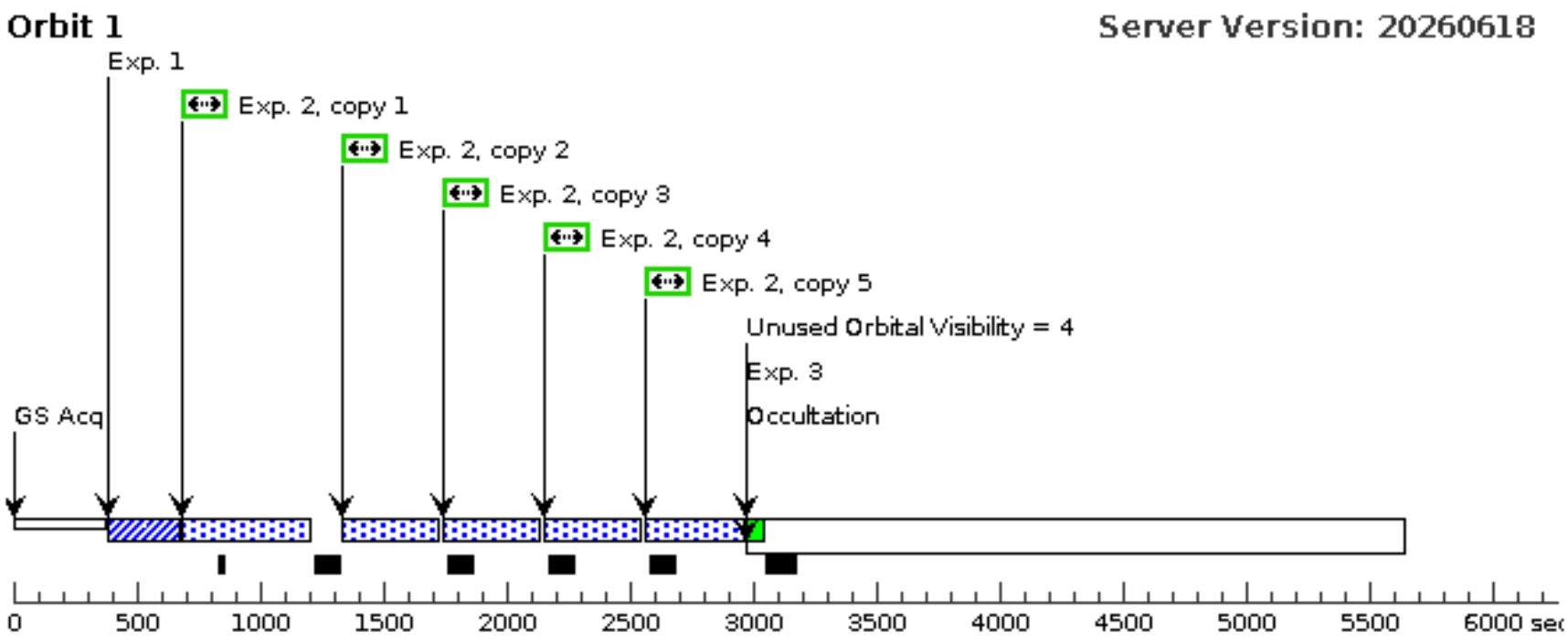
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	49-CET	RA: 01 34 37.7786 (23.6574108d)	Proper Motion RA: 94.351 mas/yr	V=5.607	Reference Frame: ICRS
		Dec: -15 40 34.90 (-15.67636d)	Proper Motion Dec: -3.130 mas/yr		
		Equinox: J2000	Parallax: 0.0174725"		
			Epoch of Position: 2000		

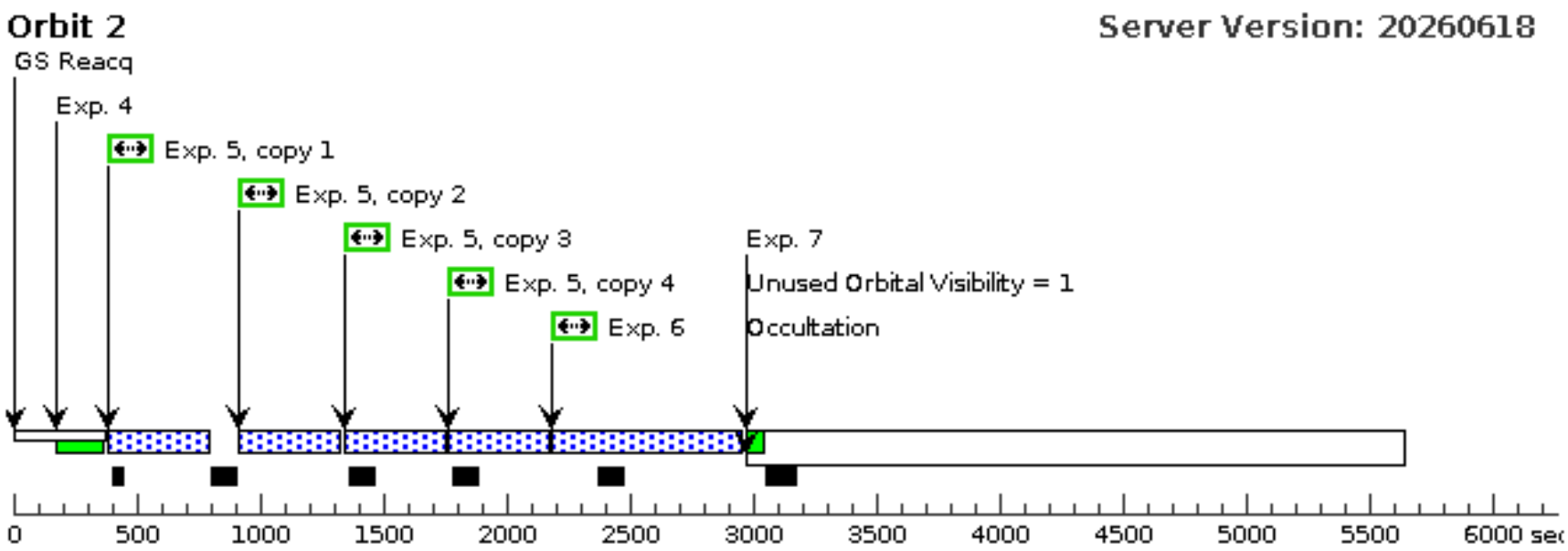
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[A0-A3 V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.236 0951)	(1) 49-CET	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-3 Non-In t in Visit 03	0.2 Secs (0.2 Secs) *[==>]*	*[1]*
2	Obs 1380 (STIS.sp.23 60953)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A	WAVECAL=NO		Sequence 1-3 Non-In t in Visit 03	400 Secs X 5 (1925 Secs) *[==>385.0 Secs (Copy 1)]* *[==>385.0 Secs (Copy 2)]* *[==>385.0 Secs (Copy 3)]* *[==>385.0 Secs (Copy 4)]* *[==>385.0 Secs (Copy 5)]*	*[1]*
3	Wavecal 13 80	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A			Sequence 1-3 Non-In t in Visit 03	*[==>]*	*[1]*
4	Wavecal 15 98	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A			Sequence 4-7 Non-In t in Visit 03	*[==>]*	*[2]*
5	Obs 1598 (STIS.sp.23 60954)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A	WAVECAL=NO		Sequence 4-7 Non-In t in Visit 03	400 Secs X 4 (1596 Secs) *[==>399.0 Secs (Copy 1)]* *[==>399.0 Secs (Copy 2)]* *[==>399.0 Secs (Copy 3)]* *[==>399.0 Secs (Copy 4)]*	*[2]*
6	Obs 1763 (STIS.sp.23 60956)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A	WAVECAL=NO		Sequence 4-7 Non-In t in Visit 03	600 Secs (599 Secs) *[==>599.0 Secs]*	*[2]*
7	Wavecal 17 63	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A			Sequence 4-7 Non-In t in Visit 03	*[==>]*	*[2]*
8	Wavecal 20 13	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-I nt in Visit 03	*[==>]*	*[3]*
9	Obs 2013 (STIS.sp.23 60959)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-I nt in Visit 03	420 Secs (420 Secs) *[==>]*	*[3]*
10	Obs 2263 (STIS.sp.23 60960)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-I nt in Visit 03	420 Secs (420 Secs) *[==>]*	*[3]*
11	Wavecal 22 63	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-I nt in Visit 03	*[==>]*	*[3]*
12	Obs 2513 (STIS.sp.23 60961)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A	WAVECAL=NO		Sequence 8-15 Non-I nt in Visit 03	420 Secs (420 Secs) *[==>]*	*[3]*
13	Wavecal 25 13	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A			Sequence 8-15 Non-I nt in Visit 03	*[==>]*	*[3]*
14	Obs 2762 (STIS.sp.23 60964)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A	WAVECAL=NO		Sequence 8-15 Non-I nt in Visit 03	420 Secs (420 Secs) *[==>]*	*[3]*
15	Wavecal 27 62	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A			Sequence 8-15 Non-I nt in Visit 03	*[==>]*	*[3]*

Orbit Structure

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Exp. 5, copy 3
Exp. 5, copy 4
Exp. 6
Exp. 7
Unused Orbital Visibility = 1
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1000
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3500
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4500
5000
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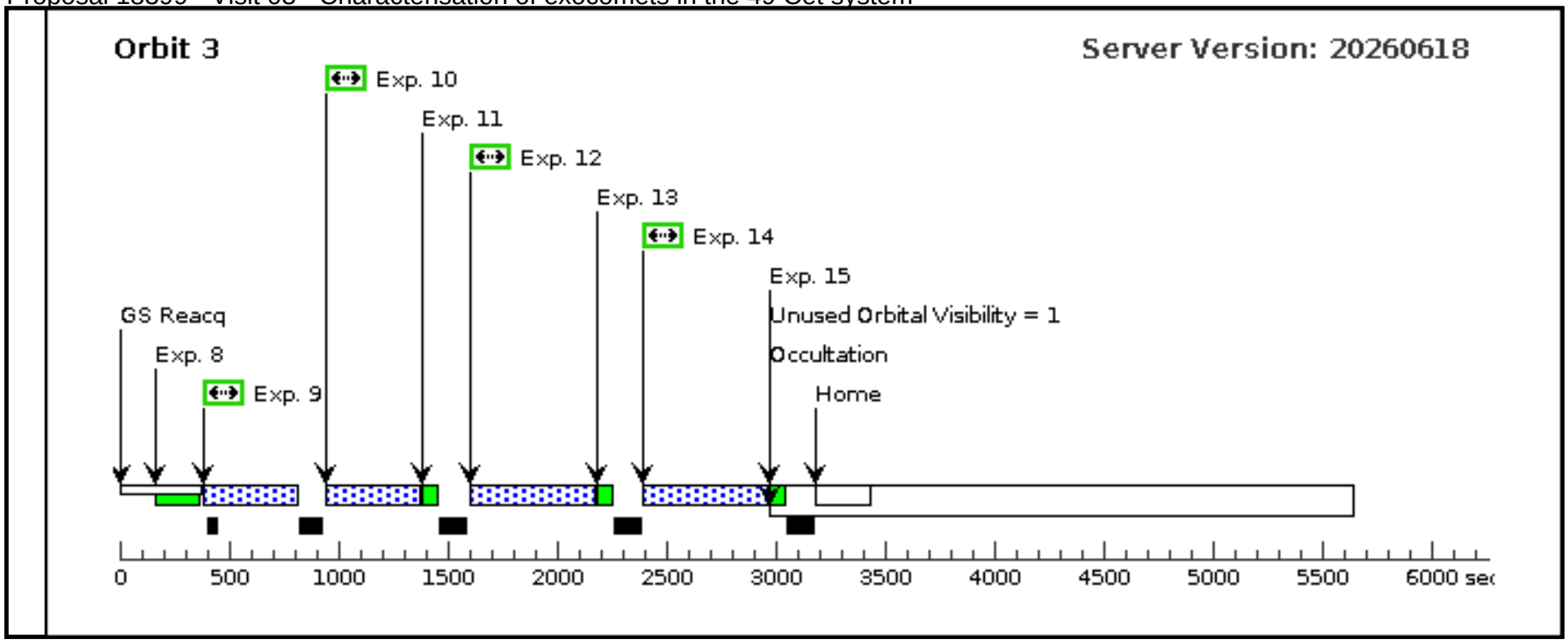
Orbit 3
Server Version: 20260618
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Exp. 12
Exp. 13
Exp. 14
Exp. 15
Unused Orbital Visibility = 1
Occultation
GS Reacq
Exp. 8
Exp. 9
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18399, Visit 04 Fri Jul 31 23:00:36 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: AFTER_03 BY 10 D TO 500 D

Fixed Targets

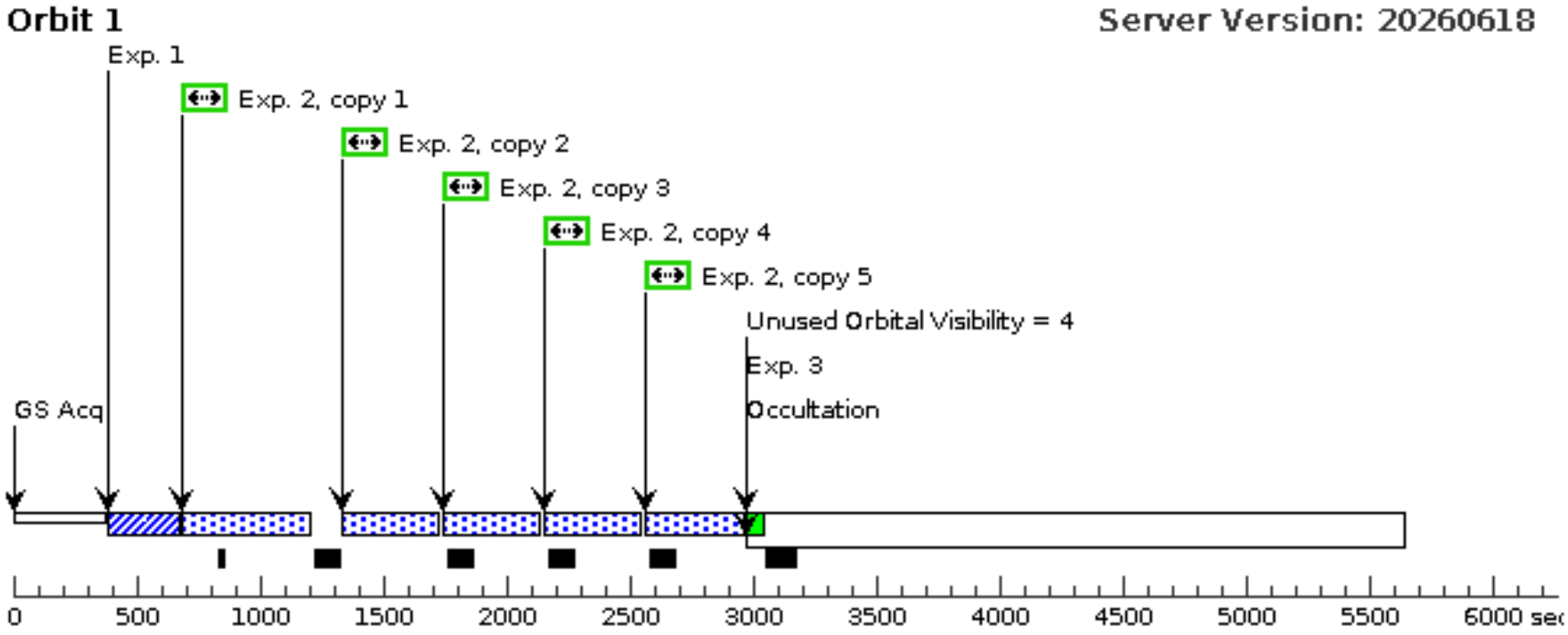
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	49-CET	RA: 01 34 37.7786 (23.6574108d) Dec: -15 40 34.90 (-15.67636d) Equinox: J2000	Proper Motion RA: 94.351 mas/yr Proper Motion Dec: -3.130 mas/yr Parallax: 0.0174725" Epoch of Position: 2000	V=5.607	Reference Frame: ICRS

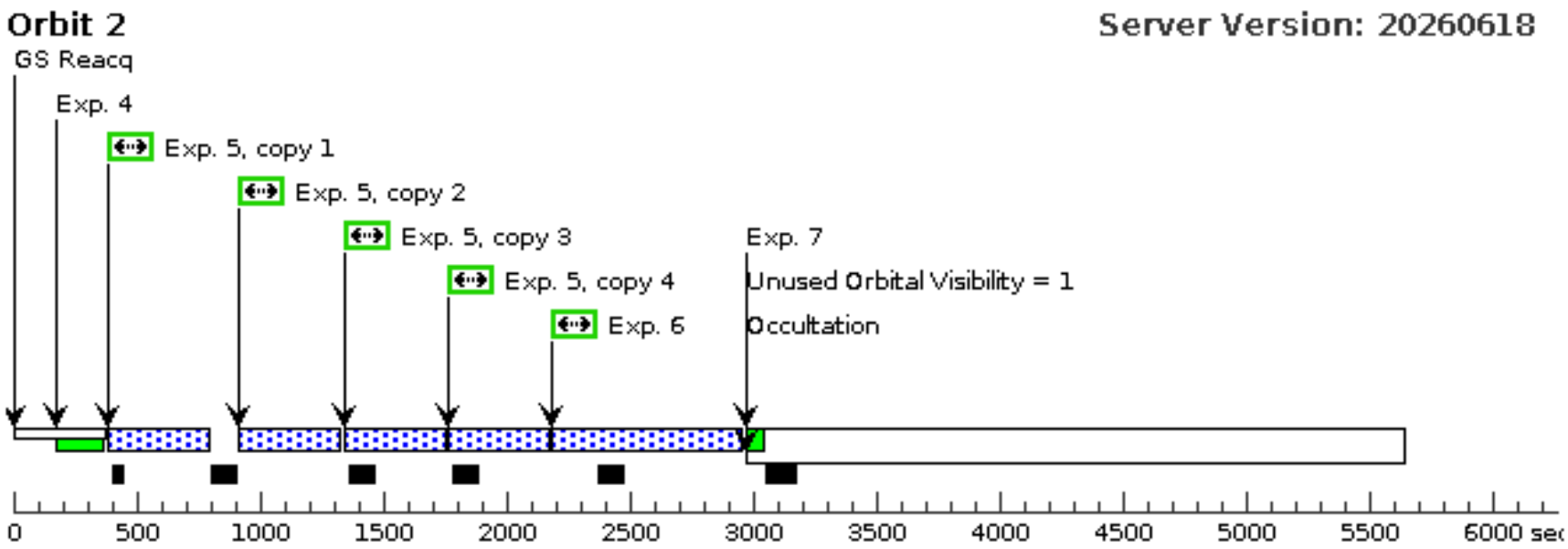
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[A0-A3 V-IV]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.2360951)	(1) 49-CET	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-3 Non-Int in Visit 04	0.2 Secs (0.2 Secs) *[==>]*	***[1]***
2	Obs 1380 (STIS.sp.2360953)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A	WAVECAL=NO		Sequence 1-3 Non-Int in Visit 04	400 Secs X 5 (1925 Secs) *[==>385.0 Secs (Copy 1)]* *[==>385.0 Secs (Copy 2)]* *[==>385.0 Secs (Copy 3)]* *[==>385.0 Secs (Copy 4)]* *[==>385.0 Secs (Copy 5)]*	***[1]***
3	Wavecal 1380	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A			Sequence 1-3 Non-Int in Visit 04	*[==>]*	***[1]***
4	Wavecal 1598	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A			Sequence 4-7 Non-Int in Visit 04	*[==>]*	***[2]***
5	Obs 1598 (STIS.sp.2360954)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 04	400 Secs X 4 (1596 Secs) *[==>399.0 Secs (Copy 1)]* *[==>399.0 Secs (Copy 2)]* *[==>399.0 Secs (Copy 3)]* *[==>399.0 Secs (Copy 4)]*	***[2]***
6	Obs 1763 (STIS.sp.2360956)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 04	600 Secs (599 Secs) *[==>599.0 Secs]*	***[2]***
7	Wavecal 1763	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A			Sequence 4-7 Non-Int in Visit 04	*[==>]*	***[2]***
8	Wavecal 2013	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 04	*[==>]*	***[3]***
9	Obs 2013 (STIS.sp.2360959)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 04	420 Secs (420 Secs) *[==>]*	***[3]***
10	Obs 2263 (STIS.sp.2360960)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 04	420 Secs (420 Secs) *[==>]*	***[3]***
11	Wavecal 2263	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 04	*[==>]*	***[3]***
12	Obs 2513 (STIS.sp.2360961)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 04	420 Secs (420 Secs) *[==>]*	***[3]***
13	Wavecal 2513	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A			Sequence 8-15 Non-Int in Visit 04	*[==>]*	***[3]***
14	Obs 2762 (STIS.sp.2360964)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 04	420 Secs (420 Secs) *[==>]*	***[3]***
15	Wavecal 2762	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A			Sequence 8-15 Non-Int in Visit 04	*[==>]*	***[3]***

Orbit Structure

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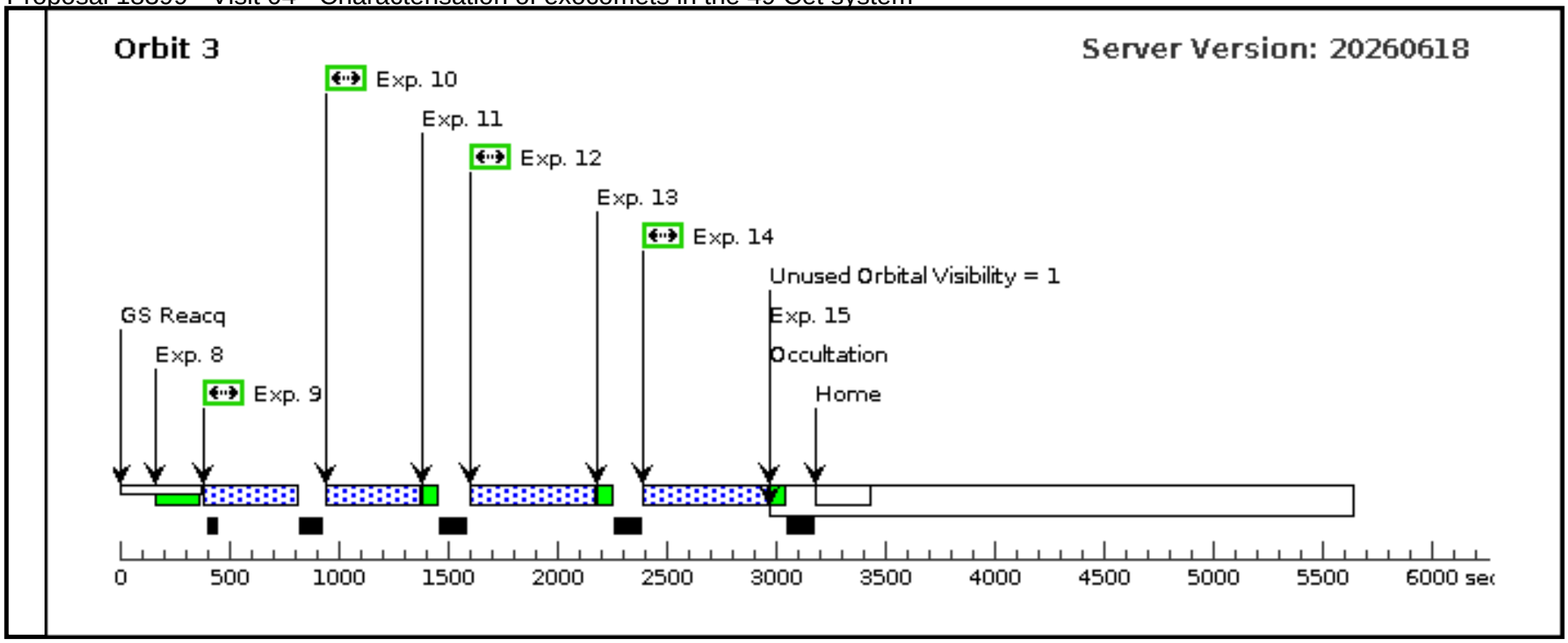
Server Version: 20260618
GS Reacq
Exp. 4
Exp. 5, copy 1
Exp. 5, copy 2
Exp. 5, copy 3
Exp. 5, copy 4
Exp. 6
Exp. 7
Unused Orbital Visibility = 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 3
Server Version: 20260618
Exp. 10
Exp. 11
Exp. 12
Exp. 13
Exp. 14
Unused Orbital Visibility = 1
Exp. 15
GS Reacq
Exp. 8
Exp. 9
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Proposal 18399 - Visit 05 - Characterisation of exocomets in the 49 Cet system

Visit

Proposal 18399, Visit 05 Fri Jul 31 23:00:36 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: AFTER_04 BY 10 D TO 500 D

Fixed Targets

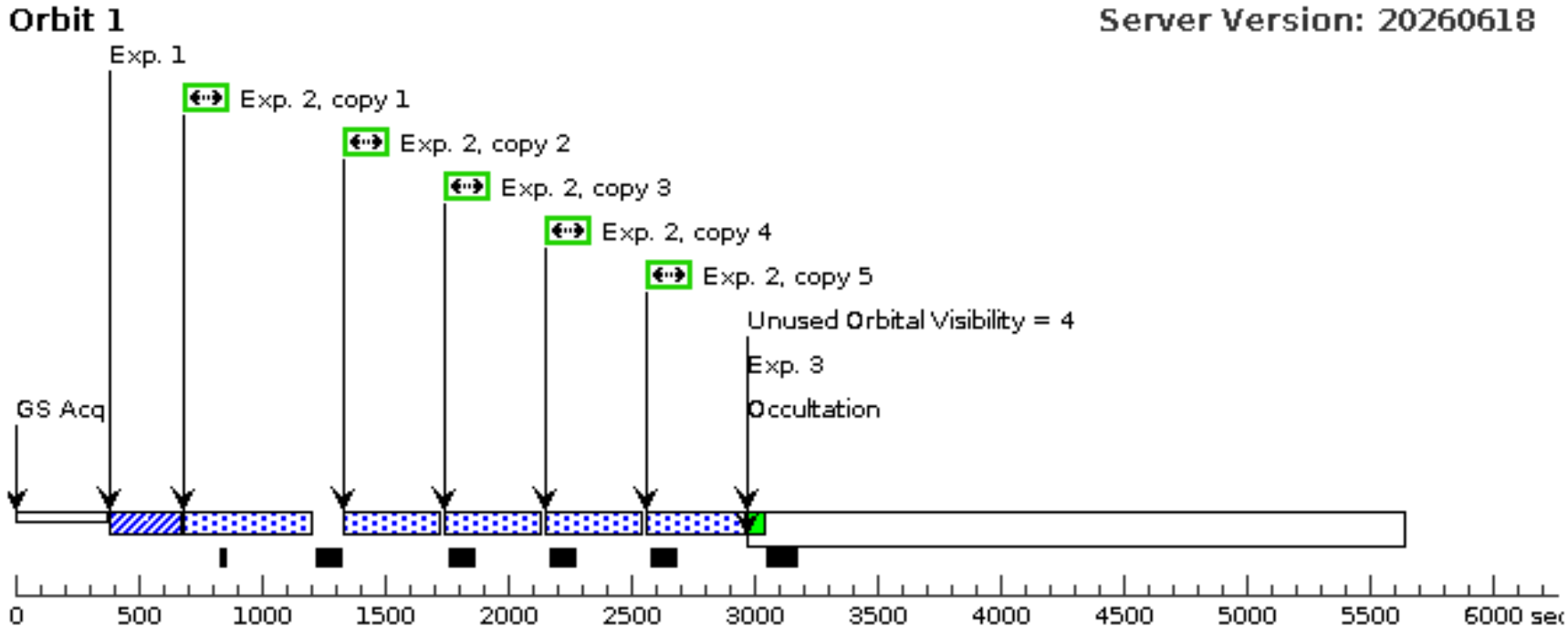
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	49-CET	RA: 01 34 37.7786 (23.6574108d) Dec: -15 40 34.90 (-15.67636d) Equinox: J2000	Proper Motion RA: 94.351 mas/yr Proper Motion Dec: -3.130 mas/yr Parallax: 0.0174725" Epoch of Position: 2000	V=5.607	Reference Frame: ICRS

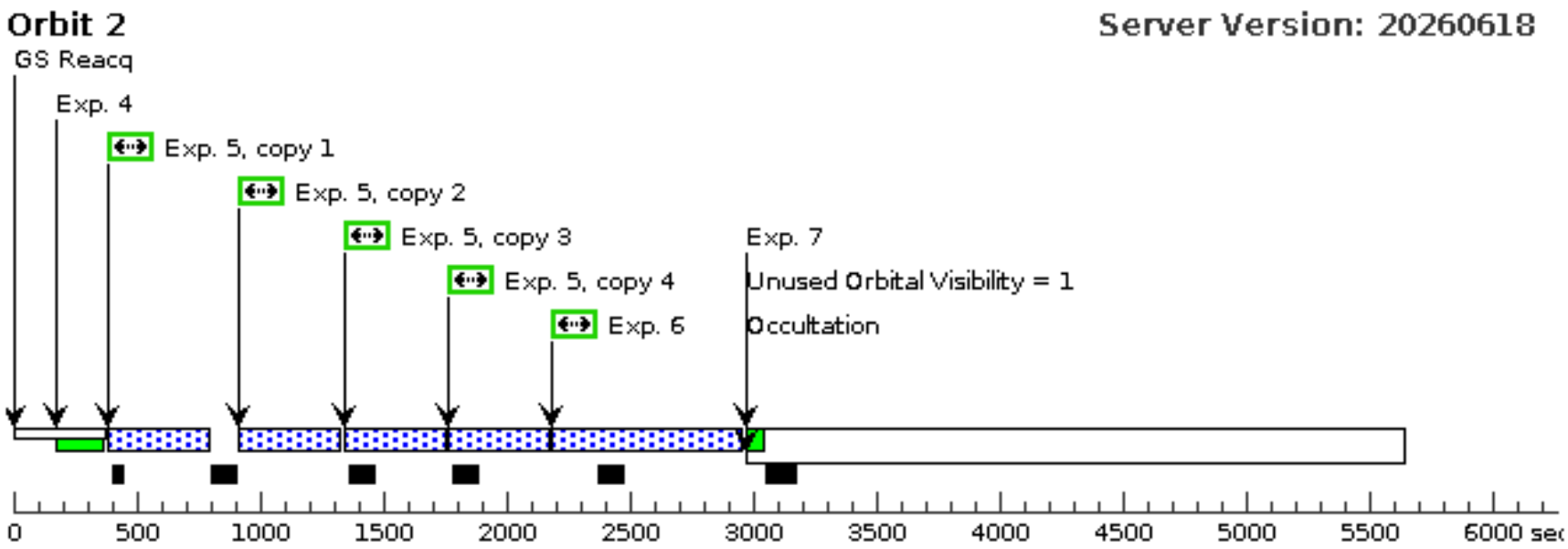
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[A0-A3 V-IV]
Extended=NO

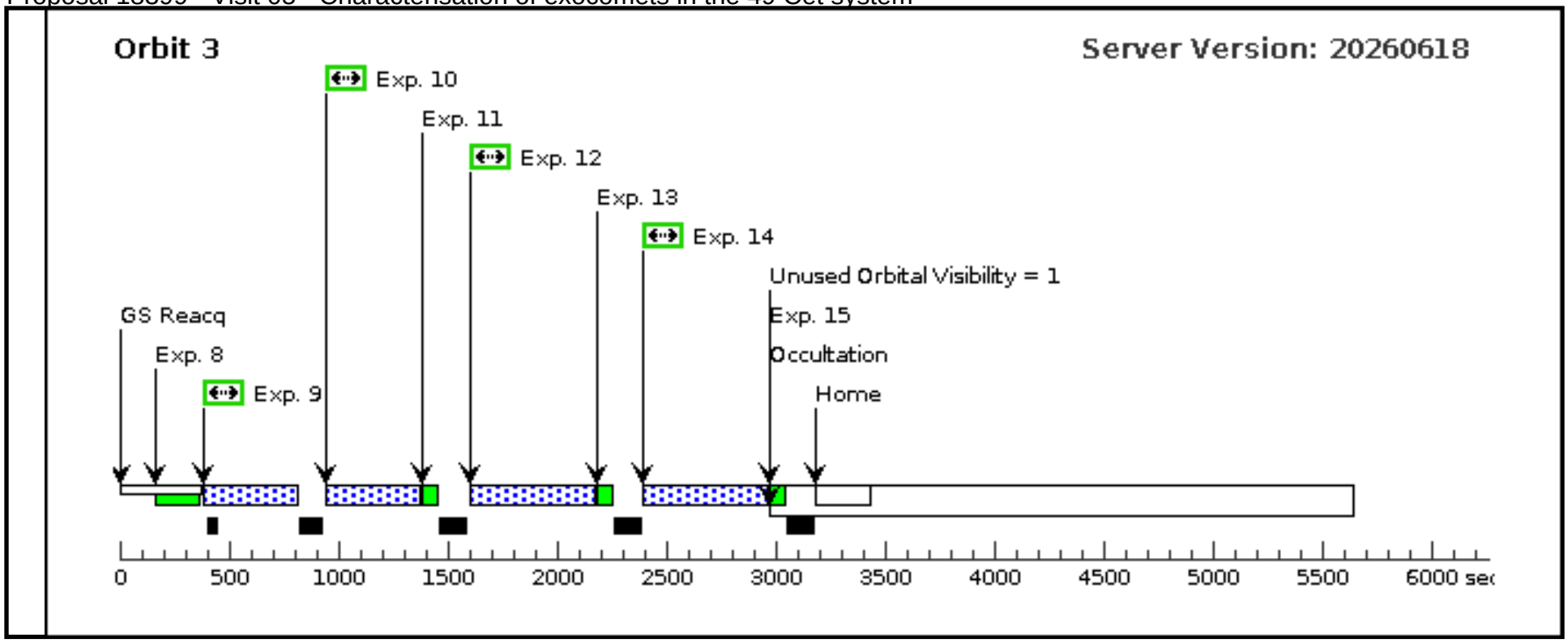
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.2360951)	(1) 49-CET	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-3 Non-Int in Visit 05	0.2 Secs (0.2 Secs) *[==>]*	***[1]***
2	Obs 1380 (STIS.sp.2360953)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A	WAVECAL=NO		Sequence 1-3 Non-Int in Visit 05	400 Secs X 5 (1925 Secs) *[==>385.0 Secs (Copy 1)]* *[==>385.0 Secs (Copy 2)]* *[==>385.0 Secs (Copy 3)]* *[==>385.0 Secs (Copy 4)]* *[==>385.0 Secs (Copy 5)]*	***[1]***
3	Wavecal 1380	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1380 A			Sequence 1-3 Non-Int in Visit 05	*[==>]*	***[1]***
4	Wavecal 1598	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A			Sequence 4-7 Non-Int in Visit 05	*[==>]*	***[2]***
5	Obs 1598 (STIS.sp.2360954)	(1) 49-CET	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140H 1598 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 05	400 Secs X 4 (1596 Secs) *[==>399.0 Secs (Copy 1)]* *[==>399.0 Secs (Copy 2)]* *[==>399.0 Secs (Copy 3)]* *[==>399.0 Secs (Copy 4)]*	***[2]***
6	Obs 1763 (STIS.sp.2360956)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A	WAVECAL=NO		Sequence 4-7 Non-Int in Visit 05	600 Secs (599 Secs) *[==>599.0 Secs]*	***[2]***
7	Wavecal 1763	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 1763 A			Sequence 4-7 Non-Int in Visit 05	*[==>]*	***[2]***
8	Wavecal 2013	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 05	*[==>]*	***[3]***
9	Obs 2013 (STIS.sp.2360959)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 05	420 Secs (420 Secs) *[==>]*	***[3]***
10	Obs 2263 (STIS.sp.2360960)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 05	420 Secs (420 Secs) *[==>]*	***[3]***
11	Wavecal 2263	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2263 A			Sequence 8-15 Non-Int in Visit 05	*[==>]*	***[3]***
12	Obs 2513 (STIS.sp.2360961)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 05	420 Secs (420 Secs) *[==>]*	***[3]***
13	Wavecal 2513	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2513 A			Sequence 8-15 Non-Int in Visit 05	*[==>]*	***[3]***
14	Obs 2762 (STIS.sp.2360964)	(1) 49-CET	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A	WAVECAL=NO		Sequence 8-15 Non-Int in Visit 05	420 Secs (420 Secs) *[==>]*	***[3]***
15	Wavecal 2762	WAVE	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230H 2762 A			Sequence 8-15 Non-Int in Visit 05	*[==>]*	***[3]***

Orbit Structure




Orbit 2
Server Version: 20260618
GS Reacq
Exp. 4
Exp. 5, copy 1
Exp. 5, copy 2
Exp. 5, copy 3
Exp. 5, copy 4
Exp. 6
Exp. 7
Unused Orbital Visibility = 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 3
Server Version: 20260618
Exp. 10
Exp. 11
Exp. 12
Exp. 13
Exp. 14
Unused Orbital Visibility = 1
Exp. 15
GS Reacq
Exp. 8
Exp. 9
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec