18436 - Imaging Six Young Planetary-Mass Companions with HST/WFC3-UVIS

Cycle: 34, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
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Claire Finley (CoI)	University of California - Santa Barbara

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) KOINTREAU-1	WFC3/UVIS	2	18-Aug-2026 11:04:46.0	yes
02	(2) KOINTREAU-3	WFC3/UVIS	2	18-Aug-2026 11:04:47.0	yes
03	(3) ITG-15	WFC3/UVIS	2	18-Aug-2026 11:04:47.0	yes
04	(4) YSES-1	WFC3/UVIS	2	18-Aug-2026 11:04:48.0	yes
05	(5) ROXS-12	WFC3/UVIS	2	18-Aug-2026 11:04:49.0	yes
06	(6) ROXS-42B	WFC3/UVIS	2	18-Aug-2026 11:04:49.0	yes

12 Total Orbits Used

ABSTRACT

Young giant planets encode their formation histories in their accretion history, but recovering accretion rates requires isolating the accretion continuum. The missing piece is UV coverage: only the UV Balmer continuum directly traces Lacc and the shock temperature structure, avoiding the order-of-magnitude uncertainty in current Halpha-based bolometric corrections. We propose consecutive-orbit HST/WFC3/UVIS imaging in F336W

and F656N for six wide-orbit planetary-mass companions (3-18 MJup, q~0.005-0.08) spanning BD to K-type hosts. This program will (1) distinguish planetary-shock from magnetospheric accretion; and (2) anchor the LHalpha-Lacc relation across a broad host-mass range, providing the bolometric correction needed for current and upcoming Halpha surveys with MagAO-X, MUSE, and the ELT.

OBSERVING DESCRIPTION

We will observe six systems with WFC3/UVIS using two consecutive orbits per system. The primary goals are to measure the Balmer-continuum excess with F336W, H-alpha emission with F656N, and the companion photospheric emission with F555W together with either F775W or F850LP. The bright host stars are intentionally allowed to saturate, and repeated exposures use a three-point dither pattern. The allowed telescope orientation ranges are selected to prevent saturated-host bleeding columns from overlapping the companions while retaining broad scheduling flexibility.

ROXs 12, YSES 1, and ITG 15 are observed with F336W, F656N, F555W, and F775W. Their exposure times are designed to detect the companion photosphere at signal-to-noise ratios greater than 5 in both continuum filters. Kointreau-1 and Kointreau-3 are highly extincted, so F336W and F555W are omitted. F850LP provides the photospheric anchor, and the remaining time is assigned to F656N.

ROXs 42B has relatively low extinction, but an F555W detection would require too much observing time. We therefore obtain a signal-to-noise ratio greater than 5 in F775W and use the remaining time to strengthen the F336W and especially the F656N constraints. Post-flash levels are selected to produce a total background of approximately 20 electrons per pixel and reduce charge-transfer-efficiency losses.

Visit

Proposal 18436, Visit 01 Tue Aug 18 15:04:50 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 97D TO 257 D; ORIENT 277D TO 77 D

Comments: KOINTREAU-1 b: two consecutive orbits. Orbit 1 F850LP+F656N; Orbit 2 F656N. F336W and F555W omitted because of high extinction. Saturated primary is intentional. ORIENT ranges for saturated-primary bleed avoidance: 97-257 deg and 277-77 deg.

Patterns

#	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		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	KOINTREAU-1 Alt Name1: XEST-17-036	RA: 04 33 26.2192 (68.3592467d) Dec: +22 45 29.26 (22.75813d) Equinox: J2000	Proper Motion RA: 8.9 mas/yr Proper Motion Dec: -16.525999922123447 mas/yr Parallax: 0.0062913" Epoch of Position: 2000	V=(?) G = 16.52 mag	Reference Frame: ICRS

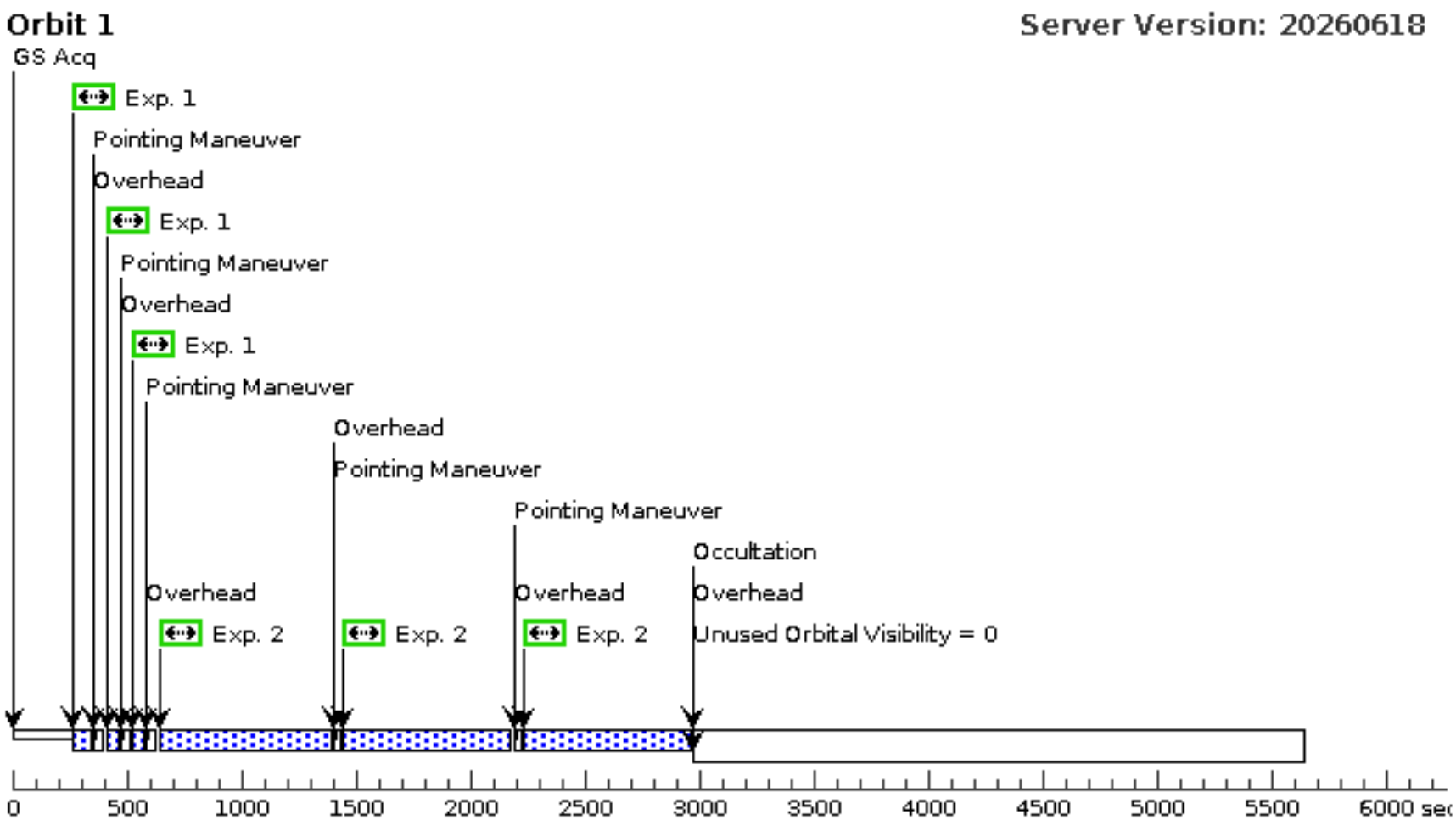
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

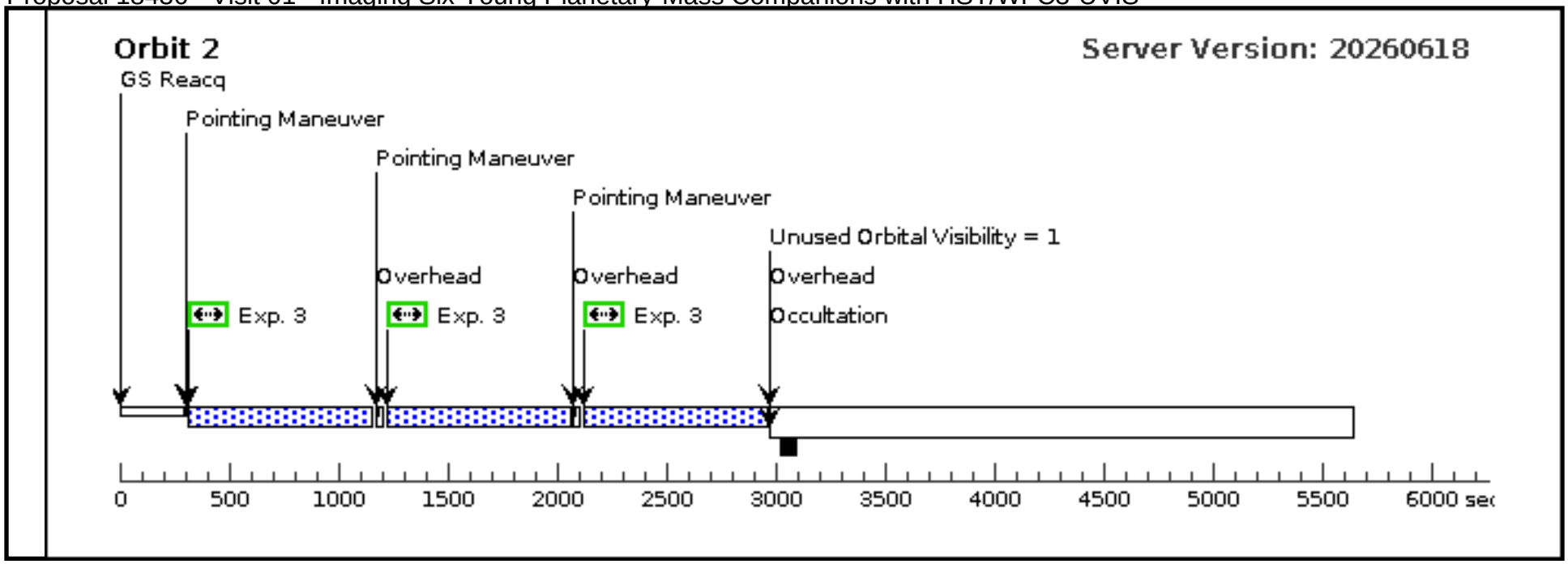
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, LOW MASS COMPANION, PRE-MAIN SEQUENCE STAR, YSO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) KOINTREAU-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F850LP	FLASH=20		Pattern 1, Exps 1-1 in Visit 01 (1)	50 Secs (150 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: snr ~ 6.9									
2		(1) KOINTREAU-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 2-2 in Visit 01 (1)	729 Secs (2187 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
3		(1) KOINTREAU-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 3-3 in Visit 01 (1)	843 Secs (2529 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20260618
GS Reacq
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 1
Overhead
Overhead
Overhead
Exp. 3
Exp. 3
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18436, Visit 02 Tue Aug 18 15:04:50 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 55D TO 215 D; ORIENT 235D TO 35 D

Comments: KOINTREAU-3 b: two consecutive orbits. Orbit 1 has the three-point F850LP anchor followed by one unpatterned F656N exposure that uses the remaining visibility; Orbit 2 has the three-point F656N sequence. F336W and F555W are omitted because of high extinction. Saturated primary is intentional. ORIENT ranges for saturated-primary bleed avoidance (pending PC approval): 55-215 deg and 235-35 deg

Patterns

#	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		(1), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	KOINTREAU-3 Alt Name1: ISO-OPH-96	RA: 16 27 4.5157 (246.7688154d) Dec: -24 42 59.67 (-24.71657d) Equinox: J2000	Proper Motion RA: -6.478 mas/yr Proper Motion Dec: -24.96700001302088 mas/yr Parallax: 0.0072555" Epoch of Position: 2000	V=(?) R=16.69 mag	Reference Frame: ICRS

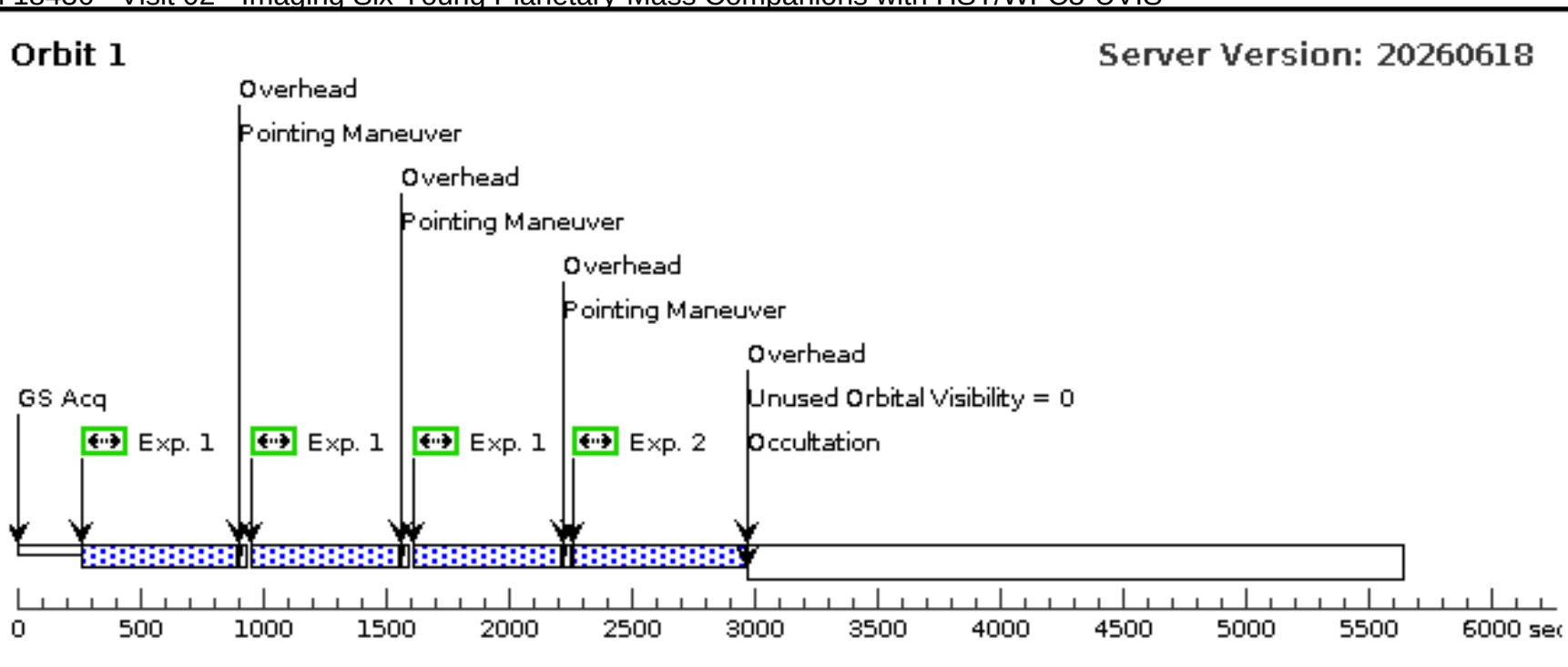
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

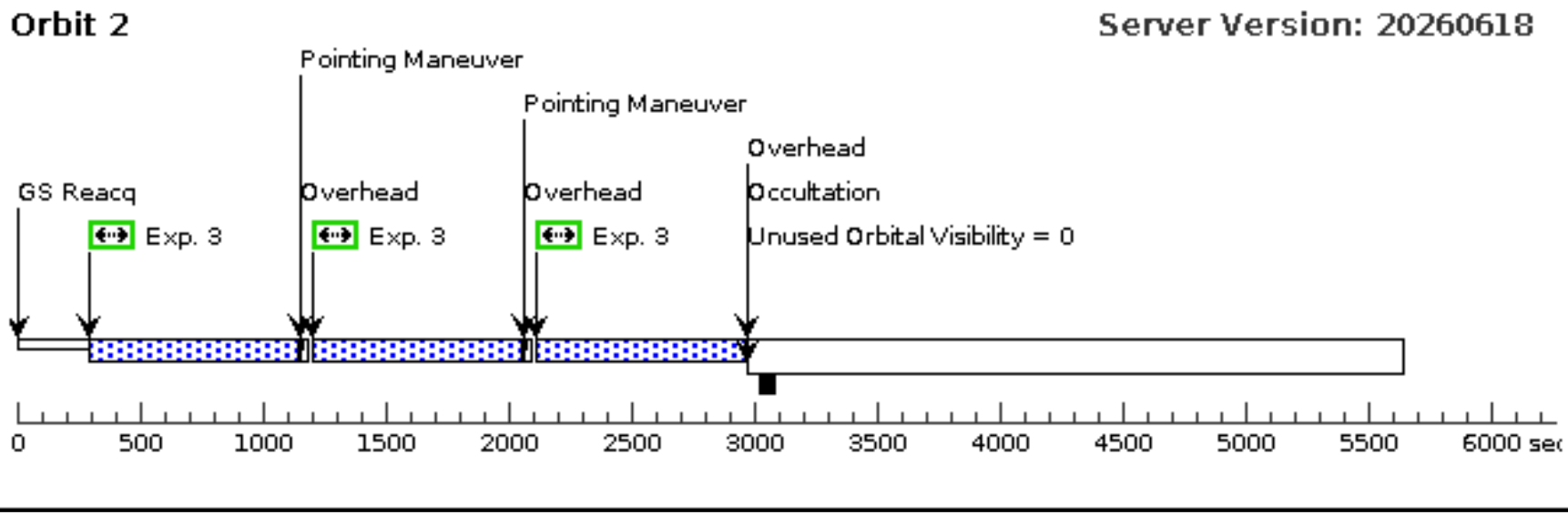
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, LOW MASS COMPANION, PRE-MAIN SEQUENCE STAR, YSO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) KOINTREAU-3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F850LP	FLASH=12		Pattern 1, Exps 1-1 in Visit 02 (1)	600 Secs (1800 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: predicted companion S/N ~ 5.1									
2		(2) KOINTREAU-3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Sequence 2-2 Non-In t in Visit 02	679 Secs (679 Secs) *[==>]*	***[1]***
Comments: Additional single F656N exposure using the remaining Orbit 1 visibility									
3		(2) KOINTREAU-3	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 3-3 in Visit 02 (1)	850 Secs (2550 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 18436, Visit 03 Tue Aug 18 15:04:50 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 115D TO 275 D; ORIENT 295D TO 95 D

Comments: ITG 15B: two consecutive orbits. Orbit 1 F336W+F555W; Orbit 2 F656N+F775W. The J-normalized atmosphere predicts F555W S/N about 7.2. Saturated primary is intentional. ETC v34.2 average-background FLASH checks: F336W 560 s FLASH=18 (WFC3UVIS.im.2366577), F555W 225 s FLASH=12 (WFC3UVIS.im.2366568), F656N 746 s FLASH=18 (WFC3UVIS.im.2366578), F775W 25 s FLASH=20 (WFC3UVIS.im.2366570). ORIENT ranges for saturated-primary bleed avoidance: 115-275 deg and 295-95 deg.

Patterns

#	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		(1), (2), (3), (4)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	ITG-15 Alt Name1: EPIC248030407	RA: 04 39 44.8814 (69.9370058d) Dec: +26 01 52.71 (26.03131d) Equinox: J2000	Proper Motion RA: 6.687 mas/yr Proper Motion Dec: -21.949000006316055 mas/yr Parallax: 0.0071594" Epoch of Position: 2000	V=(?) G = 14.98mag	Reference Frame: ICRS

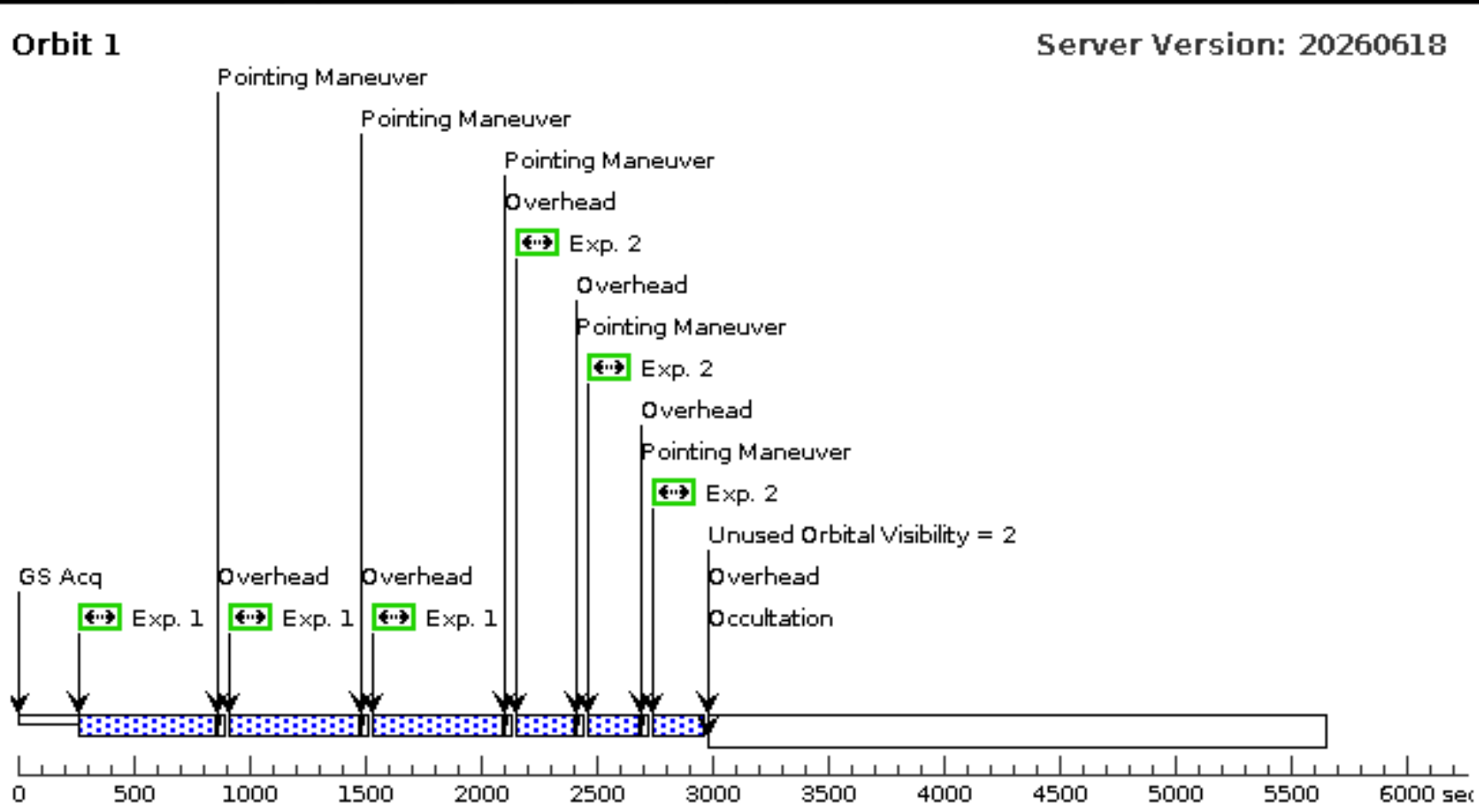
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

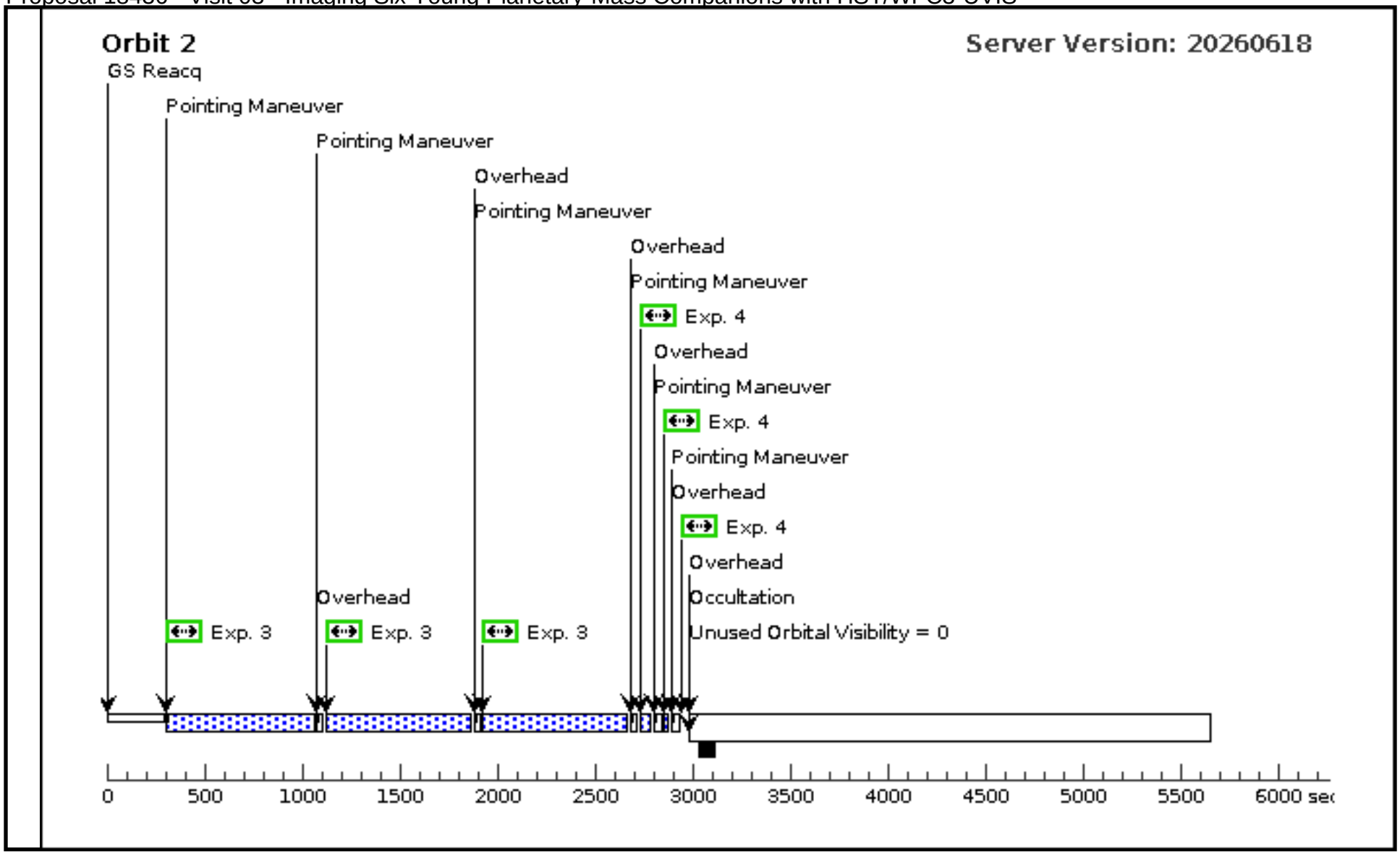
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, LOW MASS COMPANION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) ITG-15	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	FLASH=18		Pattern 1, Exps 1-1 in Visit 03 (1)	560 Secs (1680 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: Accretion-continuum exposure; zero-flash background 2.9 e-/pixel. FLASH=18 verified without a CTE warning in WFC3UVIS.im.2366577. Primary saturation allowed.									
2		(3) ITG-15	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	FLASH=12		Pattern 1, Exps 2-2 in Visit 03 (1)	225 Secs (675 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: Photospheric anchor; zero-flash background 8.8 e-/pixel. FLASH=12 verified without a CTE warning in WFC3UVIS.im.2366568. J-normalized atmosphere predicts companion S/N about 7.2.									
3		(3) ITG-15	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 3-3 in Visit 03 (1)	746 Secs (2238 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***
Comments: H-alpha line exposure; zero-flash background 2.5 e-/pixel. FLASH=18 verified without a CTE warning in WFC3UVIS.im.2366578. Primary saturation allowed.									
4		(3) ITG-15	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F775W	FLASH=20		Pattern 1, Exps 4-4 in Visit 03 (1)	25 Secs (75 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***
Comments: Red photospheric anchor; zero-flash background 0.66 e-/pixel. FLASH=20 verified without a CTE warning in WFC3UVIS.im.2366570. Nominal companion S/N about 24.									

Orbit Structure




Orbit 2
Server Version: 20260618
GS Reacq
Pointing Maneuver
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Pointing Maneuver
Exp. 4
Overhead
Pointing Maneuver
Exp. 4
Pointing Maneuver
Overhead
Exp. 4
Overhead
Occultation
Unused Orbital Visibility = 0
Overhead
Exp. 3
Exp. 3
Exp. 3
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18436, Visit 04 Tue Aug 18 15:04:50 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 359D TO 104 D; ORIENT 124D TO 159 D; ORIENT 179D TO 284 D; ORIENT 304D TO 339 D

Comments: YSES 1 system: two consecutive orbits; both b and c remain in the subarray. Orbit 1 F336W+F775W; Orbit 2 F656N+F555W. Saturated primary is intentional. ORIENT ranges for saturated-primary bleed avoidance: 359-104 deg, 124-159 deg, 179-284 deg, and 304-339 deg. For companion PAs 214 deg (b) and 159 deg (c), exclude +/-10 deg around ORIENT=169/349 deg and 114/294 deg, respectively; calculation uses the WFC3/UVIS detector-column offset ORIENT=PA+135 deg.

Patterns

#	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		(1), (2), (3), (4)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	YSES-1 Alt Name1: TYC-8998-760-1	RA: 13 25 12.1263 (201.3005262d) Dec: -64 56 20.69 (-64.93908d) Equinox: J2000	Proper Motion RA: -40.996 mas/yr Proper Motion Dec: -17.733999970914738 mas/yr Parallax: 0.0106124" Epoch of Position: 2000	V=11.12	Reference Frame: ICRS

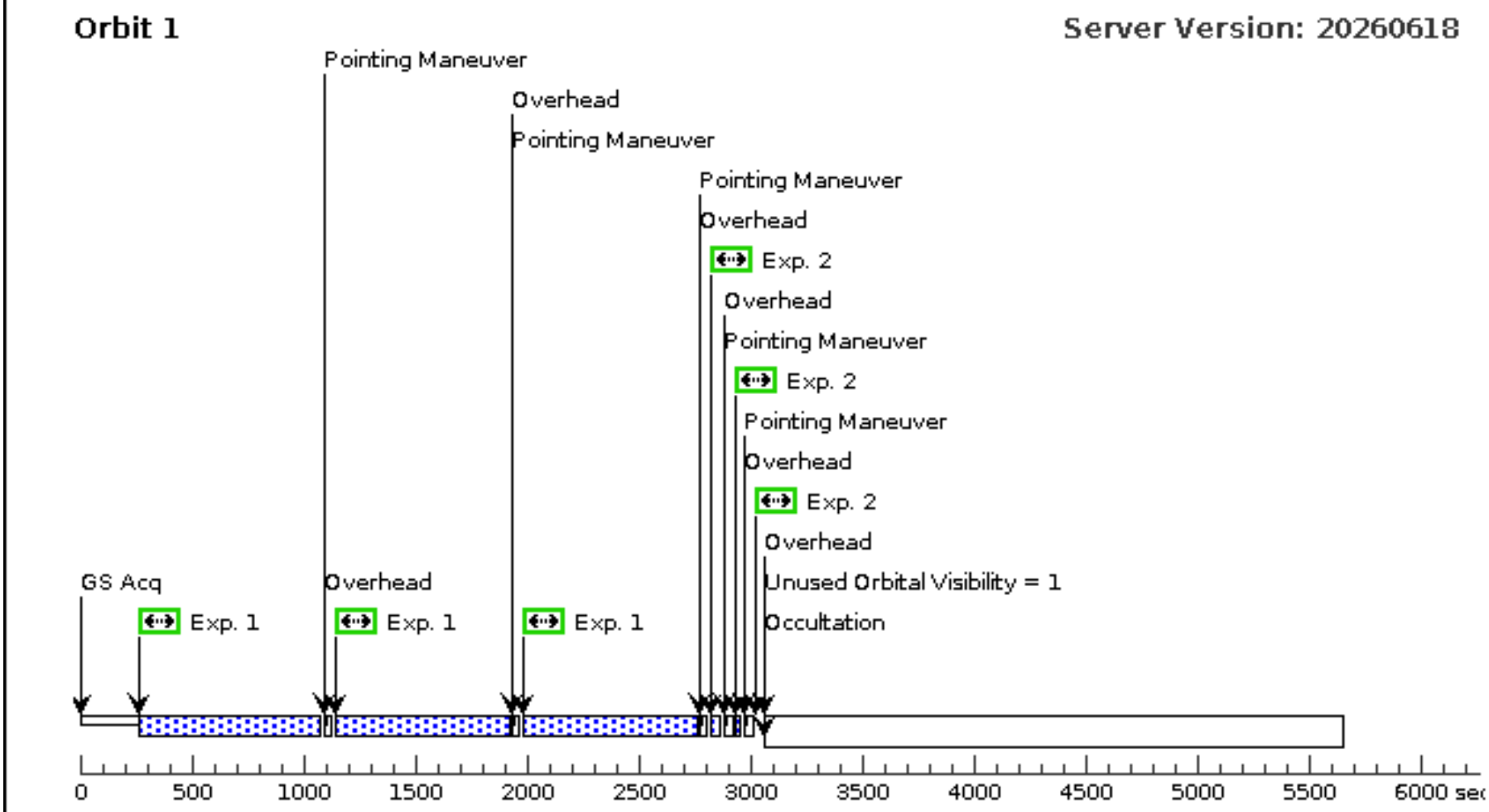
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

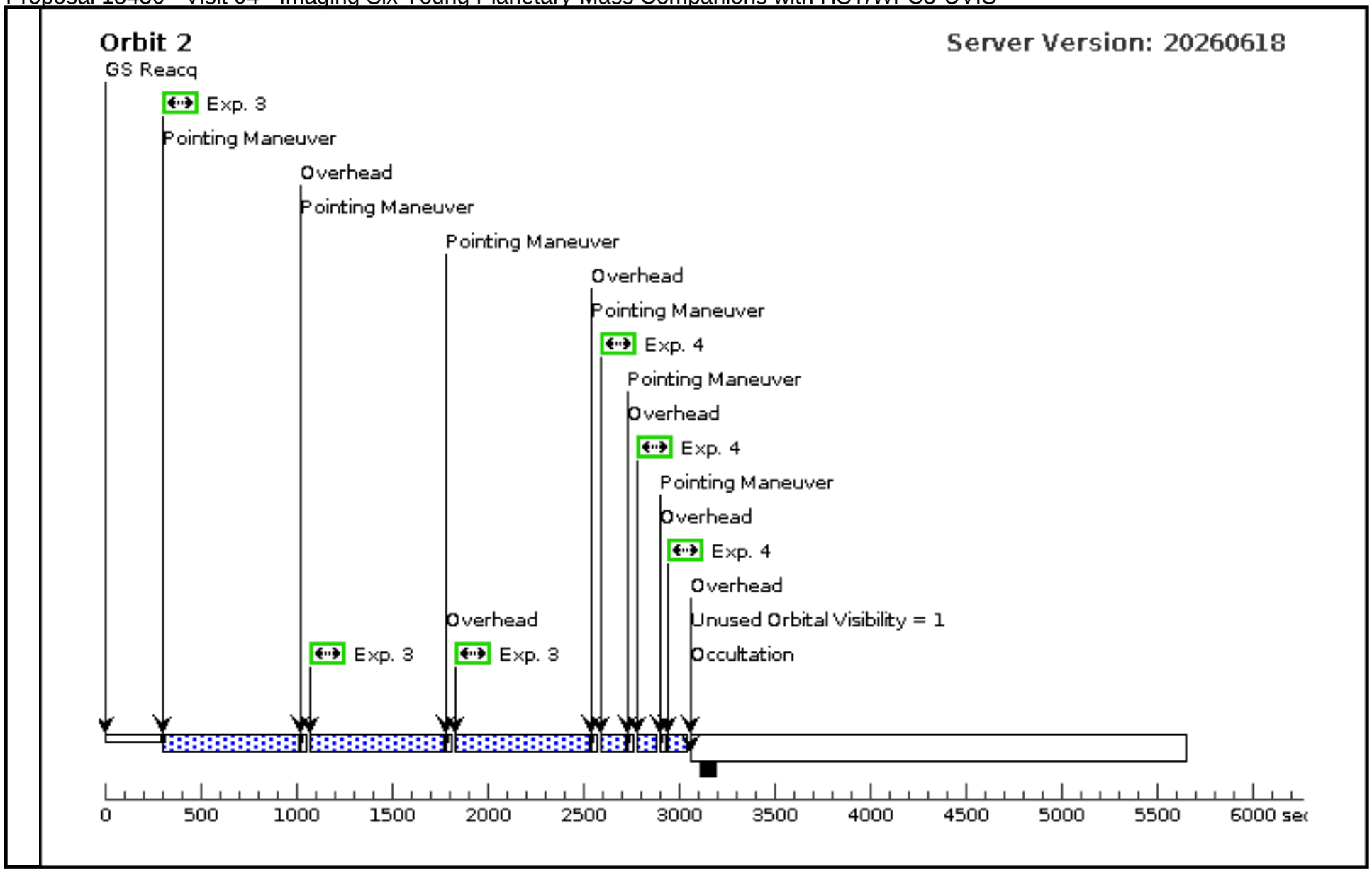
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, LOW MASS COMPANION, PRE-MAIN SEQUENCE STAR, YSO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) YSES-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	FLASH=16		Pattern 1, Exps 1-1 in Visit 04 (1)	784 Secs (2352 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(4) YSES-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F775W	FLASH=19		Pattern 1, Exps 2-2 in Visit 04 (1)	25 Secs (75 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
3		(4) YSES-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 3-3 in Visit 04 (1)	698 Secs (2094 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***
4		(4) YSES-1	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	FLASH=16		Pattern 1, Exps 4-4 in Visit 04 (1)	100 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***

Orbit Structure




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

Visit

Proposal 18436, Visit 05 Tue Aug 18 15:04:50 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 17D TO 177 D; ORIENT 197D TO 357 D

Comments: ROXs 12 B: two consecutive orbits. Orbit 1 F336W+F555W; Orbit 2 F656N+F775W. Saturated primary is intentional. ORIENT ranges for saturated-primary bleed avoidance: 17-177 deg and 197-357 deg.

Patterns

#	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		(1), (2), (3), (4)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	ROXS-12	RA: 16 26 28.0397 (246.6168321d) Dec: -25 26 47.72 (-25.44659d) Equinox: J2000	Proper Motion RA: -6.858 mas/yr Proper Motion Dec: -24.81500005160342 mas/yr Parallax: 0.0072169999999999995" Epoch of Position: 2000	V=14.29	Reference Frame: ICRS

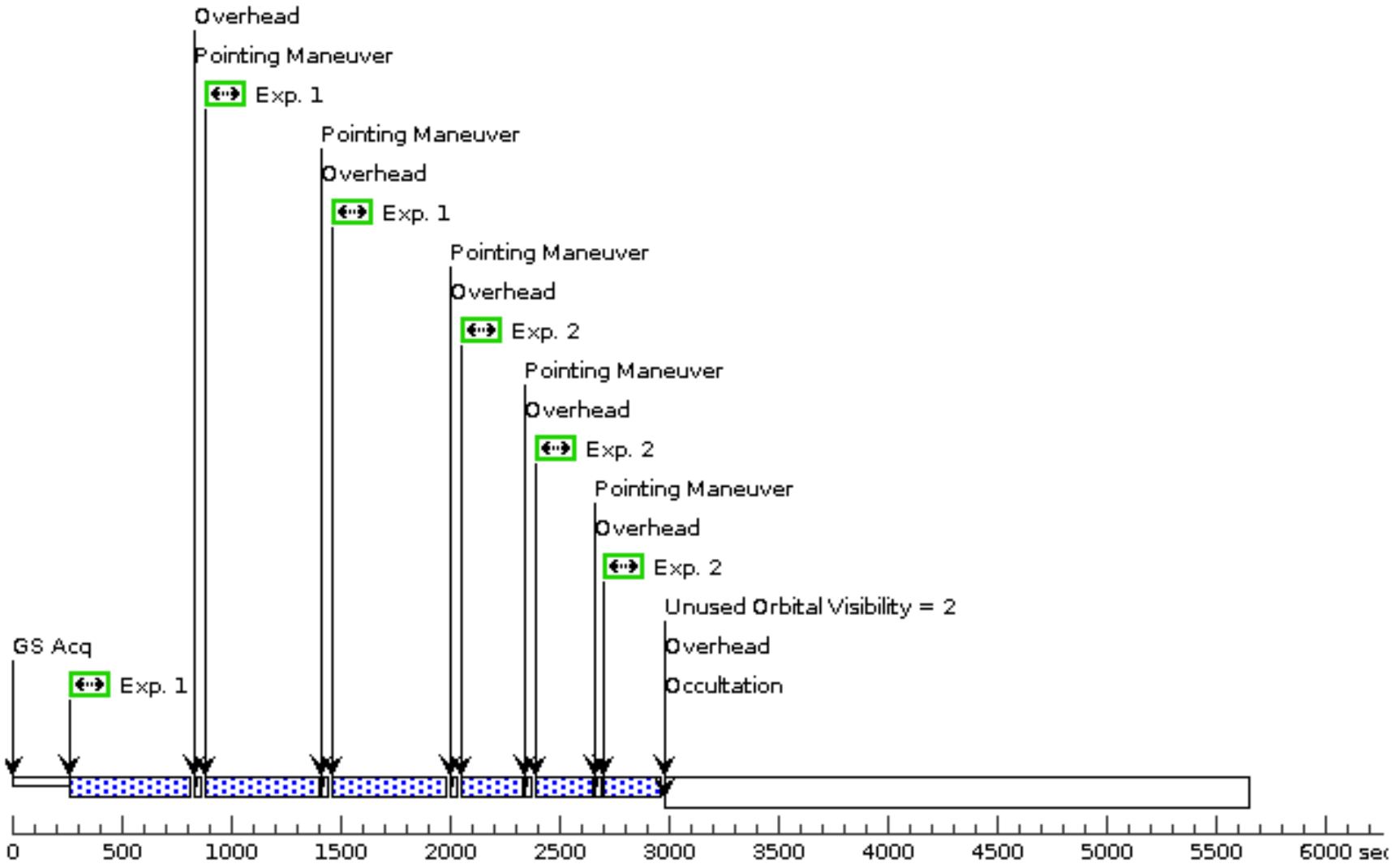
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

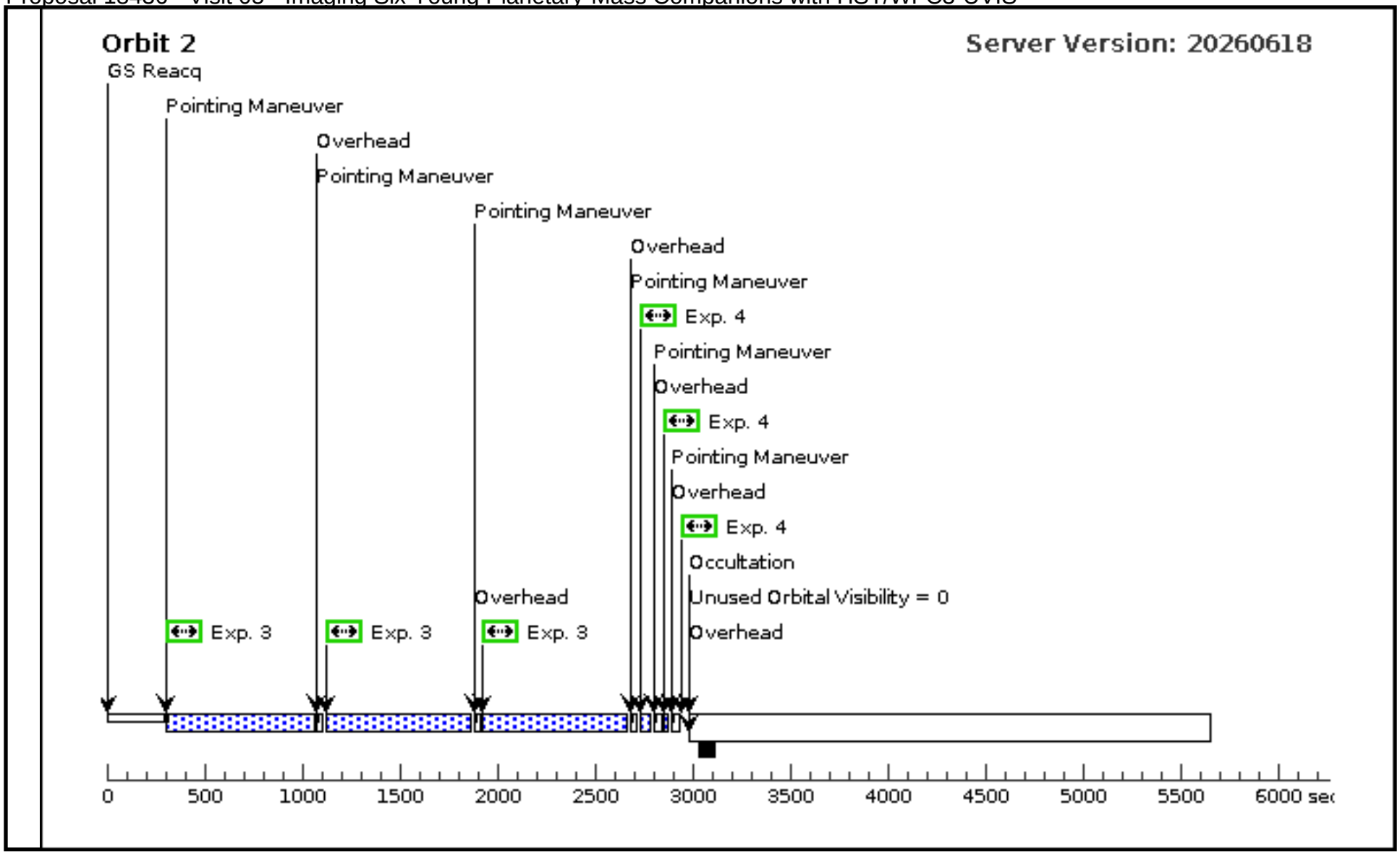
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, LOW MASS COMPANION, PRE-MAIN SEQUENCE STAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) ROXS-12	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	FLASH=18		Pattern 1, Exps 1-1 in Visit 05 (1)	525 Secs (1575 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(5) ROXS-12	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	FLASH=10		Pattern 1, Exps 2-2 in Visit 05 (1)	260 Secs (780 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: predicted companion S/N ~ 5.2.									
3		(5) ROXS-12	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 3-3 in Visit 05 (1)	746 Secs (2238 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***
4		(5) ROXS-12	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F775W	FLASH=20		Pattern 1, Exps 4-4 in Visit 05 (1)	25 Secs (75 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***
Comments: predicted companion S/N about 24.									

Orbit Structure




Orbit 2
Server Version: 20260618
GS Reacq
Pointing Maneuver
Overhead
Pointing Maneuver
Pointing Maneuver
Overhead
Pointing Maneuver
Exp. 4
Pointing Maneuver
Overhead
Exp. 4
Pointing Maneuver
Overhead
Exp. 4
Occultation
Unused Orbital Visibility = 0
Overhead
Exp. 3
Exp. 3
Exp. 3
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18436, Visit 06 Tue Aug 18 15:04:50 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 53D TO 213 D; ORIENT 233D TO 33 D

Comments: ROXs 42B b: two consecutive orbits. Orbit 1 F336W+F775W; Orbit 2 is dedicated to F656N. F555W is omitted because a meaningful photospheric detection is too expensive. Saturated primary is intentional. ETC v34.2 average-background FLASH checks: F336W 725 s FLASH=17 (WFC3UVIS.im.2366571), F775W 55 s FLASH=19 (WFC3UVIS.im.2366579), F656N 843 s FLASH=18 (WFC3UVIS.im.2366580). ORIENT ranges for saturated-primary bleed avoidance: 53-213 deg and 233-33 deg.

Patterns

#	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		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ROXS-42B	RA: 16 31 15.0183 (247.8125763d) Dec: -24 32 43.72 (-24.54548d) Equinox: J2000	Proper Motion RA: -5.732 mas/yr Proper Motion Dec: -23.36600002763589 mas/yr Parallax: 0.0068284" Epoch of Position: 2000	V=14.27	Reference Frame: ICRS

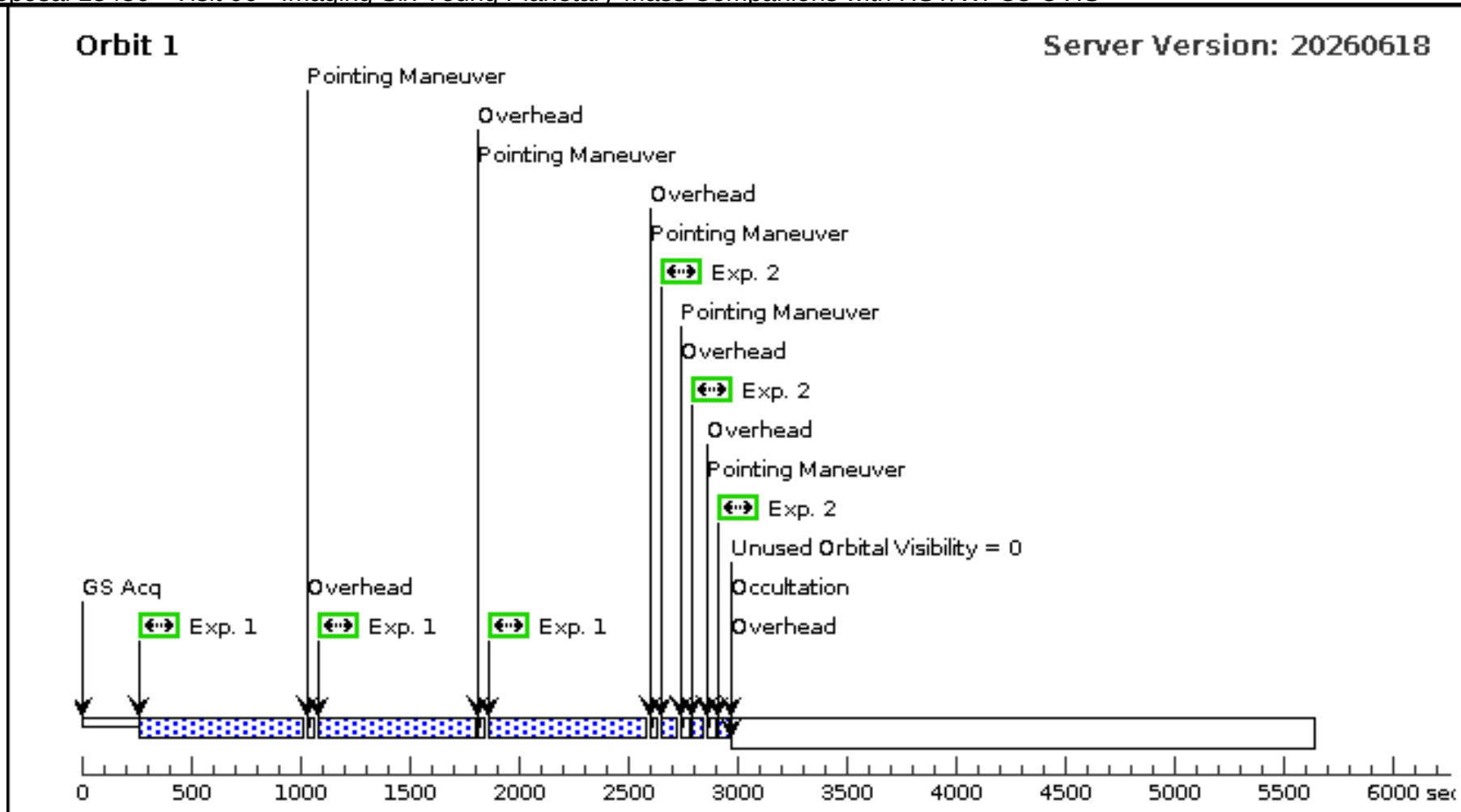
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

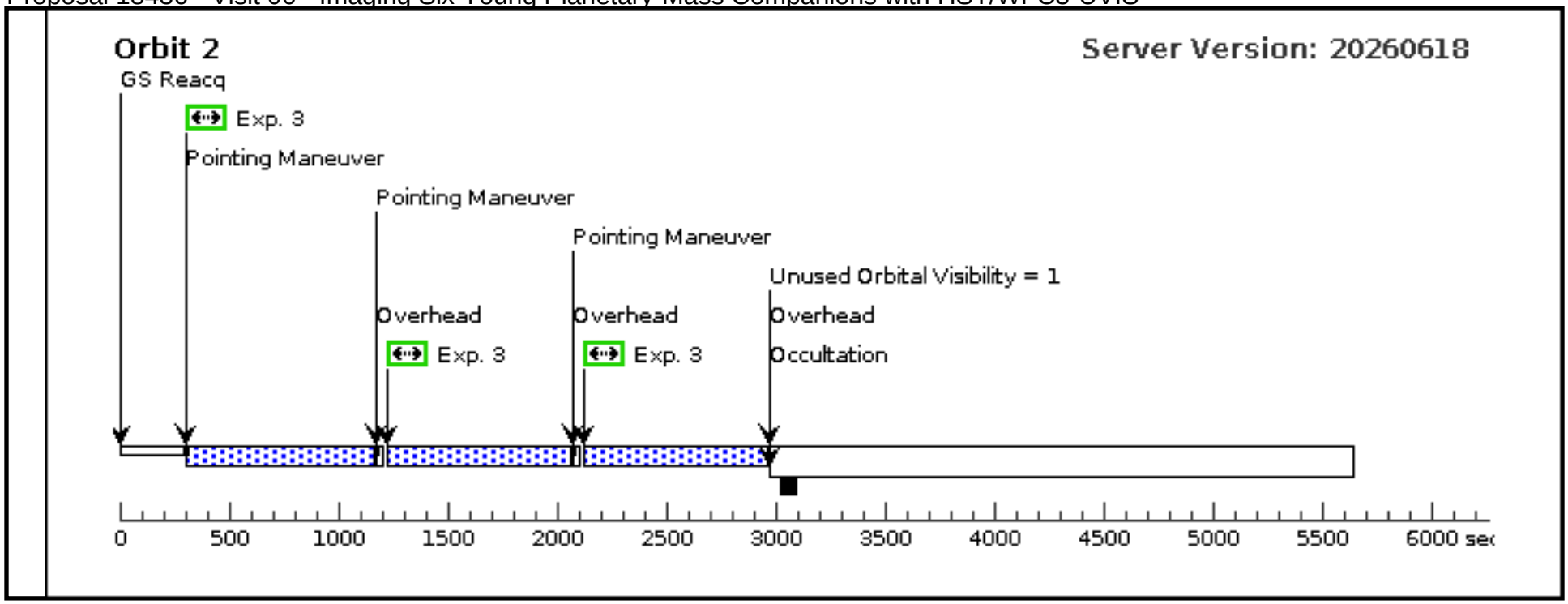
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, LOW MASS COMPANION, PRE-MAIN SEQUENCE STAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) ROXS-42B	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	FLASH=17		Pattern 1, Exps 1-1 in Visit 06 (1)	725 Secs (2175 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: Accretion-continuum exposure; zero-flash background 3.8 e-/pixel. FLASH=17 verified without a CTE warning in WFC3UVIS.im.2366571.									
2		(6) ROXS-42B	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F775W	FLASH=19		Pattern 1, Exps 2-2 in Visit 06 (1)	55 Secs (165 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
Comments: Red photospheric anchor; zero-flash background 1.5 e-/pixel. FLASH=19 verified without a CTE warning in WFC3UVIS.im.2366579.									
3		(6) ROXS-42B	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F656N	FLASH=18		Pattern 1, Exps 3-3 in Visit 06 (1)	843 Secs (2529 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[2]***
Comments: H-alpha line exposure; zero-flash background 2.8 e-/pixel. FLASH=18 verified without a CTE warning in WFC3UVIS.im.2366580.									

Orbit Structure




Orbit 2
Server Version: 20260618
GS Reacq
Exp. 3
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Orbital Visibility = 1
Overhead
Exp. 3
Overhead
Exp. 3
Overhead
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec