# 18030 - Muscles Advanced Library With an Atmospheric Retention Emphasis

Cycle: 33, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

**INVESTIGATORS**



| *Name* | *Institution* |
|---|---|
| **Prof. Kevin France (PI) (Contact)** | **University of Colorado at Boulder** |
| Dr. Christian Schneider (CoI) (ESA Member) | Christian-Albrechts Universitat zu Kiel |
| Dr. Allison Youngblood (CoI) | NASA Goddard Space Flight Center |
| Dr. Cynthia Suzanne Froning (CoI) | Southwest Research Institute |
| Dr. Girish M. Duvvuri (CoI) | Vanderbilt University |
| Dr. Alexander Brown (CoI) | University of Colorado at Boulder |
| Dr. David John Wilson (CoI) | University of Colorado at Boulder |



**VISITS**

| *Visit* | *Targets used in Visit* | *Configurations used in Visit* | *Orbits Used* | *Last Orbit Planner Run* | *OP Current with Visit?* |
|---|---|---|---|---|---|
| 01 | (2) GJ3929 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:27.0 | yes |
| 02 | (2) GJ3929 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:28.0 | yes |
| 03 | (2) GJ3929 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:28.0 | yes |
| 04 | (2) GJ3929 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:29.0 | yes |

| *Visit* | *Targets used in Visit* | *Configurations used in Visit* | *Orbits Used* | *Last Orbit Planner Run* | *OP Current with Visit?* |
|---|---|---|---|---|---|
| 05 | (1) LTT1445A | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:29.0 | yes |
| 06 | (1) LTT1445A | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:30.0 | yes |
| 07 | (1) LTT1445A | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:30.0 | yes |
| 08 | (1) LTT1445A | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:31.0 | yes |
| 09 | (4) LHS1140 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:31.0 | yes |
| 10 | (4) LHS1140 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:32.0 | yes |
| 11 | (4) LHS1140 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:32.0 | yes |
| 12 | (4) LHS1140 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:32.0 | yes |
| 60 | (4) LHS1140 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:33.0 | yes |
| 62 | (4) LHS1140 | COS/FUV<br>COS/NUV | 3 | 28-Aug-2026 12:00:34.0 | yes |

42 Total Orbits Used

**ABSTRACT**

Shoring Up the Cosmic Shoreline: Improving the Cumulative XUV Irradiance Knowledge of Rocky Worlds DDT Targets

The JWST Rocky Worlds Director's Discretionary Time (RW DDT) program is studying whether rocky planets orbiting M dwarf stars can retain their atmospheres. The RW DDT is targeting approximately 10 of the most promising small planets for (1) atmospheric detection observations with JWST and (2) measurements of the far-ultraviolet to infrared stellar spectral energy distributions with HST. The RW program is framed around the

concept of the Cosmic Shoreline, where a planet's gravity (escape velocity) is compared with the escape-driving XUV energy input from the star.

We propose to directly support the fundamental goal of the DDT program with a multi-cycle GO+AR program to quantify the stellar XUV environments of the RW target stars and empirically place them on the Cosmic Shoreline. We will do this with (1) new far-ultraviolet + X-ray (Chandra and XMM) observations of the host stars in Cycles 33, 34, and 35 that enable high-quality extreme-ultraviolet calculations and characterization of the full XUV (X-ray + extreme-ultraviolet) irradiance, (2) observation and characterization of stellar flares across the full high-energy spectral band to quantify the contribution of time-variable phenomena to the total ionizing radiation budget, and (3) creation of a high-level stellar data product library to support the community's analysis and interpretation of the terrestrial planet data acquired by the RW DDT program.

**OBSERVING DESCRIPTION**

++Observing Modes and Exposure Times: We propose deep, COS G140L CENWAVE 800 observations of each of the Rocky Worlds targets. The short wavelength coverage compared to the RW DDT HST plan (monitoring in COS G130M only; Espinoza & Diamond-Lowe 2025) provides access to key spectral diagnostics that |*|fill in|*| plasma temperature coverage for robust EUV spectral calculations using the DEM method, including the brightest stellar FUV lines in cool star atmosphere (C III |*|977 |*|A, O VI 1032/1038 |*|A; Redfield et al. 2002) and high-temperature lines not covered by standard COS G130M CENWAVE 1291 observations (S VI |*|933/944 |*|A, Fe XVIII 974 |*|A, Fe XIX 1118 |*|A; Redfield et al. 2003).

G140L CENWAVE 800 has the additional advantage of being designed specifically to minimize the astigmatic spectral height on the COS detector at |*| < 1100 |*|A, reducing the background levels where HST|*|s sensitivity is lower (e.g., Sankrit et al. 2018). We estimate exposure times for our proposed observations by scaling the observed Si IV flux of LTT1445 A (Diamond Lowe et al. 2024) with line ratios derived from AU Mic observations by FUSE and HST (Redfield et al., 2002; Feinstein et al., 2022). We find that quiescent S/N per spectral resolution element |*| 4 |*| 5 in the peaks of key lines (C III, O VI, Fe XIX) can be achieved in 12 orbit observations (COS.sp.1949954, COS.sp.1949955, COS.sp.1949956), which we propose to break into 4 visits of 3 orbits each. These observations will also be

sensitive to flares which can raise the FUV flux by factors of 5 |*| 10 and are expected to be present during |*| 25 |*| 40% of the total observing duration (France et al. 2020). The majority of our proposed targets have previous UV detections, and UV/X-ray flares have been observed on several of our proposed targets (e.g., Brown et al. 2022; Behr et al. 2023).

++FUV Spectral Lightcurve Production for Flares |*| The COS FUV XDL detector records spectra in time-tagged mode as [x (or |*|), y, t] photon lists, where x is the photon|*|s x-axis arrival position (i.e., wavelength), y is the photon|*|s cross-dispersion location, and t is the photon arrival time. The CALCOS-provided corrtag files contain the [x, y, t] photon lists, and the total number of counts in a [|*|x,|*|y] box is integrated over an arbitrary time step |*|t as part of CalCOS|*|s SplitTag package. Flux-calibrated light curves (in units of erg cm|*|2 s|*|1) are produced by integrating the SplitTag x1d spectrum over the wavelength interval |*| of the spectral line of interest.

++COS Instrument Safety & Lifetime Position Usage: All of the spectral estimates for our targets have been run through the STScI on-line Exposure Time Calculators, including the |*|M dwarf flare safety margins|*| (COS ISR 2017-01-v3). Our targets are all well within the safety limits for the COS FUV detector using the G140L grating (including the bright lines Ly|*|, Si IV, and C IV). The targets have been checked against the new COS Lifetime Position Usage rules and are well under the 1% guidelines (COS.sp.1958706).

## Visit

**Proposal 18030, GJ3929_vis1 (01), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 07-JAN-2027:00:00:00 AND 18-JAN-2027:00:00:00; BETWEEN 08-FEB-2027:00:00:00 AND 08-MAR-2027:00:00:00

*Comments: Coordinated with XMM*

## Diagnostics

(GJ3929_vis1 (01)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

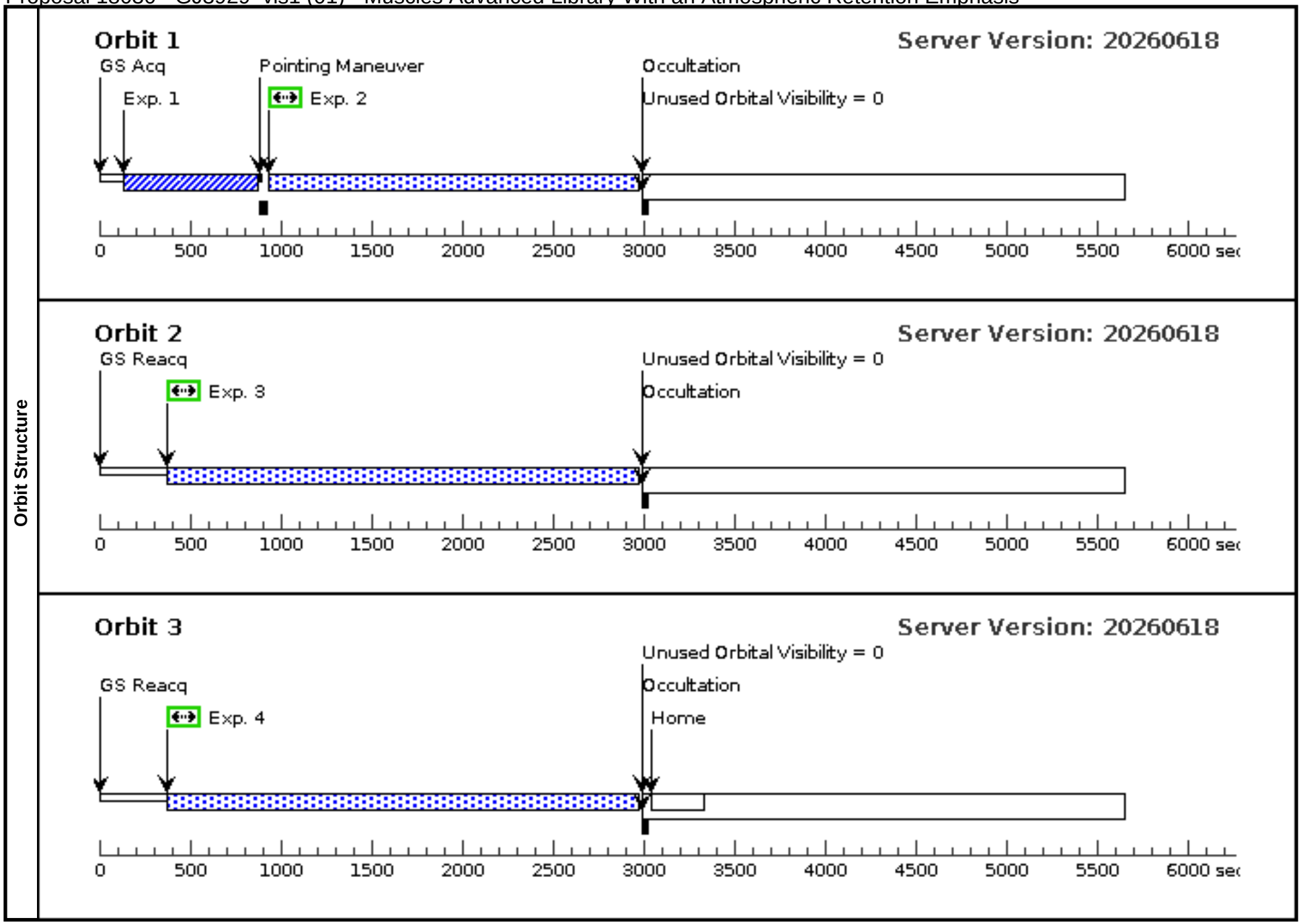
| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (2) | GJ3929 | RA: 15 58 18.7976 (239.5783233d)<br>Dec: +35 24 24.28 (35.40674d)<br>Equinox: J2000 | Proper Motion RA: -143.059 mas/yr<br>Proper Motion Dec: 318.12 mas/yr<br>Parallax: 0.0631727"<br>Epoch of Position: 2000 | V=14.33<br>the above "V" mag is actually Johnson B | 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=EXT-STAR*
*Description=[M 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_IMG_GJ3929_vis1 (COS.ta.2295128) | (2) GJ3929 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 214 Secs (214 Secs)<br>*[==>]* | *[1]* |
| 2 | COSspec_GJ3929_vis1a (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 1835 Secs (1835 Secs)<br>*[==>]* | *[1]* |
| 3 | COSspec_GJ3929_vis1b (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[2]* |
| 4 | COSspec_GJ3929_vis1c (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[3]* |


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

## Visit

**Proposal 18030, GJ3929_vis2 (02), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 07-JAN-2027:00:00:00 AND 18-JAN-2027:00:00:00; BETWEEN 08-FEB-2027:00:00:00 AND 08-MAR-2027:00:00:00

*Comments: Coordinated with XMM*

## Diagnostics

(GJ3929_vis2 (02)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

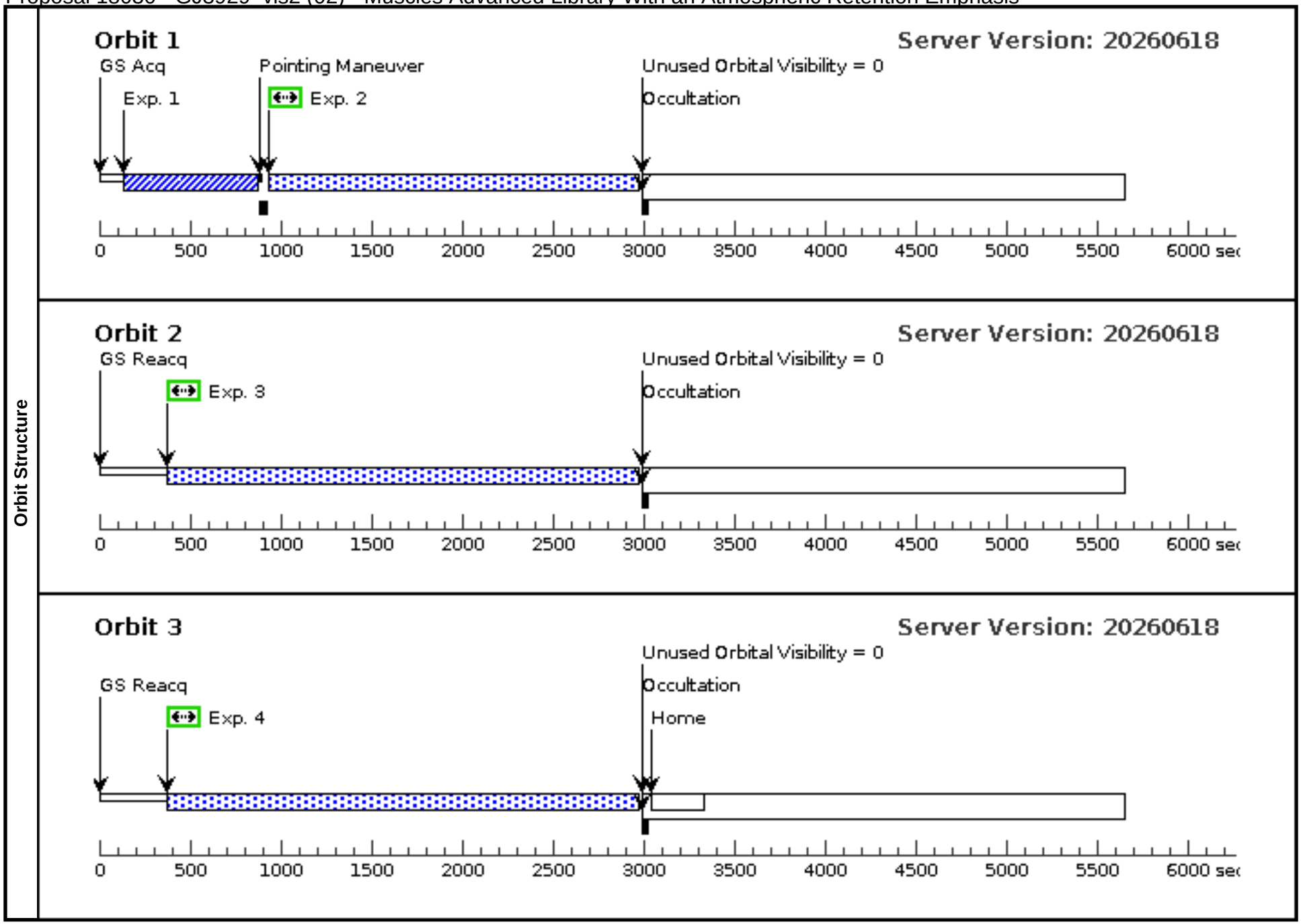
| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (2) | GJ3929 | RA: 15 58 18.7976 (239.5783233d)<br>Dec: +35 24 24.28 (35.40674d)<br>Equinox: J2000 | Proper Motion RA: -143.059 mas/yr<br>Proper Motion Dec: 318.12 mas/yr<br>Parallax: 0.0631727"<br>Epoch of Position: 2000 | V=14.33<br>the above "V" mag is actually Johnson B | 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=EXT-STAR*
*Description=[M 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_IMG_GJ3929_vis2 (COS.ta.2295128) | (2) GJ3929 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 214 Secs (214 Secs)<br>*[==>]* | *[1]* |
| 2 | COSspec_GJ3929_vis2a (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 1835 Secs (1835 Secs)<br>*[==>]* | *[1]* |
| 3 | COSspec_GJ3929_vis2b (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[2]* |
| 4 | COSspec_GJ3929_vis2c (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[3]* |


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

## Visit

**Proposal 18030, GJ3929_vis3 (03), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 07-JAN-2027:00:00:00 AND 18-JAN-2027:00:00:00; BETWEEN 08-FEB-2027:00:00:00 AND 08-MAR-2027:00:00:00

*Comments: Coordinated with XMM*

## Diagnostics

(GJ3929_vis3 (03)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (2) | GJ3929 | RA: 15 58 18.7976 (239.5783233d)<br>Dec: +35 24 24.28 (35.40674d)<br>Equinox: J2000 | Proper Motion RA: -143.059 mas/yr<br>Proper Motion Dec: 318.12 mas/yr<br>Parallax: 0.0631727"<br>Epoch of Position: 2000 | V=14.33<br>the above "V" mag is actually Johnson B | Reference Frame: ICRS |

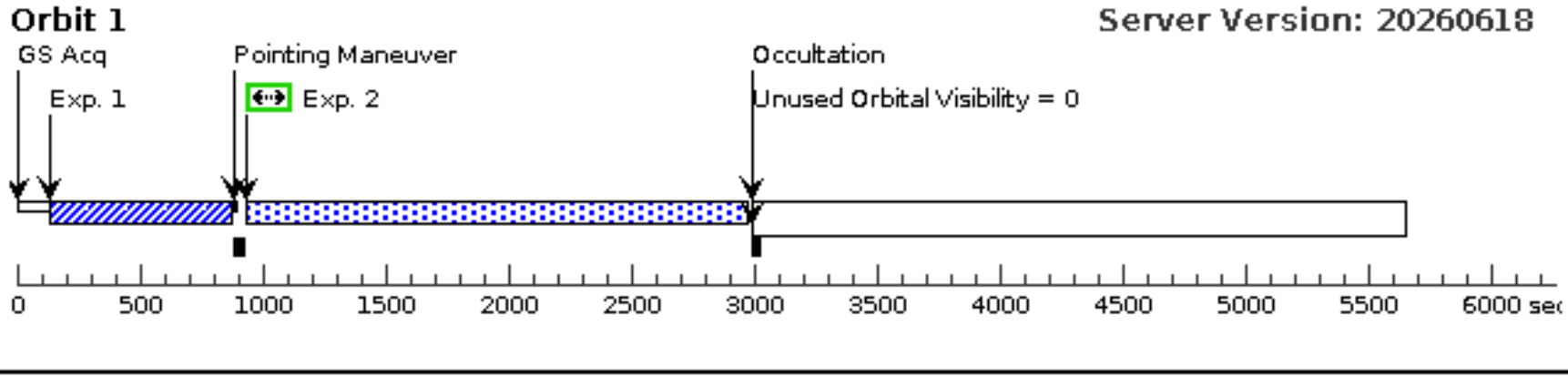
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

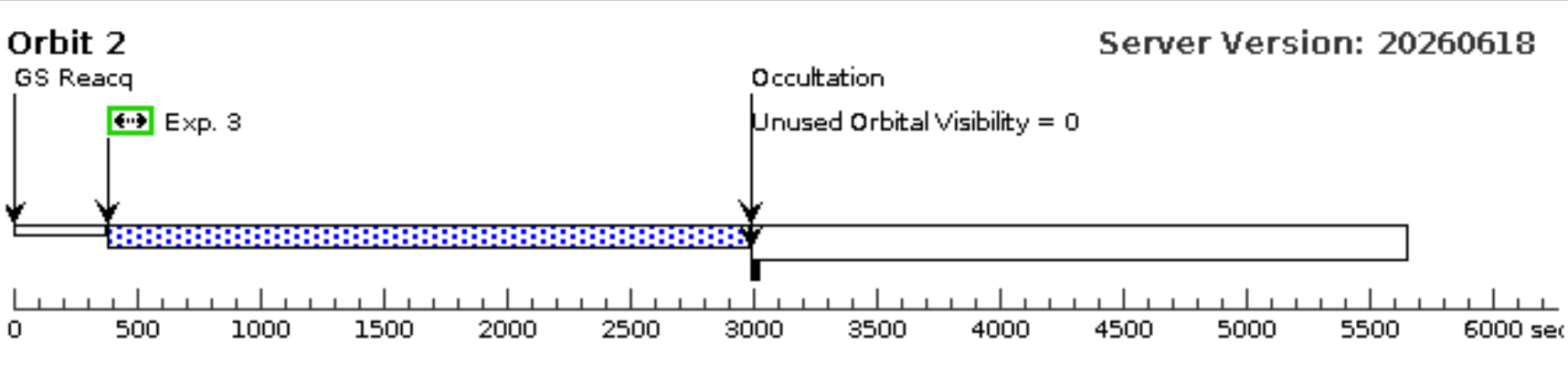
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

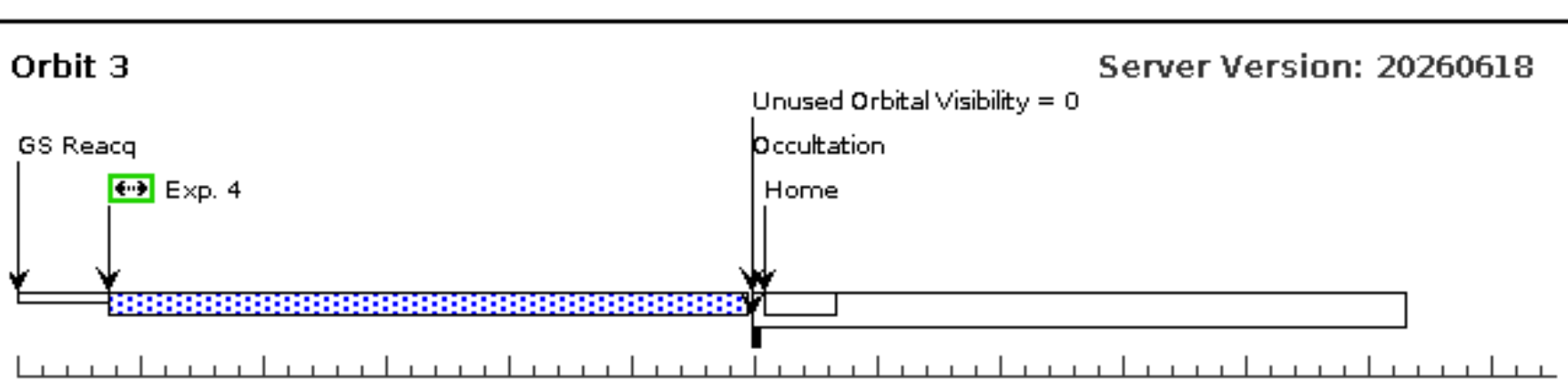
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_GJ3929_vis3 (COS.ta.2295128) | (2) GJ3929 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 214 Secs (214 Secs)<br>*[==>]* | *[1]* |
| 2 | COSspec_GJ3929_vis3a (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 1835 Secs (1835 Secs)<br>*[==>]* | *[1]* |
| 3 | COSspec_GJ3929_vis3b (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[2]* |
| 4 | COSspec_GJ3929_vis3c (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[3]* |

Orbit Structure



## Visit

**Proposal 18030, GJ3929_vis4 (04), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 07-JAN-2027:00:00:00 AND 18-JAN-2027:00:00:00; BETWEEN 08-FEB-2027:00:00:00 AND 08-MAR-2027:00:00:00

*Comments: Coordinated with XMM*

## Diagnostics

(GJ3929_vis4 (04)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(GJ3929_vis4 (04)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (2) | GJ3929 | RA: 15 58 18.7976 (239.5783233d)<br>Dec: +35 24 24.28 (35.40674d)<br>Equinox: J2000 | Proper Motion RA: -143.059 mas/yr<br>Proper Motion Dec: 318.12 mas/yr<br>Parallax: 0.0631727"<br>Epoch of Position: 2000 | V=14.33<br>the above "V" mag is actually Johnson B | Reference Frame: ICRS |

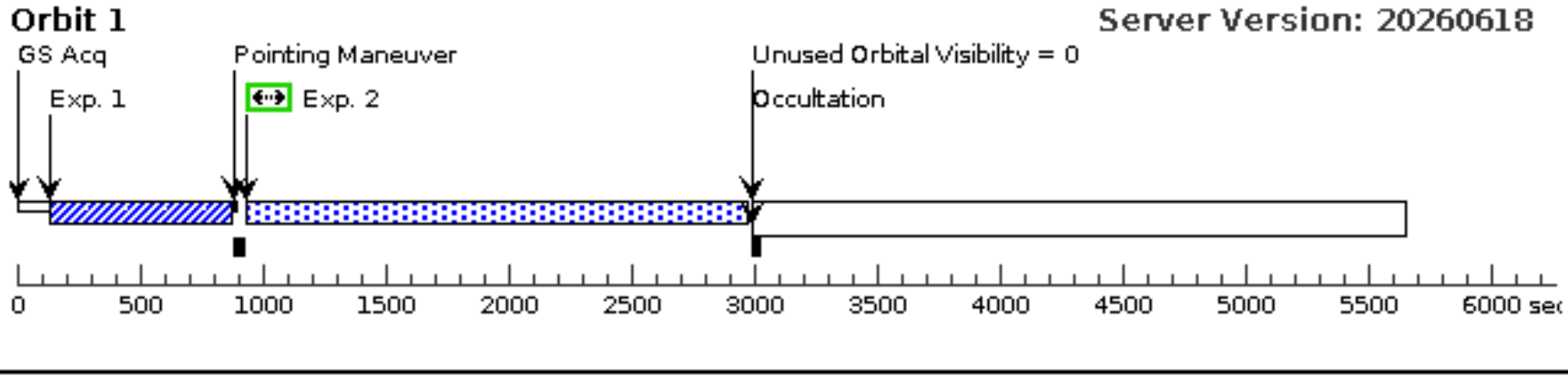
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

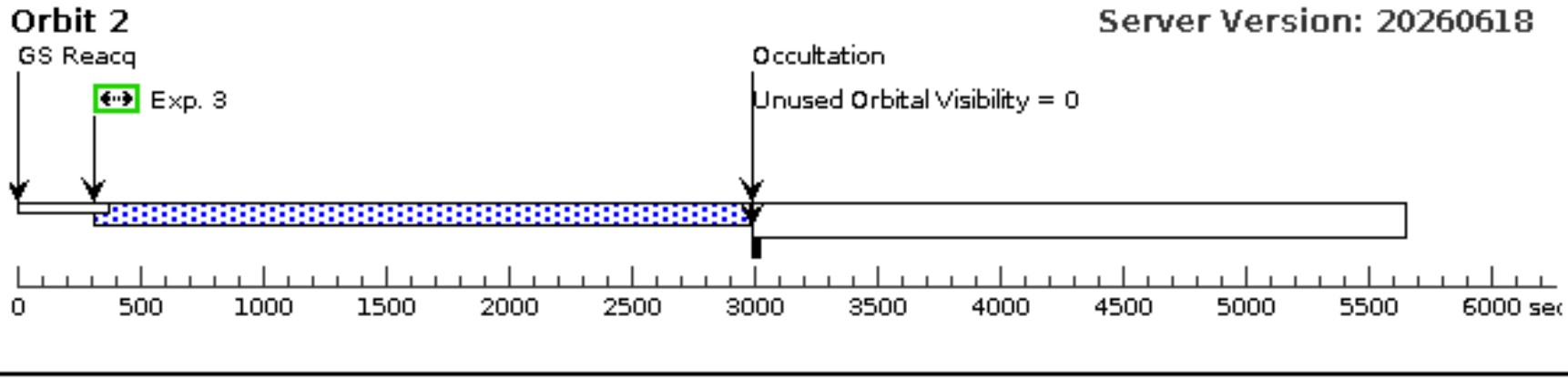
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

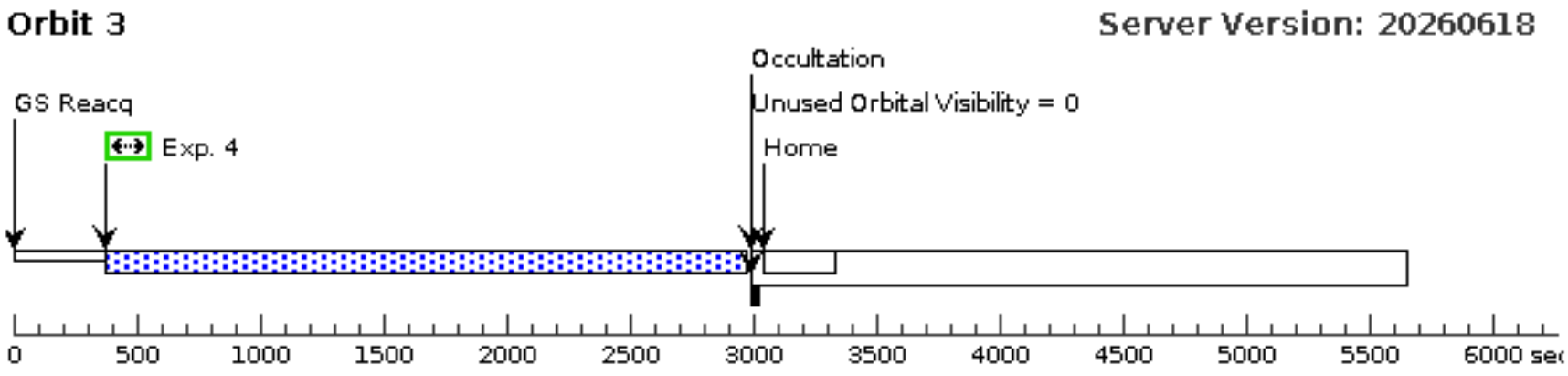
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_GJ3929_vis4 (COS.ta.2295128) | (2) GJ3929 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 214 Secs (214 Secs)<br>*[==>]* | *[1]* |
| 2 | COSspec_GJ3929_vis4a (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 1835 Secs (1835 Secs)<br>*[==>]* | *[1]* |
| 3 | COSspec_GJ3929_vis4b (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[2]* |
| 4 | COSspec_GJ3929_vis4c (COS.sp.1949956) | (2) GJ3929 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2548 Secs (2548 Secs)<br>*[==>]* | *[3]* |

Orbit Structure



## Visit

**Proposal 18030, LTT1445A_vis1 (05), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 20-DEC-2026:00:00:00 AND 28-DEC-2026:00:00:00

*Comments: PC added Between window to coordinate simultaneous observations with Chandra*

## Diagnostics

(LTT1445A_vis1 (05)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (1) | LTT1445A | RA: 03 01 51.3937 (45.4641404d)<br>Dec: -16 35 36.03 (-16.59334d)<br>Equinox: J2000 | Proper Motion RA: -369.972 mas/yr<br>Proper Motion Dec: -267.9309999848556 mas/yr<br>Parallax: 0.14569220000000002"<br>Epoch of Position: 2000 | V=10.529 | Reference Frame: ICRS |

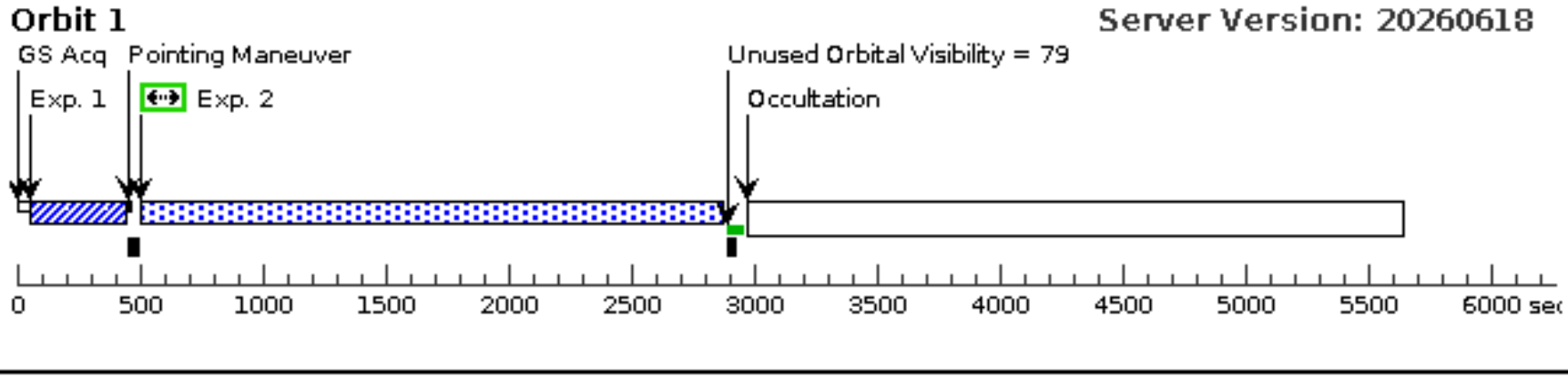
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

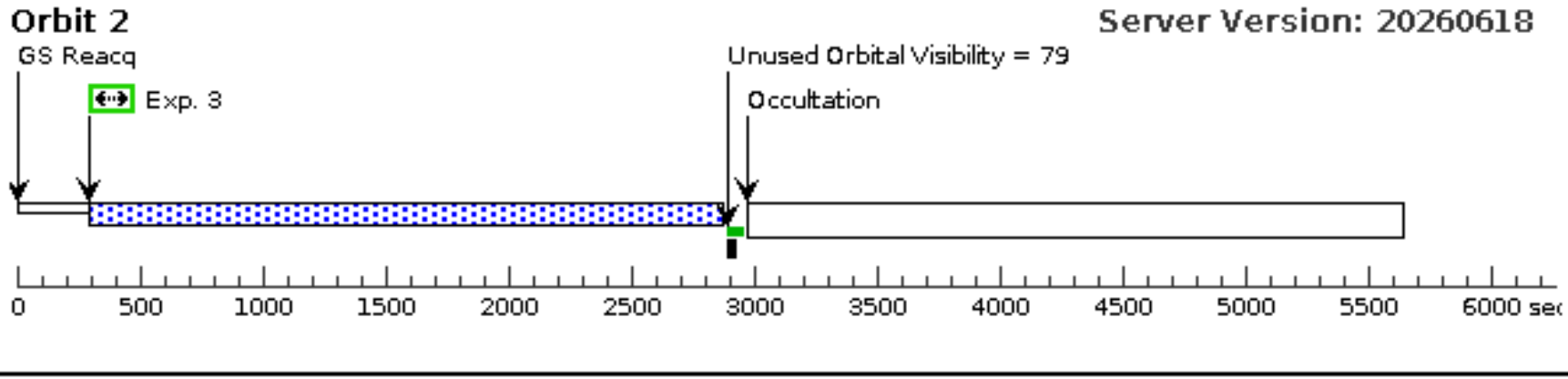
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

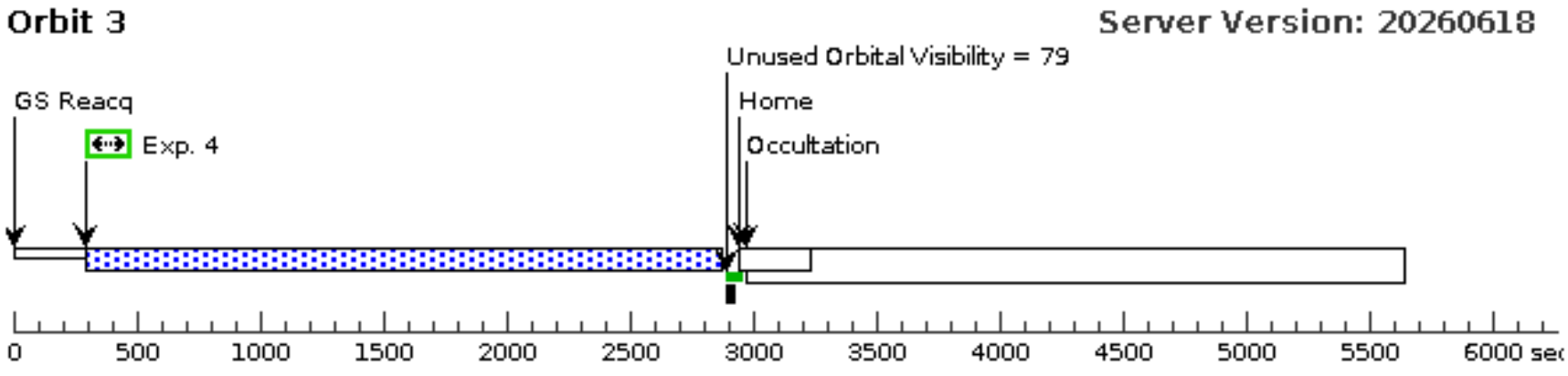
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LTT1445A_vis1 (COS.ta.1544663) | (1) LTT1445A | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | GS ACQ SCENARIO ONEB1OR | | 40 Secs (40 Secs)<br>*[==>]* | ***[1]*** |
| 2 | COSspec_LTT1445A_vis1a (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 2167 Secs (2167 Secs)<br>*[==>]* | ***[1]*** |
| 3 | COSspec_LTT1445A_vis1b (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | ***[2]*** |
| 4 | COSspec_LTT1445A_vis1c (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | ***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LTT1445A_vis2 (06), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 20-DEC-2026:00:00:00 AND 28-DEC-2026:00:00:00

*Comments: PC added Between window to coordinate simultaneous observations with Chandra*

## Diagnostics

(LTT1445A_vis2 (06)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (1) | LTT1445A | RA: 03 01 51.3937 (45.4641404d)<br>Dec: -16 35 36.03 (-16.59334d)<br>Equinox: J2000 | Proper Motion RA: -369.972 mas/yr<br>Proper Motion Dec: -267.9309999848556 mas/yr<br>Parallax: 0.14569220000000002"<br>Epoch of Position: 2000 | V=10.529 | Reference Frame: ICRS |

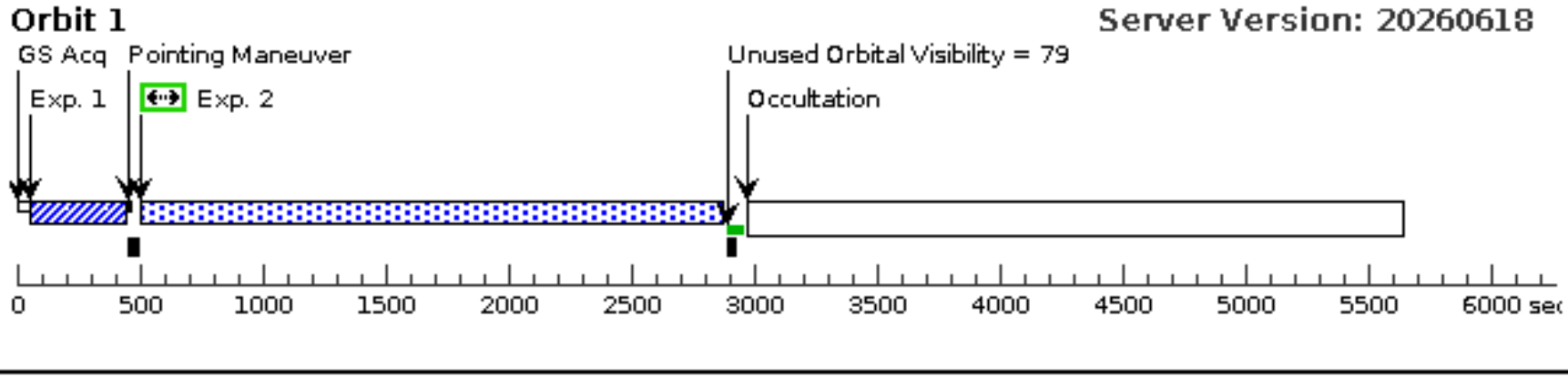
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

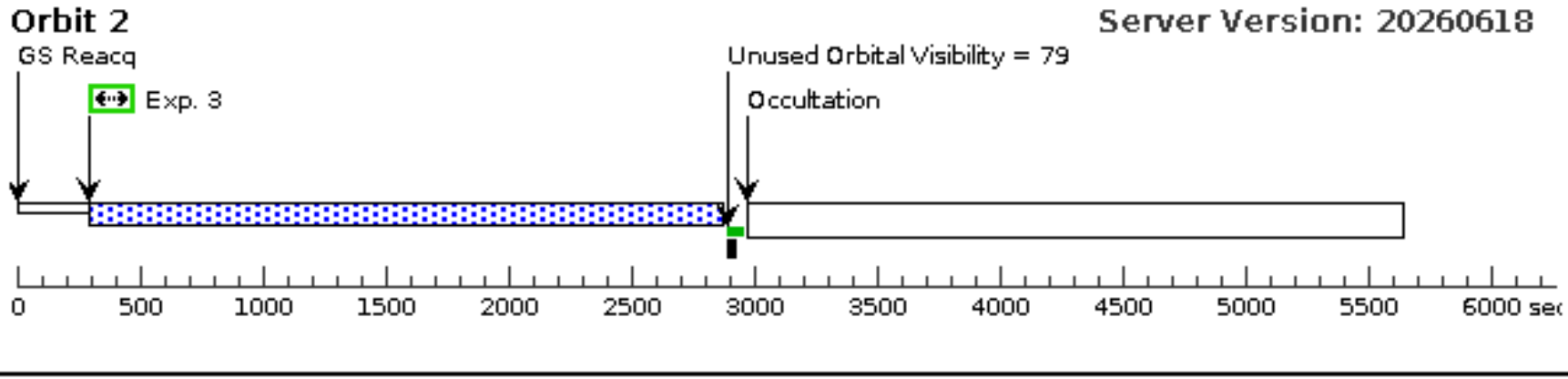
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

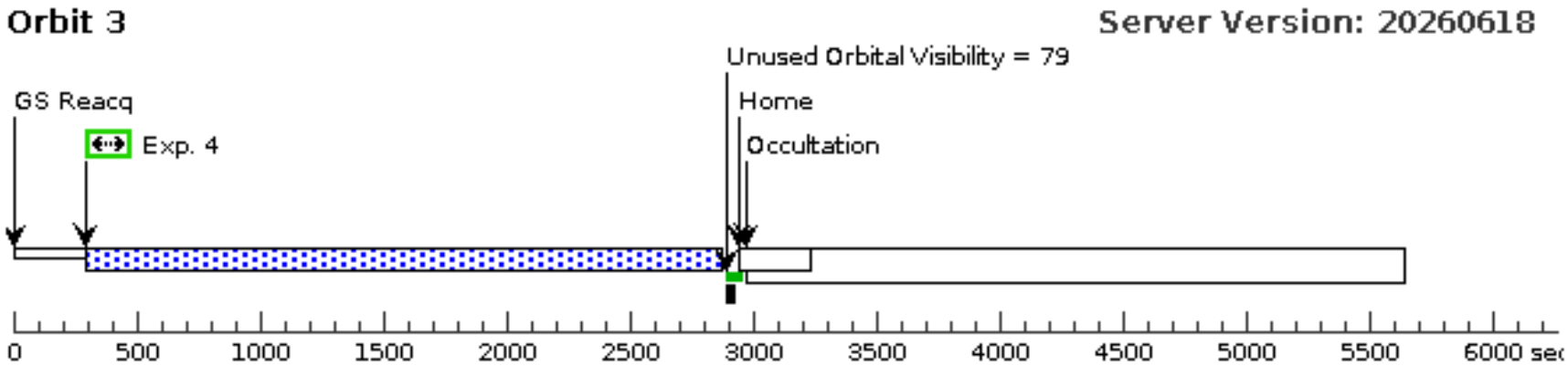
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LTT1445A_vis2 (COS.ta.1544663) | (1) LTT1445A | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | GS ACQ SCENARIO ONEB1OR | | 40 Secs (40 Secs)<br>*[==>]* | *[1]* |
| 2 | COSspec_LTT1445A_vis2a (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2167 Secs (2167 Secs)<br>*[==>]* | *[1]* |
| 3 | COSspec_LTT1445A_vis2b (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | *[2]* |
| 4 | COSspec_LTT1445A_vis2c (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | *[3]* |

Orbit Structure



## Visit

**Proposal 18030, LTT1445A_vis3 (07), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 20-DEC-2026:00:00:00 AND 28-DEC-2026:00:00:00

*Comments: PC added Between window to coordinate simultaneous observations with Chandra*

## Diagnostics

(LTT1445A_vis3 (07)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (1) | LTT1445A | RA: 03 01 51.3937 (45.4641404d)<br>Dec: -16 35 36.03 (-16.59334d)<br>Equinox: J2000 | Proper Motion RA: -369.972 mas/yr<br>Proper Motion Dec: -267.9309999848556 mas/yr<br>Parallax: 0.14569220000000002"<br>Epoch of Position: 2000 | V=10.529 | Reference Frame: ICRS |

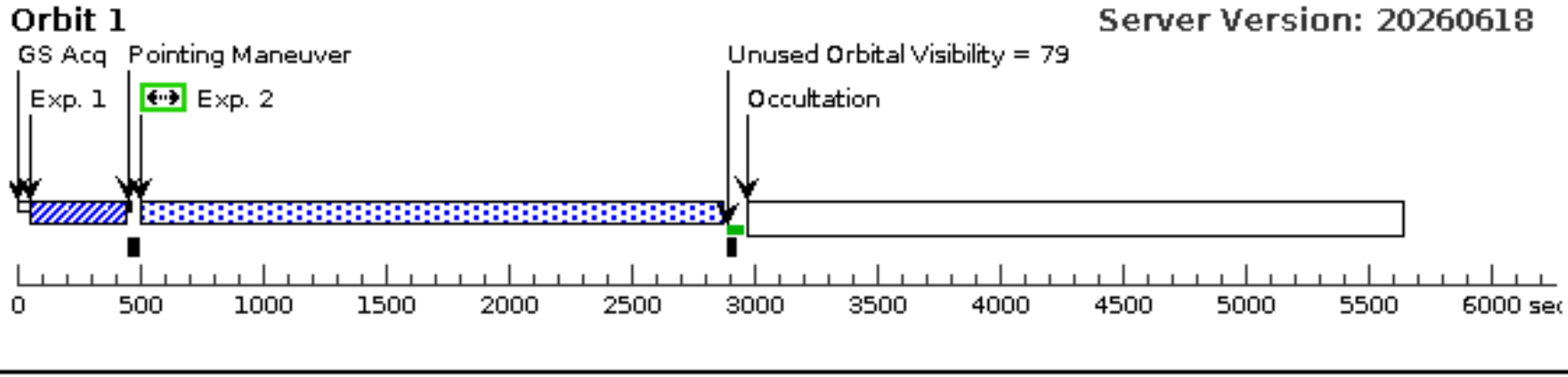
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

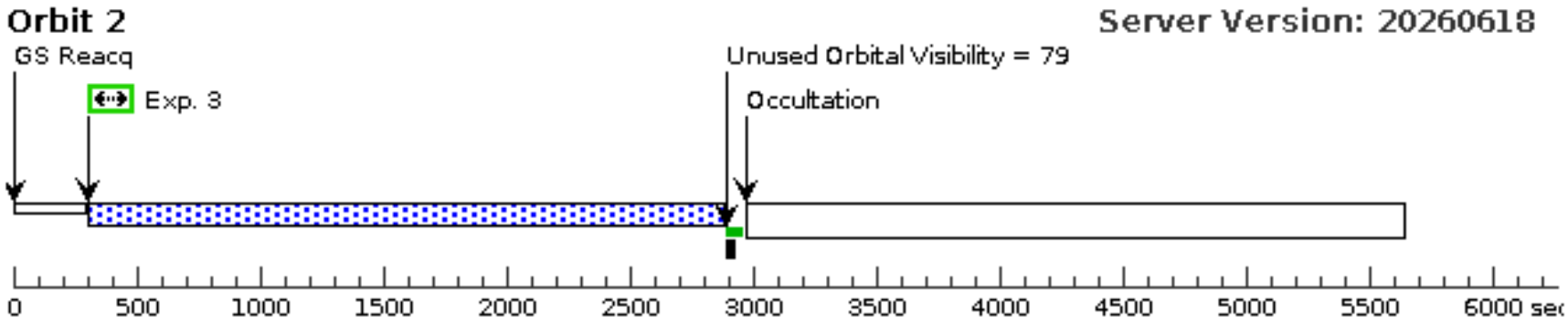
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

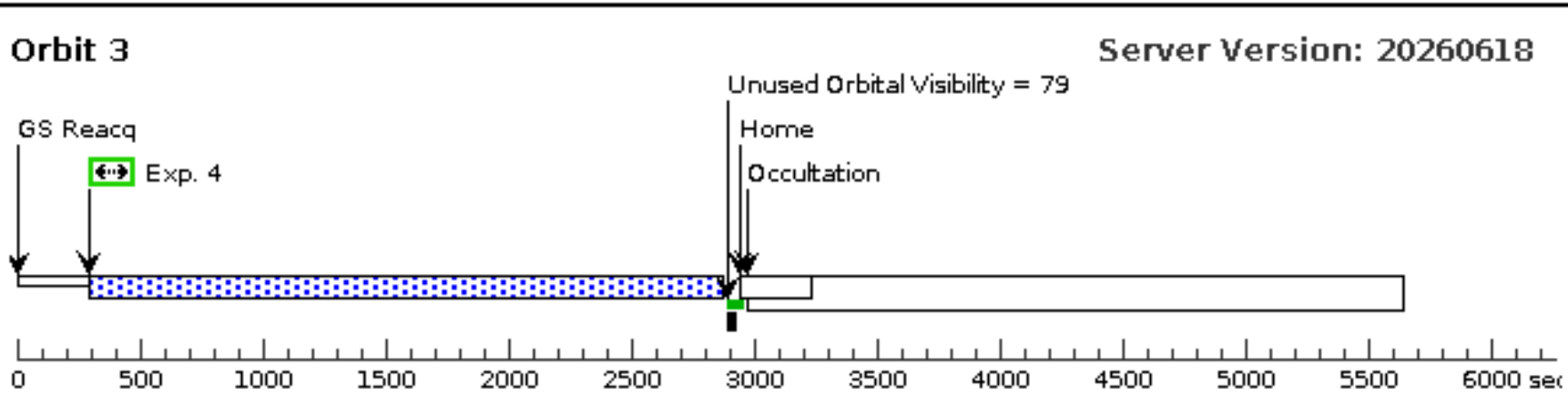
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LTT1445A_vis3 (COS.ta.1544663) | (1) LTT1445A | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | GS ACQ SCENARIO ONEB1OR | | 40 Secs (40 Secs)<br>*[==>]* | ***[1]*** |
| 2 | COSspec_LTT1445A_vis3a (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2167 Secs (2167 Secs)<br>*[==>]* | ***[1]*** |
| 3 | COSspec_LTT1445A_vis3b (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | ***[2]*** |
| 4 | COSspec_LTT1445A_vis3c (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | ***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LTT1445A_vis4 (08), implementation** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 20-DEC-2026:00:00:00 AND 28-DEC-2026:00:00:00

*Comments: PC added Between window to coordinate simultaneous observations with Chandra*

## Diagnostics

(LTT1445A_vis4 (08)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(LTT1445A_vis4 (08)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (1) | LTT1445A | RA: 03 01 51.3937 (45.4641404d)<br>Dec: -16 35 36.03 (-16.59334d)<br>Equinox: J2000 | Proper Motion RA: -369.972 mas/yr<br>Proper Motion Dec: -267.9309999848556 mas/yr<br>Parallax: 0.14569220000000002"<br>Epoch of Position: 2000 | V=10.529 | Reference Frame: ICRS |

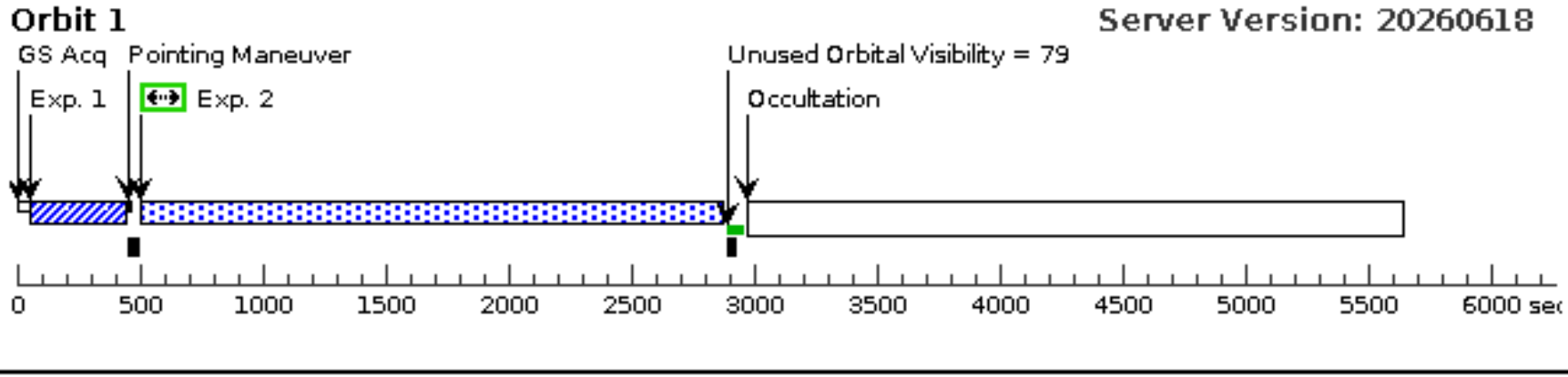
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

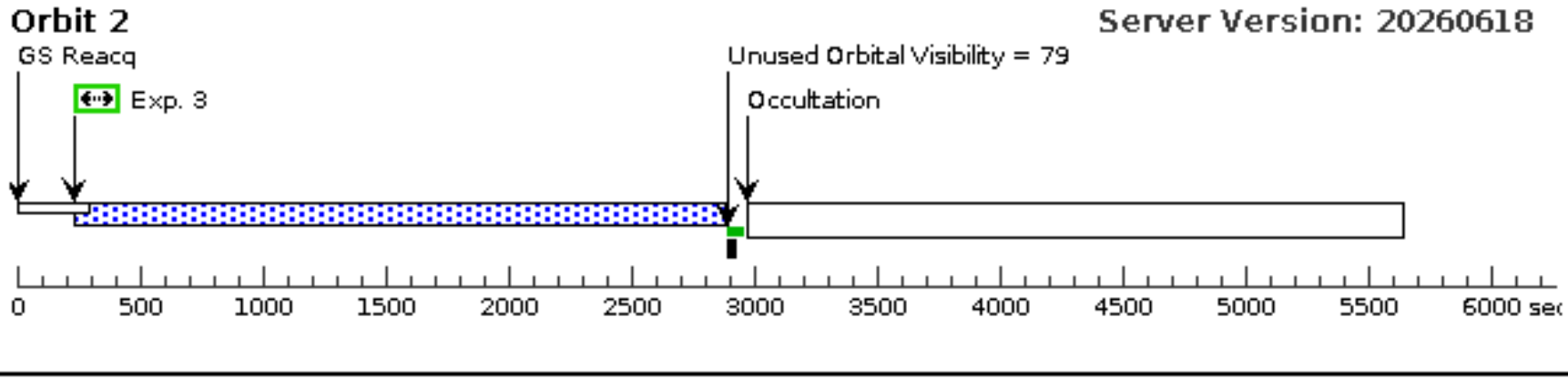
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

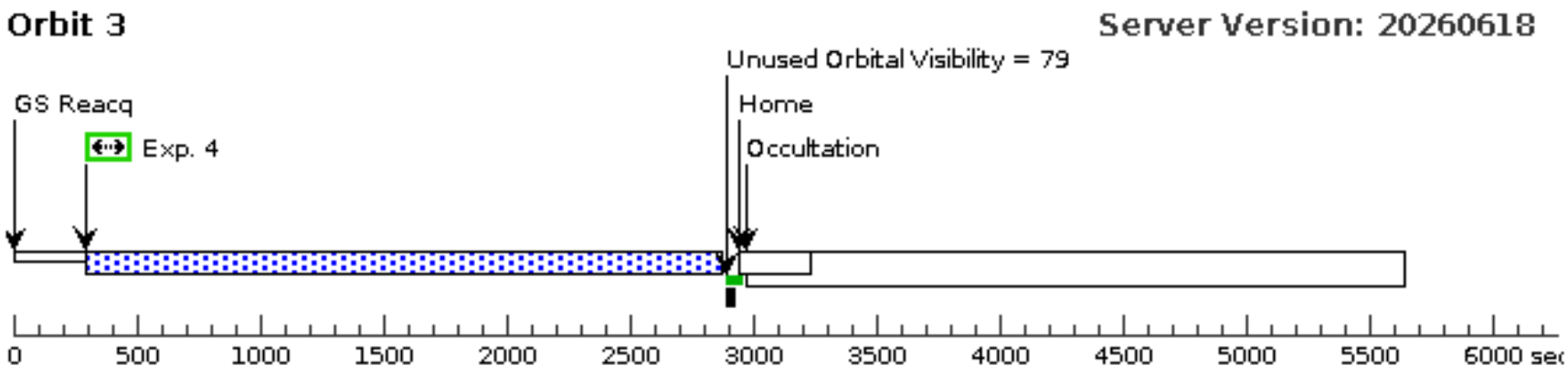
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LTT1445A_vis4 (COS.ta.1544663) | (1) LTT1445A | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | GS ACQ SCENARIO ONEB1OR | | 40 Secs (40 Secs)<br>*[==>]* | ***[1]*** |
| 2 | COSspec_LTT1445A_vis4a (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2167 Secs (2167 Secs)<br>*[==>]* | ***[1]*** |
| 3 | COSspec_LTT1445A_vis4b (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | ***[2]*** |
| 4 | COSspec_LTT1445A_vis4c (COS.sp.1949956) | (1) LTT1445A | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | ***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LHS1140_vis1 (09), completed** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 06-JUN-2026:00:00:00 AND 17-JUL-2026:00:00:00

## Diagnostics

(LHS1140_vis1 (09)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (4) | LHS1140 | RA: 00 44 59.3309 (11.2472121d)<br>Dec: -15 16 17.54 (-15.27154d)<br>Equinox: J2000 | Proper Motion RA: 318.152 mas/yr<br>Proper Motion Dec: -596.6230000922224 mas/yr<br>Parallax: 0.06682869999999999"<br>Epoch of Position: 2000 | V=14.15 | Reference Frame: ICRS |

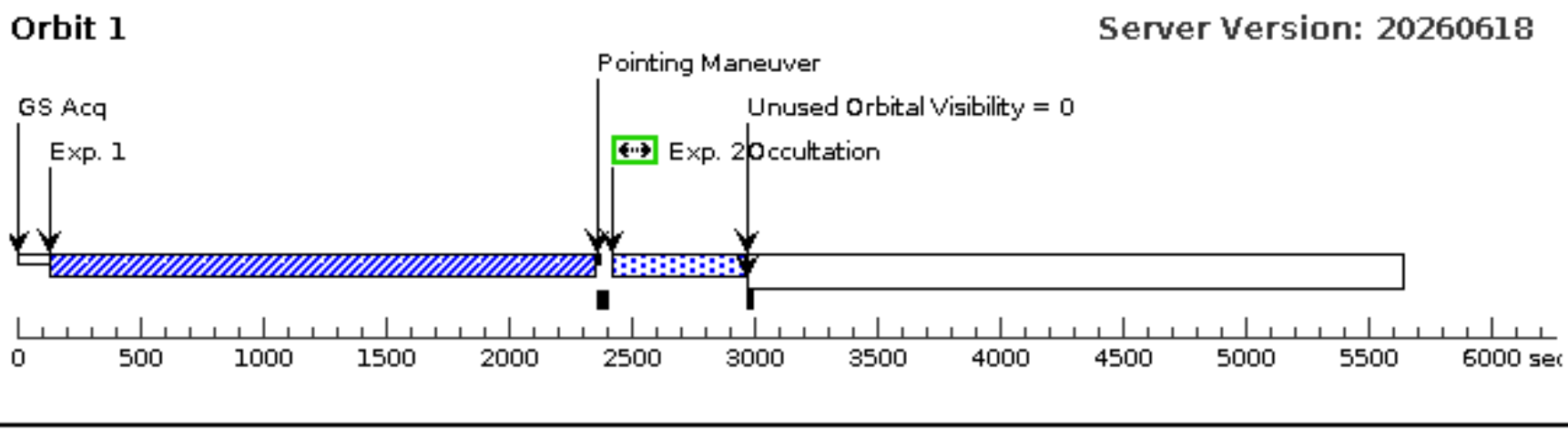
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

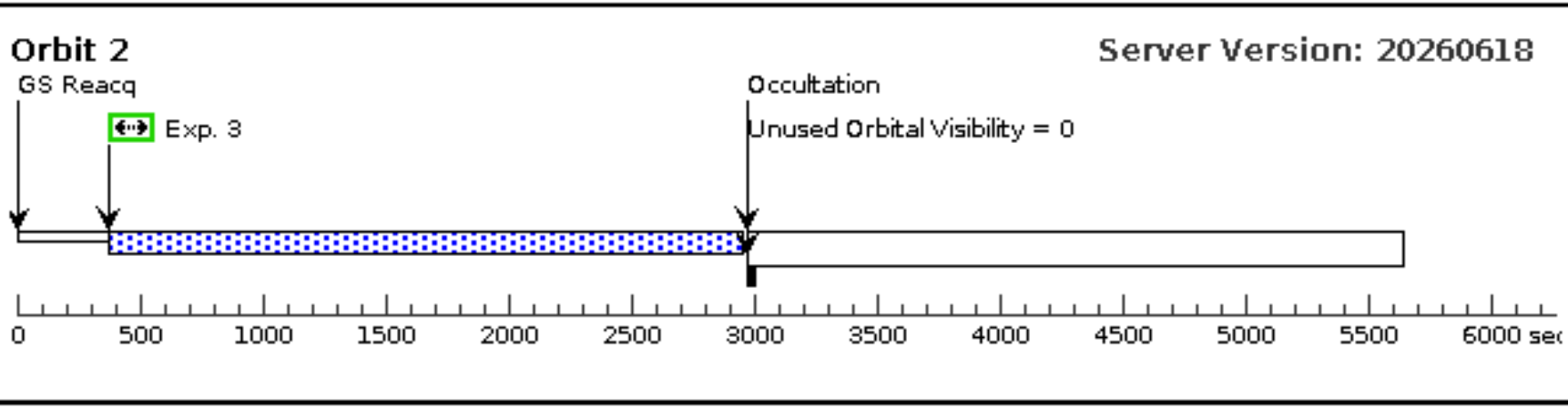
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

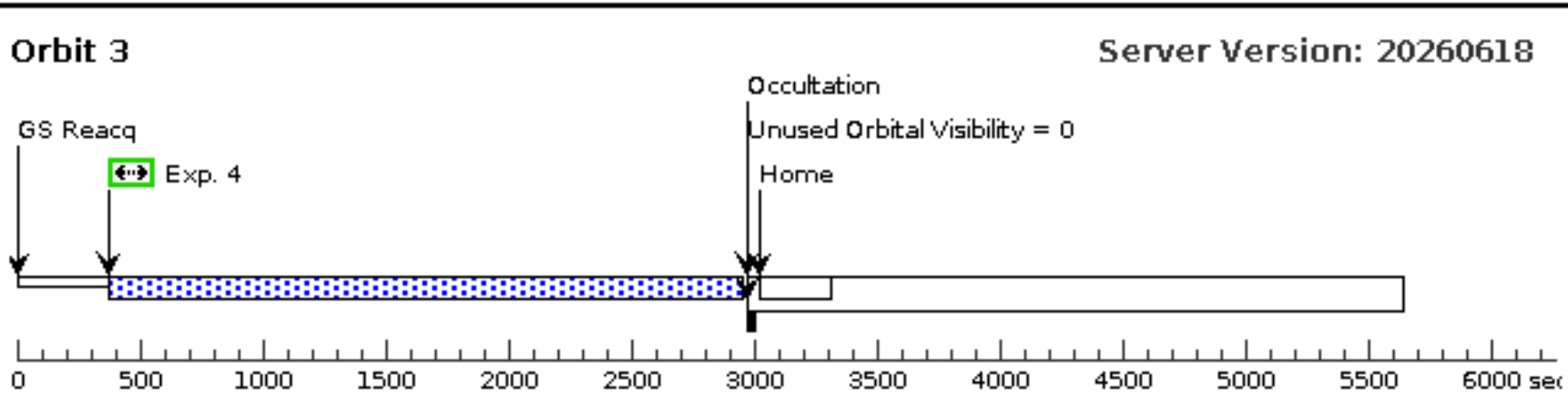
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LHS1140_vis1 (COS.ta.2021012) | (4) LHS1140 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 957 Secs (957 Secs)<br>*[==>]* | <br>***[1]*** |
| 2 | COSspec_LHS1140_vis1a (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 333 Secs (333 Secs)<br>*[==>]* | <br>***[1]*** |
| 3 | COSspec_LHS1140_vis1b (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[2]*** |
| 4 | COSspec_LHS1140_vis1c (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LHS1140_vis2 (10), failed** Fri Aug 28 16:00:34 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 14-JUL-2026:15:47:48 AND 15-JUL-2026:21:00:00

## Diagnostics

(LHS1140_vis2 (10)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (4) | LHS1140 | RA: 00 44 59.3309 (11.2472121d)<br>Dec: -15 16 17.54 (-15.27154d)<br>Equinox: J2000 | Proper Motion RA: 318.152 mas/yr<br>Proper Motion Dec: -596.6230000922224 mas/yr<br>Parallax: 0.06682869999999999"<br>Epoch of Position: 2000 | V=14.15 | Reference Frame: ICRS |

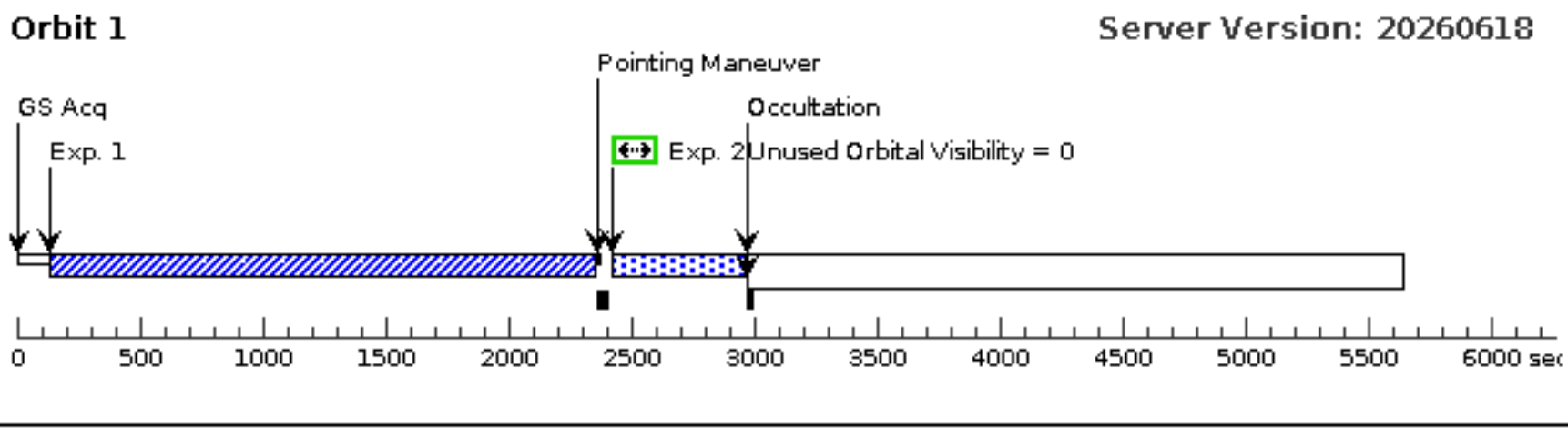
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

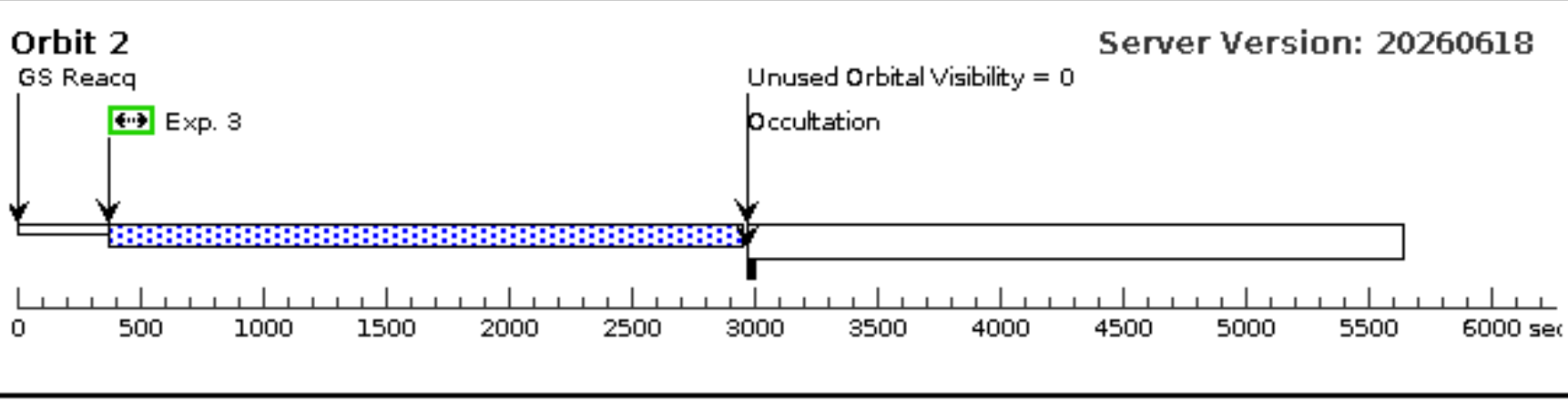
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

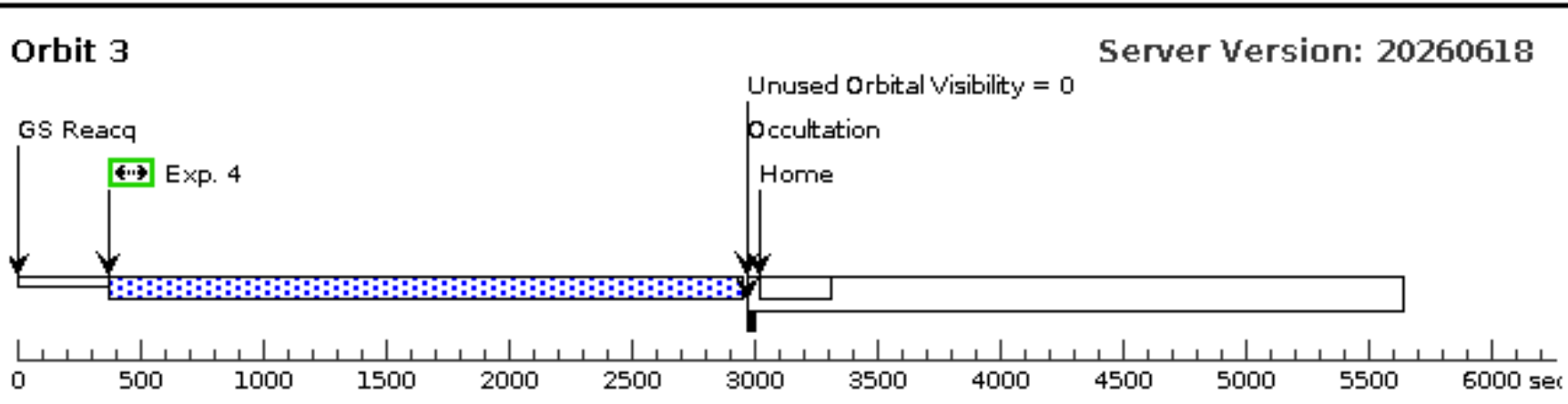
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LHS1140_vis2 (COS.ta.2021012) | (4) LHS1140 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 957 Secs (957 Secs)<br>*[==>]* | <br>***[1]*** |
| 2 | COSspec_LHS1140_vis2a (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 333 Secs (333 Secs)<br>*[==>]* | <br>***[1]*** |
| 3 | COSspec_LHS1140_vis2b (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[2]*** |
| 4 | COSspec_LHS1140_vis2c (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LHS1140_vis3 (11), completed** Fri Aug 28 16:00:35 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 14-JUL-2026:15:47:48 AND 15-JUL-2026:21:00:00

## Diagnostics

(LHS1140_vis3 (11)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (4) | LHS1140 | RA: 00 44 59.3309 (11.2472121d)<br>Dec: -15 16 17.54 (-15.27154d)<br>Equinox: J2000 | Proper Motion RA: 318.152 mas/yr<br>Proper Motion Dec: -596.6230000922224 mas/yr<br>Parallax: 0.06682869999999999"<br>Epoch of Position: 2000 | V=14.15 | Reference Frame: ICRS |

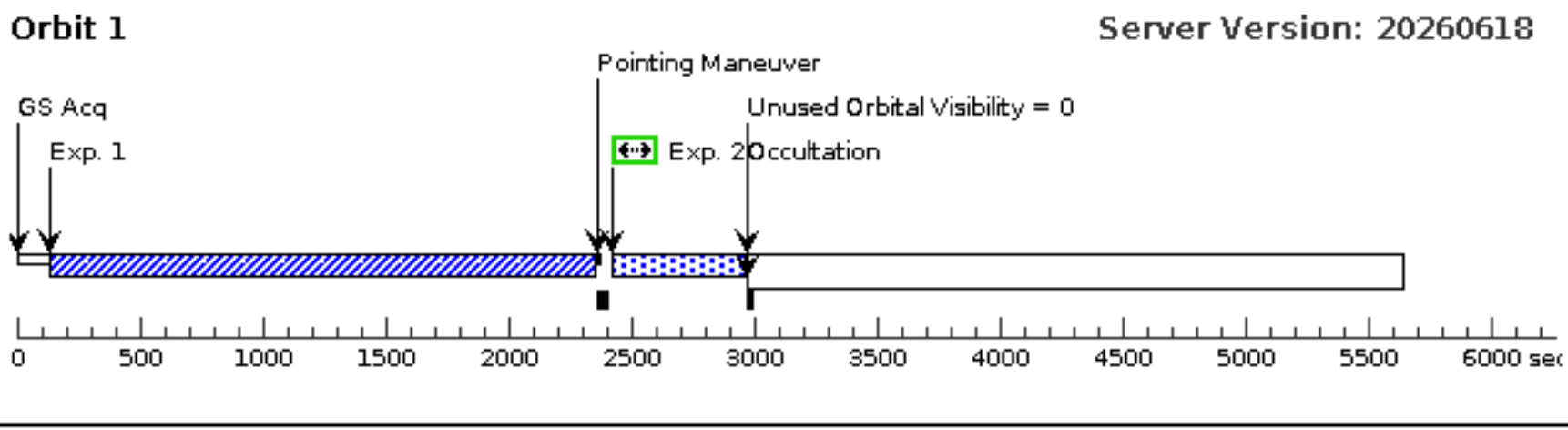
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

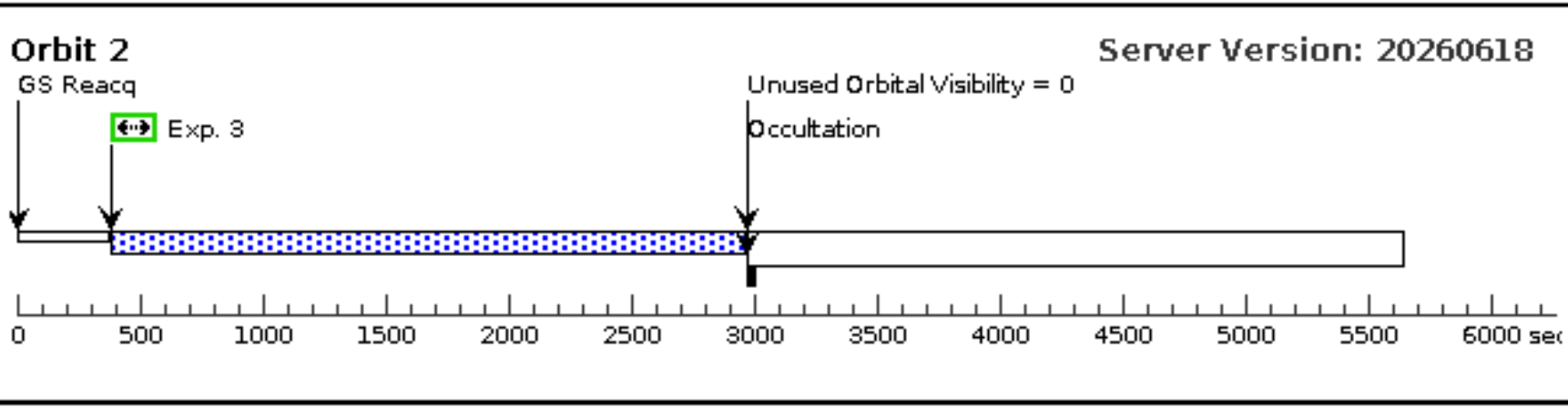
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

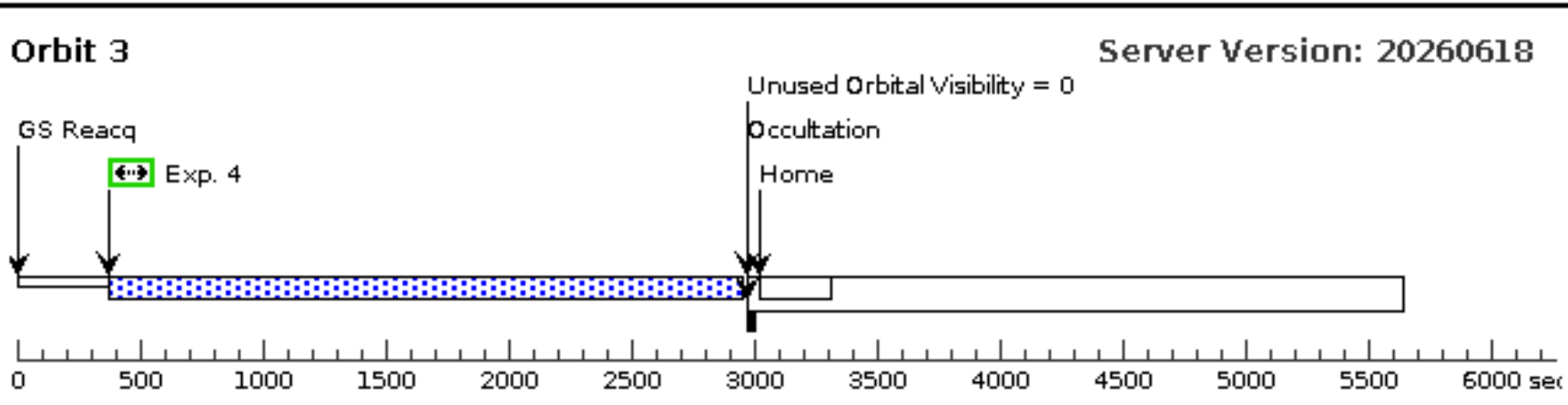
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LHS1140_vis3 (COS.ta.2021012) | (4) LHS1140 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 957 Secs (957 Secs)<br>*[==>]* | <br>***[1]*** |
| 2 | COSspec_LHS1140_vis3a (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 333 Secs (333 Secs)<br>*[==>]* | <br>***[1]*** |
| 3 | COSspec_LHS1140_vis3b (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[2]*** |
| 4 | COSspec_LHS1140_vis3c (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LHS1140_vis4 (12), failed** Fri Aug 28 16:00:35 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: BETWEEN 06-JUN-2026:00:00:00 AND 17-JUL-2026:00:00:00

## Diagnostics

(LHS1140_vis4 (12)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(LHS1140_vis4 (12)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

## Fixed Targets

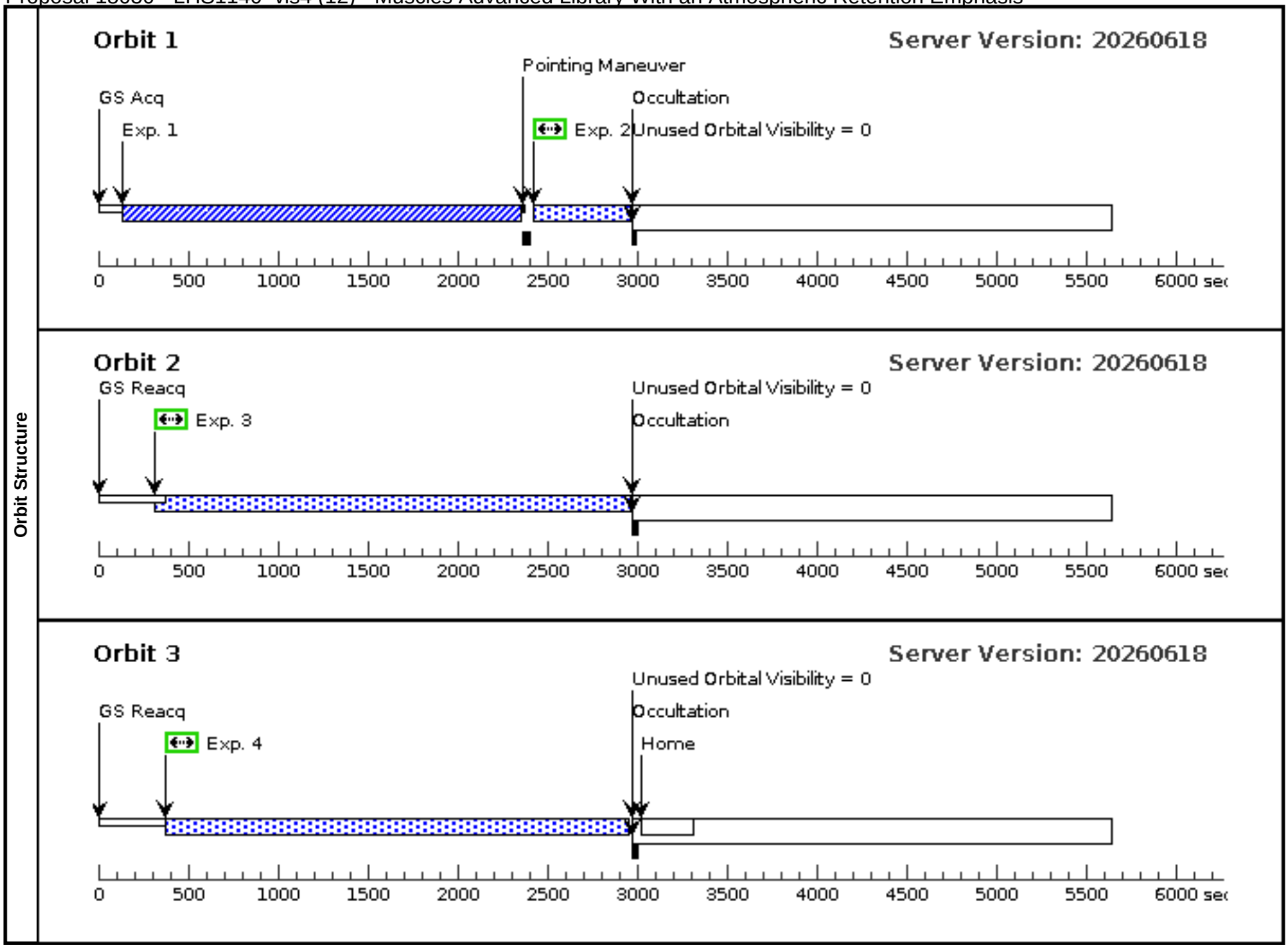
| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (4) | LHS1140 | RA: 00 44 59.3309 (11.2472121d)<br>Dec: -15 16 17.54 (-15.27154d)<br>Equinox: J2000 | Proper Motion RA: 318.152 mas/yr<br>Proper Motion Dec: -596.6230000922224 mas/yr<br>Parallax: 0.06682869999999999"<br>Epoch of Position: 2000 | V=14.15 | 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=EXT-STAR*
*Description=[M 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_IMG_LHS1140_vis4 (COS.ta.2021012) | (4) LHS1140 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 957 Secs (957 Secs)<br>*[==>]* | <br>***[1]*** |
| 2 | COSspec_LHS1140_vis4a (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 333 Secs (333 Secs)<br>*[==>]* | <br>***[1]*** |
| 3 | COSspec_LHS1140_vis4b (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[2]*** |
| 4 | COSspec_LHS1140_vis4c (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[3]*** |


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

## Visit

**Proposal 18030, LHS1140_vis2 (60), completed** Fri Aug 28 16:00:35 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

## Diagnostics

(LHS1140_vis2 (60)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

## Fixed Targets

| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (4) | LHS1140 | RA: 00 44 59.3309 (11.2472121d)<br>Dec: -15 16 17.54 (-15.27154d)<br>Equinox: J2000 | Proper Motion RA: 318.152 mas/yr<br>Proper Motion Dec: -596.6230000922224 mas/yr<br>Parallax: 0.06682869999999999"<br>Epoch of Position: 2000 | V=14.15 | Reference Frame: ICRS |

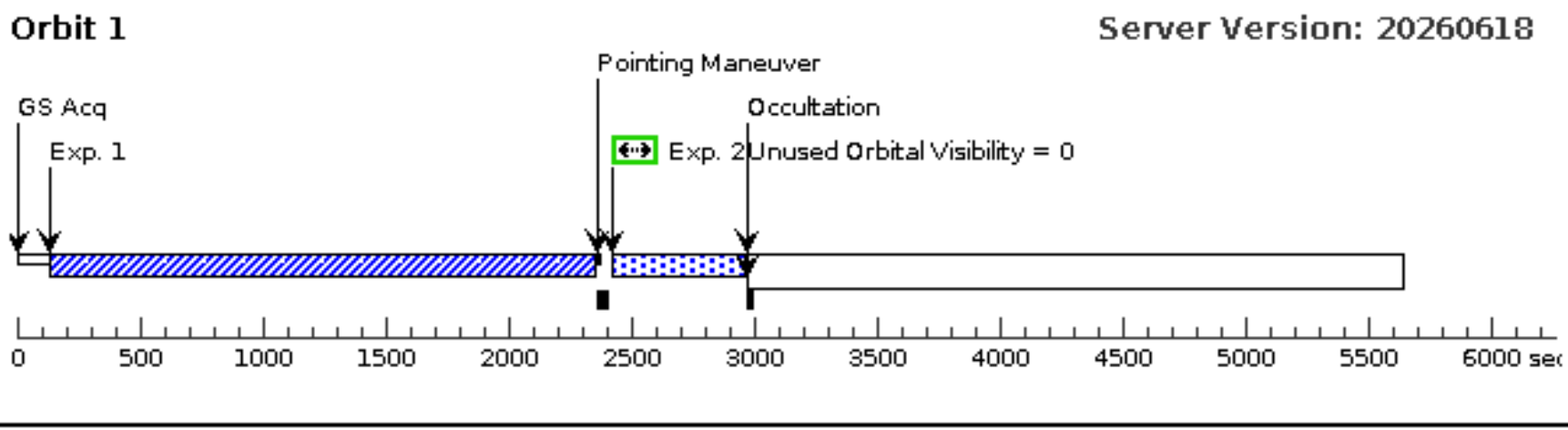
*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

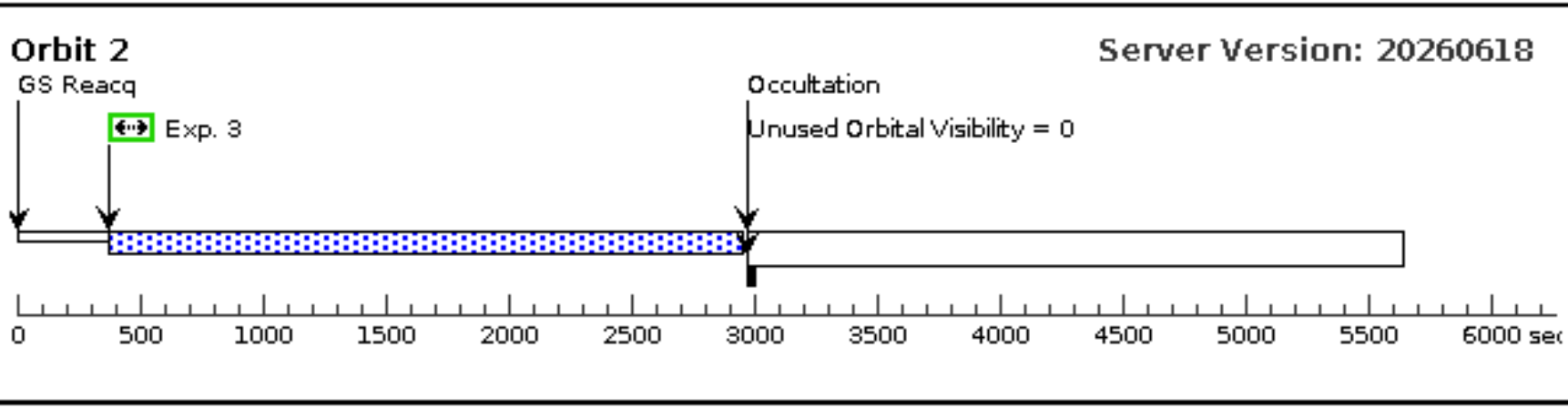
*SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.*
*Category=EXT-STAR*
*Description=[M V-IV]*
*Extended=NO*

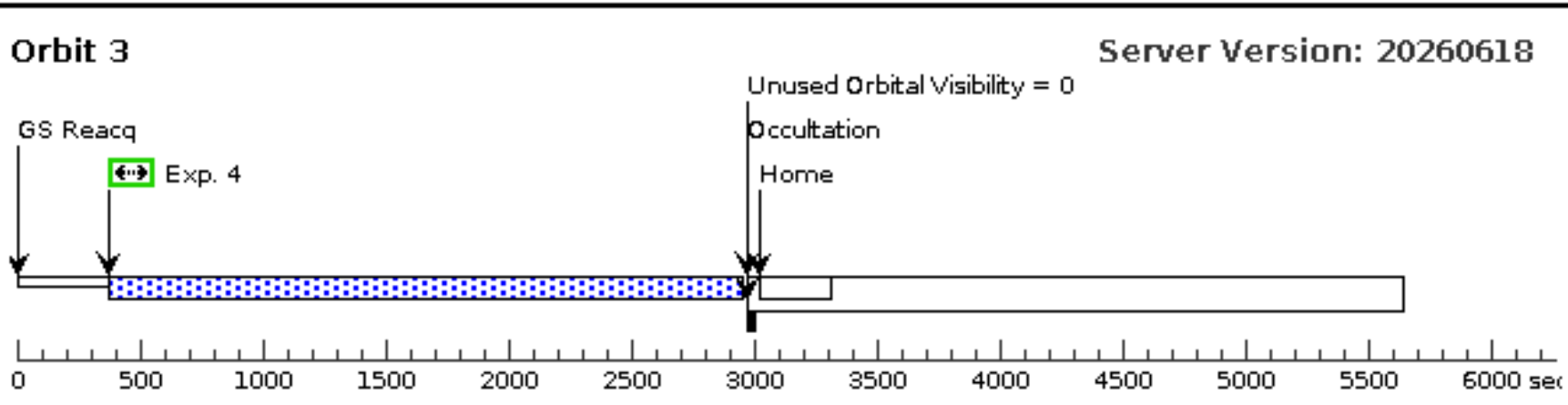
## Exposures

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ACQ_IMG_LHS1140_vis2 (COS.ta.2021012) | (4) LHS1140 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 957 Secs (957 Secs)<br>*[==>]* | <br>***[1]*** |
| 2 | COSspec_LHS1140_vis2a (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 333 Secs (333 Secs)<br>*[==>]* | <br>***[1]*** |
| 3 | COSspec_LHS1140_vis2b (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=3;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[2]*** |
| 4 | COSspec_LHS1140_vis2c (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[3]*** |

Orbit Structure



## Visit

**Proposal 18030, LHS1140_vis4 (62), completed** Fri Aug 28 16:00:35 GMT 2026

**Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

## Diagnostics

(LHS1140_vis4 (62)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(LHS1140_vis4 (62)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

## Fixed Targets

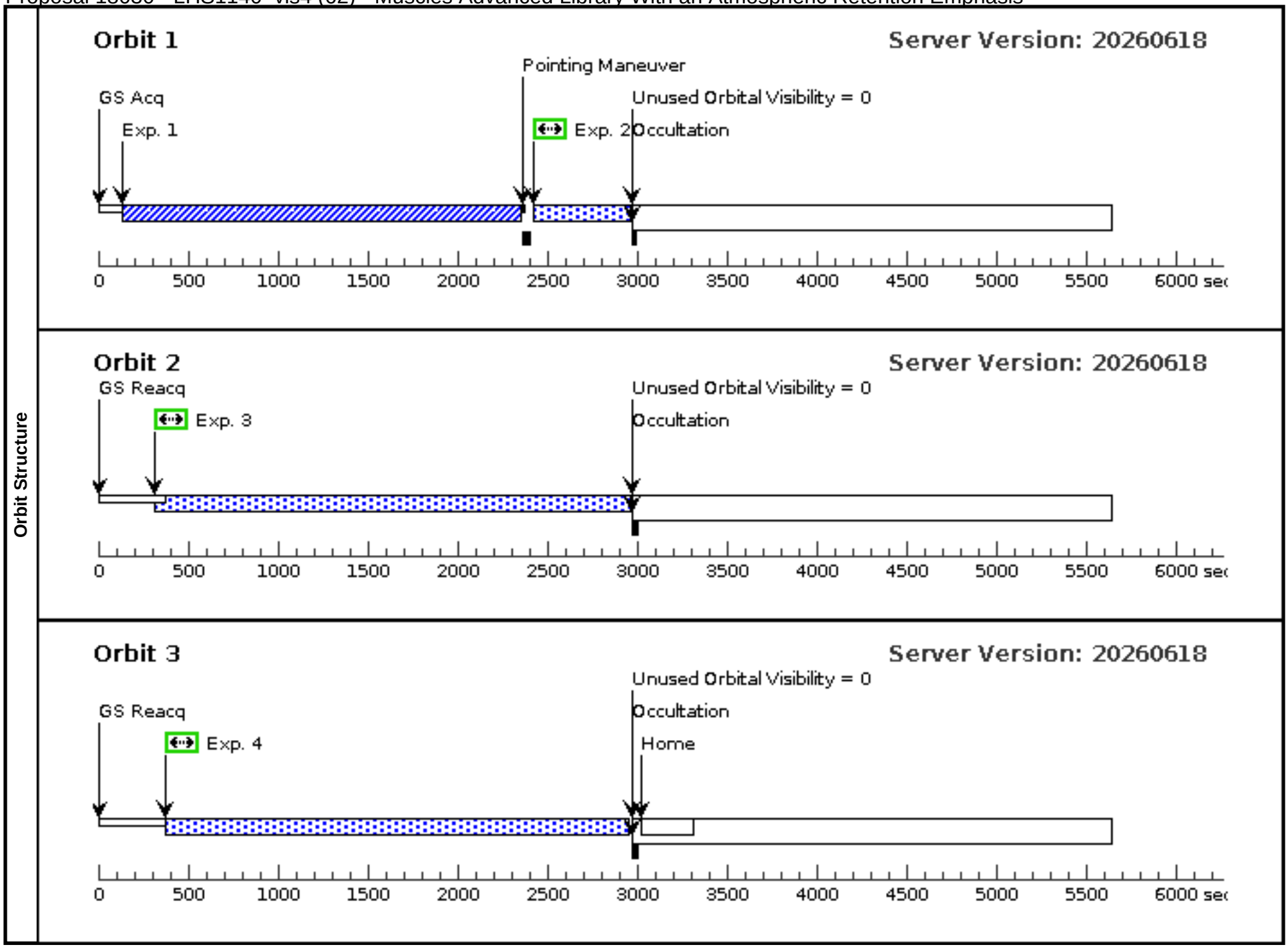
| # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---|---|---|---|---|---|
| (4) | LHS1140 | RA: 00 44 59.3309 (11.2472121d)<br>Dec: -15 16 17.54 (-15.27154d)<br>Equinox: J2000 | Proper Motion RA: 318.152 mas/yr<br>Proper Motion Dec: -596.6230000922224 mas/yr<br>Parallax: 0.06682869999999999"<br>Epoch of Position: 2000 | V=14.15 | 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=EXT-STAR*
*Description=[M 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_IMG_LHS1140_vis4 (COS.ta.2021012) | (4) LHS1140 | COS/NUV, ACQ/IMAGE, PSA | MIRRORB | | | | 957 Secs (957 Secs)<br>*[==>]* | <br>***[1]*** |
| 2 | COSspec_LHS1140_vis4a (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=4;<br>BUFFER-TIME=15000 | | | 333 Secs (333 Secs)<br>*[==>]* | <br>***[1]*** |
| 3 | COSspec_LHS1140_vis4b (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=1;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[2]*** |
| 4 | COSspec_LHS1140_vis4c (COS.sp.1949956) | (4) LHS1140 | COS/FUV, TIME-TAG, PSA | G140L<br>800 A | FP-POS=2;<br>BUFFER-TIME=15000 | | | 2532 Secs (2532 Secs)<br>*[==>]* | <br>***[3]*** |


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