17700 - Separating Accretion and Magnetic Activity in Young Brown Dwarfs

Cycle: 32, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
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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	(7) 2MASS-J04064443+2540182	COS/FUV COS/NUV	2	28-Apr-2026 16:00:15.0	yes
02	(7) 2MASS-J04064443+2540182	STIS/CCD	1	28-Apr-2026 16:00:16.0	yes
03	(1) 2MASS-J04230607+2801194	COS/FUV COS/NUV	2	28-Apr-2026 16:00:17.0	yes
04	(1) 2MASS-J04230607+2801194	STIS/CCD	1	28-Apr-2026 16:00:17.0	yes
05	(2) 2MASS-J04242090+2630511	COS/FUV COS/NUV	2	28-Apr-2026 16:00:18.0	yes
06	(2) 2MASS-J04242090+2630511	STIS/CCD	1	28-Apr-2026 16:00:18.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(9) 2MASS-J04285053+1844361	COS/FUV COS/NUV	2	28-Apr-2026 16:00:19.0	yes
08	(9) 2MASS-J04285053+1844361	STIS/CCD	1	28-Apr-2026 16:00:19.0	yes
09	(5) 2MASS-J04485745+2913521	COS/FUV COS/NUV	2	28-Apr-2026 16:00:20.0	yes
10	(5) 2MASS-J04485745+2913521	STIS/CCD	1	28-Apr-2026 16:00:20.0	yes
11	(12) 2MASS-J04554801+3028050	COS/FUV COS/NUV	2	28-Apr-2026 16:00:20.0	yes
12	(12) 2MASS-J04554801+3028050	STIS/CCD	1	28-Apr-2026 16:00:21.0	yes
13	(8) 2MASS-J04214013+2814224	COS/FUV COS/NUV	3	28-Apr-2026 16:00:22.0	yes
14	(8) 2MASS-J04214013+2814224	STIS/CCD	1	28-Apr-2026 16:00:22.0	yes
15	(3) 2MASS-J04251550+2829275	COS/FUV COS/NUV	3	28-Apr-2026 16:00:23.0	yes
16	(3) 2MASS-J04251550+2829275	STIS/CCD	1	28-Apr-2026 16:00:24.0	yes
17	(10) 2MASS-J04322329+2403013	COS/FUV COS/NUV	3	28-Apr-2026 16:00:24.0	yes
18	(10) 2MASS-J04322329+2403013	STIS/CCD	1	28-Apr-2026 16:00:24.0	yes
19	(11) 2MASS-J04363248+2421395	COS/FUV COS/NUV	3	28-Apr-2026 16:00:25.0	yes
20	(11) 2MASS-J04363248+2421395	STIS/CCD	1	28-Apr-2026 16:00:25.0	yes
21	(6) PSO-J074.1999+29.2197	COS/FUV COS/NUV	3	28-Apr-2026 16:00:26.0	yes
22	(6) PSO-J074.1999+29.2197	STIS/CCD	1	28-Apr-2026 16:00:26.0	yes
23	(4) 2MASS-J04345923+1733379	COS/FUV COS/NUV	3	28-Apr-2026 16:00:27.0	yes
24	(4) 2MASS-J04345923+1733379	STIS/CCD	1	28-Apr-2026 16:00:28.0	yes

42 Total Orbits Used

ABSTRACT

Several recent studies have begun to explore accretion physics on planetary mass objects orbiting young stars; however, many of these studies highlight uncertainties in the accretion models used to interpret the observations. The models have been developed and calibrated for stellar accretion. Do they apply to planetary mass objects? Young brown dwarfs provide a natural bridge for connecting accretion studies from stars down to planetary mass obejcts. A key difficulty in diagnosing excess emission produced by accretion is to properly account for emission produced by magnetic activity. This is particularly true for line emission. We will study the FUV and blue optical emission of a sample of a dozen young brown dwarfs spanning the mass range from near the stellar limit down to near the planetary mass limit. Half of our sources show evidence for accretion while half do not. We will use these data to separate out the role of accretion and magnetic activity in producing the observed excess emission in order to test the applicability of models of stellar accretion to very low mass objects such as young giant planets.

OBSERVING DESCRIPTION

We will observe each target with COS+G160M with a CENWAVE of 1533 AA. This will deliver spectra in two segments spanning the wavelength ranges 1342 - 1515 Ang and 1533 - 1707 Ang, containing the important accretion and activity diagnostics of Si IV at 1400 Ang, C IV at 1550 Ang, He II at 1640 Ang, C I at 1656 Ang, and Al II at 1671 Ang. COS+G160M is the most sensitive instrument available to observe at these wavelengths and will provide a spectral resolution of ~15,000 which will give us sensitivity to line broadening and mass motions. Most accreting CTTSs have C IV lines substantially broader than non-accreting T Tauri stars (Ardila et al. 2013, ApJS, 207, 1) which derive their C IV emission from magnetic activity. Thus, the line shape provides an additional check with the line strength to indicate whether accretion is occuring. Because it is always possible a flare will occur, we will take our spectra in TIMETAG mode at no cost to S/N. A flare would produce ancillary science that will be very interesting but is not the focus of this program.

Our targets are in the Taurus star forming region and are selected from Esplin and Luhman (2019, AJ, 158, 54).
EL19 analyse the full SED of each object and categorize objects as having primordial accretion disks, transition/debris disks, or not having a disk. We assume the objects with primordial disks are accreting, and 6 of our targets (numbers 7, 1, 2, 9, 5, and 12) are these accreting stars. The other 6 all do not have a detectable disk and are assumed to not be accreting. EL19 provide extinction (A$_J$) for each object as well, and we use these in our ETC calculations.
Our primary goal is to measure the C IV and other emission lines noted above from these 12 objects and to show the accretors have substantially more emission than the non-accretors.

Because accretion in young stars is primary diagnosed by blue optical spectra that span the Balmer jump, we also include an observation of each target using STIS G430L observations covering wavelengths of 3000 - 5700 Ang. Ideally, the COS and STIS observations should be taken as close in time as possible; however, we separate them to facilitate scheduling because of SAA passage, but group them together so that they are taken within a day. This is the strategy used by the ULLYSES DDT program.

All objects are bright enough in the optical that 1 orbit of STIS G430L observation will give good S/N in these spectra. The non-accretors are expected to be fainter in the FUV emission lines, and because they are also fainter in the NUV, the target acquisition exosures for these need to be longer. As a result, the accreting brown dwarfs have 2 COS orbits each while the non-accreting stars have 3 COS orbits each.

Bright Object Protection Checks:

Half of our sample are expected to be accreting brown dwarfs. For these objects, we downloaded the ULLYSES spectrum of the accreting brown dwarf RECX-16 from program 16480. This object is an M6 star. We used its spectrum, scaling by the G magnitudes of the target stars relative to RECX-16 and accounting for reddening using values in Esplin and Luhman (2019, AJ, 158, 54). We used this for our baseline ETC calculations. For a BOP check, we then repeated the ETC calculations with this template spectrum multiplied by a factor of 4 as done in 16480. These checks did not result in any count rate warnings.

For our non-accreting stars, we performed baseline ETC calculations using the Phoenix M dwarf models in the ETC, picking the one closest in effective temperature to our targets and using reddenning values from Esplin and Luhman (2019). To these we added a C IV line doublet using the peak observed C IV flux from very late type dwarfs in Hawley and Johns-Krull (2003, ApJ, 588, L109). This peak line flux value was scaled by distance to the sources as well as the surface area of the objects. For BOP calculations for the non-accretors, we then used the appropriately scaled RECX-16 spectrum as above which contains substantially more UV flux than these baseline calculations as a worst case scenario in case they actually do have some level of accretion. These ETC runs did not yield any count rate warnings.

These BOP ETC runs are given in the comments for each observation exposure in the visits.

We then followed ISR COS 2017-01(v3) to perform BOP flare checks as follows.

For ACQ Imaging:

Using the 9000 K blackbody in the ETC, no warnings occur as long as the U magnitude is fainter than 15.7. Using the ISR methodology, we estimate quiescent U magntiudes for our stars from 19.65 to 23.10. They are all M6 or later in spectral type, so the P=10^-4 delta_U (flare) is -2.8. This means the flare peak U magnitudes range from 16.85 to 20.3. The brightest of these is 16.85, and the ETC run for this is COS.ta.1934125. No warnings result from this.

For FUV Spectroscopy:

Our observed spectral region contains only C IV and Si IV in terms of concerning lines. Ly-a is outside the spectral region recorded, so we do not

consider it. From above, the brightest flare expected produces a peak U magnitude of 16.85. This produces an f_U = 7.66e-16 erg cm^-2 s^-1 using equation (6) of the ISR. This produces f_CIV = 2.59e-14 erg cm^-2 s^-1 from equation (2) and f_SIV = 5.92e-15 erg cm^-2 s^-1 from equation (3) of the ISR. We put these flux values into the ETC assuming FWHM 0.2 Ang and line wavelengths of 1548.2 Ang and 1393.8 Ang for C IV and Si IV respectively as directed by the ISR, along with the U continuum for a 9000 K blackbody at U=16.85. We use an exposure time of 2500 sec which is typical of our longest exposures. The ETC run is COS.sp.1934205 with no warnings.

Visit

Proposal 17700, J0406+2540_COS (01), completed Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 2 orbits.

Diagnostics

(J0406+2540_COS (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.

(J0406+2540_COS (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0406+2540_COS (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	2MASS-J04064443+2540182	RA: 04 06 44.4356 (61.6851483d) Dec: +25 40 18.24 (25.67173d) Equinox: J2000	Proper Motion RA: 14.006 mas/yr Proper Motion Dec: -18.760 mas/yr Parallax: 0.0065244" Epoch of Position: 2000.0	V=18.65+/-0.2	Reference Frame: ICRS

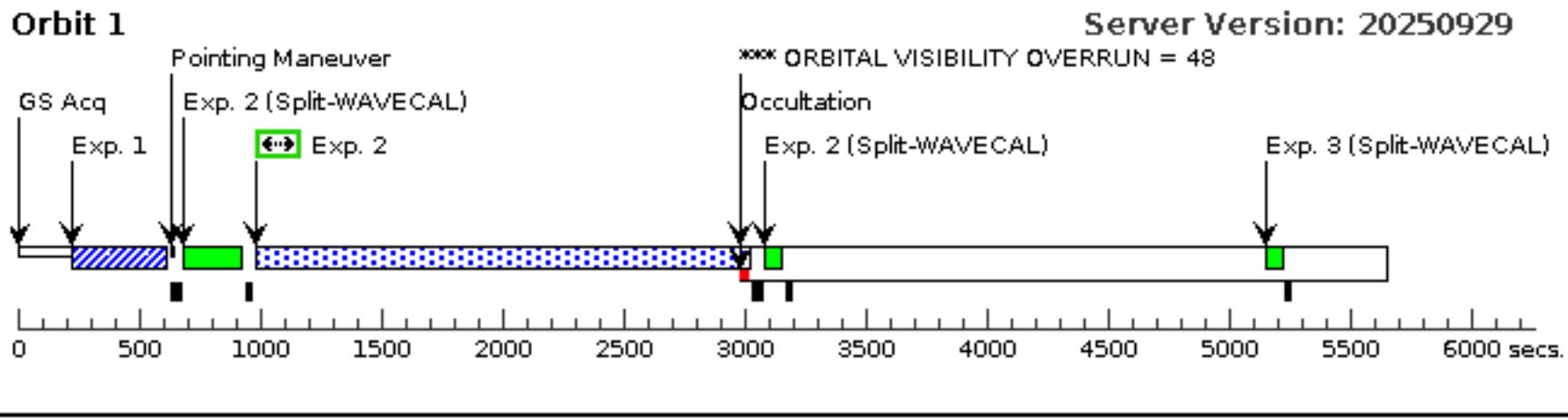
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

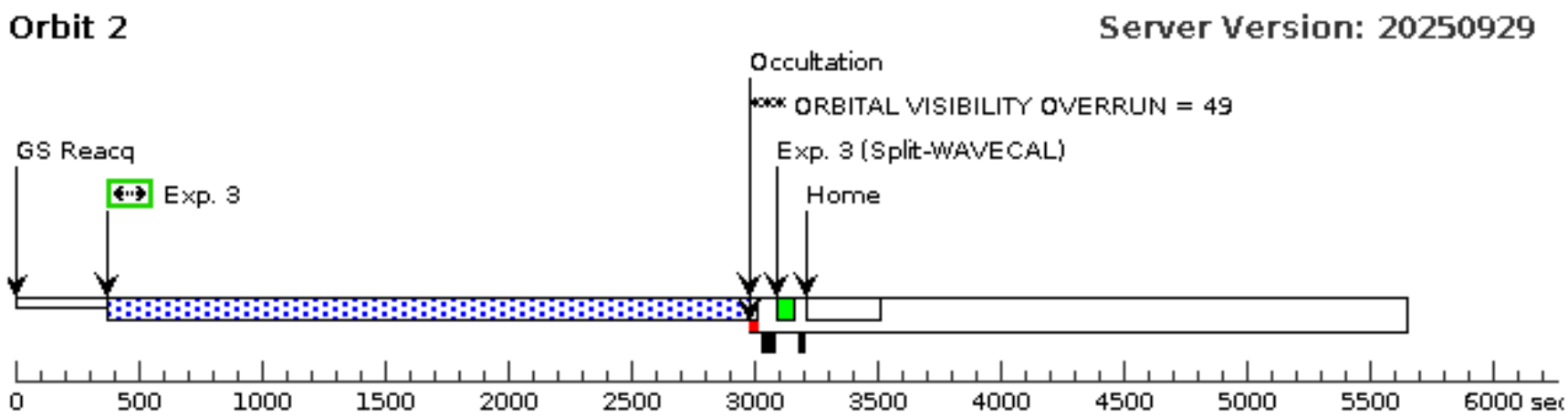
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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 (COS.ta.1932453)	(7) 2MASS-J04064443+2540182	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				90 Secs (90 Secs) *[==>]*	 ***[1]***
Comments: COS.ta.1932453 is the nominal TA ETC run. Actual exposure time padded by a factor of 3 in case accretion rate is lower and therefore star is a bit fainter.									
BOP ETC run is COS.ta.1932940 with spectrum multiplied by 4 and no count rate warnings.									
2	COS G160M (COS.sp.1933019)	(7) 2MASS-J04064443+2540182	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			1986 Secs (1986 Secs) *[==>]*	 ***[1]***
Comments: BOP ETC run is COS.sp.1933020 with input spectrum multiplied by 4 and no count rate warnings.									
3	COS G160M (COS.sp.1933021)	(7) 2MASS-J04064443+2540182	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2592 Secs) *[==>]*	 ***[2]***
Comments: BOP ETC run is COS.sp.1933022 with input spectrum multiplied by 4 and no count rate warnings.									

Orbit Structure





Visit

Proposal 17700, J0406+2540_STIS (02), completed Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 02,01 WITHIN 1D

Comments: This is the 1 orbit STIS G430L observation.

Diagnostics

(J0406+2540_STIS (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	2MASS-J04064443+2540182	RA: 04 06 44.4356 (61.6851483d) Dec: +25 40 18.24 (25.67173d) Equinox: J2000	Proper Motion RA: 14.006 mas/yr Proper Motion Dec: -18.760 mas/yr Parallax: 0.0065244" Epoch of Position: 2000.0	V=18.65+/-0.2	Reference Frame: ICRS

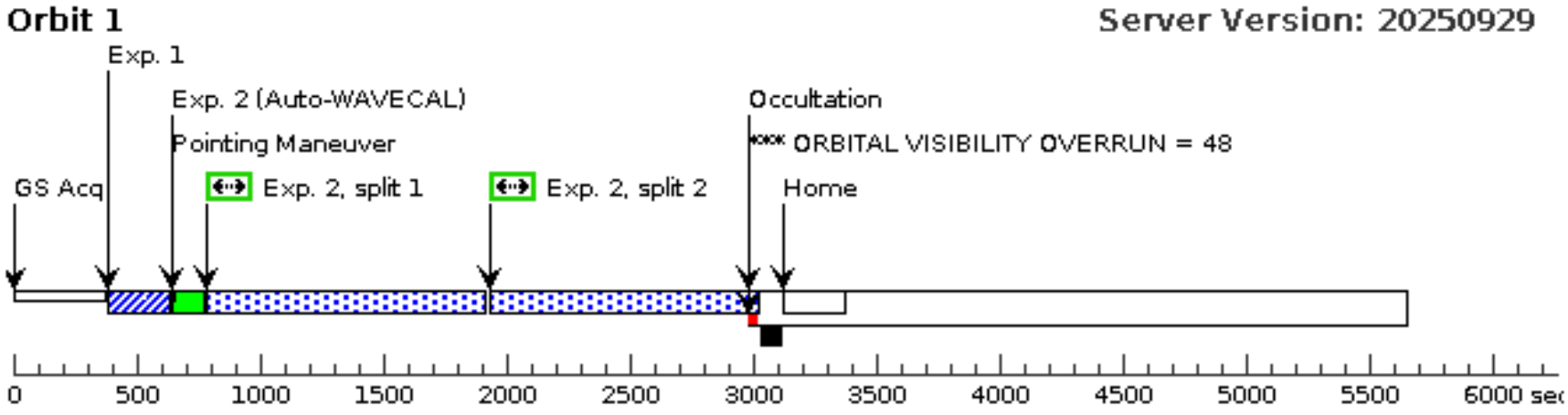
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932536)	(7) 2MASS-J04064443+2540182	STIS/CCD, ACQ, F28X50LP	MIRROR				5 Secs (5 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1932948)	(7) 2MASS-J04064443+2540182	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2100 Secs (2100 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0423+2801_COS (03), scheduling Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 2 orbits.

Diagnostics

(J0423+2801_COS (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.

(J0423+2801_COS (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0423+2801_COS (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	2MASS-J04230607+2801194	RA: 04 23 6.0792 (65.7753300d) Dec: +28 01 19.55 (28.02210d) Equinox: J2000	Proper Motion RA: 8.800 mas/yr Proper Motion Dec: -26.322 mas/yr Parallax: 0.0077184" Epoch of Position: 2000.0	V=18.68+/-0.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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 (COS.ta.1932956)	(1) 2MASS-J04230607+2801194	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				120 Secs (120 Secs) *[==>]*	 ***[1]***

Comments: COS.ta.1932956 is nominal TA ETC run for S/N ~ 20. Actual exposure padded by a factor of 3 in case accretion is lower and target is noticeably fainter.

BOP ETC run is COS.ta.1932957 at the requested 120 sec with the input spectrum multiplied by 4. No count rate warnings result.

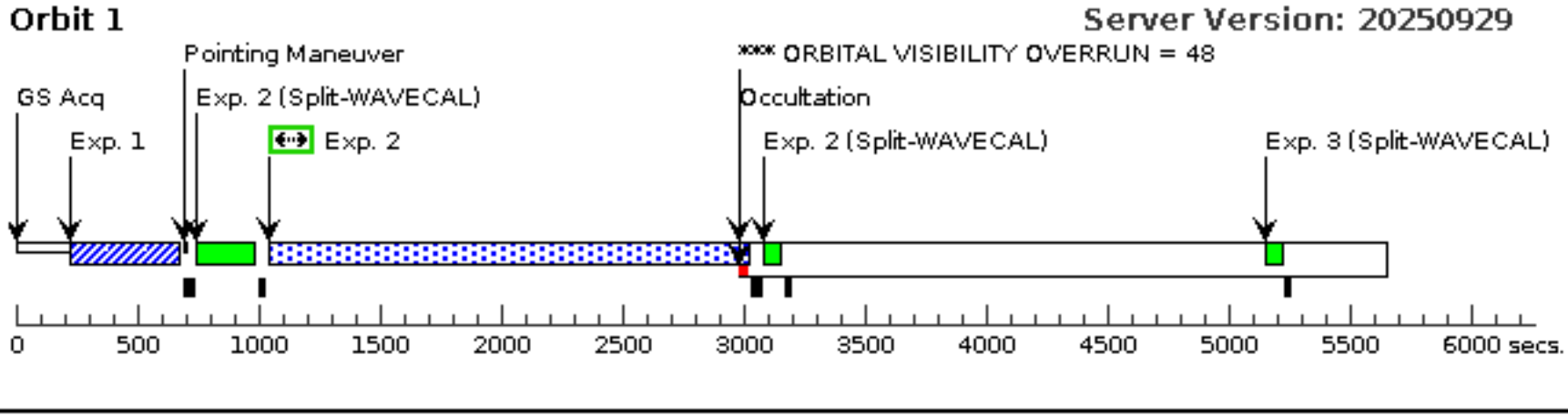
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	COS G160M (COS.sp.1933015)	(1) 2MASS-J04230607+2801194	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			1926 Secs (1926 Secs) *[==>]*	 ***[1]***

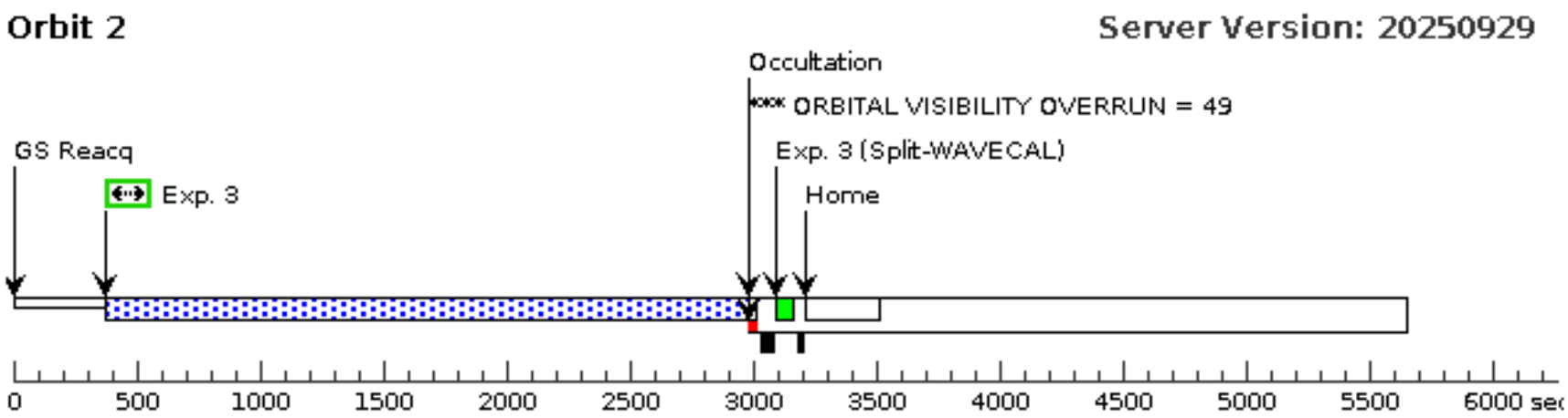
Comments: BOP ETC run is COS.sp.1933016 with input spectrum multiplied by 4 and no count rate warnings.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	COS G160M (COS.sp.1933017)	(1) 2MASS-J04230607+2801194	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2592 Secs) *[==>]*	 ***[2]***

Comments: BOP ETC run is COS.sp.1933018 with input spectrum multiplied by 4 and no count rate warnings.

Orbit Structure





Visit

Proposal 17700, J0423+2801_STIS (04), scheduling Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 04,03 WITHIN 1D

Comments: This is the 1 orbit STIS G430L observation.

Diagnostics

(J0423+2801_STIS (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

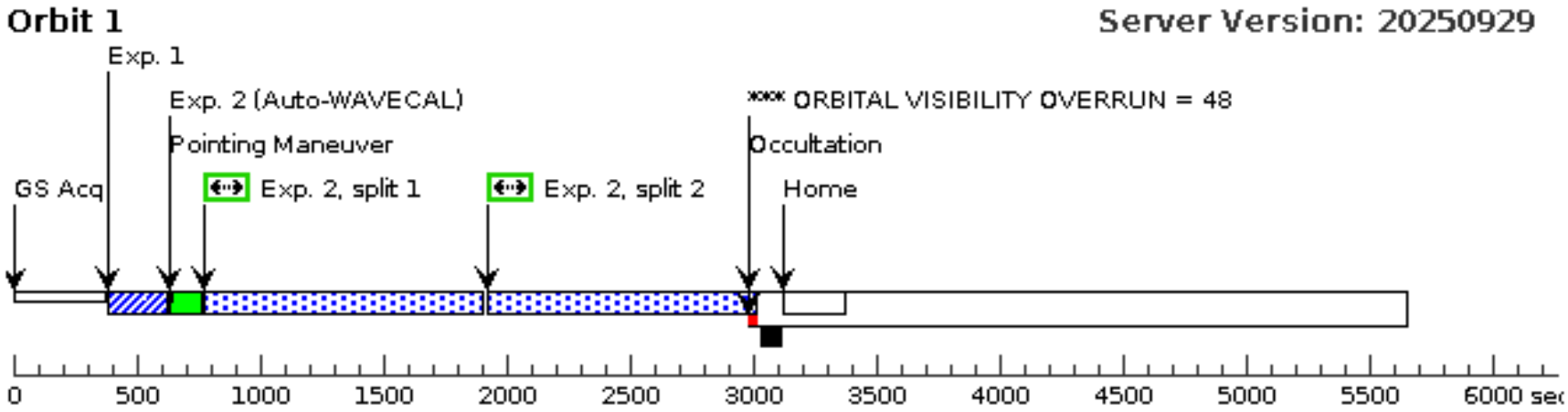
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	2MASS-J04230607+2801194	RA: 04 23 6.0792 (65.7753300d) Dec: +28 01 19.55 (28.02210d) Equinox: J2000	Proper Motion RA: 8.800 mas/yr Proper Motion Dec: -26.322 mas/yr Parallax: 0.0077184" Epoch of Position: 2000.0	V=18.68+/-0.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932593)	(1) 2MASS-J04230607+2801194	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1932962)	(1) 2MASS-J04230607+2801194	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2108 Secs (2108 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0424+2630_COS (05), implementation Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 2 orbits.

Diagnostics

(J0424+2630_COS (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

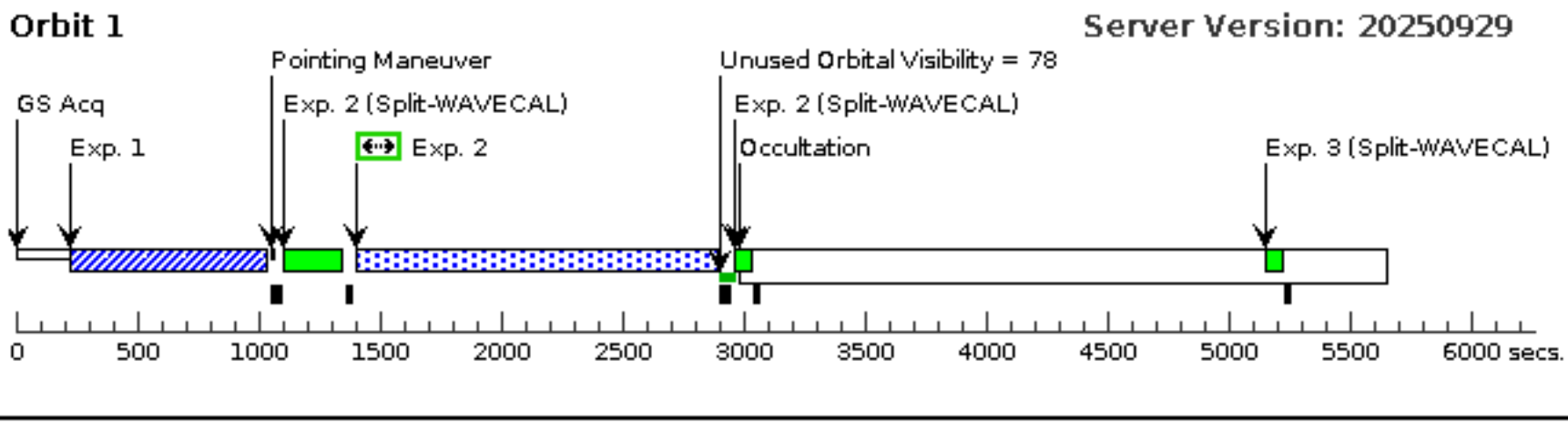
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	2MASS-J04242090+2630511	RA: 04 24 20.8974 (66.0870725d) Dec: +26 30 51.06 (26.51418d) Equinox: J2000	Proper Motion RA: 7.168628717522304E-4 sec of time/yr Proper Motion Dec: -0.0272059999360863 arcsec/yr Parallax: 0.007787" Epoch of Position: 2000	V=20.1+/-0.2	Reference Frame: ICRS

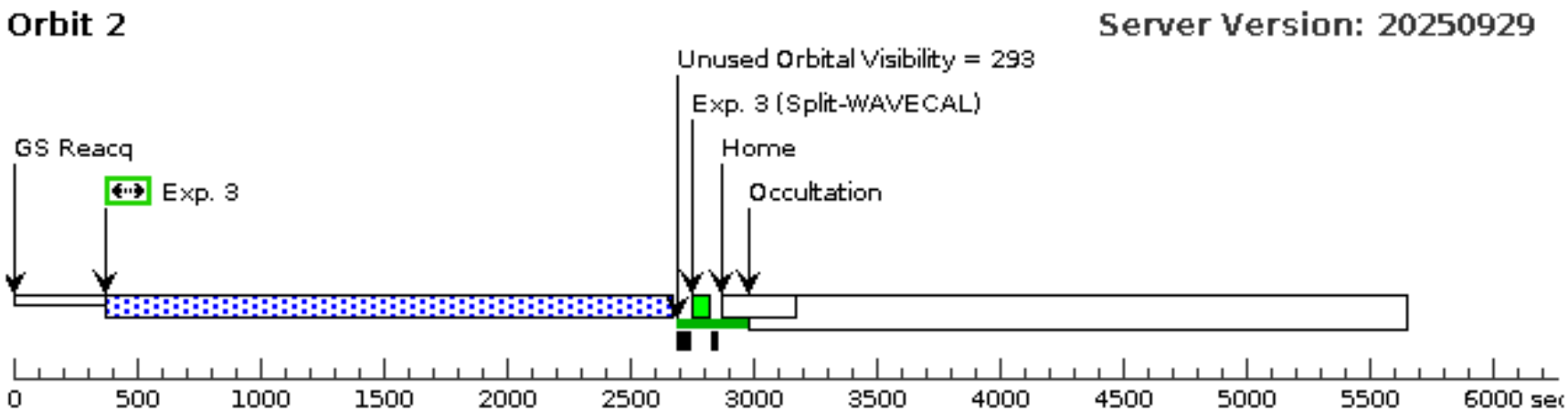
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1932602)	(2) 2MASS-J04242090+2630511	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				300 Secs (300 Secs) *[==>]*	*[1]*
Comments: COS.ta.1932602 in nominal ETC TA run for target. Actual exposure padded by factor of 3 in case accretion rate is lower and target is fainter by appreciable amount.									
BOP ETC run is COS.ta.1932963 with input spectrum multiplied by 4 and exposure time the full 300 sec. No count rate warnings result.									
2	COS G160M (COS.sp.1933010)	(2) 2MASS-J04242090+2630511	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			1566 Secs (1440 Secs) *[==>1440 Secs]*	*[1]*
Comments: BOP ETC run is COS.sp.1933011 with inpuut spectrum multiplied by 4. No count rate warnings result.									
3	COS G160M (COS.sp.1933012)	(2) 2MASS-J04242090+2630511	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2250 Secs) *[==>2250.0 Secs]*	*[2]*
Comments: BOP ETC run is COS.sp.1933013 with input spectrum multiplied by 4. No count rate warnings result.									

Orbit Structure





Visit

Proposal 17700, J0424+2630_STIS (06), implementation Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Comments: This is the 1 orbit STIS G430L observation.

Fixed Targets

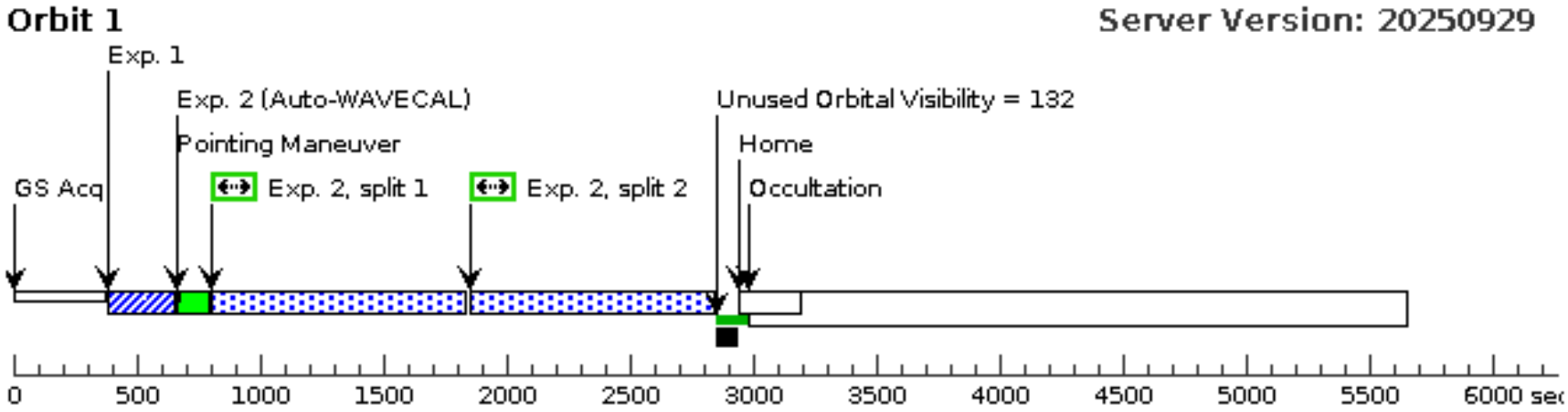
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	2MASS-J04242090+2630511	RA: 04 24 20.8974 (66.0870725d) Dec: +26 30 51.06 (26.51418d) Equinox: J2000	Proper Motion RA: 7.168628717522304E-4 sec of time/yr Proper Motion Dec: -0.0272059999360863 arcsec/yr Parallax: 0.007787" Epoch of Position: 2000	V=20.1+/-0.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932605)	(2) 2MASS-J04242090+2630511	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs) *[==>]*	 ***[1]***
2	G430L (STIS.sp.1932968)	(2) 2MASS-J04242090+2630511	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2080 Secs (1900 Secs) *[==>950 Secs (Split 1)]* *[==>950 Secs (Split 2)]*	 ***[1]***

Orbit Structure



Visit

Proposal 17700, J0428+1844_COS (07), scheduling Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 2 orbits.

Diagnostics

(J0428+1844_COS (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.

(J0428+1844_COS (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0428+1844_COS (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	2MASS-J04285053+1844361	RA: 04 28 50.5436 (67.2105983d) Dec: +18 44 36.13 (18.74337d) Equinox: J2000	Proper Motion RA: 12.516 mas/yr Proper Motion Dec: -18.995 mas/yr Parallax: 0.0067472" Epoch of Position: 2000	V=17.35+/-0.2	Reference Frame: ICRS

Comments: Object entered by PI from SIMBAD.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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 (COS.ta.1932617)	(9) 2MASS-J04285053+1844361	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				45 Secs (45 Secs) *[==>]*	 ***[1]***

Comments: COS.ta.1932617 is nominal TA ETC run for target. Actual exposure time is padded by a factor of 3 in case accretion rate is lower and target is noticeable fainter.

BOP ETC run is COS.ta.1932973 where input spectrum is multiplied by 4 and using full exposure of 45 sec. No count rate warnings result.

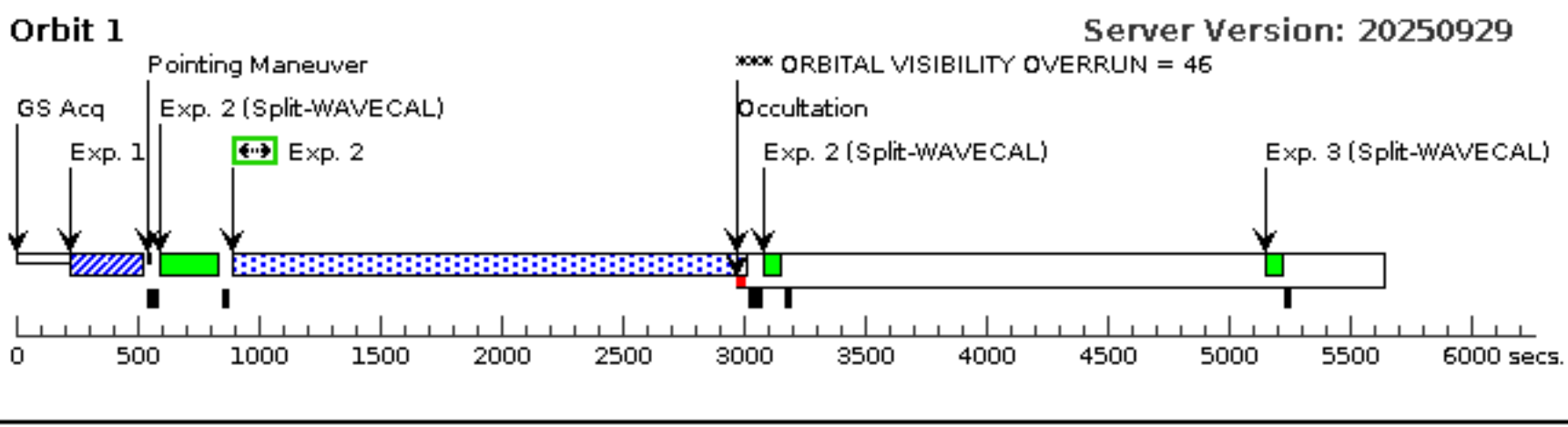
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	COS G160M (COS.sp.1933005)	(9) 2MASS-J04285053+1844361	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2067 Secs (2067 Secs) *[==>]*	 ***[1]***

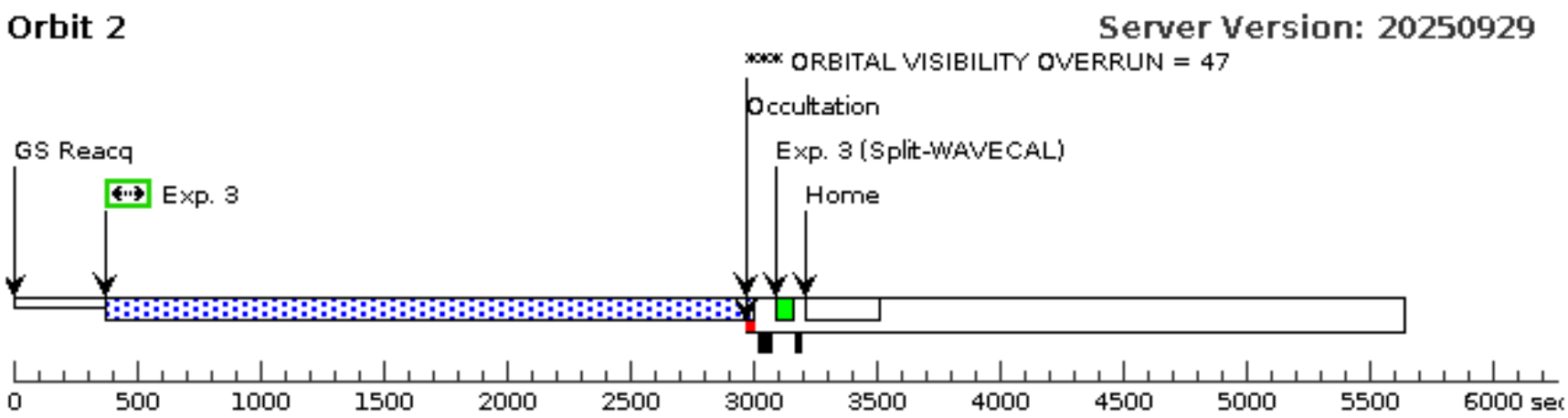
Comments: BOP ETC calculation is COS.sp.1933006 with input spectrum multiplied by 4. No warnings result.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	COS G160M (COS.sp.1933007)	(9) 2MASS-J04285053+1844361	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2583 Secs (2583 Secs) *[==>]*	 ***[2]***

Comments: BOP ETC run is COS.sp.1933008 with input spectrum multiplied by 4. No warnings result.

Orbit Structure





Visit

Proposal 17700, J0428+1844_STIS (08), scheduling Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 08,07 WITHIN 1D

Comments: This is the 1 orbit STIS G430L observation.

Diagnostics

(J0428+1844_STIS (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	2MASS-J04285053+1844361	RA: 04 28 50.5436 (67.2105983d) Dec: +18 44 36.13 (18.74337d) Equinox: J2000	Proper Motion RA: 12.516 mas/yr Proper Motion Dec: -18.995 mas/yr Parallax: 0.0067472" Epoch of Position: 2000	V=17.35+/-0.2	Reference Frame: ICRS

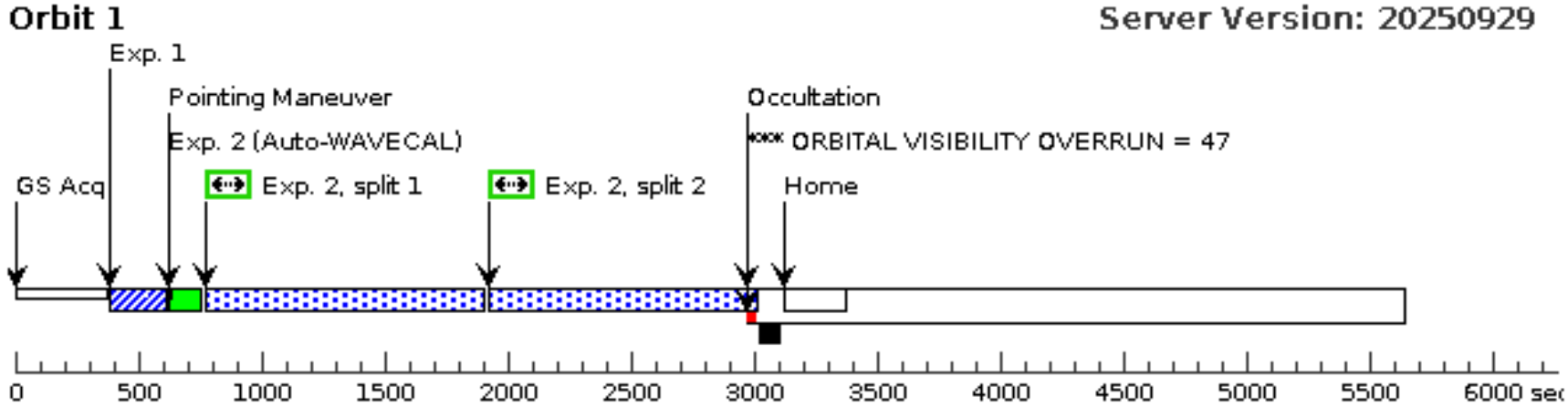
Comments: Object entered by PI from SIMBAD.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932619)	(9) 2MASS-J04285053+1844361	STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933009)	(9) 2MASS-J04285053+1844361	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2104 Secs (2104 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0448+2913_COS (09), scheduling Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 2 orbits.

Diagnostics

(J0448+2913_COS (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.

(J0448+2913_COS (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0448+2913_COS (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

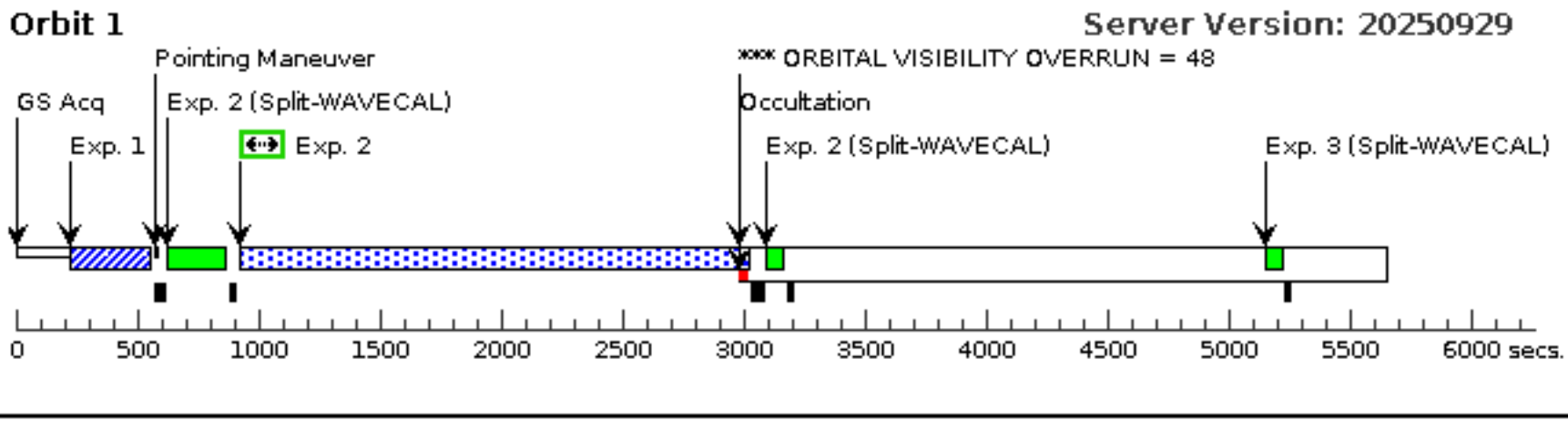
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	2MASS-J04485745+2913521	RA: 04 48 57.4539 (72.2393912d) Dec: +29 13 52.04 (29.23112d) Equinox: J2000	Proper Motion RA: 4.421 mas/yr Proper Motion Dec: -24.143 mas/yr Parallax: 0.0062841" Epoch of Position: 2000	V=18.12+/-0.2	Reference Frame: ICRS

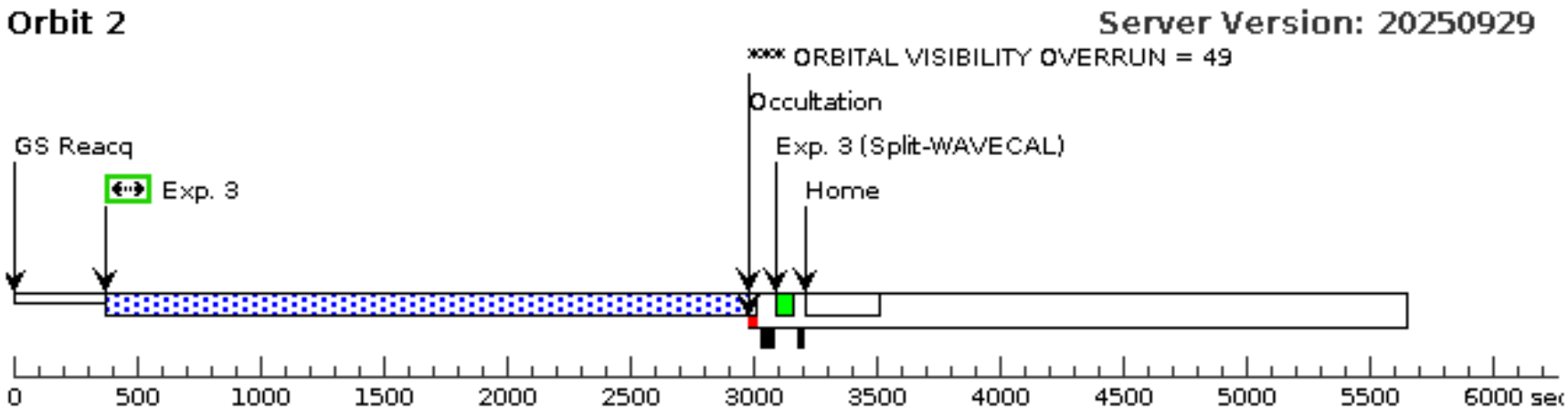
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1932621)	(5) 2MASS-J04485745+2913521	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs) *[==>]*	 ***[1]***
Comments: COS.ta.1932621 is nominal TA ETC run for target. Actual exposure time is padded by a factor of 3 in case accretion rate is lower and targets is noticeably fainter.									
2	COS G160M (COS.sp.1933023)	(5) 2MASS-J04485745+2913521	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2046 Secs (2046 Secs) *[==>]*	 ***[1]***
Comments: BOP ETC run is COS.sp.1933024 with input spectrum multiplied by 4. No warnings result.									
3	COS G160M (COS.sp.1933025)	(5) 2MASS-J04485745+2913521	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2592 Secs) *[==>]*	 ***[2]***
Comments: BOP ETC run is COS.sp.1933027 with input spectrum multiplied by 4. No warnings result.									

Orbit Structure





Visit

Proposal 17700, J0448+2913_STIS (10), scheduling Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 10,09 WITHIN 1D

Comments: This is the 1 orbit STIS G430L observation.

Diagnostics

(J0448+2913_STIS (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

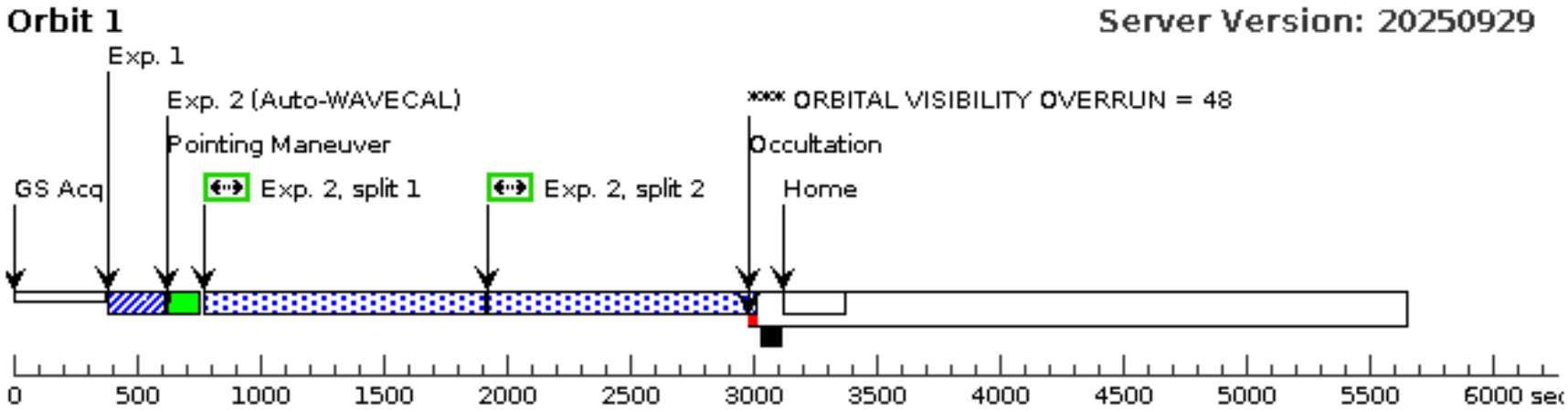
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	2MASS-J04485745+2913521	RA: 04 48 57.4539 (72.2393912d) Dec: +29 13 52.04 (29.23112d) Equinox: J2000	Proper Motion RA: 4.421 mas/yr Proper Motion Dec: -24.143 mas/yr Parallax: 0.0062841" Epoch of Position: 2000	V=18.12+/-0.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932623)	(5) 2MASS-J04485745+2913521	STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933028)	(5) 2MASS-J04485745+2913521	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2112 Secs (2112 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0455+3028_COS (11), completed Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 2 orbits.

Diagnostics

(J0455+3028_COS (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.

(J0455+3028_COS (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0455+3028_COS (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	2MASS-J04554801+3028050	RA: 04 55 48.0216 (73.9500900d) Dec: +30 28 4.84 (30.46801d) Equinox: J2000	Proper Motion RA: 4.919 mas/yr Proper Motion Dec: -23.838 mas/yr Parallax: 0.0062413" Epoch of Position: 2000	V=19.67+/-0.2	Reference Frame: ICRS

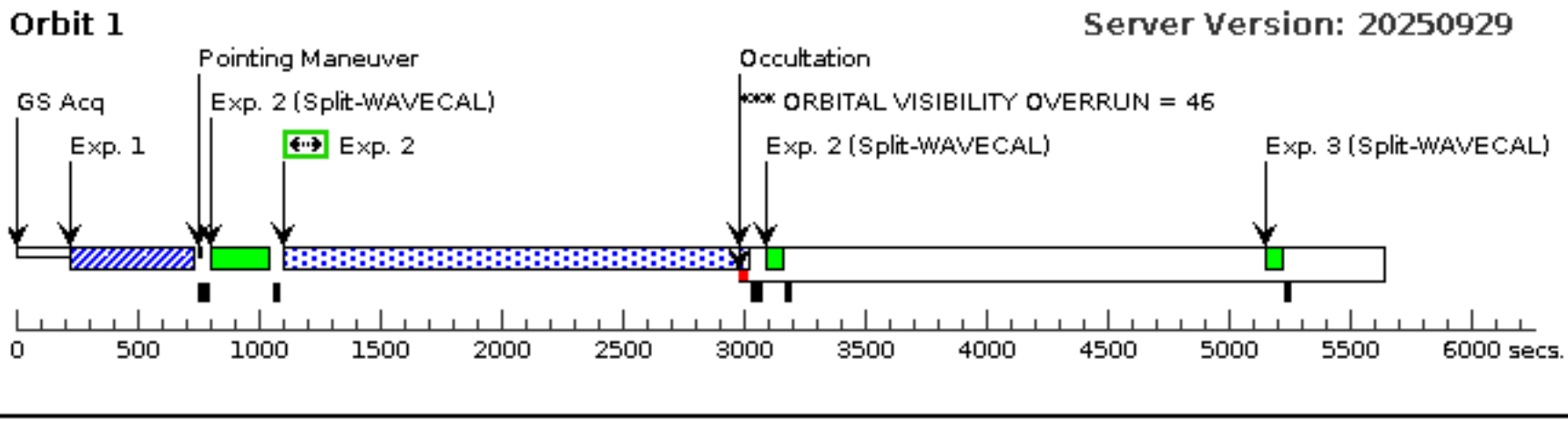
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

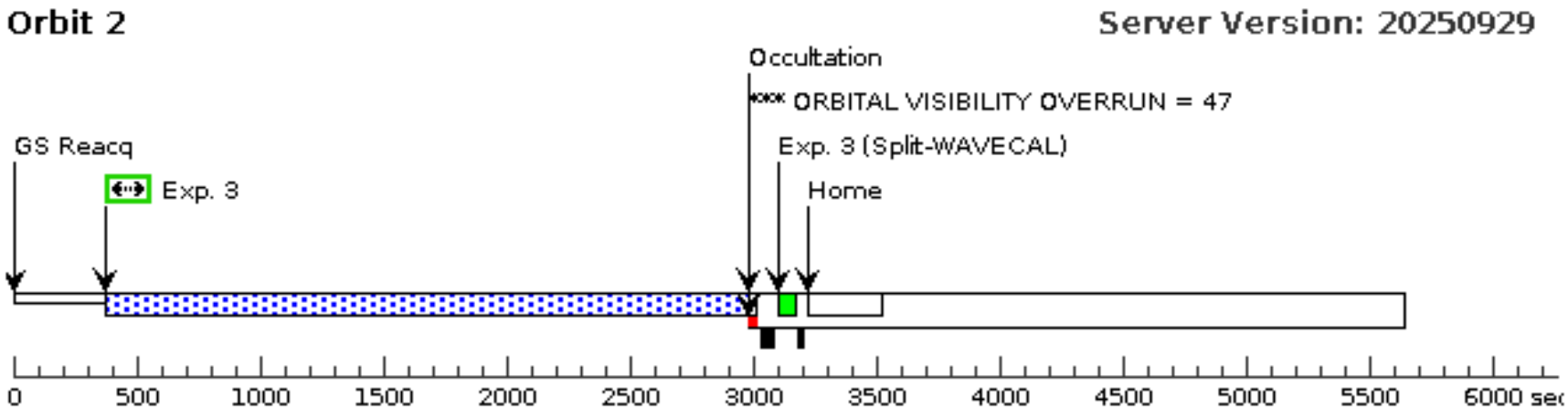
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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 (COS.ta.1932633)	(12) 2MASS-J04554801+3028050	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				150 Secs (150 Secs) *[==>]*	 ***[1]***
Comments: COS.ta.1932633 is nominal TA ETC run for target. Actual exposure time is padded by a factor of 3 in case accretion rate is lower and target is noticeably fainter.									
2	COS G160M (COS.sp.1933030)	(12) 2MASS-J04554801+3028050	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			1868 Secs (1868 Secs) *[==>]*	 ***[1]***
Comments: BOP ETC run is COS.sp.1933032 with input spectrum multiplied by 4. No warnings result.									
3	COS G160M (COS.sp.1933034)	(12) 2MASS-J04554801+3028050	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2594 Secs (2594 Secs) *[==>]*	 ***[2]***
Comments: BOP ETC run is COS.sp.1933036 with input spectrum multiplied by 4. No warnings result.									

Orbit Structure





Visit

Proposal 17700, J0455+3028_STIS (12), completed Tue Apr 28 20:00:28 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 12,11 WITHIN 1D

Comments: This is the 1 orbit STIS G430L observation.

Diagnostics

(J0455+3028_STIS (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	2MASS-J04554801+3028050	RA: 04 55 48.0216 (73.9500900d) Dec: +30 28 4.84 (30.46801d) Equinox: J2000	Proper Motion RA: 4.919 mas/yr Proper Motion Dec: -23.838 mas/yr Parallax: 0.0062413" Epoch of Position: 2000	V=19.67+/-0.2	Reference Frame: ICRS

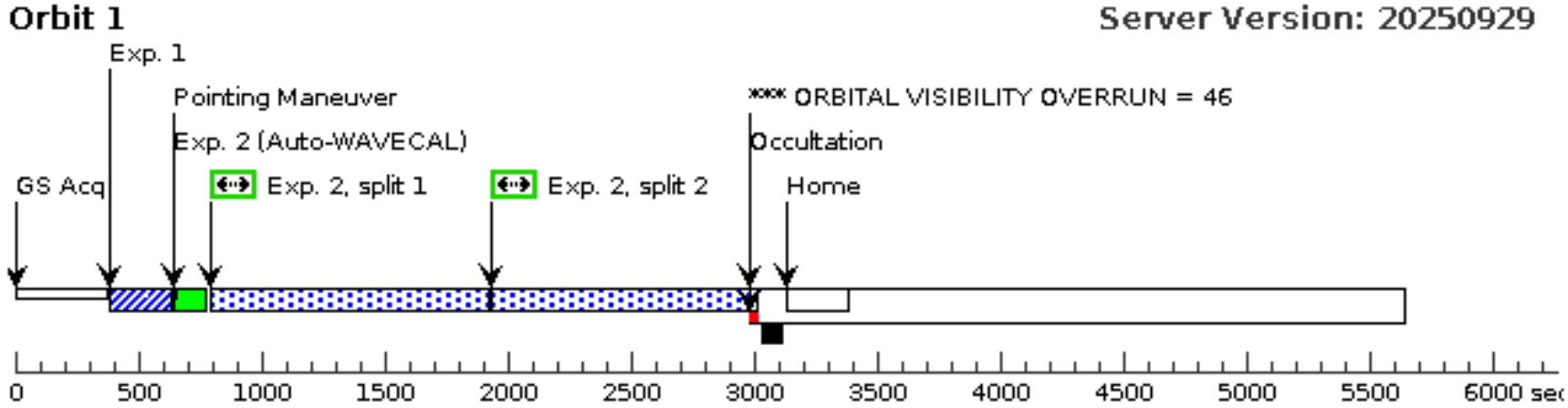
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932635)	(12) 2MASS-J04554801+3028050	STIS/CCD, ACQ, F28X50LP	MIRROR				6 Secs (6 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933037)	(12) 2MASS-J04554801+3028050	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2098 Secs (2098 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0421+2814_COS (13), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 3 orbits.

Diagnostics

(J0421+2814_COS (13)) 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.

(J0421+2814_COS (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0421+2814_COS (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0421+2814_COS (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	2MASS-J04214013+2814224	RA: 04 21 40.1441 (65.4172671d) Dec: +28 14 22.56 (28.23960d) Equinox: J2000	Proper Motion RA: 8.849 mas/yr Proper Motion Dec: -25.789 mas/yr Parallax: 0.0079782" Epoch of Position: 2000	V=18.01+/-0.2	Reference Frame: ICRS

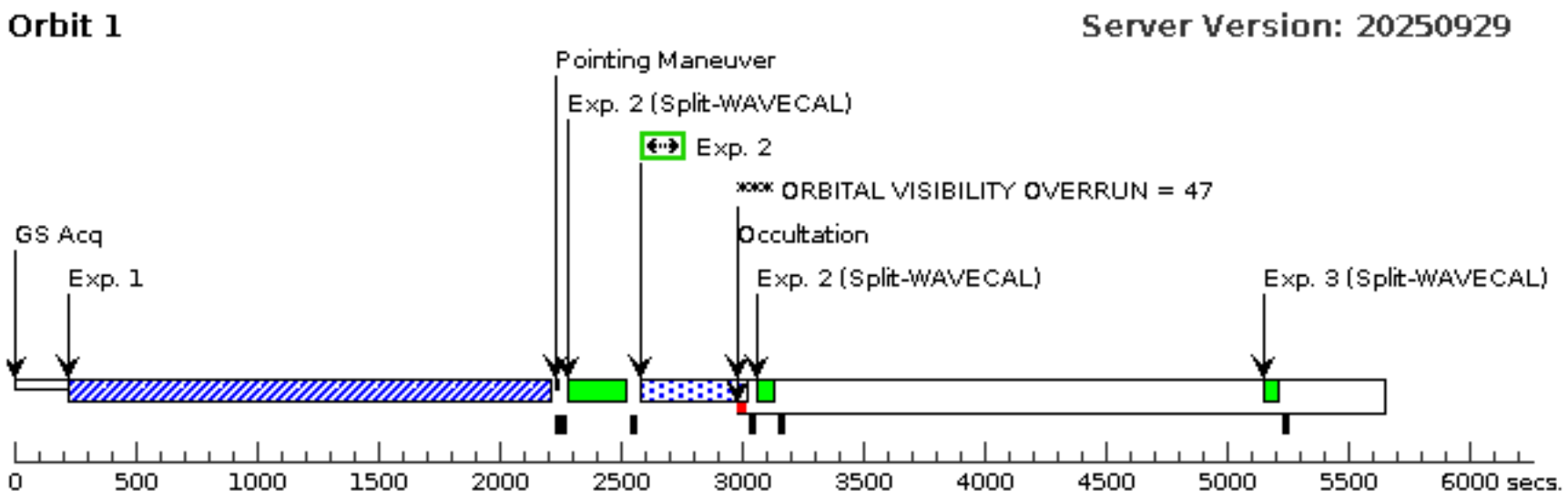
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

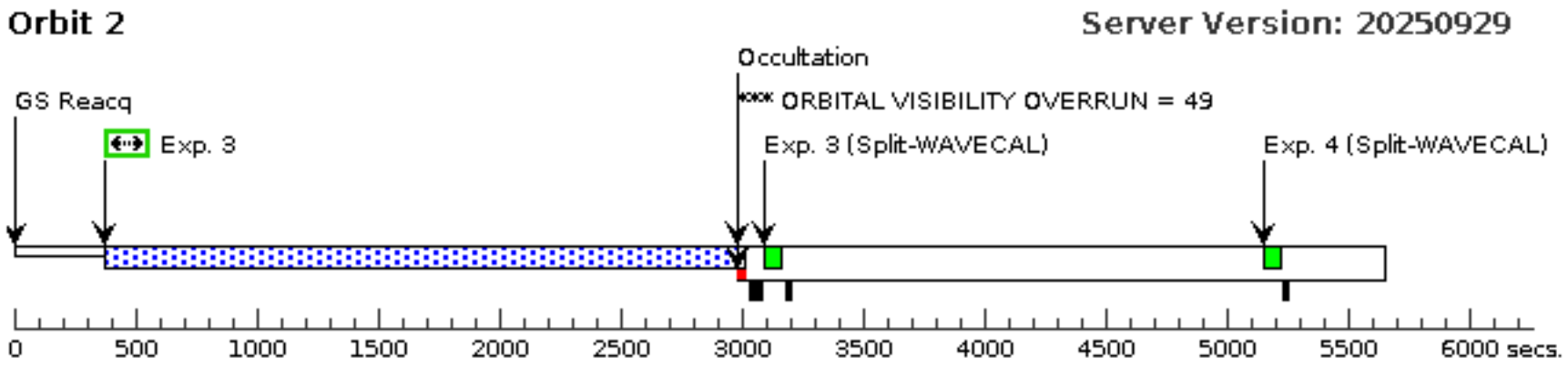
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR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

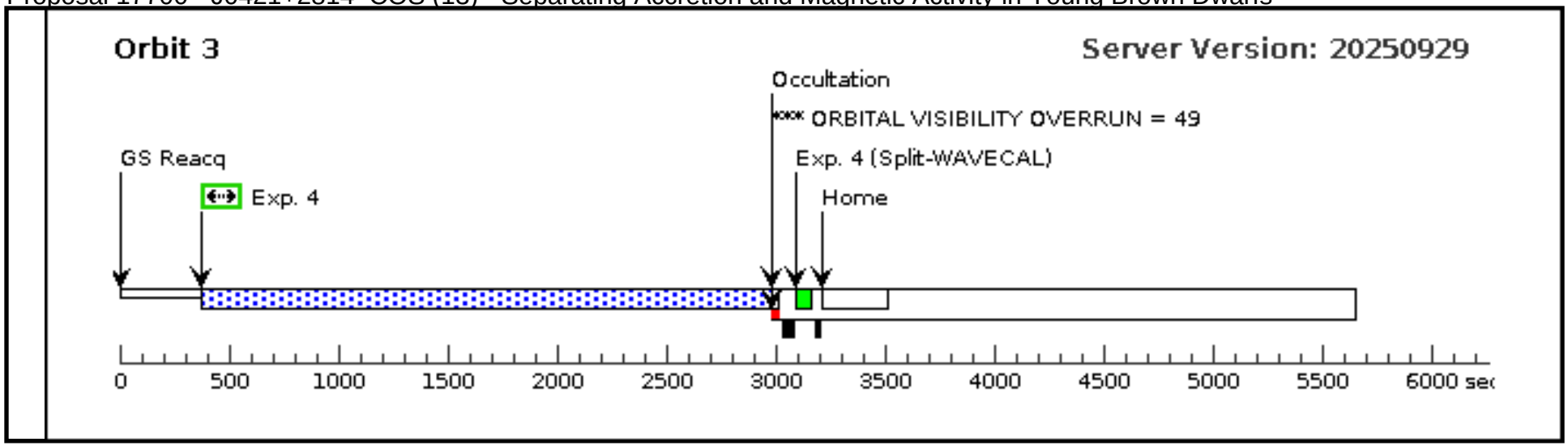
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1932648)	(8) 2MASS-J04214013+2814224	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				890 Secs (890 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.ta.1933558 where scaled accreting star template is used. No count rate warnings result.									
2	COS G160M (COS.sp.1933594)	(8) 2MASS-J04214013+2814224	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			385 Secs (385 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933600 with scaled accreting template used.									
3	COS G160M (COS.sp.1933595)	(8) 2MASS-J04214013+2814224	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2592 Secs (2592 Secs) *[==>]*	***[2]***
Comments: Non-accreting star. BPO ETC run is COS.sp.1933602 using scaled accreting star template. No warnings result.									
4	COS G160M (COS.sp.1933595)	(8) 2MASS-J04214013+2814224	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2592 Secs) *[==>]*	***[3]***
Comments: Non-accreting star. BPO ETC run is COS.sp.1933602 using scaled accreting star template. No warnings result.									

Orbit Structure






Orbit 3
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Occultation
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GS Reacq
Exp. 4
Exp. 4 (Split-WAVECAL)
Home
0
500
1000
1500
2000
2500
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3500
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4500
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5500
6000 sec

Visit

Proposal 17700, J0421+2814_STIS (14), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 14,13 WITHIN 1D

Comments: This is the 1 orbit STIS G430L observation.

Diagnostics

(J0421+2814_STIS (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	2MASS-J04214013+2814224	RA: 04 21 40.1441 (65.4172671d) Dec: +28 14 22.56 (28.23960d) Equinox: J2000	Proper Motion RA: 8.849 mas/yr Proper Motion Dec: -25.789 mas/yr Parallax: 0.0079782" Epoch of Position: 2000	V=18.01+/-0.2	Reference Frame: ICRS

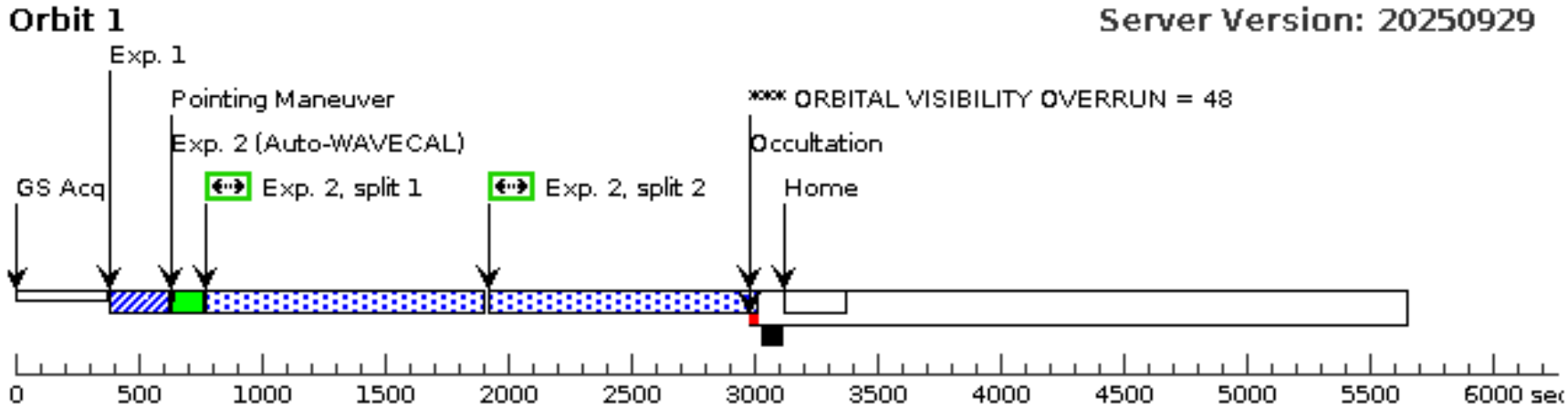
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932657)	(8) 2MASS-J04214013+2814224	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933434)	(8) 2MASS-J04214013+2814224	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2108 Secs (2108 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0425+2829_COS (15), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 3 orbits.

Diagnostics

(J0425+2829_COS (15)) 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.

(J0425+2829_COS (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0425+2829_COS (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0425+2829_COS (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

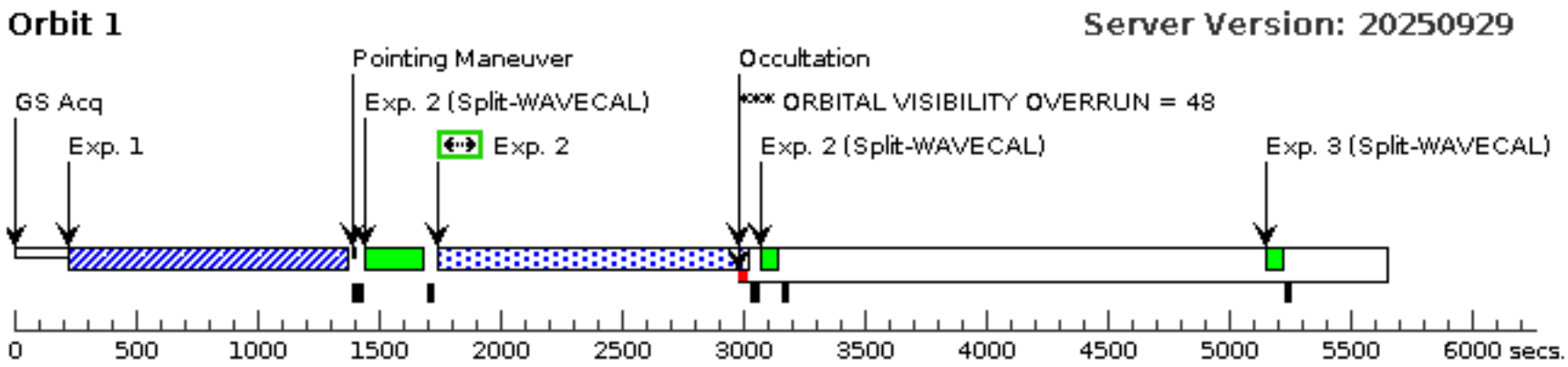
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	2MASS-J04251550+2829275	RA: 04 25 15.5091 (66.3146213d) Dec: +28 29 27.54 (28.49098d) Equinox: J2000	Proper Motion RA: 10.945 mas/yr Proper Motion Dec: -25.228 mas/yr Parallax: 0.0072018" Epoch of Position: 2000	V=17.72+/-0.2	Reference Frame: ICRS

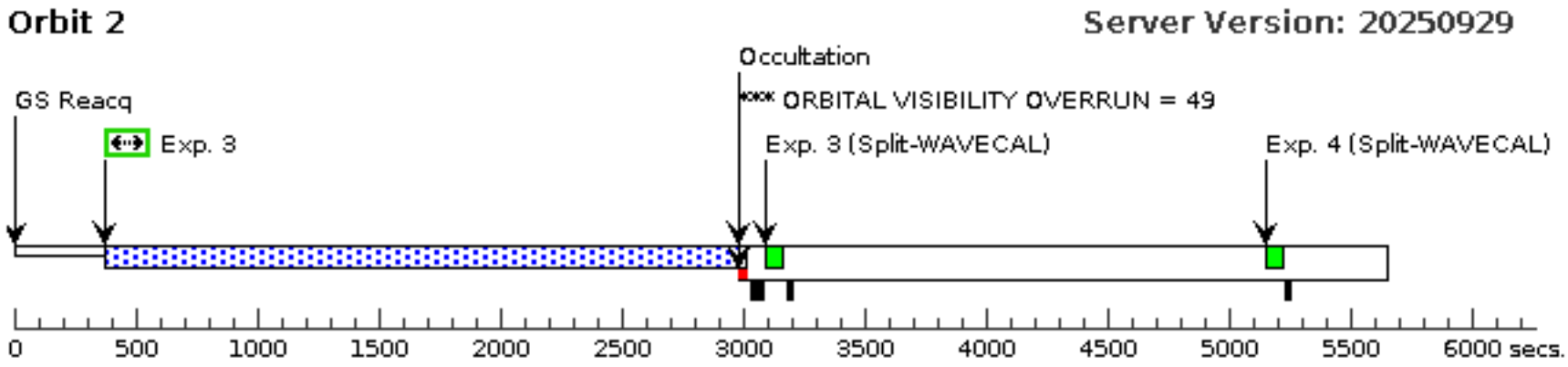
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
Extended=NO

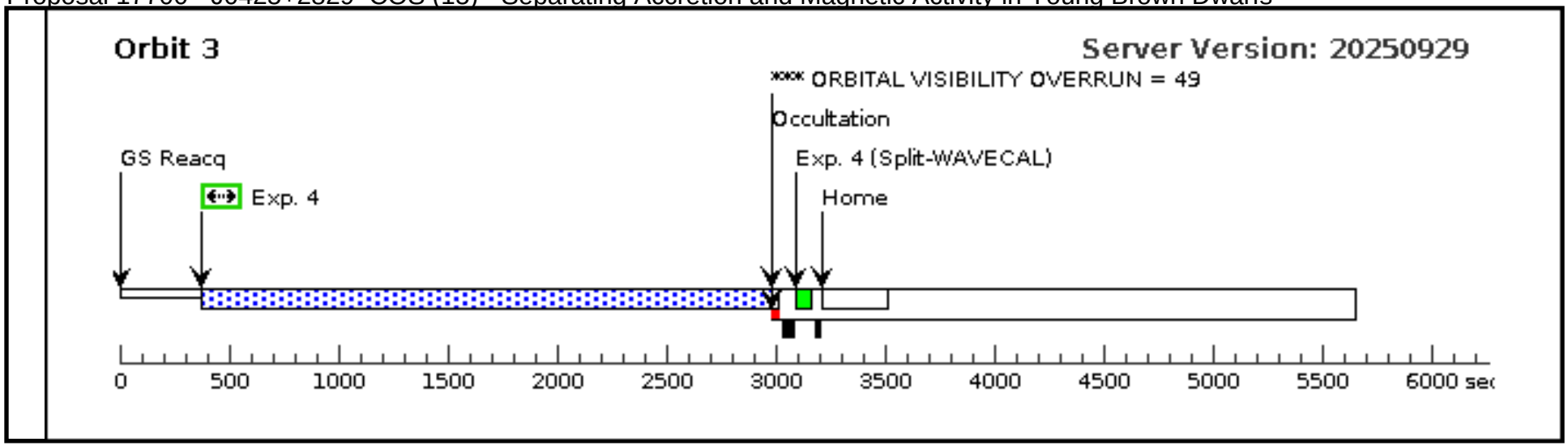
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1932665)	(3) 2MASS-J04251550+2829275	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				470 Secs (470 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.ta.1933597 where spectrum of scaled accreting star is input. No count rate warnings result.									
2	COS G160M (COS.sp.1933610)	(3) 2MASS-J04251550+2829275	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=2			1226 Secs (1226 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933613 qhwew scaled spectrum of accreting template is used. No warnings result.									
3	COS G160M (COS.sp.1933611)	(3) 2MASS-J04251550+2829275	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2592 Secs (2592 Secs) *[==>]*	***[2]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933614 where scaled spectrum of accreting template is used. No warnings result.									
4	COS G160M (COS.sp.1933611)	(3) 2MASS-J04251550+2829275	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2592 Secs) *[==>]*	***[3]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933614 where scaled spectrum of accreting template is used. No warnings result.									

Orbit Structure






Orbit 3
Server Version: 20250929
**** ORBITAL VISIBILITY OVERRUN = 49
Occultation
GS Reacq
Exp. 4 (Split-WAVECAL)
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17700, J0425+2829_STIS (16), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 16,15 WITHIN 1D

Comments: This is the 1 orbit G430L observation.

Diagnostics

(J0425+2829_STIS (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

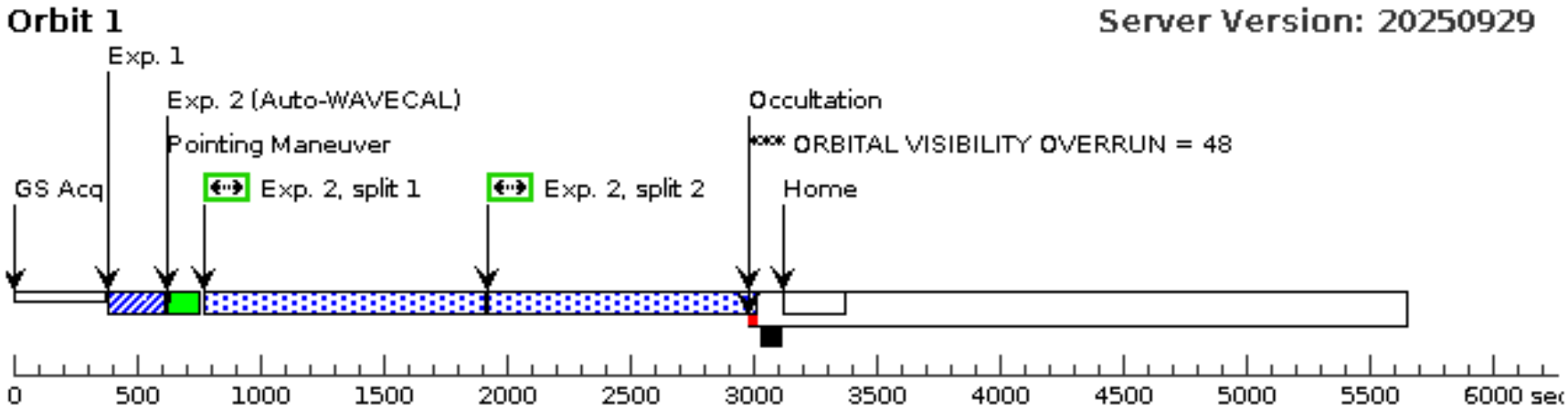
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	2MASS-J04251550+2829275	RA: 04 25 15.5091 (66.3146213d) Dec: +28 29 27.54 (28.49098d) Equinox: J2000	Proper Motion RA: 10.945 mas/yr Proper Motion Dec: -25.228 mas/yr Parallax: 0.0072018" Epoch of Position: 2000	V=17.72+/-0.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932667)	(3) 2MASS-J04251550+2829275	STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933435)	(3) 2MASS-J04251550+2829275	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2112 Secs (2112 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0432+2403_COS (17), implementation Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 3 orbits.

Diagnostics

(J0432+2403_COS (17)) 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
(10)	2MASS-J04322329+2403013	RA: 04 32 23.3108 (68.0971283d) Dec: +24 03 1.46 (24.05041d) Equinox: J2000	Proper Motion RA: 7.182 mas/yr Proper Motion Dec: -21.886000058657373 mas/yr Parallax: 0.0078883" Epoch of Position: 2000	V=19.28+/-0.2	Reference Frame: ICRS

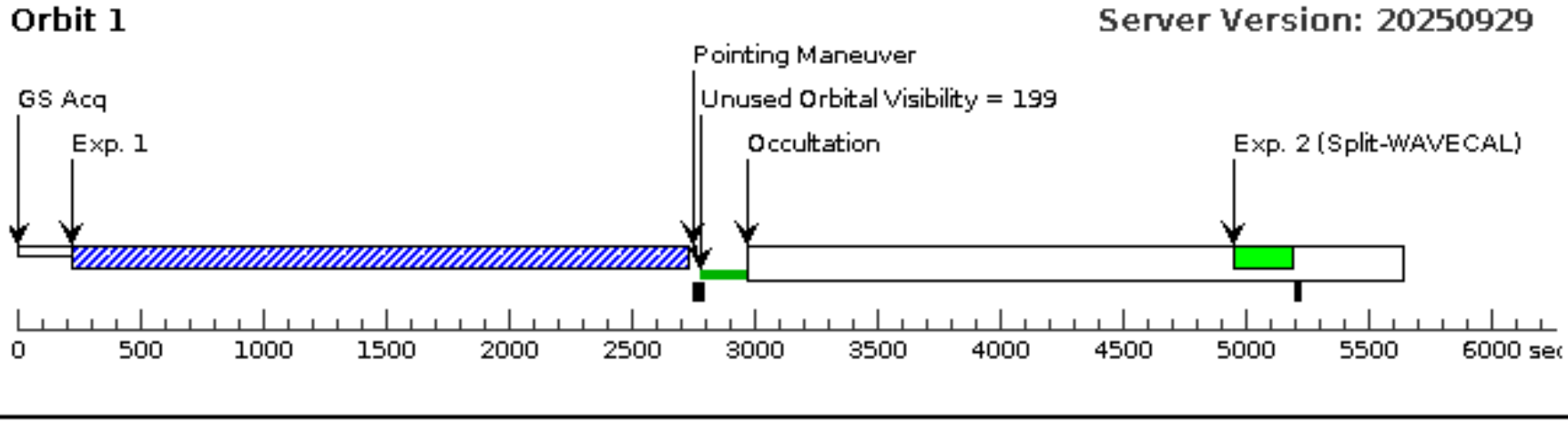
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

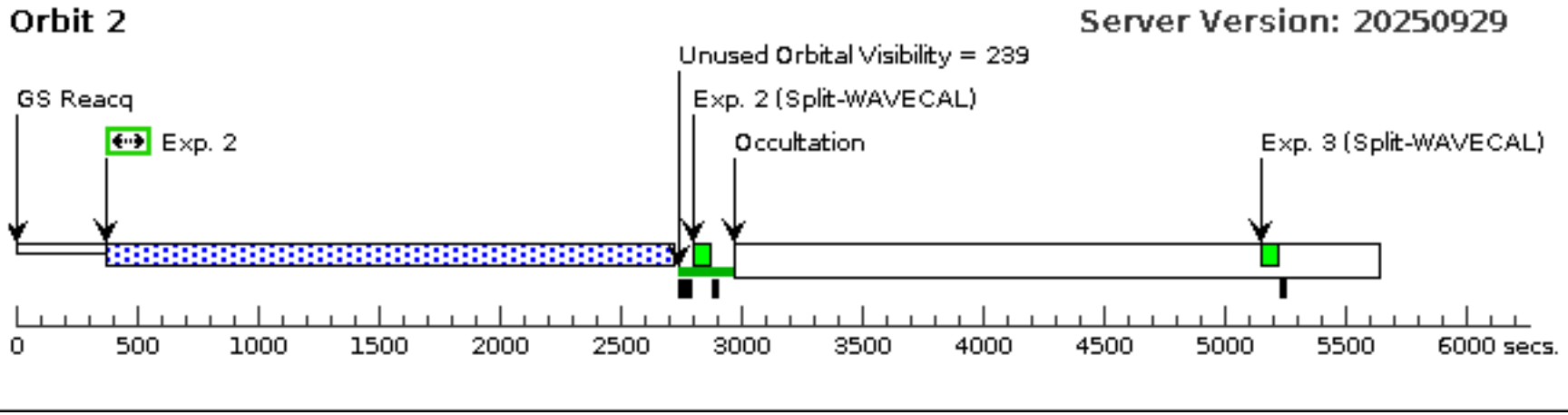
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR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

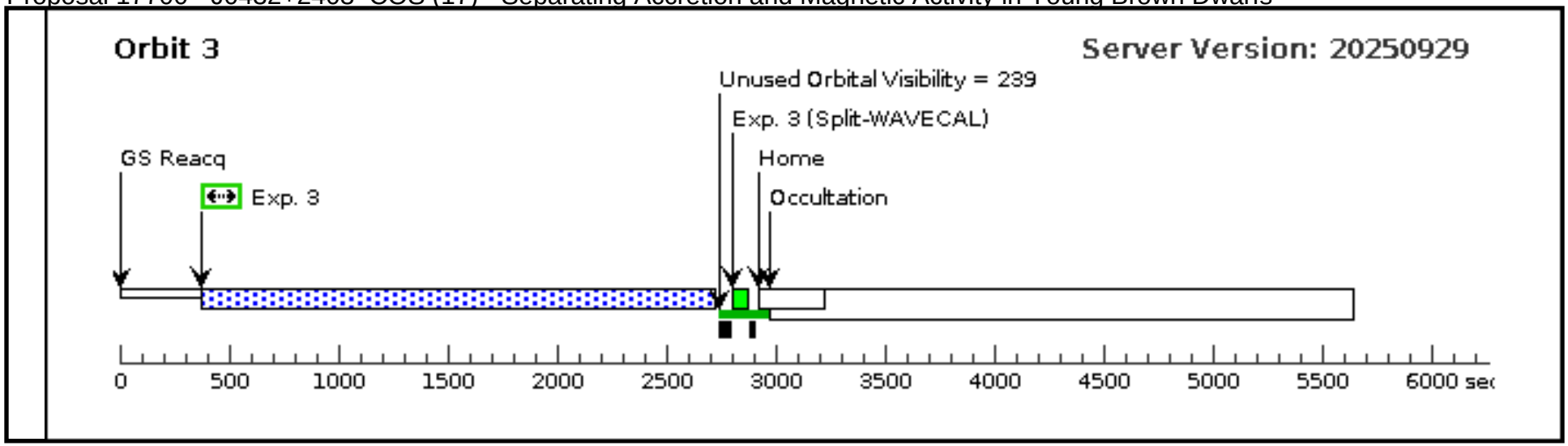
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1932670)	(10) 2MASS-J04322329+2403013	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		GS ACQ SCENARIO BASE1ON3		1150 Secs (1150 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.ta.1933632 where scaled accreting template is used. No count rate warnings result.									
2	COS G160M (COS.sp.1933636)	(10) 2MASS-J04322329+2403013	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2588 Secs (2300 Secs) *[==>2300.0 Secs]*	***[2]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933637 using scaled template of an accreting star. No warnings result.									
3	COS G160M (COS.sp.1933636)	(10) 2MASS-J04322329+2403013	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2588 Secs (2300 Secs) *[==>2300.0 Secs]*	***[3]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933637 using scaled template of an accreting star. No warnings result.									

Orbit Structure






Orbit 3
Server Version: 20250929
Unused Orbital Visibility = 239
Exp. 3 (Split-WAVECAL)
GS Reacq
Home
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17700, J0432+2403_STIS (18), implementation Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 18,17 WITHIN 2D

Comments: This is the 1 orbit G430L observation.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	2MASS-J04322329+2403013	RA: 04 32 23.3108 (68.0971283d) Dec: +24 03 1.46 (24.05041d) Equinox: J2000	Proper Motion RA: 7.182 mas/yr Proper Motion Dec: -21.886000058657373 mas/yr Parallax: 0.0078883" Epoch of Position: 2000	V=19.28+/-0.2	Reference Frame: ICRS

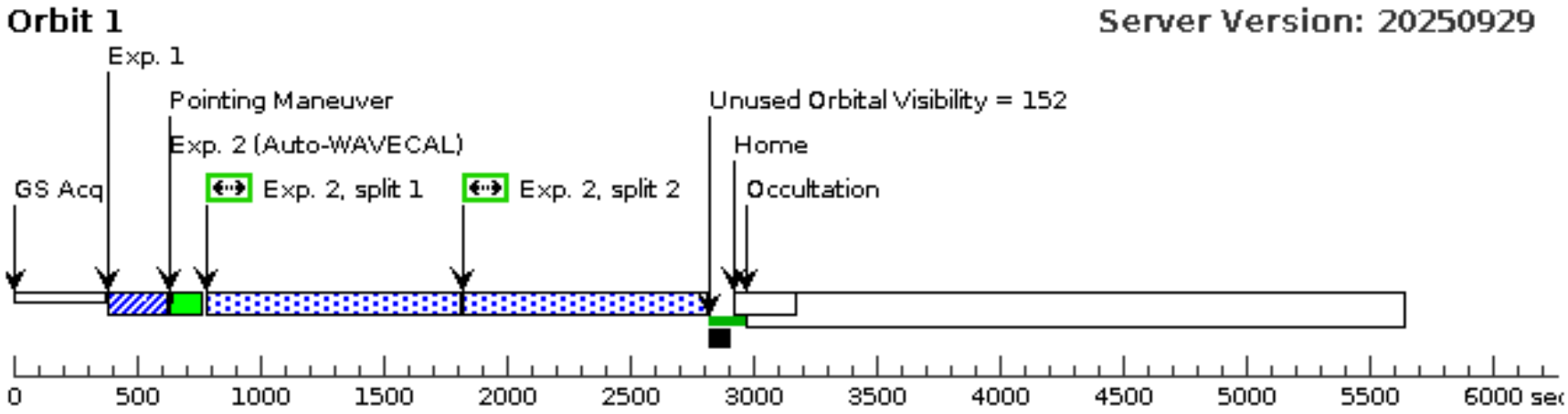
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932672)	(10) 2MASS-J04322329+2403013	STIS/CCD, ACQ, F28X50LP	MIRROR				4 Secs (4 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933436)	(10) 2MASS-J04322329+2403013	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2100 Secs (1900 Secs) *[==>950 Secs (Split 1)]* *[==>950 Secs (Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0436+2421_COS (19), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 3 orbits.

Diagnostics

(J0436+2421_COS (19)) 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.

(J0436+2421_COS (19)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0436+2421_COS (19)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0436+2421_COS (19)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	2MASS-J04363248+2421395	RA: 04 36 32.4939 (69.1353912d) Dec: +24 21 39.66 (24.36102d) Equinox: J2000	Proper Motion RA: 10.001 mas/yr Proper Motion Dec: -14.353999972627207 mas/yr Parallax: 0.0062997" Epoch of Position: 2000	V=18.58+/-0.2	Reference Frame: ICRS

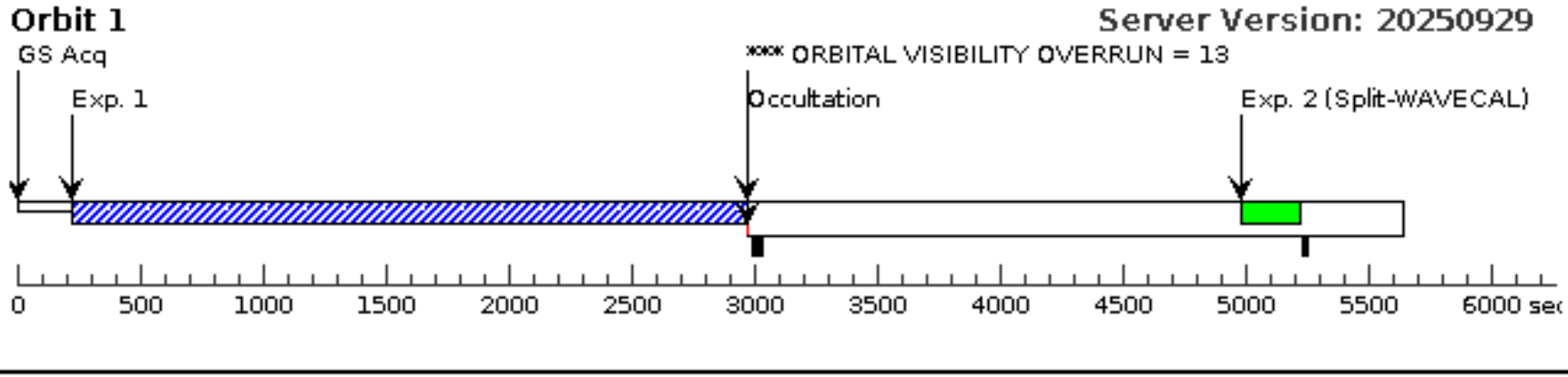
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

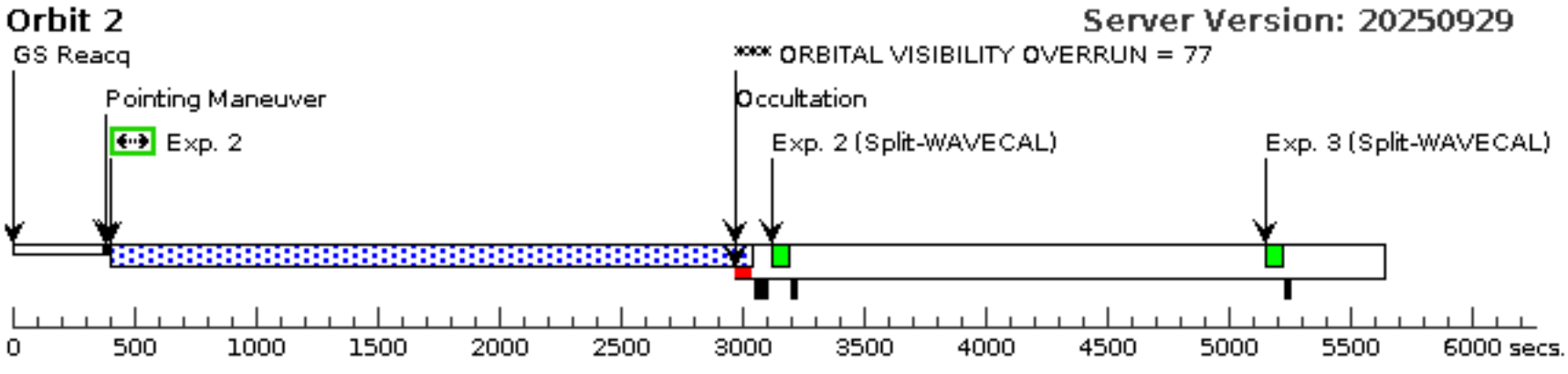
SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.
Category=STAR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

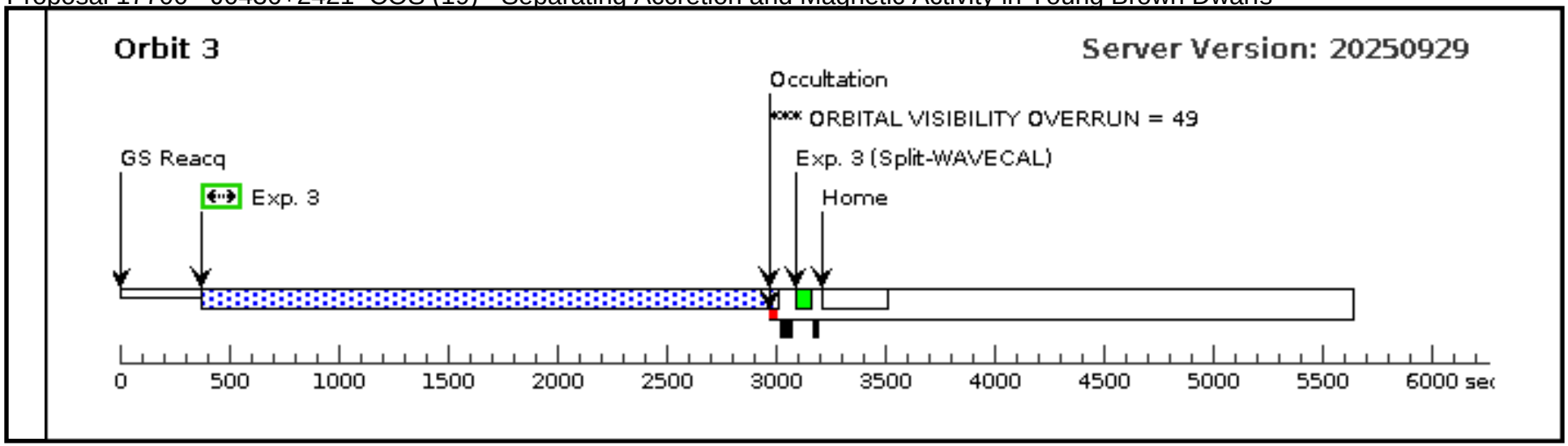
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1932879)	(11) 2MASS-J04363248+2421395	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				1270 Secs (1270 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.ta.1933655 using a scaled accreting template spectrum. No count rate warings result.									
2	COS G160M (COS.sp.1933667)	(11) 2MASS-J04363248+2421395	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2588 Secs (2588 Secs) *[==>]*	***[2]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933669 using a scaled accreting template. No warnings result.									
3	COS G160M (COS.sp.1933667)	(11) 2MASS-J04363248+2421395	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2588 Secs (2588 Secs) *[==>]*	***[3]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933669 using a scaled accreting template. No warnings result.									

Orbit Structure






Orbit 3
Server Version: 20250929
Occultation
**** ORBITAL VISIBILITY OVERRUN = 49
GS Reacq
Exp. 3
Exp. 3 (Split-WAVECAL)
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17700, J0436+2421_STIS (20), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 20,19 WITHIN 1D

Comments: This is the 1 orbit G430L observation.

Diagnostics

(J0436+2421_STIS (20)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	2MASS-J04363248+2421395	RA: 04 36 32.4939 (69.1353912d) Dec: +24 21 39.66 (24.36102d) Equinox: J2000	Proper Motion RA: 10.001 mas/yr Proper Motion Dec: -14.353999972627207 mas/yr Parallax: 0.0062997" Epoch of Position: 2000	V=18.58+/-0.2	Reference Frame: ICRS

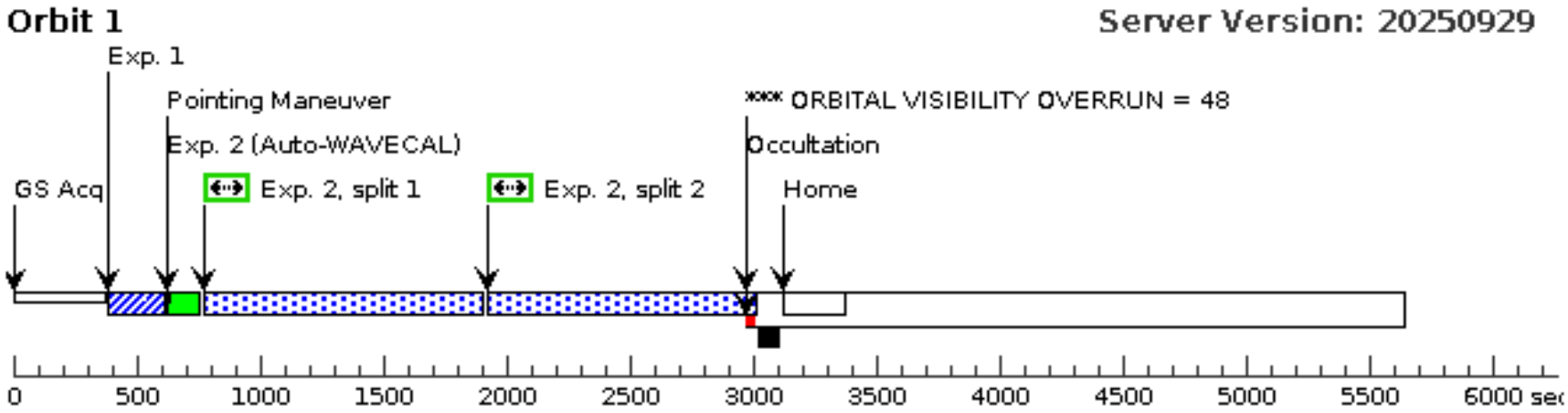
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932882)	(11) 2MASS-J04363248+2421395	STIS/CCD, ACQ, F28X50LP	MIRROR				2 Secs (2 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933439)	(11) 2MASS-J04363248+2421395	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2108 Secs (2108 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0456+2913_COS (21), scheduling Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 3 orbits.

Diagnostics

(J0456+2913_COS (21)) 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.

(J0456+2913_COS (21)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0456+2913_COS (21)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0456+2913_COS (21)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

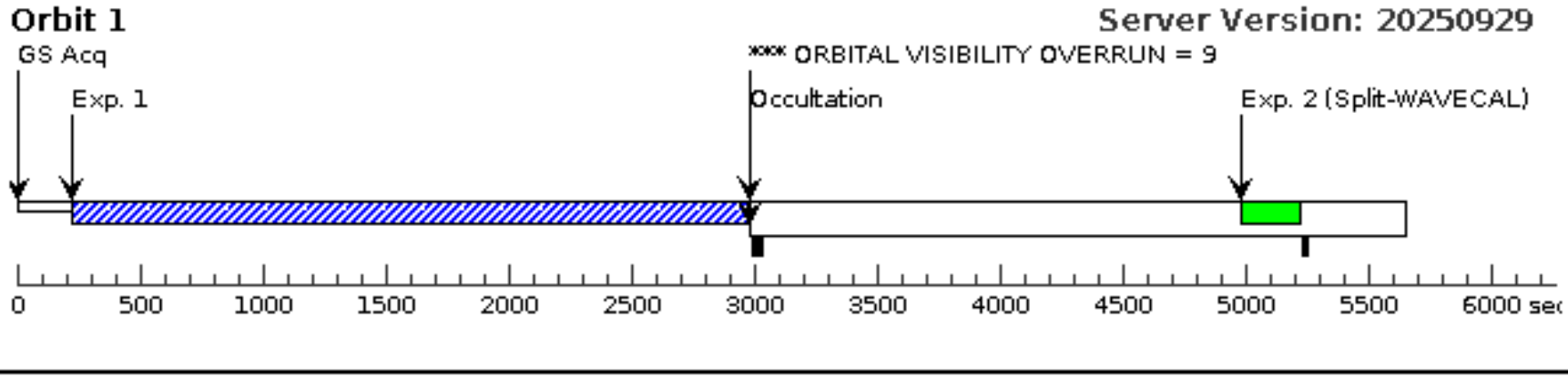
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PSO-J074.1999+29.2197	RA: 04 56 47.9808 (74.1999200d) Dec: +29 13 11.41 (29.21984d) Equinox: J2000	Proper Motion RA: 5.509 mas/yr Proper Motion Dec: -24.584 mas/yr Parallax: 0.006115" Epoch of Position: 2000	V=18.49+/-0.2	Reference Frame: ICRS

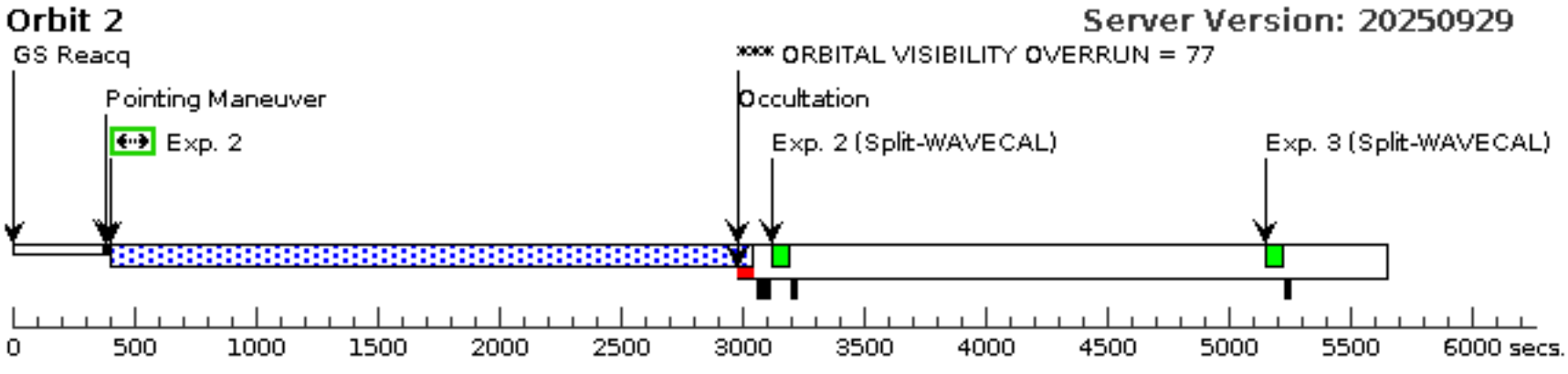
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
Extended=NO

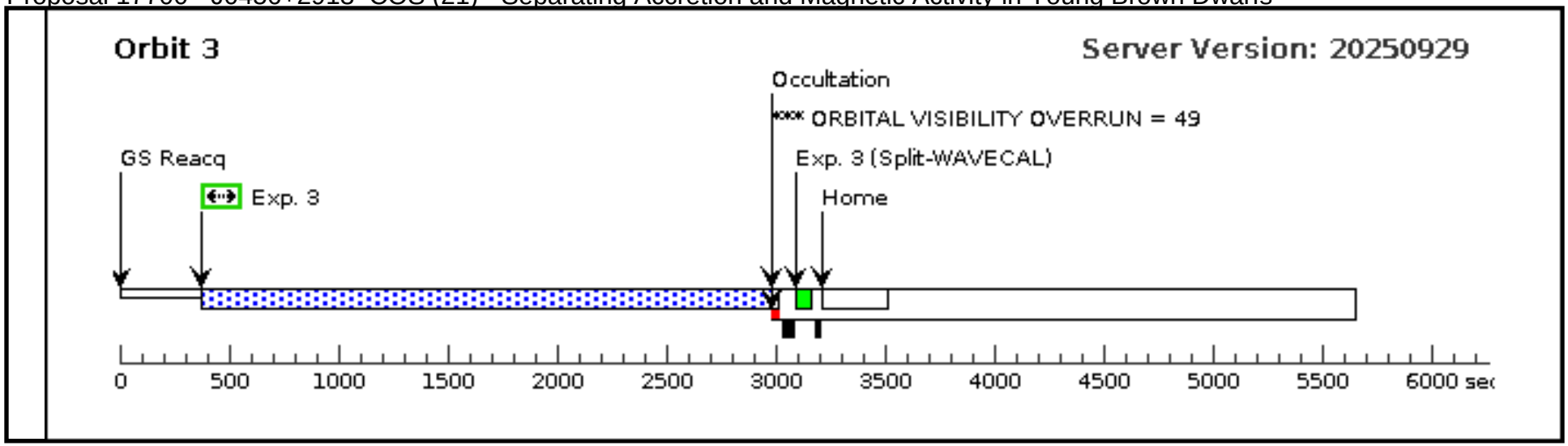
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1933697)	(6) PSO-J074.1999+29.2197	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				1270 Secs (1270 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.ta.1933700 using scaled accreting star template. No count rate warnings result.									
2	COS G160M (COS.sp.1933702)	(6) PSO-J074.1999+29.2197	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2592 Secs (2592 Secs) *[==>]*	***[2]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933704 using scaled spectrum of accreting template. No warnings result.									
3	COS G160M (COS.sp.1933702)	(6) PSO-J074.1999+29.2197	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2592 Secs (2592 Secs) *[==>]*	***[3]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933704 using scaled spectrum of accreting template. No warnings result.									

Orbit Structure






Orbit 3
Server Version: 20250929
Occultation
**** ORBITAL VISIBILITY OVERRUN = 49
GS Reacq
Exp. 3
Exp. 3 (Split-WAVECAL)
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17700, J0456+2913_STIS (22), scheduling Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 22,21 WITHIN 1D

Comments: This is the 1 orbit G430L observation.

Diagnostics

(J0456+2913_STIS (22)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

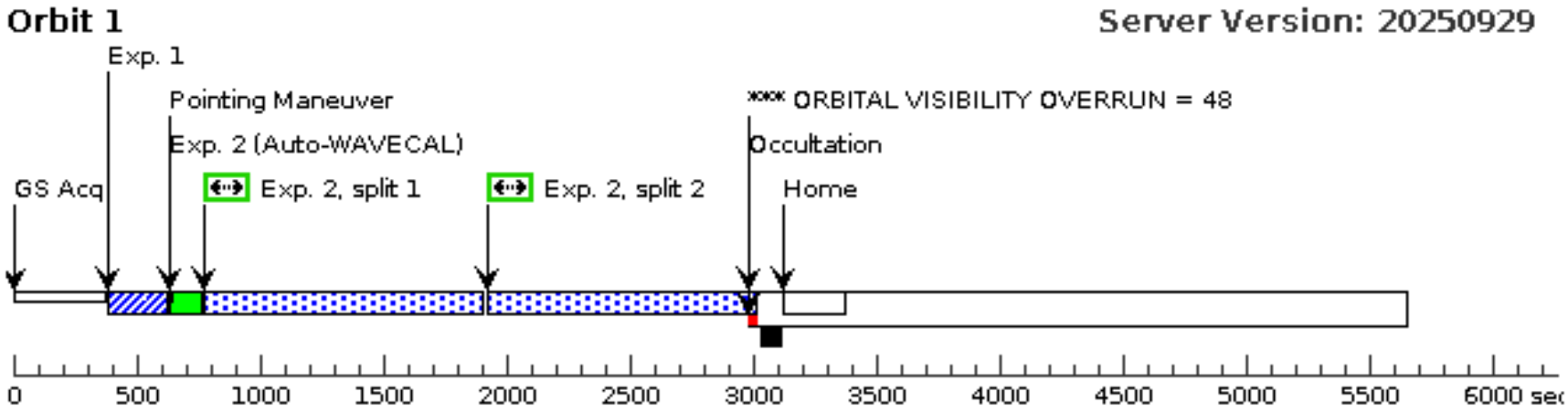
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PSO-J074.1999+29.2197	RA: 04 56 47.9808 (74.1999200d) Dec: +29 13 11.41 (29.21984d) Equinox: J2000	Proper Motion RA: 5.509 mas/yr Proper Motion Dec: -24.584 mas/yr Parallax: 0.006115" Epoch of Position: 2000	V=18.49+/-0.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1932930)	(6) PSO-J074.1999+29.2197	STIS/CCD, ACQ, F28X50LP	MIRROR				3 Secs (3 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933440)	(6) PSO-J074.1999+29.2197	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2108 Secs (2108 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure



Visit

Proposal 17700, J0434+1733_COS (23), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Comments: This is the COS observation for 3 orbits.

Diagnostics

(J0434+1733_COS (23)) 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.

(J0434+1733_COS (23)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0434+1733_COS (23)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(J0434+1733_COS (23)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

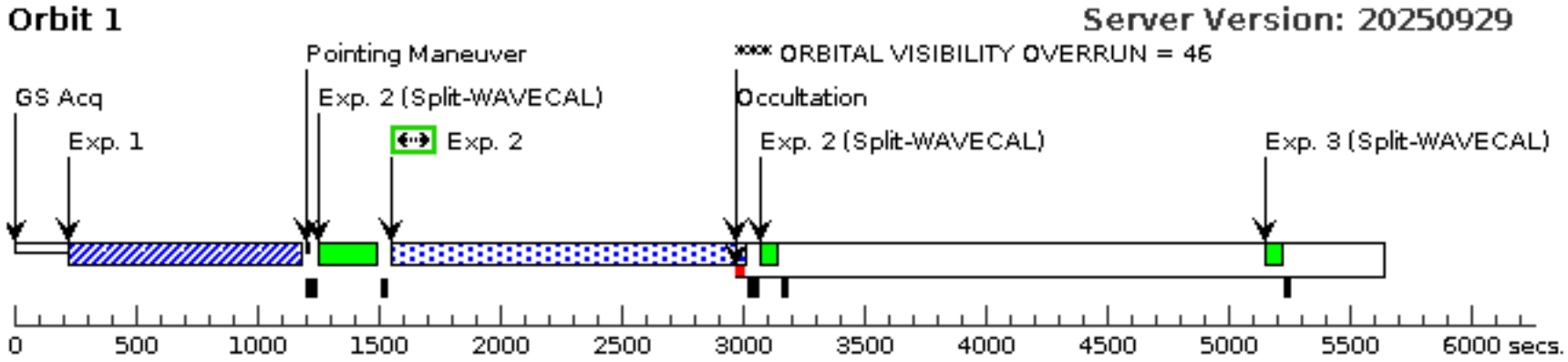
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	2MASS-J04345923+1733379	RA: 04 34 59.2331 (68.7468046d) Dec: +17 33 38.04 (17.56057d) Equinox: J2000	Proper Motion RA: 12.299 mas/yr Proper Motion Dec: -20.240 mas/yr Parallax: 0.006842" Epoch of Position: 2000	V=16.38+/-0.2	Reference Frame: ICRS

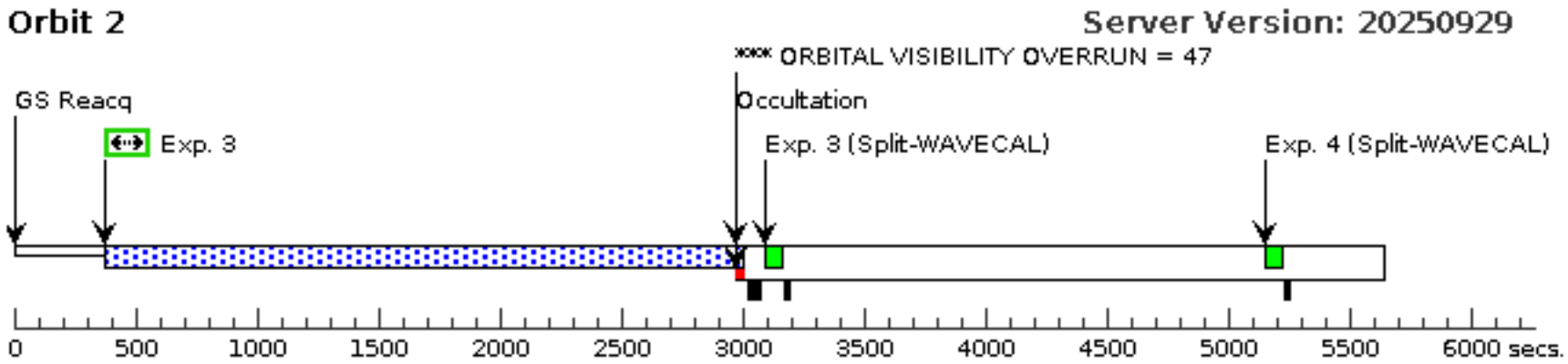
Comments: Object entered by PI from SIMBAD data.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
Extended=NO

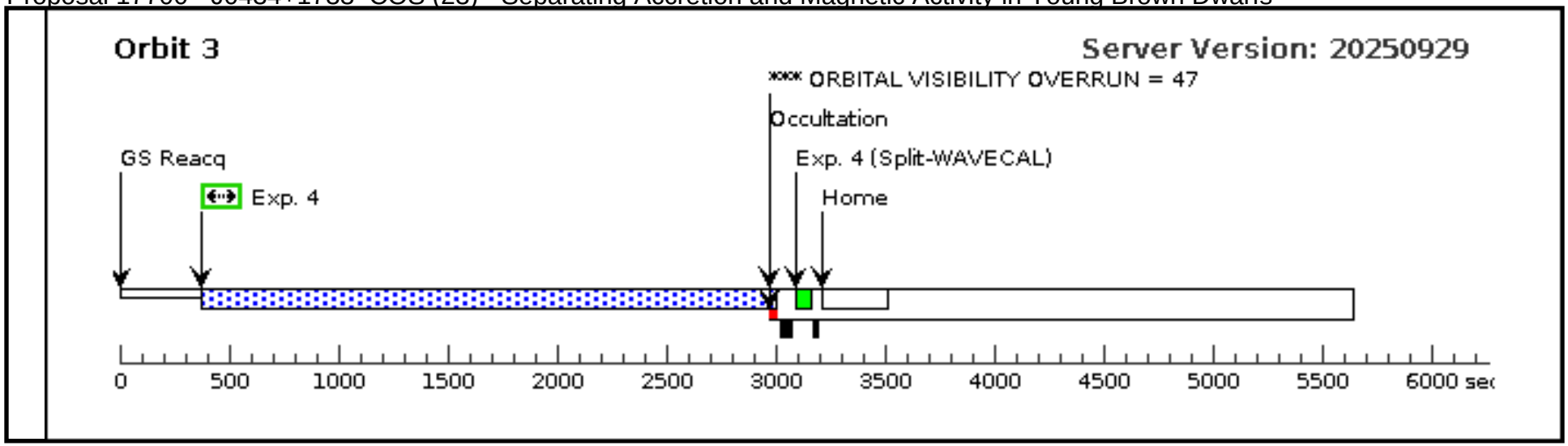
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (COS.ta.1933490)	(4) 2MASS-J04345923+1733379	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				375 Secs (375 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.ta.1933708 using scaled spectrum of accreting star template. No count rate warnings result.									
2	(COS.sp.1933713)	(4) 2MASS-J04345923+1733379	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=2			1407 Secs (1407 Secs) *[==>]*	***[1]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933728 using a scaled spectrum of the accreting star template. No warnings result.									
3	(COS.sp.1933717)	(4) 2MASS-J04345923+1733379	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=3			2583 Secs (2583 Secs) *[==>]*	***[2]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933731 using scaled spectrum of accreting star template. Now warnings result.									
4	(COS.sp.1933717)	(4) 2MASS-J04345923+1733379	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=6000; FP-POS=4			2583 Secs (2583 Secs) *[==>]*	***[3]***
Comments: Non-accreting star. BOP ETC run is COS.sp.1933731 using scaled spectrum of accreting star template. Now warnings result.									

Orbit Structure






Orbit 3
Server Version: 20250929
**** ORBITAL VISIBILITY OVERRUN = 47
Occultation
GS Reacq
Exp. 4
Exp. 4 (Split-WAVECAL)
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17700, J0434+1733_STIS (24), completed Tue Apr 28 20:00:29 GMT 2026

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: GROUP 24,23 WITHIN 1D

Comments: This is the 1 orbit G430L observation.

Diagnostics

(J0434+1733_STIS (24)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	2MASS-J04345923+1733379	RA: 04 34 59.2331 (68.7468046d) Dec: +17 33 38.04 (17.56057d) Equinox: J2000	Proper Motion RA: 12.299 mas/yr Proper Motion Dec: -20.240 mas/yr Parallax: 0.006842" Epoch of Position: 2000	V=16.38+/-0.2	Reference Frame: ICRS

Comments: Object entered by PI from SIMBAD data.
Category=STAR
Description=[BROWN DWARF, M V-IV, PRE-MAIN SEQUENCE STAR]
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.1933548)	(4) 2MASS-J04345923+1733379	STIS/CCD, ACQ, F28X50LP	MIRROR				1 Secs (1 Secs) *[==>]*	*[1]*
2	G430L (STIS.sp.1933550)	(4) 2MASS-J04345923+1733379	STIS/CCD, ACCUM, 52X2	G430L 4300 A				2108 Secs (2108 Secs) *[==>(Split 1)]* *[==>(Split 2)]*	*[1]*

Orbit Structure