18180 - COS FUV LP10 Calibration: Dispersion Solutions

Cycle: 33, Proposal Category: CAL/COS

(Calibration)

(Availability Mode: RESTRICTED)

INVESTIGATORS

Name	*Institution*
Dr. David M. French (PI) (Contact)	**Space Telescope Science Institute**
Dr. Travis C Fischer (CoI) (ESA Member)	Space Telescope Science Institute - ESA - JWST
Dr. Ravi Sankrit (CoI) (Contact)	Space Telescope Science Institute
Dr. Anna Payne (CoI) (Contact)	Space Telescope Science Institute
Dr. Svea S Hernandez (CoI) (ESA Member)	Space Telescope Science Institute - ESA - JWST

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:05.0	yes
02	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:05.0	yes
03	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:06.0	yes
04	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:06.0	yes
05	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:07.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
06	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:07.0	yes
07	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:08.0	yes
08	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:08.0	yes
09	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:09.0	yes
10	(1) V-EPS-ERI	COS/FUV COS/NUV	1	10-Sep-2025 12:02:09.0	yes

10 Total Orbits Used

ABSTRACT

This program determines the dispersion solutions for the FUV G160M grating at LP10. It observes the K2V emission-line star eps Eri with all six G160M cenwaves. The G160M dispersion solutions are linear, so we will derive updated dispersion coefficients and zero points. All visits changed to single orbits to help mitigate data loss due to failures. All visits start with a double ACQ/IMAGE for improved target centering, using the BOA and MirrorB.

The exposure times and the number of orbits requested are driven by the number of counts needed to achieve good cross-correlations using multiple chromospheric emission lines. We need to achieve at least S/N ~ 5 per pixel in the peaks of weaker emission lines. The dispersion coefficients of intermediate cenwaves can be constrained by those of shorter and longer ones, so these can accommodate reduced exposure time to achieve S/N ~ 3.3 per pixel.

OBSERVING DESCRIPTION

This proposal obtains spectra of eps Eri at all six G160M cenwaves to determine the dispersion coefficients and zero points. It is based on the LP6 wavelength calibration program (PID 16908), but has been split into single-orbit visits to reduce data loss from failures, and exposure times have been increased to account for declining sensitivity. Exposures times have also been distributed across FP-POS 1 and 3 to decrease the fractional pixel lifetime used.

Double ACQ/IMAGE target acquisitions with the BOA and MirrorB will be performed to ensure the best possible target centering for the zero-point measurement. In an analysis of acquisitions in program 14909, double ACQ/IMAGEs were confirmed to center the target 2 to 3 times more accurately than single ACQ/IMAGEs.

The line at 1681.2 angstroms is used as the fiducial weak line for ETC calculations. For cenwaves 1533, 1577, 1600, and 1623, we require the full exposure times to achieve S/N ~ 5 per pixel. Cenwaves 1589 and 1611 have exposure times reduced to about 70% of this, which is acceptable because they are middle cenwaves whose dispersion solutions will be determined by fits through the higher S/N adjacent cenwave observations.

Visit

Proposal 18180, EPS-ERI 1-orbit v1 (01) Wed Sep 10 16:02:09 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v1 (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
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

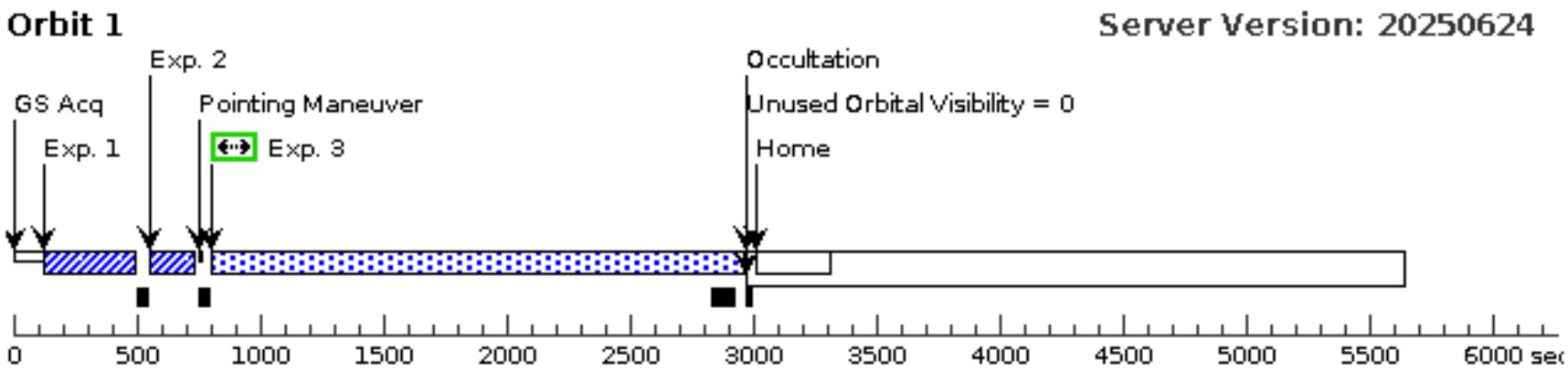
Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	c1533 FP3 (COS.sp.2024343)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1533 A	FP-POS=3; BUFFER-TIME=1814; LIFETIME-POS=LP10			1924 Secs (1924 Secs) *[==>]*	*[1]*

Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input.
Exposure time of 3381 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A

BP = 0.14 cts/sec local; 368 cts/sec global
ETC buffer fill time is 6361 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal
Only FP-POS 3 is needed for wavecal programs

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v2 (02) Wed Sep 10 16:02:09 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v2 (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
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	Reference Frame: ICRS

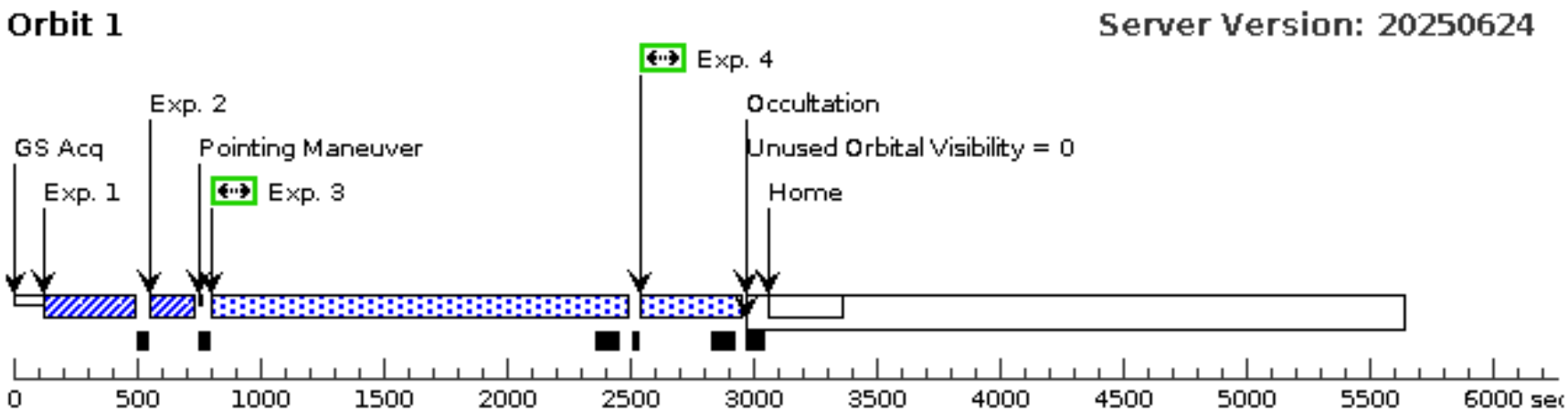
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
3	c1533 FP1 (COS.sp.2024343)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1533 A	FP-POS=1; BUFFER-TIME=1347; LIFETIME-POS=LP10			1457 Secs (1457 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 3381 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 368 cts/sec global* *ETC buffer fill time is 6361 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								
4	c1577 FP1 (COS.sp.2024344)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=1; BUFFER-TIME=168; LIFETIME-POS=LP10			278 Secs (278 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 3423 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 374 cts/sec global* *ETC buffer fill time is 6370 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v3 (03) Wed Sep 10 16:02:09 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v3 (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
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

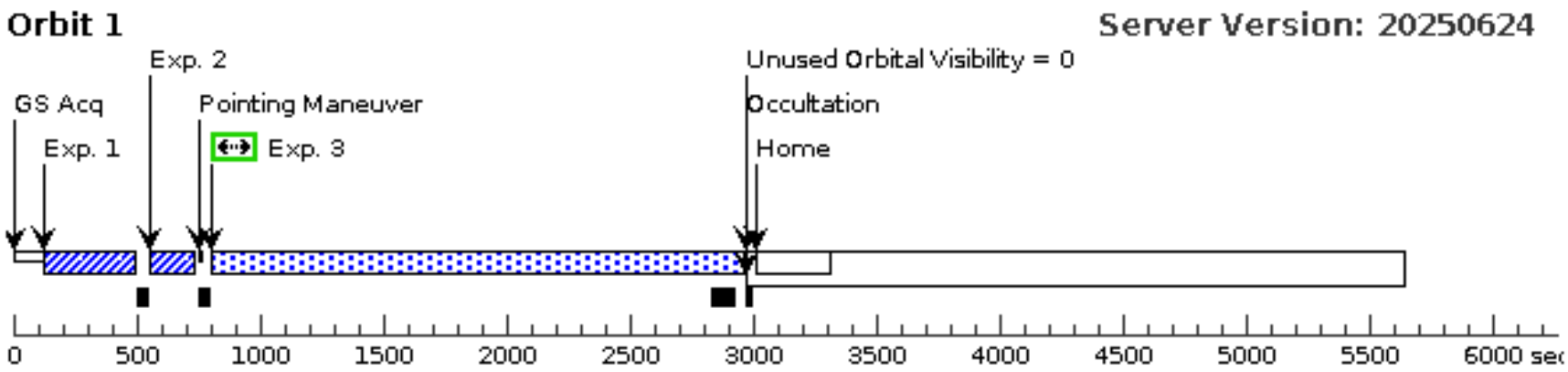
Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	c1577 FP3 (COS.sp.2024344)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=1825; LIFETIME-POS=LP10			1935 Secs (1935 Secs) *[==>]*	*[1]*

Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input.
Exposure time of 3423 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A

BP = 0.14 cts/sec local; 374 cts/sec global
ETC buffer fill time is 6370 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal
Only FP-POS 3 is needed for wavecal programs

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v4 (04) Wed Sep 10 16:02:09 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v4 (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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	Reference Frame: ICRS

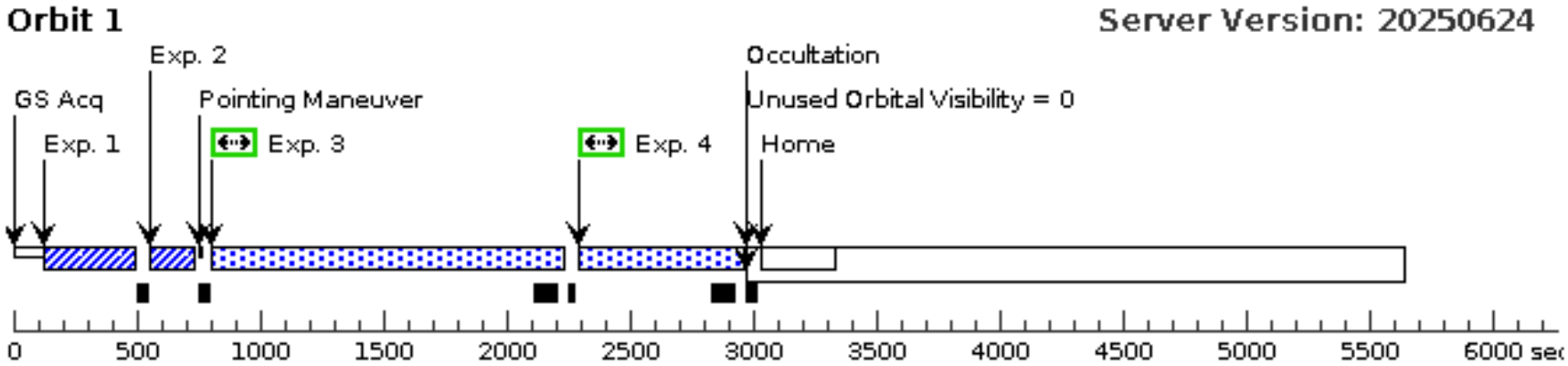
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
3	c1577 FP1 (COS.sp.2024344)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1577 A	LIFETIME-POS=LP10; FP-POS=1; BUFFER-TIME=1100			1210 Secs (1210 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 3423 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.11 cts/sec local; 379 cts/sec global* *ETC buffer fill time is 6370 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								
4	c1589 FP1 (COS.sp.2024345)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1589 A	LIFETIME-POS=LP10; FP-POS=1; BUFFER-TIME=433			543 Secs (543 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 1623 sec is expected to give per-pixel S/N ~ 3.3 (per-resel S/N ~ 8) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.11 cts/sec local; 379 cts/sec global* *ETC buffer fill time is 6516 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v5 (05) Wed Sep 10 16:02:10 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v5 (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)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	Reference Frame: ICRS

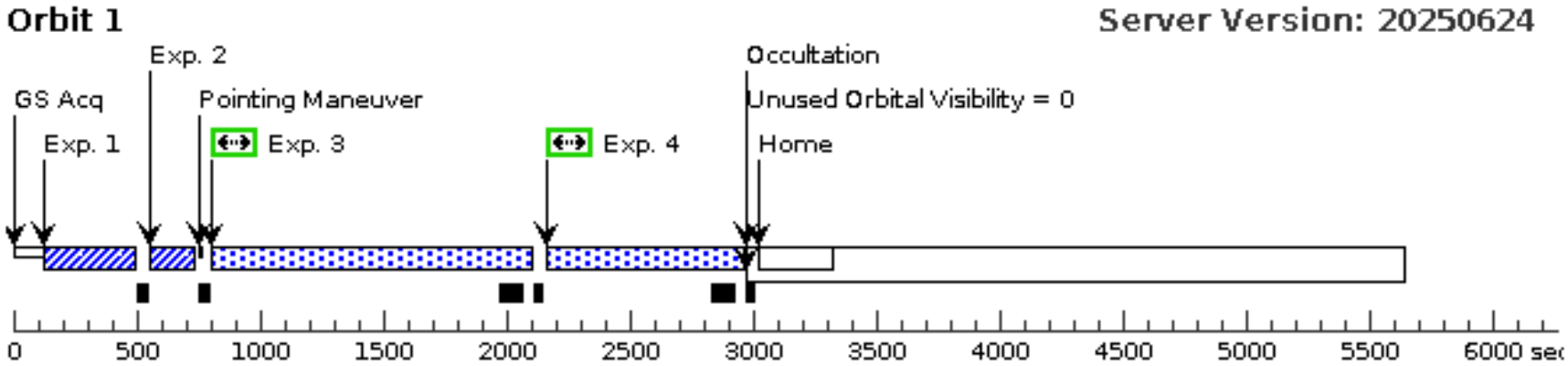
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
3	c1589 FP3 (COS.sp.2024345)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=9700; LIFETIME-POS=LP10			1080 Secs (1080 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 1623 sec is expected to give per-pixel S/N ~ 3.3 (per-resel S/N ~ 8) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.11 cts/sec local; 379 cts/sec global* *ETC buffer fill time is 6516 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								
4	c1600 FP1 (COS.sp.2024346)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1600 A	FP-POS=1; BUFFER-TIME=5566; LIFETIME-POS=LP10			666 Secs (666 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 3513 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 356 cts/sec global* *ETC buffer fill time is 6797 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v6 (06) Wed Sep 10 16:02:10 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v6 (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)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

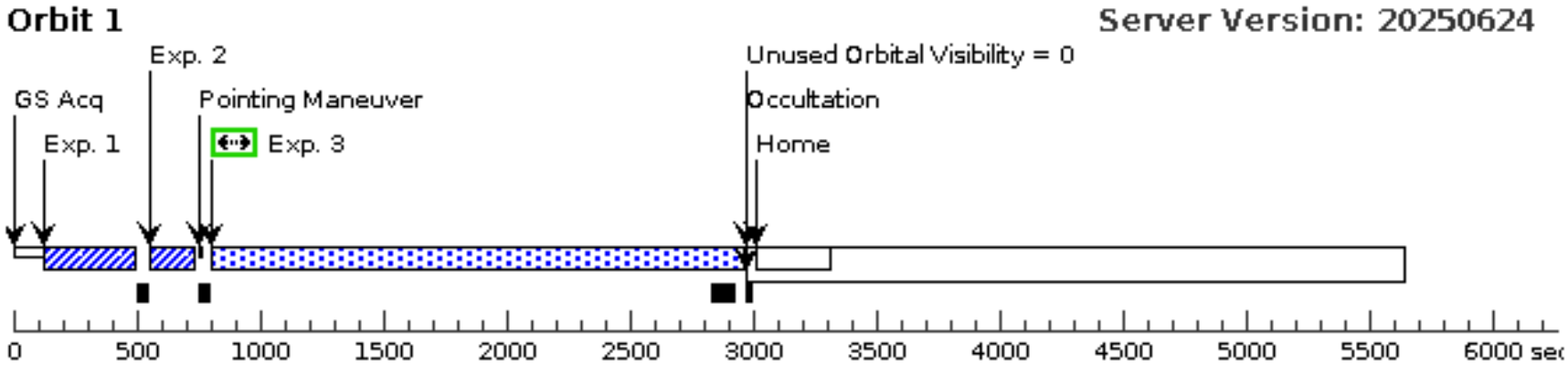
Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	c1600 FP3 (COS.sp.2024346)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1600 A	FP-POS=3; BUFFER-TIME=1825; LIFETIME-POS=LP10			1935 Secs (1935 Secs) *[==>]*	*[1]*

Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input.
Exposure time of 3513 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A

BP = 0.14 cts/sec local; 356 cts/sec global
ETC buffer fill time is 6797 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal
Only FP-POS 3 is needed for wavecal programs

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v7 (07) Wed Sep 10 16:02:10 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v7 (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)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d)	Proper Motion RA: -974.758 mas/yr	V=3.73	Reference Frame: ICRS
		Dec: -09 27 29.74 (-9.45826d)	Proper Motion Dec: 20.876 mas/yr		
		Equinox: J2000	Parallax: 0.3105773"		
			Epoch of Position: 2000		
			Radial Velocity: 16.43 km/sec		

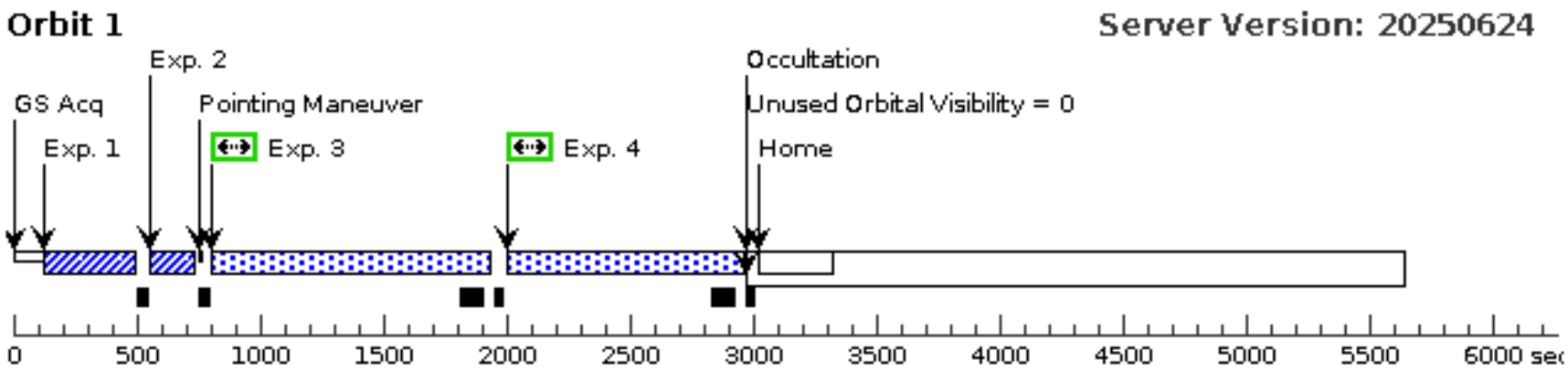
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
3	c1600 FP1 (COS.sp.2024346)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1600 A	FP-POS=1; BUFFER-TIME=802; LIFETIME-POS=LP10			912 Secs (912 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 3513 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 356 cts/sec global* *ETC buffer fill time is 6797 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								
4	c1611 FP1 (COS.sp.2024348)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=1; BUFFER-TIME=721; LIFETIME-POS=LP10			831 Secs (831 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 1632 sec is expected to give per-pixel S/N ~ 3.3 (per-resel S/N ~ 8) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 356 cts/sec global* *ETC buffer fill time is 6794 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v8 (08) Wed Sep 10 16:02:10 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v8 (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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	Reference Frame: ICRS

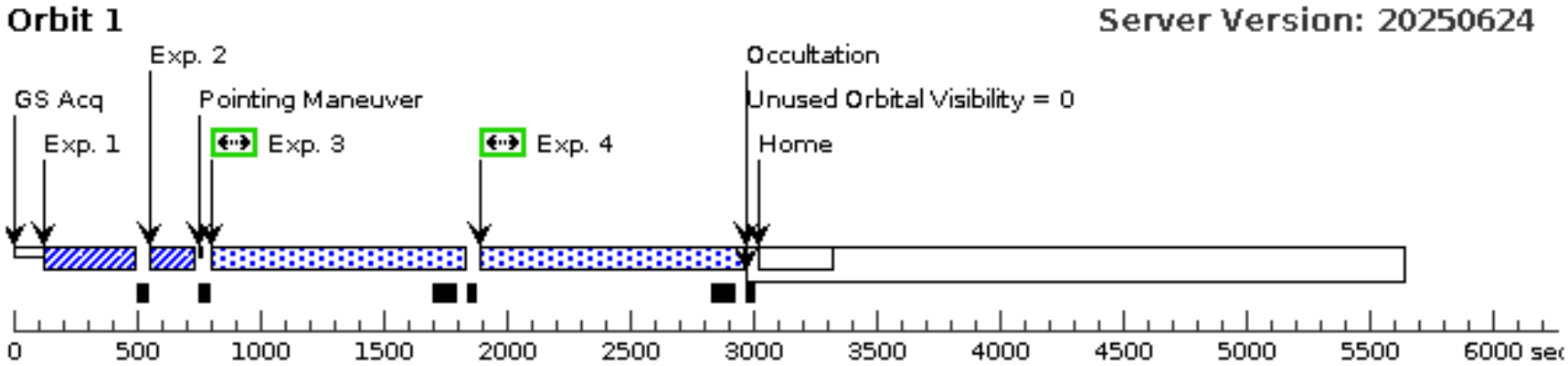
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	***[1]***
	Comments: ETC taken from LP6 version of this program: *Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19* *Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs* *BP = 31 cts/sec local; 1571 cts/sec global*								
3	c1611 FP3 (COS.sp.2024348)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=3; BUFFER-TIME=6911; LIFETIME-POS=LP10			801 Secs (801 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 1632 sec is expected to give per-pixel S/N ~ 3.3 (per-resel S/N ~ 8) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 356 cts/sec global* *ETC buffer fill time is 6794 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								
4	c1623 FP3 (COS.sp.2024352)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=3; BUFFER-TIME=8288; LIFETIME-POS=LP10			938 Secs (938 Secs) *[==>]*	***[1]***
	Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input. *Exposure time of 3634 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A* *BP = 0.14 cts/sec local; 356 cts/sec global* *ETC buffer fill time is 6898 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal* *Only FP-POS 3 is needed for wavecal programs*								

Orbit Structure



Visit

Proposal 18180, EPS-ERI 1-orbit v9 (09) Wed Sep 10 16:02:10 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v9 (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
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

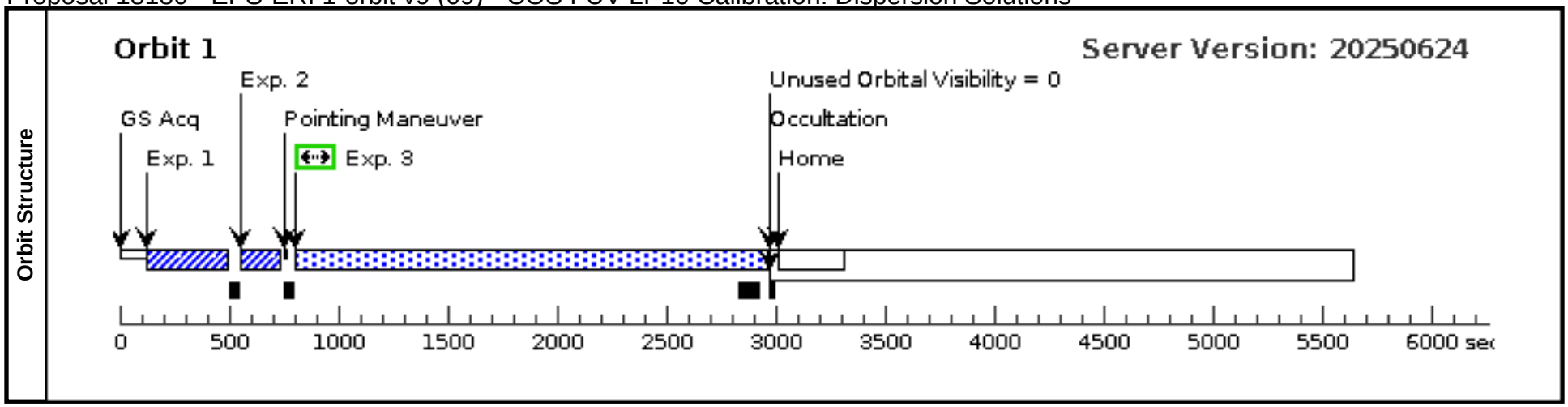
Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	c1623 FP3 (COS.sp.2024352)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=3; BUFFER-TIME=1818; LIFETIME-POS=LP10			1928 Secs (1928 Secs) *[==>]*	*[1]*

Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input.
Exposure time of 3634 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A

BP = 0.14 cts/sec local; 356 cts/sec global
ETC buffer fill time is 6898 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal
Only FP-POS 3 is needed for wavecal programs


Orbit Structure
Orbit 1
Server Version: 20250624
Exp. 2
Unused Orbital Visibility = 0
GS Acq
Pointing Maneuver
Occultation
Exp. 1
Exp. 3
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 18180, EPS-ERI 1-orbit v10 (10) Wed Sep 10 16:02:10 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(EPS-ERI 1-orbit v10 (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
(1)	V-EPS-ERI	RA: 03 32 55.8445 (53.2326854d) Dec: -09 27 29.74 (-9.45826d) Equinox: J2000	Proper Motion RA: -974.758 mas/yr Proper Motion Dec: 20.876 mas/yr Parallax: 0.3105773" Epoch of Position: 2000 Radial Velocity: 16.43 km/sec	V=3.73	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=[K 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/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

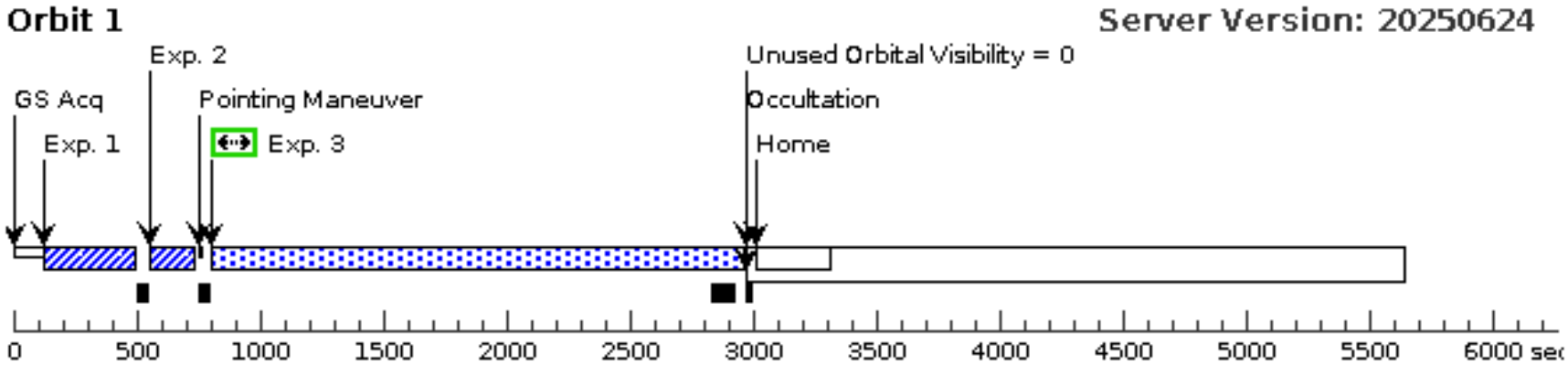
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	2nd ACQ/IMAGE BOA/MirrorB (1688523)	(1) V-EPS-ERI	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				25 Secs (25 Secs) *[==>]*	*[1]*

Comments: ETC taken from LP6 version of this program:

Used the Pickles K2V model in the ETC normalized to SIMBAD U=5.19
Only 4.1 sec are needed for required S/N = 30, but we retain the 25 sec used in previous successful wavecal programs
BP = 31 cts/sec local; 1571 cts/sec global

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	c1623 FP1 (COS.sp.1954120)	(1) V-EPS-ERI	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=1818; LIFETIME-POS=LP10			1928 Secs (1928 Secs) *[==>]*	*[1]*

Comments: Used Eps-Eri spectrum from the LP6 version of this program as ETC input.
Exposure time of 3879 sec is expected to give per-pixel S/N ~ 5 (per-resel S/N ~ 12) at the peak of the fiducial weak line at 1681.2 A

BP = 0.13 cts/sec local; 349 cts/sec global
ETC buffer fill time is 6749 sec; buffer time is set to exposure length - 110 sec to minimize delay before auto wavecal
Only FP-POS 3 is needed for wavecal programs

Orbit Structure