15204 - Testing our scenario of a failed wind for TW Hya

Cycle: 25, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:09.0	yes
51	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:10.0	yes
02	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:11.0	yes
52	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:12.0	yes
03	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:13.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
53	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:14.0	yes
04	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:14.0	yes
54	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:15.0	yes
05	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:16.0	yes
55	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:17.0	yes
06	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:18.0	yes
56	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:19.0	yes
07	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:19.0	yes
57	(1) V-TW-HYA	COS/FUV COS/NUV	1	22-May-2019 10:01:20.0	yes

14 Total Orbits Used

ABSTRACT

Young, accreting low-mass stars show strong, broad and asymmetric FUV emission lines. When multiple observations of the same wavelength region exist, we often see that the flux and profile of these lines change strongly between the observations. Observationally, this is poorly characterized, and theoretically, neither the lines profiles nor their variability can be explained. In 2011 we tried to remedy this situation by monitoring the classical Tauri star TW Hya for 10 orbits with HST/COS. At the time, the literature suggested that the variability could be due to a hot stellar wind and thus we distributed the observations over one month, which would have been the appropriate time scale. As it turns out, this assumption appears to have been wrong. The data we received clearly shows that no hot wind is present and that all variability happens on much shorter time scales. In this proposal, we show that we have done a thorough analysis of the existing data and we have a model to explain it. Now, we

ask for additional monitoring of TW Hya to cover the time scale of a few hours - as we now know this is the relevant time scale to understand the variability.

OBSERVING DESCRIPTION

We propose to observe the variability of the FUV emission lines in CTTS. With a distance of only 57 pc (Wichmann et al. 1998) TW Hya is the closest bright CTTS and it has a larger FUV flux than any other star of this class, thus it is the prime target to study variability. The large effective area of COS makes this project possible in a reasonable number of orbits. Because of its proximity TW Hya is also the best-studied CTTS (e.g. it has been observed for 700 ks with X-ray gratings on Chandra).

We observed TW Hya before in ProgID 12315. The observations here largely copy that setup, so we are confident that there are no safety risks etc to the instrument.

We concentrate here on the C IV doublet at 1548/1550 Ang the brightest hot FUV line, which we will observe with the G160M grating, set on central wavelength 1577 Ang. Several other important features are covered in the wavelength range of this grating: i) Si IV 1392/1403 Ang is a second hot ion line we will use for comparison. ii) Si ii 1527/1533 Ang, He II 1640 Ang and C I 1656 A probe the presence of cooler material. iii) Between the lines we obtain a continuum measurement to calculate the mass accretion rate. Unlike our existing observation we will expose in the G160M grating for the entire orbit to better sample the
variability (in the previous observations the half of each orbit was spend on NUV exposures).
We ask for 7 HST orbits unevenly spaced over about 1.5 days. Each orbit will have an identical layout of observations with target acquisition and four G160M exposures at different FP-SPLIT positions to reduce fixed-pattern noise.
According to the ETC TW Hya can be observed in the ACQ/IMAGE mode, if the BOA is used. Thus the target acquisition including initial acquisition, exposures and spacecraft motion requires about 10 min out of 55 min usable orbit time at TW Hya's declination.
The existing data (Program ID 12315) shows that the signal-to-noise ratio is very good and there
are no safety risks to the instrument.

Visit

Proposal 15204, Visit 01, failed

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Visit 01) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

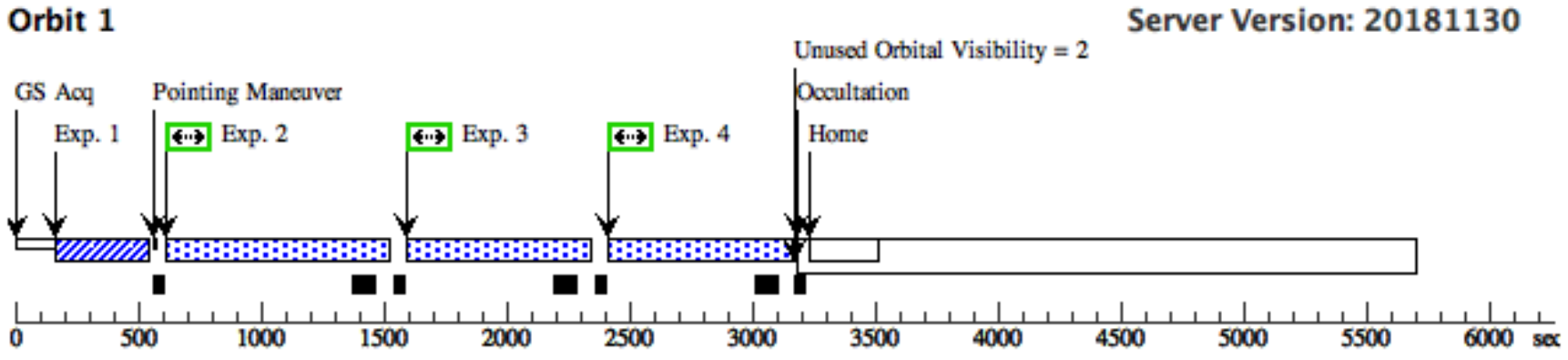
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=2; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 51, implementation

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(Visit 51) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

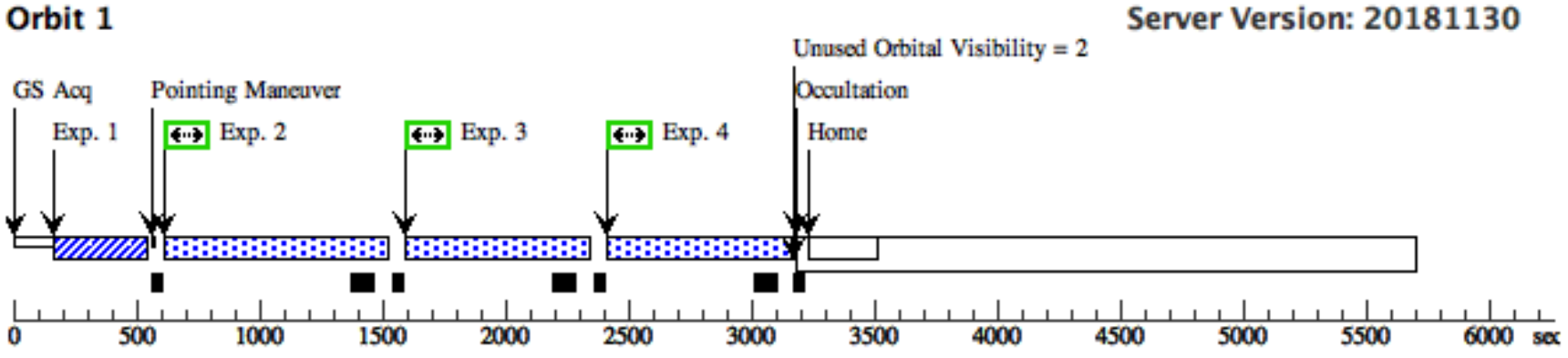
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=2; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 02, failed

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER_01 BY 3_Orbits TO 4_Orbits

Diagnostics

(Visit 02) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

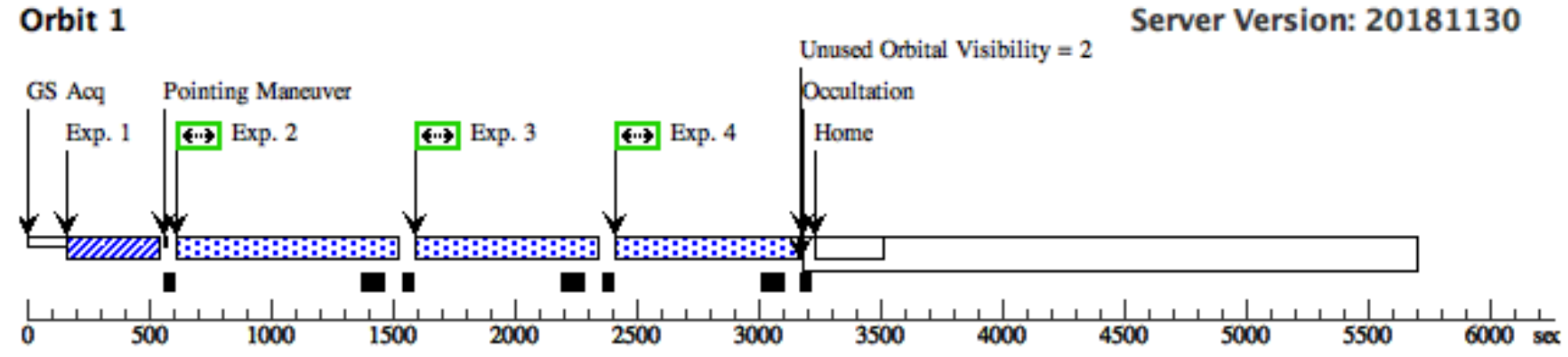
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 52, implementation Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 51 BY 3 Orbits TO 4 Orbits

Diagnostics

(Visit 52) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

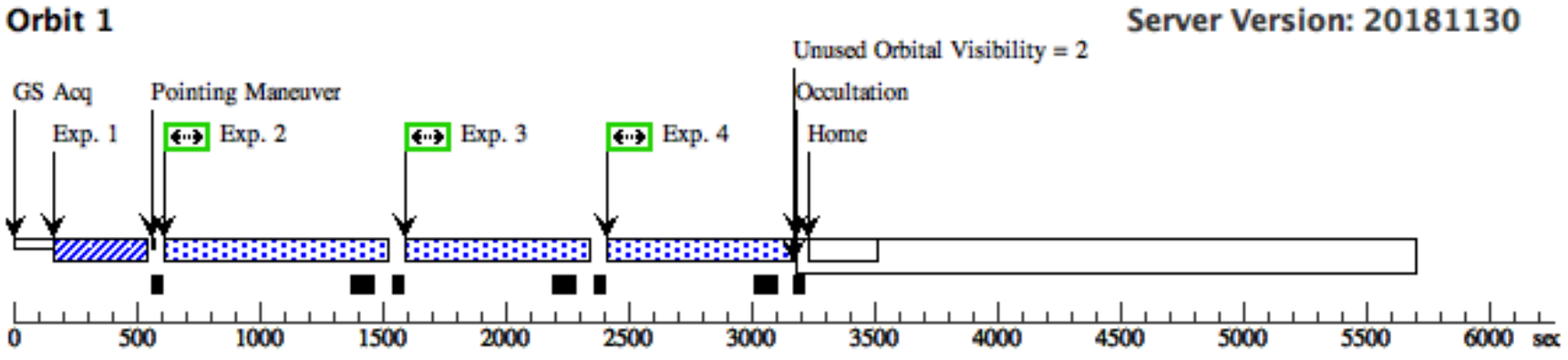
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 03, failed

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 01 BY 6 Orbits TO 7 Orbits

Diagnostics

(Visit 03) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

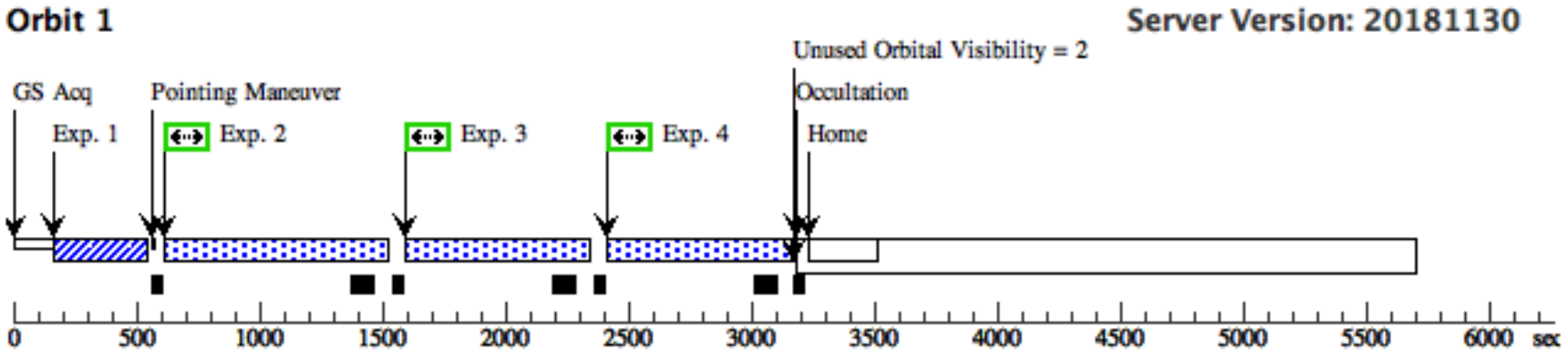
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 53, implementation Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 51 BY 5 Orbits TO 6 Orbits

Diagnostics

(Visit 53) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

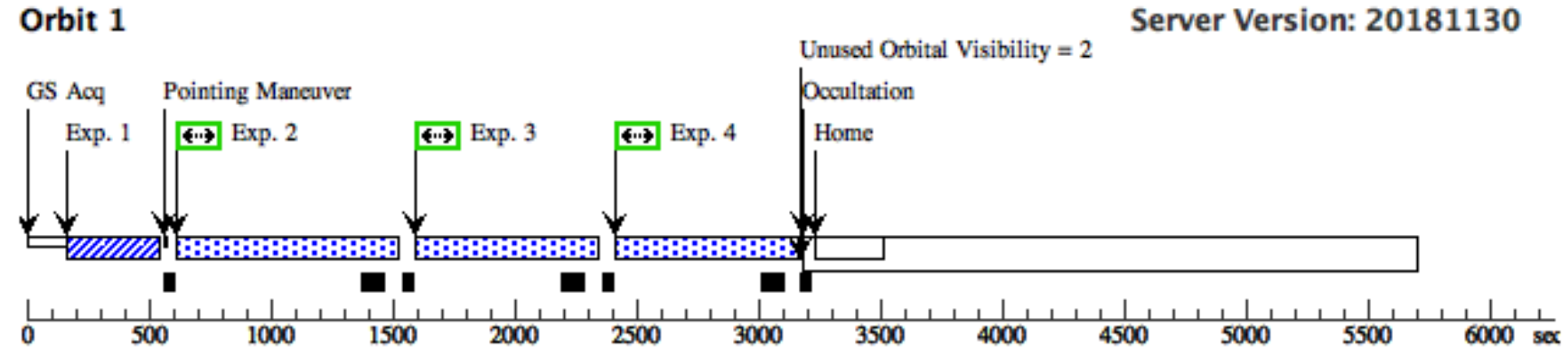
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 04, failed

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER_01 BY 9_Orbits TO 10_Orbits

Diagnostics

(Visit 04) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

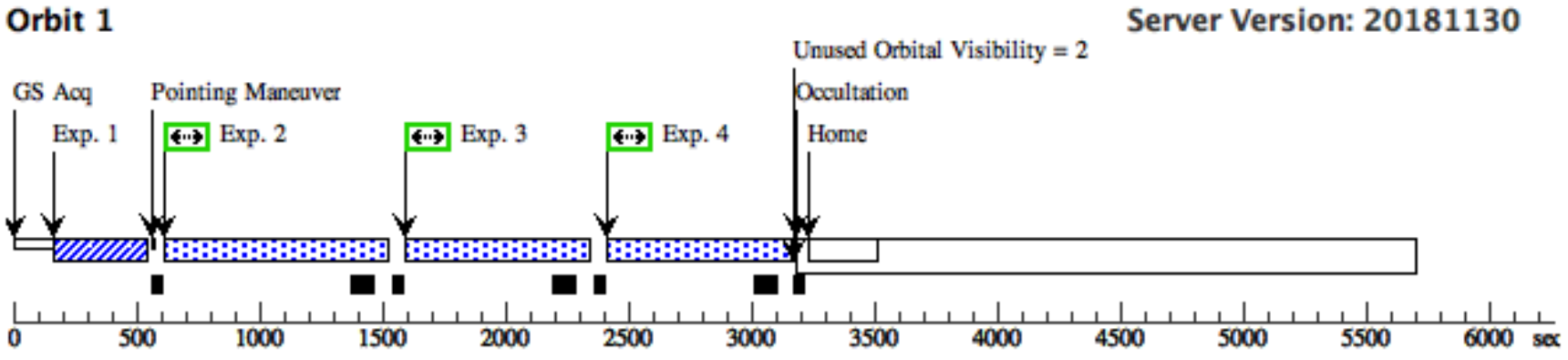
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 54, implementation Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 51 BY 9 Orbits TO 10 Orbits

Diagnostics

(Visit 54) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

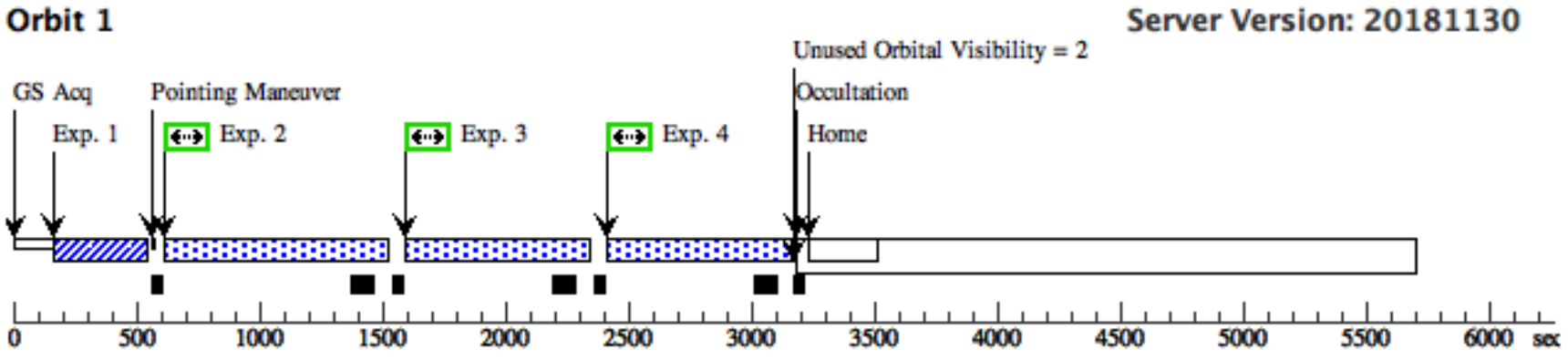
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 05, failed

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER_01 BY 13_Orbits TO 14_Orbits

Diagnostics

(Visit 05) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

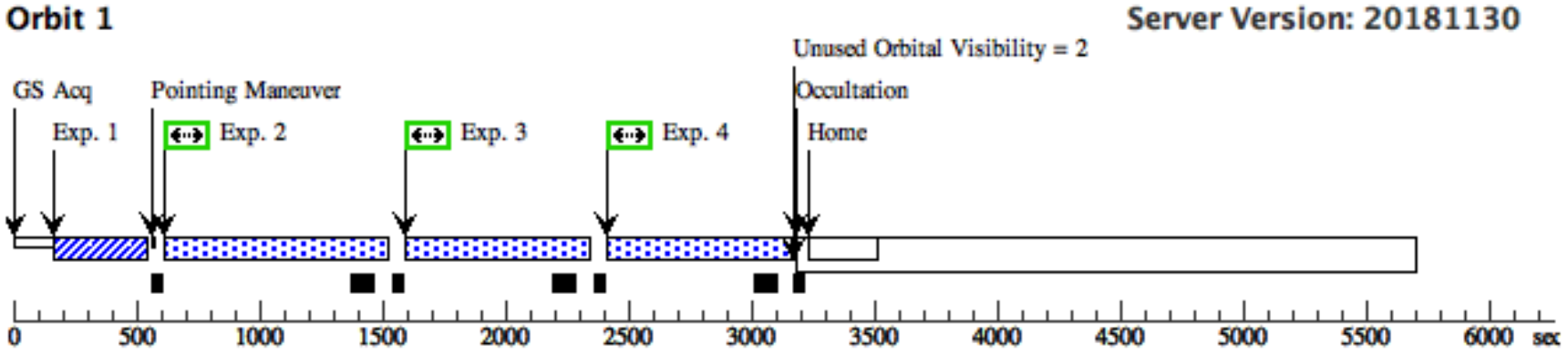
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 55, implementation Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 51 BY 13 Orbits TO 14 Orbits

Diagnostics

(Visit 55) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

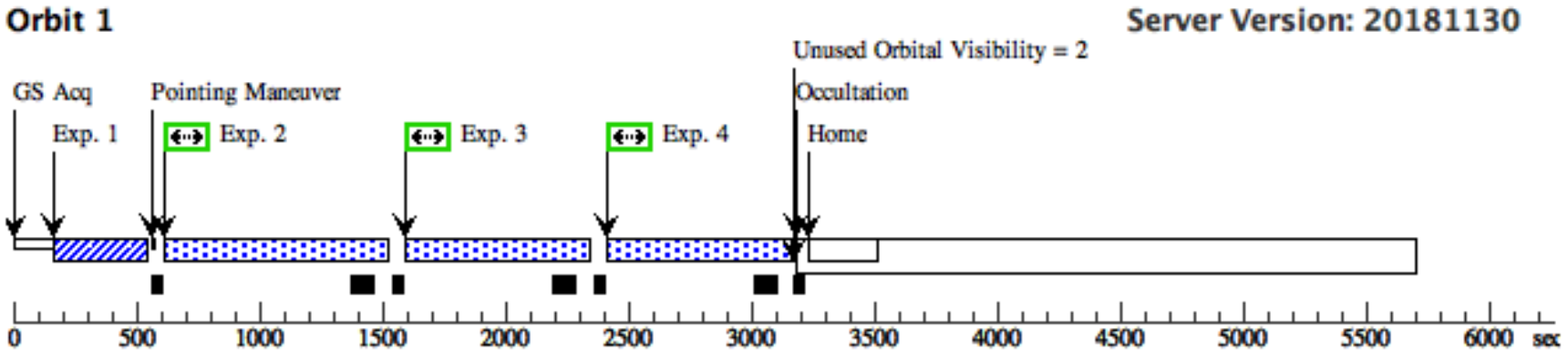
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 06, failed

Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER_01 BY 16_Orbits TO 17_Orbits

Diagnostics

(Visit 06) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

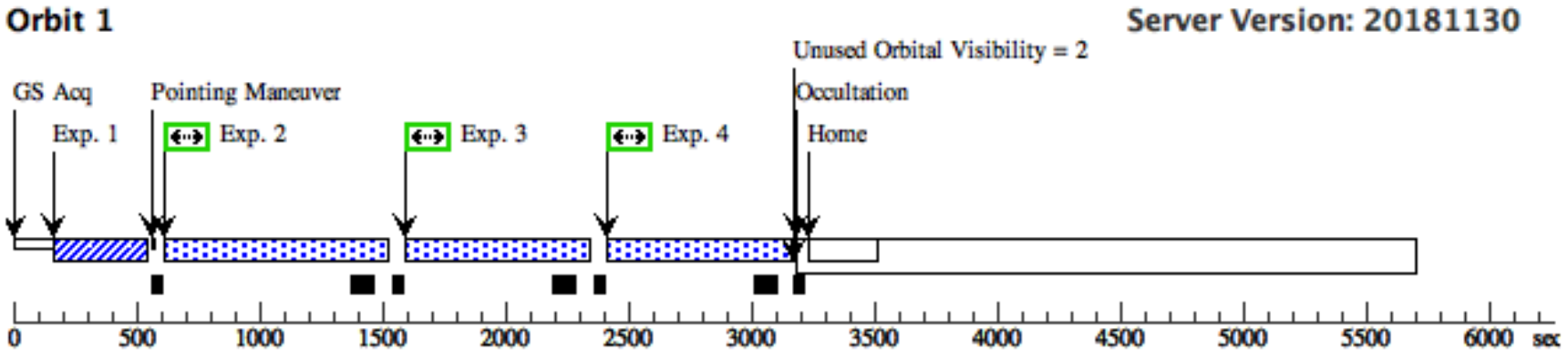
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 56, implementation Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 51 BY 16 Orbits TO 17 Orbits

Diagnostics

(Visit 56) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

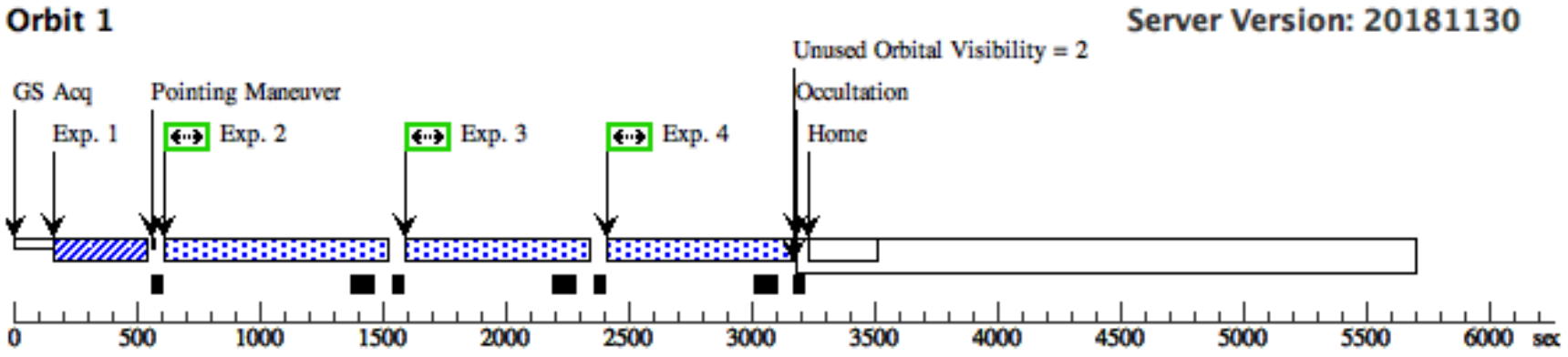
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 07, failed Wed May 22 14:01:21 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER_01 BY 19_Orbits TO 20_Orbits

Diagnostics

(Visit 07) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

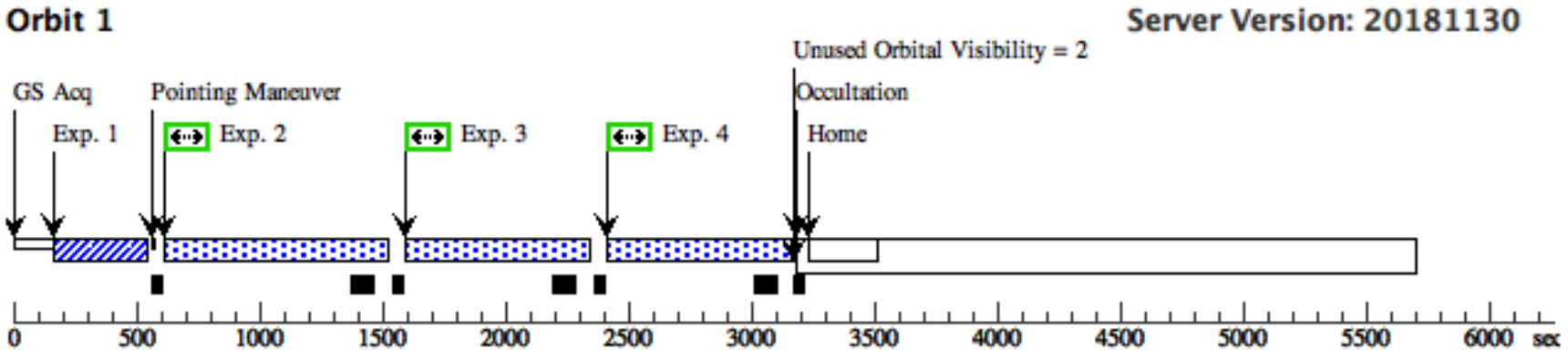
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 15204, Visit 57, implementation Wed May 22 14:01:22 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: AFTER 51 BY 19 Orbits TO 20 Orbits

Diagnostics

(Visit 57) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA	RA: 11 01 51.9062 (165.4662758d) Dec: -34 42 17.03 (-34.70473d) Equinox: J2000	Proper Motion RA: -66.19 mas/yr Proper Motion Dec: -13.90 mas/yr Parallax: 0.0168" Epoch of Position: 2000	V=10.5	Reference Frame: ICRS

Comments: Target coordiantes and propoer motions have been updated to GAIA values.
Category=STAR
Description=[T TAURI 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	(COS.ta.1031653)	(1) V-TW-HYA	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				77.5 Secs (77.5 Secs) *[==>]*	*[1]*
2	FUV FPPOS 2 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=2			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
3	FUV FP Pos 3 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FP-POS=3; BUFFER-TIME=560			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*
4	FUV FP POS 4 (COS.sp.1018473)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=560; FP-POS=4			520 Secs (694 Secs) *[==>694.0 Secs]*	*[1]*

Orbit Structure