



16109 - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Cycle: 28, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

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Proposal 16109 (STScI Edit Number: 1, Created: Friday, March 12, 2021 at 8:00:41 AM Eastern Standard Time) - Overview

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
1C	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:25.0	yes
1D	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:27.0	yes
1E	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:28.0	yes
1F	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:29.0	yes
1G	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:31.0	yes
1H	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:32.0	yes
1I	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:33.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
1J	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:35.0	yes
1K	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:37.0	yes
1L	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:38.0	yes
1M	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:39.0	yes
1N	(1) V-TW-HYA	COS/FUV COS/NUV	1	12-Mar-2021 08:00:40.0	yes

12 Total Orbits Used

ABSTRACT

The Space Telescope Science Institute (STScI) Director has decided to devote up to 1000 orbits of Director's Discretionary time in observing Cycles 27-29 to a new Hubble Ultraviolet Legacy program focused on star formation and associated stellar physics. This new program, ULLYSES (UV Legacy Library of Young Stars as Essential Standards), will provide a UV spectroscopic reference sample of young (< 10 Myr) high- and low-mass stars. It will target ~165 OB stars in the Magellanic Clouds and lower metallicity galaxies in the Local Group, and ~67 T Tauri stars and brown dwarfs in the Milky Way. In addition, ULLYSES will monitor 4 typical T Tauri stars over different rotational phases through at least three rotation periods, and over timescales of months to years. The resulting library will provide template spectra of massive stars at metallicities substantially below the well studied, while the low mass sample will cover a wide range of ages, accretion rates, and masses, including objects down to well below 0.5 M_{sun} . The legacy of this large UV dataset on the first 10 Myr of stellar evolution will be enhanced by complementary datasets obtained by the scientific community. In addition to the core goals of the program related to stellar astrophysics of low and high mass stars, this data will also enable exciting science in the fields of ISM, CGM, jets, and exoplanets. ULLYSES will be modeled after the Frontier Fields program: all data obtained will be non-proprietary. The implementation team at STScI is developing high-level science data products and a sophisticated database and website for disseminating data from the ULLYSES program and ancillary datasets for the ULLYSES target sample from space and ground-based facilities.

OBSERVING DESCRIPTION

Dispersed target acquisitions are done with G230L c2950.

COS G230L is used to measure the Mg II line. The c2950 setting places the Mg II line in the variably vignettted region near the short wavelength edge of the NUV stripe, so we are also using the c2635 setting to get this region on the long wavelength end of the stripe and to expand the wavelength coverage. Comparison of the two exposures will allow the vignetting to be directly measured in each visit. The single FP-POS position used for each of these gratings has been selected to maximize the overlap between the two exposures and get the Mg II line as far as possible from the edge of the stripe wavelength coverage.

For the G160M observations we are using two FP-POS from c1623 and two from c1589, as the previously used c1577 observations put the gap on top of an noteworthy molecular feature. Using all four FP-POS for both settings would result in undue overheads and break the exposures into too many small pieces to be consistent with the monitoring goals of this proposal.

Between 2000 and 2019, excluding TA exposures, there have been 86 previous COS and STIS spectroscopic observations of TW HYA, including 24 COS G160M c1577, 10 COS G285M 2676, 9 STIS E140M, 2 E140H, 5 G230L, 1 E230M, and 1 E230H, in addition to a number of 1st order STIS CCD exposures. The UV flux of this object in particular has been sampled over a wide variety of time scales, and so these archival observations give the best available estimate of the range of flux levels to be expected.

However, none of the previous observations matches the sampling strategy selected for the ULLYSES monitor observations, which requests 12 exposures uniformly distributed over 3 rotational periods to better identify trends that depend on the rotational phase.

For our ETC calculations, we have assembled a composite spectrum based on the archival exposures that show the highest flux levels. For the FUV we gave priority to the brightest available G160M 1577 exposure lbl206020, filling in other FUV wavelengths with the E140M exposure ob3r07060 scaled up by 20% to match. For most of the NUV range, we used the STIS G230L exposure, oclv03040; however, as the peak local rate for our planned NUV observations will set by the Mg II line, we extracted this region from the STIS E230H observation ocd857010 and convolved it with the numerical COS NUV line-spread function at 2800 angstroms, (this detailed convolution is needed as non-Gaussian wings of the COS line-spread function remove a fair fraction of the light from the peak of observed emission features and a Gaussian convolution is a poor approximation). This adopted composite spectrum can be found on STScI box under /ullyses_tech/ullyses_proposals/monitor/16109/tw_hya/seds/twhya_etc.dat.

We used this composite spectrum twhya_etc.dat for the BOP screening, but also checked that a spectrum with 1/4 this intensity, twhya_etc_faint.dat, met our S/N goals.

Using this spectrum twhya_etc.dat our results are

G230L/c2950 COS.sp.1473357, global rate 3579, peak local 13.657 (5x below allowed local screening limit)

G230L/c2635 COS.sp.1473358, global rate 3818, peak local 13.201

G160M/c1623 COS.sp.1473509, global A/B 340/1101, peak local 0.178 (3.74x below local screening limit), Peak S/N=93 in 1200s (integrated time for both CENWAVE settings)

G160M/c1589 COS.sp.1473508, global A/B 430/1149, peak local 0.175, Peak S/N=92 in 1200s (integrated time for both CENWAVE settings)

S/N expected for integrated exposure if target 4x fainter than expected in COS.sp.1473510

Plan for buffer times had originally been to set buffer times to 1/3 the ETC estimate to allow for extra variability, but it turns out that for the FUV observations the loss in available expo time from setting them to the even smaller value of texpo-110s is only a few seconds, so we did that instead.

Observations use COS NUV + FUV and all visits are single orbit with SCHED=100.

This target is planned to be in the TESS field of view from 2021-Mar-07 to 2021-Apr-02. Since TESS will read out full frame images every 10 minutes during TESS cycle 3, it is a high priority to have our observations overlap with this window. The current version sets the BETWEEN for all visits to be from 2021-Mar-09 to 2021-Apr-01 to allow TESS coverage to extend a bit before and after the HST observations.

The rotation period of the target is about 3.57 days = 54 orbits. See Setiawan et al. (2008, Nature, 451, 38), Hue'lamo et al. (2008, A&A, 489, L9), and Donati et al. 2011, MNRAS 417, 472.

We want to schedule 4 visits/period over three consecutive rotation periods, but we don't care about zero point shifts in the whole pattern.

Ideal visit spacing would be 13.5 orbits

If we allow windows that are multiples of 13.5 +/- 3.1 orbits after visit 1 the required AFTER BY orbit values are as follows

Visit	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
Start	10.4	23.9	37.4	50.9	64.4	77.9	91.4	104.9	118.4	131.9	145.4
End	16.6	30.1	43.6	57.1	70.6	84.1	97.6	111.1	124.6	138.1	151.6

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If we allow windows that are multiples of 13.5 +/- 4.1 orbits after visit 1 the required AFTER BY orbit values are as follows

Visit	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
Start	9.4	22.9	36.4	49.9	63.4	76.9	90.4	103.9	117.4	130.9	144.4
End	17.6	31.1	44.6	58.1	71.6	85.1	98.6	112.1	125.6	139.1	152.6

If we allow windows that are multiples of 13.5 +/- 5.1 orbits after visit 1 the required AFTER BY orbit values are as follows

Visit	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
Start	8.4	21.9	35.4	48.9	62.4	75.9	89.4	102.9	116.4	129.9	143.4
End	18.6	32.1	45.6	59.1	72.6	86.1	99.6	113.1	126.6	140.1	153.6

Much more than this and the adjacent phase bins will start running into each other.

This version uses the rather narrow +/-3.1 orbit windows. Individual windows will likely need to be shifted or widened when detailed scheduling is done.

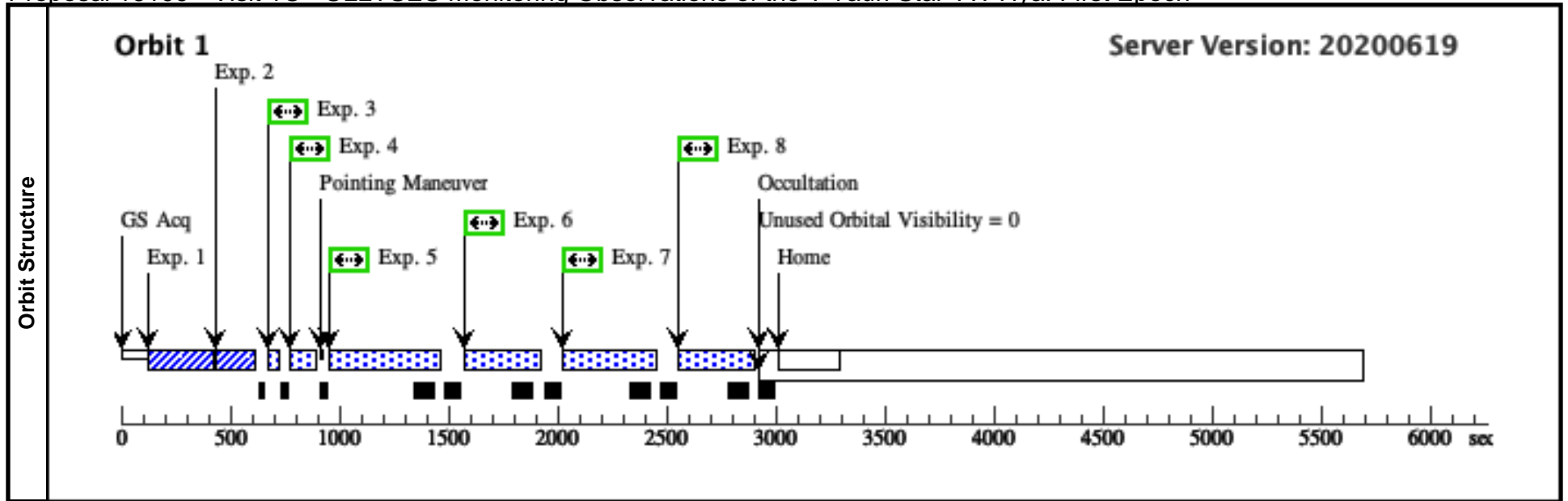
Proposal 16109 - Visit 1C - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Fri Mar 12 13:00:41 GMT 2021

Visit	<p>Proposal 16109, Visit 1C, scheduling</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00</p> <p><i>Comments: vstatus; 1C; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21</i></p> <p><i>vcheck; Enter targ name & Inst. & Resp. Sci.; V-TW-HYA ; COS ; CP</i></p> <p><i>vcheck; ETC numbers entered in APT?; Yes</i></p> <p><i>vcheck; Any screening violations?; NO</i></p> <p><i>vcheck; M-dwarf check complete and added to box folder?; N/A</i></p> <p><i>vcheck; S/N ETC calcs done & documented?; yes</i></p> <p><i>vcheck; Field images checked & saved?; yes, although field image is uninteresting</i></p> <p><i>vcheck; Selected ACQ strategy?; Dispered COS G230L 2950</i></p> <p><i>vcheck; Possible ACQ or Sci spoilers?; None</i></p> <p><i>vcheck; Field BOT clear?; Yes</i></p> <p><i>vcheck; Visual BOT check for stars not in catalog?; none</i></p> <p><i>vcheck; Orbit packing finalized?; Yes ...</i></p> <p><i>Plan had been to set buffer times to 1/3 the ETC estimate to allow for extra variability, but it turns out that for the FUV observations the loss in expo time from setting them to the smaller value of texpo-110s is only a few seconds, so we did that instead.</i></p> <p><i>vcheck; Verify visit grouping correct; yes but need to consult with PC about detailed scheduling</i></p> <p><i>vcheck; phase constraint for ground based observations added?; Not needed if we can do in first 1/2 of TESS window. Will look into details once detailed scheduling is known</i></p> <p><i>vcheck; BETWEENS for coordinated observations added?; Yes</i></p> <p><i>vcheck; Is visit ready for int. review?; Yes</i></p> <p><i>Allocated COS orbits = 12</i></p>																											
	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>V-TW-HYA</td> <td>RA: 11 01 51.8195 (165.4659146d)</td> <td>Proper Motion RA: -0.005545902508307827 sec of time/yr</td> <td>V=10.5</td> <td>Reference Frame: ICRS</td> </tr> <tr> <td></td> <td>Alt Name1: 2MASS-J11015191-3442170</td> <td>Dec: -34 42 17.25 (-34.70479d)</td> <td>Proper Motion Dec: -0.014015999931871193 arcsec/yr</td> <td>SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J=8.217; H=7.558; Ks=7.297</td> <td></td> </tr> <tr> <td></td> <td>Alt Name2: TWA-1</td> <td>Equinox: J2000</td> <td>Parallax: 0.0166428" Epoch of Position: 2015.5</td> <td></td> <td></td> </tr> </tbody> </table> <p><i>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days.</i></p> <p><i>TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2.</i></p> <p>-----</p> <p><i>tstatus; V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY</i></p> <p><i>tcheck; APT/SIMBAD target names: ; Good</i></p> <p><i>tcheck; Target info verification status?; Done</i></p> <p><i>tcheck; Coordinates & P.M. verified, epoch checked?;Done</i></p> <p><i>tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations</i></p> <p>Category=STAR</p> <p>Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR]</p> <p>Extended=NO</p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-TW-HYA	RA: 11 01 51.8195 (165.4659146d)	Proper Motion RA: -0.005545902508307827 sec of time/yr	V=10.5	Reference Frame: ICRS		Alt Name1: 2MASS-J11015191-3442170	Dec: -34 42 17.25 (-34.70479d)	Proper Motion Dec: -0.014015999931871193 arcsec/yr	SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J=8.217; H=7.558; Ks=7.297			Alt Name2: TWA-1	Equinox: J2000	Parallax: 0.0166428" Epoch of Position: 2015.5	
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																							
(1)	V-TW-HYA	RA: 11 01 51.8195 (165.4659146d)	Proper Motion RA: -0.005545902508307827 sec of time/yr	V=10.5	Reference Frame: ICRS																							
	Alt Name1: 2MASS-J11015191-3442170	Dec: -34 42 17.25 (-34.70479d)	Proper Motion Dec: -0.014015999931871193 arcsec/yr	SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J=8.217; H=7.558; Ks=7.297																								
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Fixed Targets																												

Proposal 16109 - Visit 1C - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A			10 Secs (10 Secs) [==>]	[1]	
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>									
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9		7 Secs (7 Secs) [==>]	[1]	
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>									
	3	2950 (COS.sp.147 3414)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0		30 Secs (30 Secs) [==>]	[1]	
	<i>Comments: Bright limit ETC buffer time 659s/617s for c2950/c2635; 2/3 would be 440/412 brightest pixel ~13.7 vs limit of 70, a margin of about 5X See observing description for additional details of BOP and S/N calculations.</i>									
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0		30 Secs (30 Secs) [==>]	[1]	
	<i>Comments: See observing description for details of BOP and S/N calculations.</i>									
5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1		301 Secs (301 Secs) [==>]	[1]		
<i>Comments: See observing description for details of BOP and S/N calculations.</i>										
6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1		301 Secs (301 Secs) [==>]	[1]		
<i>Comments: See observing description for details of BOP and S/N calculations.</i>										
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1		301 Secs (301 Secs) [==>]	[1]		
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s (factor of 3.7x below allowed local limit) S/N for integration of all 4 settings (1200s) for the 4x "Faint" spectrum is given by COS.sp.1473510. Need to make buffer time > 500s to save time vs setting buffer time to exposure time - 110s Setting to 800s would provide ~59s of additional exposure time ETC buffer time 1636s for c1623 and 1494s for c1589. See observing description for details of BOP and S/N calculations.</i>										
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1		301 Secs (301 Secs) [==>]	[1]		
<i>Comments: See observing description for details of BOP and S/N calculations.</i>										



Proposal 16109 - Visit 1D - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

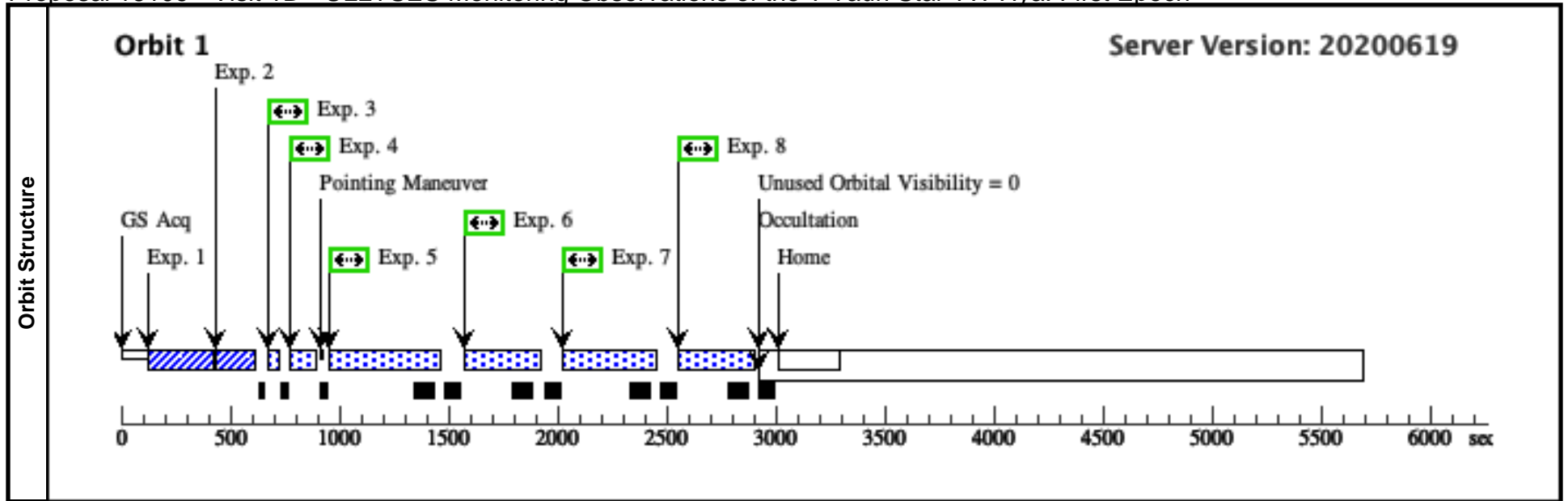
Fri Mar 12 13:00:41 GMT 2021

Proposal 16109, Visit 1D, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 8.4 Orbits TO 18.6 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1D; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1D - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A				10 Secs (10 Secs) [==>]	[1]	
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9			7 Secs (7 Secs) [==>]	[1]	
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0			30 Secs (30 Secs) [==>]	[1]	
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0			30 Secs (30 Secs) [==>]	[1]	
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1			301 Secs (301 Secs) [==>]	[1]	
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1			301 Secs (301 Secs) [==>]	[1]	
	7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1			301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1			301 Secs (301 Secs) [==>]	[1]		



Proposal 16109 - Visit 1E - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

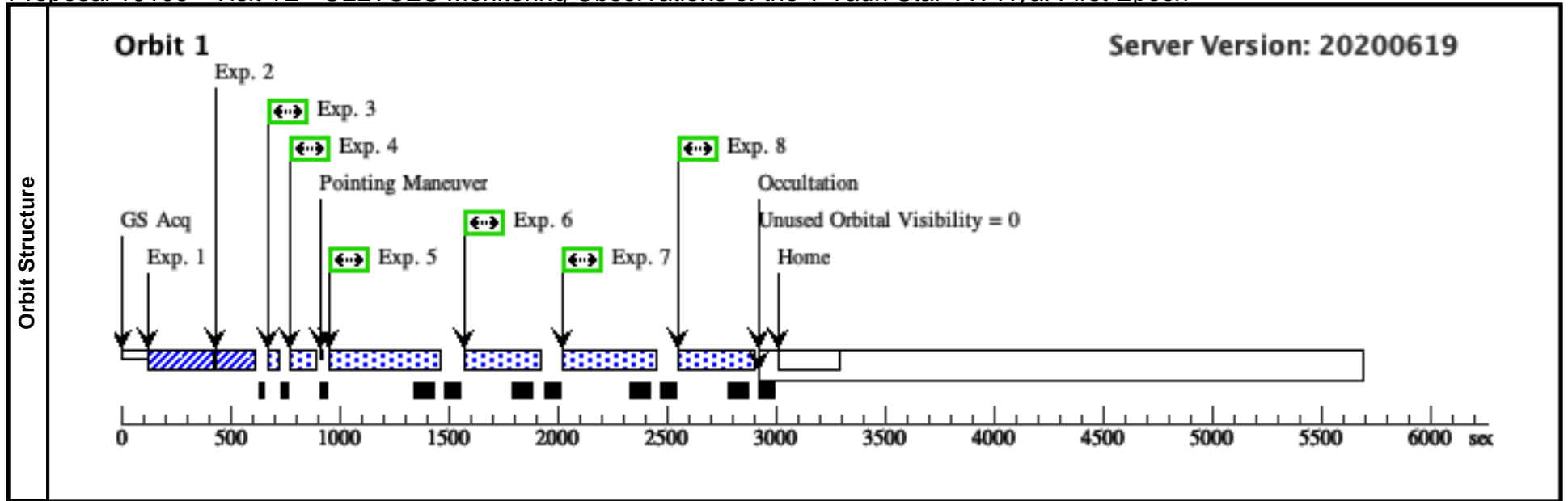
Fri Mar 12 13:00:41 GMT 2021

Proposal 16109, Visit 1E, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 21.9 Orbits TO 32.1 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1E; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1E - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1F - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

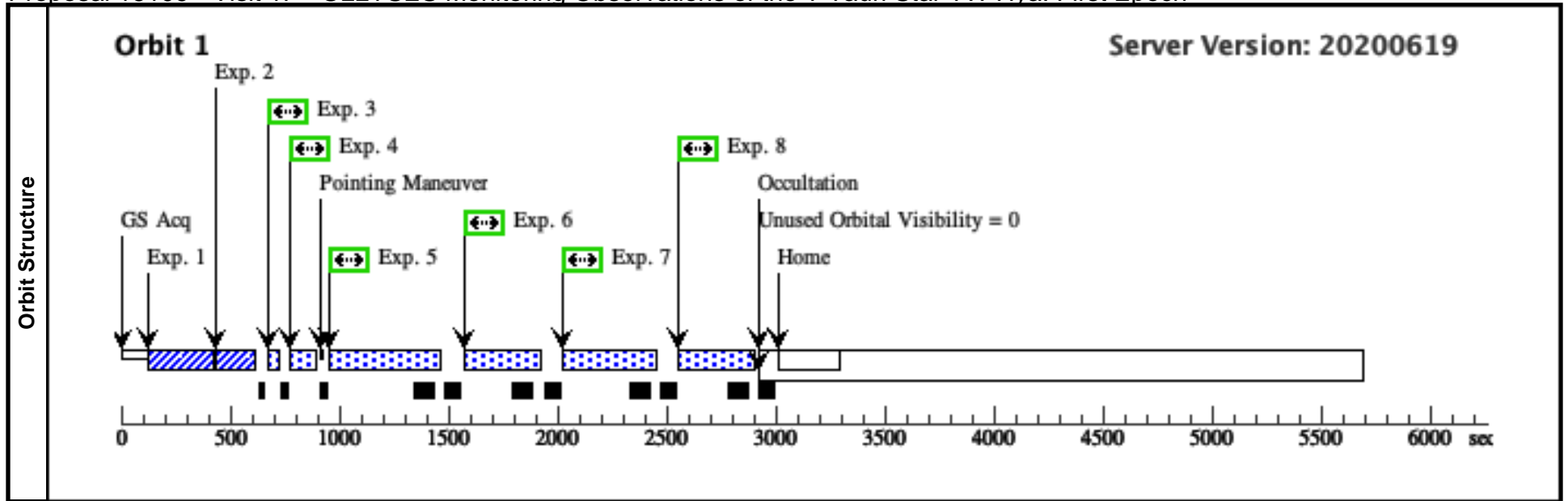
Fri Mar 12 13:00:41 GMT 2021

Proposal 16109, Visit 1F, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 35.4 Orbits TO 45.6 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1F; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1F - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1G - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

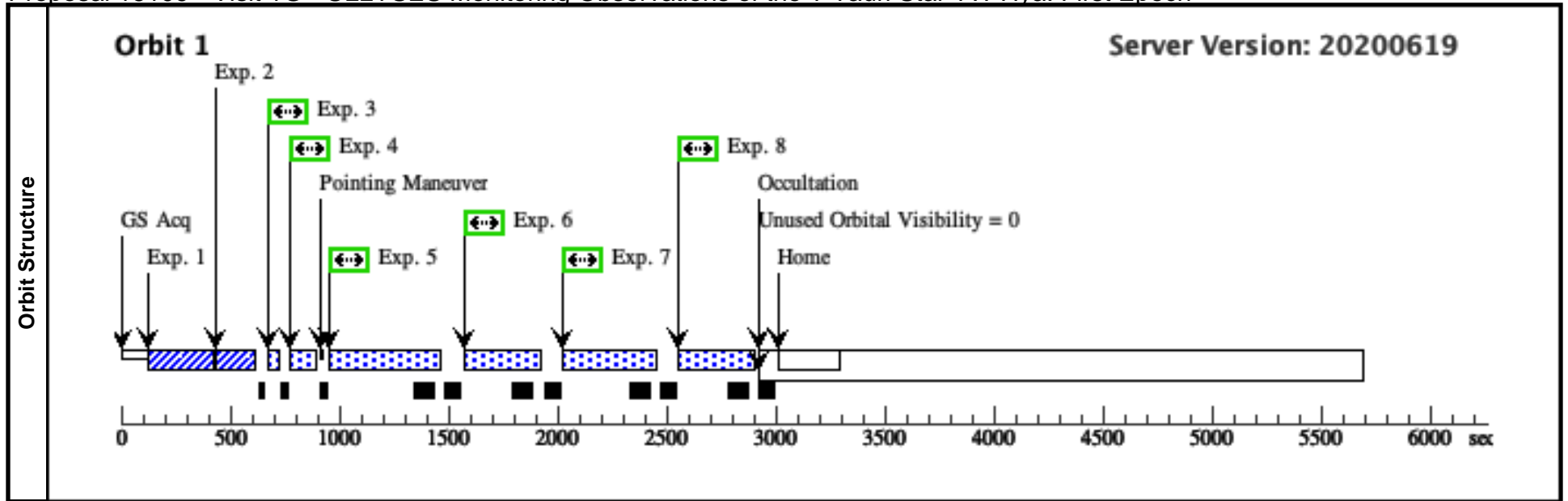
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1G, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 48.9 Orbits TO 59.1 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1G; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1G - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1H - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

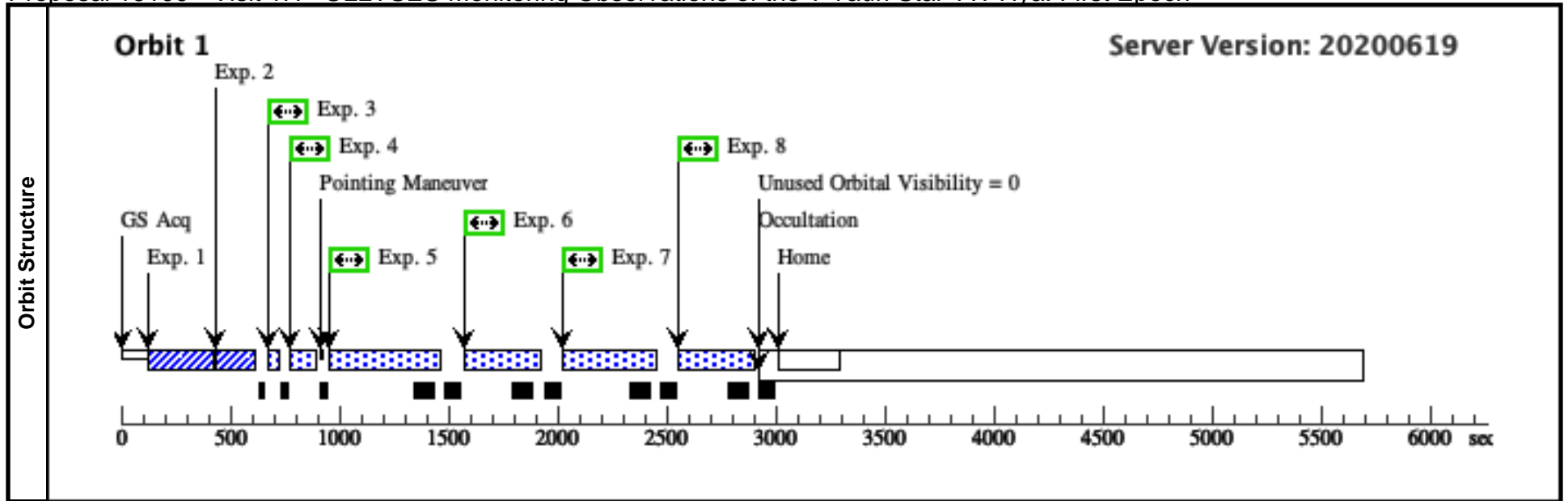
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1H, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 62.4 Orbits TO 72.6 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1H; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1H - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1I - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

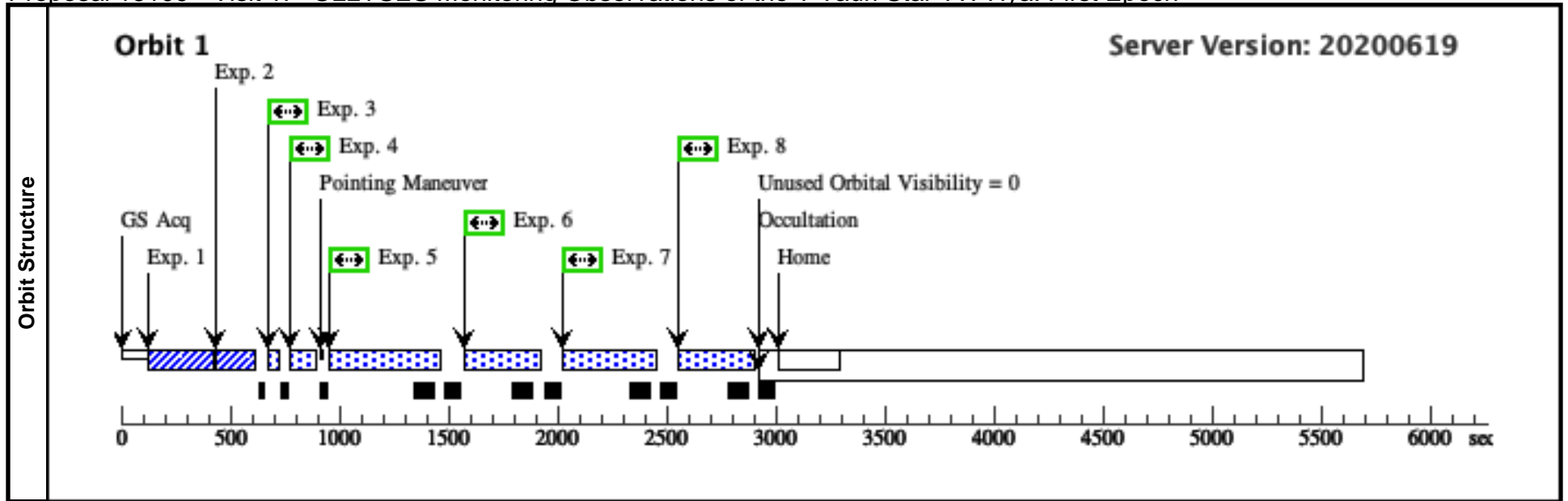
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1I, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 75.9 Orbits TO 86.1 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
Comments: vstatus; 1I; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20; intrev: complete ; P/WF 15/12/21
vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
vcheck; ETC numbers entered in APT?; -----
vcheck; Any screening violations?; -----
vcheck; M-dwarf check complete and added to box folder?; -----
vcheck; S/N ETC calcs done & documented?; -----
vcheck; Field images checked & saved?; -----
vcheck; Selected ACQ strategy?; -----
vcheck; Possible ACQ or Sci spoilers?; -----
vcheck; Field BOT clear?; -----
vcheck; Visual BOT check for stars not in catalog?; -----
vcheck; Orbit packing finalized?; -----
vcheck; Buffer times optimized?; -----
vcheck; Verify visit grouping correct; -----
vcheck; phase constraint for ground based observations added?; -----
vcheck; BETWEENS for coordinated observations added?; -----
vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p><i>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days.</i> <i>TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2.</i> ----- <i>tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY</i> <i>tcheck; APT/SIMBAD target names: ; Good</i> <i>tcheck; Target info verification status?; Done</i> <i>tcheck; Coordinates & P.M. verified, epoch checked?;Done</i> <i>tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations</i> Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1I - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=18 8				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1J - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

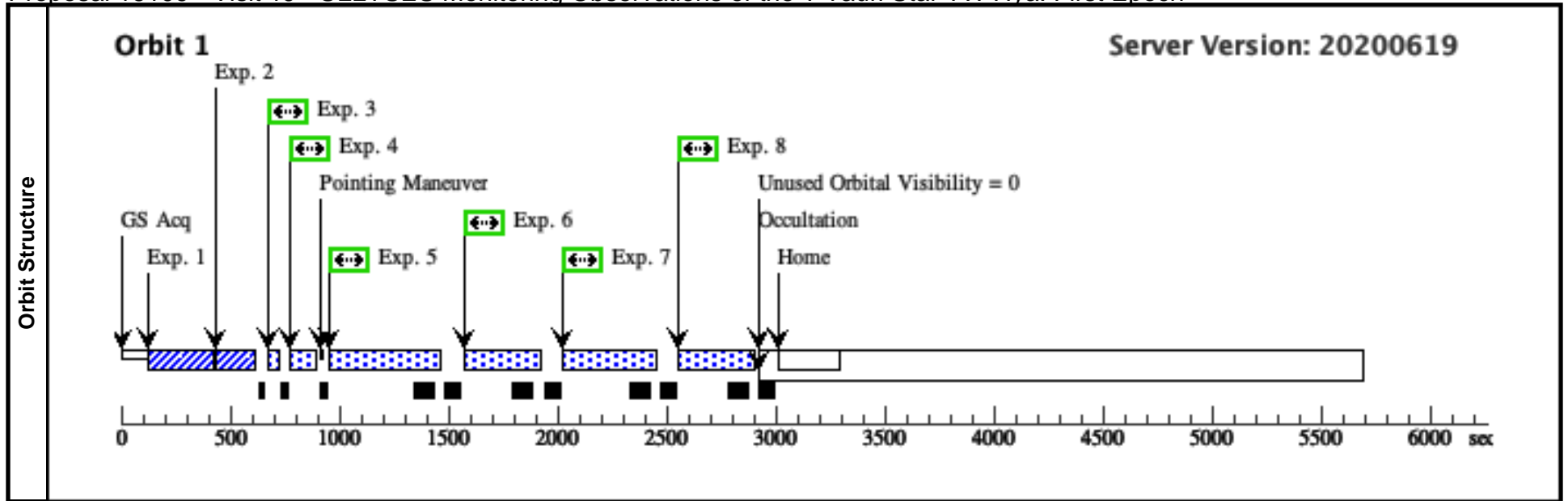
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1J, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 89.4 Orbits TO 99.6 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1J; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1J - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1K - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

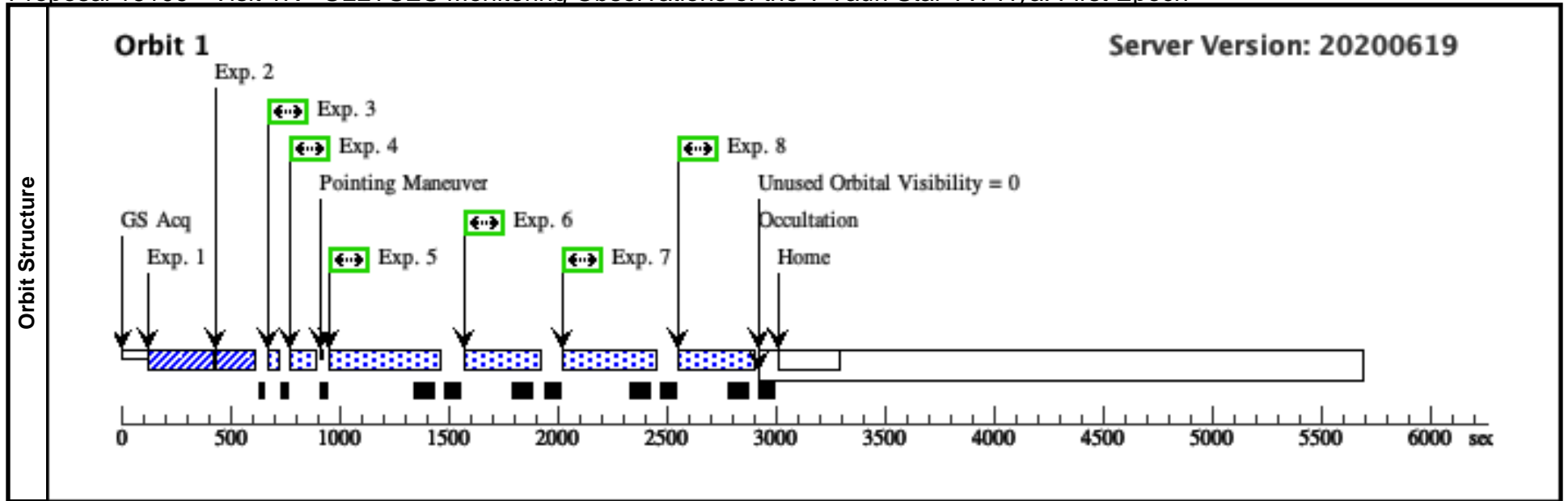
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1K, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 102.9 Orbits TO 113.1 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1K; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1K - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1L - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

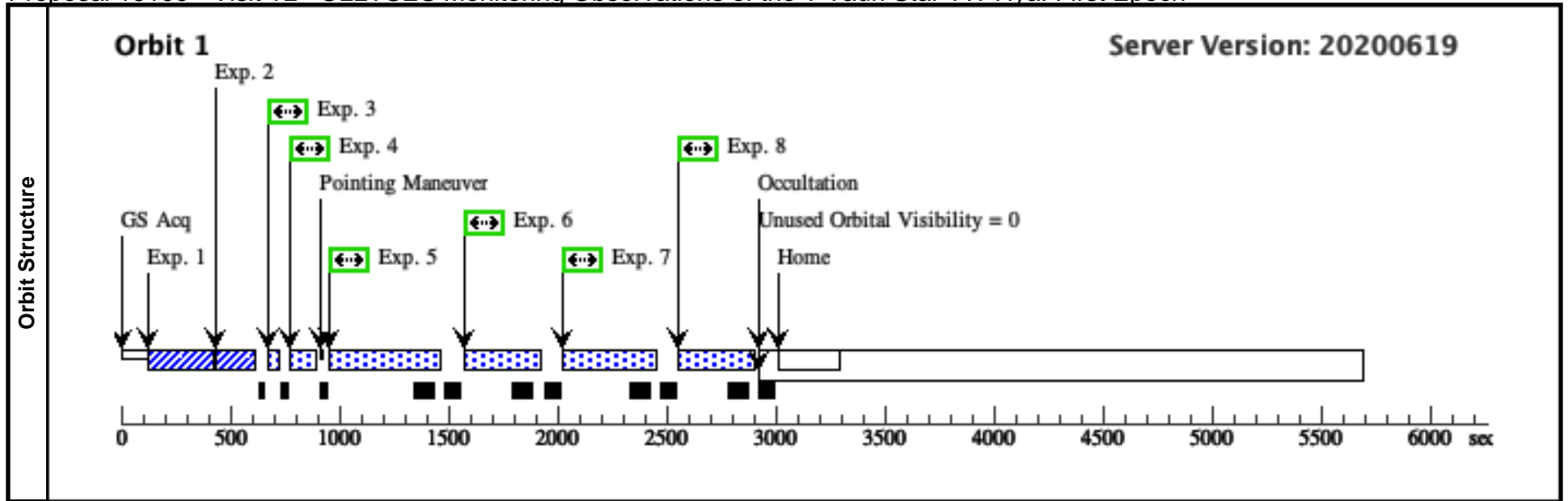
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1L, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 116.4 Orbits TO 126.6 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1L; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1L - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1M - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

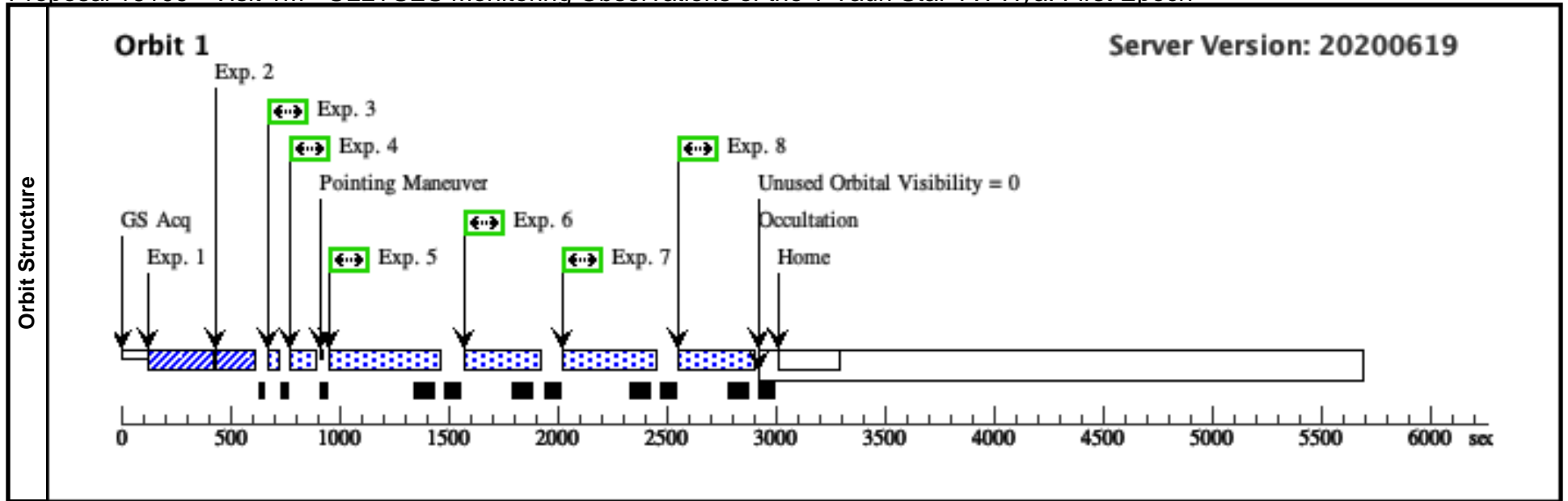
Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1M, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 129.9 Orbits TO 140.1 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1M; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1M - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	



Proposal 16109 - Visit 1N - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Fri Mar 12 13:00:42 GMT 2021

Proposal 16109, Visit 1N, scheduling
Diagnostic Status: No Diagnostics
 Scientific Instruments: COS/FUV, COS/NUV
 Special Requirements: SCHED 100%; AFTER 1C BY 143.4 Orbits TO 153.6 Orbits; BETWEEN 07-MAR-2021:10:35:00 AND 19-MAR-2021:06:40:00; BETWEEN 20-MAR-2021:08:00:00 AND 16-APR-2021:19:55:00
 Comments: vstatus; 1N; V-TW-HYA; P/COS Approved for submission; P/CP 22/10/20 ; intrev: complete ; P/WF 15/12/21
 vcheck; Enter targ name & Inst. & Resp. Sci.; ----- ; ----- ; -----
 vcheck; ETC numbers entered in APT?; -----
 vcheck; Any screening violations?; -----
 vcheck; M-dwarf check complete and added to box folder?; -----
 vcheck; S/N ETC calcs done & documented?; -----
 vcheck; Field images checked & saved?; -----
 vcheck; Selected ACQ strategy?; -----
 vcheck; Possible ACQ or Sci spoilers?; -----
 vcheck; Field BOT clear?; -----
 vcheck; Visual BOT check for stars not in catalog?; -----
 vcheck; Orbit packing finalized?; -----
 vcheck; Buffer times optimized?; -----
 vcheck; Verify visit grouping correct; -----
 vcheck; phase constraint for ground based observations added?; -----
 vcheck; BETWEENS for coordinated observations added?; -----
 vcheck; Is visit ready for int. review?; -----
 Allocated COS orbits = 12

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-TW-HYA Alt Name1: 2MASS- J11015191-3442170 Alt Name2: TWA-1	RA: 11 01 51.8195 (165.4659146d) Dec: -34 42 17.25 (-34.70479d) Equinox: J2000	Proper Motion RA: -0.005545902508307827 sec of time/yr Proper Motion Dec: -0.014015999931871193 arcsec/yr Parallax: 0.0166428" Epoch of Position: 2015.5	V=10.5 SpT=K6Ve; B=11.94; V=10.50; R=10.626; G=10.4393; I=9.18; J =8.217; H=7.558; Ks=7.297	Reference Frame: ICRS
<p>Comments: Prot=3.57 (need reference!), or about 53.5 orbits, so ideal visit spacing would be 13.38 orbits or 0.8925 days. TESS Sector 36 (2021-Mar-07 to 2021-Apr-02, in cycle 3): observed in camera 2. ----- tstatus: V-TW-HYA ; P/COS Approved for submission; S/ins not started; P/CP 14/12/21; S/xx DD/MM/YY tcheck; APT/SIMBAD target names: ; Good tcheck; Target info verification status?; Done tcheck; Coordinates & P.M. verified, epoch checked?; Done tcheck; Adopted SED compared to Observations?; Adopting SED constructed from composite of actual observations Category=STAR Description=[PRE-MAIN SEQUENCE STAR, T TAURI STAR] Extended=NO</p>					

Proposal 16109 - Visit 1N - ULLYSES Monitoring Observations of the T Tauri Star TW Hya: First Epoch

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	G230L PEA KXD (COS.sa.147 3346)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKXD, PSA	G230L 2950 A					10 Secs (10 Secs) [==>]	[1]
	<i>Comments: For our faint spectrum, COS.sa.1473349 shows that 5 s is needed so adopt 10</i>										
	2	G230L PEA KD (COS.sa.147 3347)	(1) V-TW-HYA	COS/NUV, ACQ/PEAKD, PSA	G230L 2950 A	CENTER=DEF; NUM-POS=5; STEP-SIZE=0.9				7 Secs (7 Secs) [==>]	[1]
	<i>Comments: For our "faint" spectrum, COS.sa.1473348 shows 3.5s is needed, so adopt 7</i>										
	3	2950 (COS.sp.147 3357)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2950 A	FP-POS=4; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	4	2635 (COS.sp.147 3358)	(1) V-TW-HYA	COS/NUV, TIME-TAG, PSA	G230L 2635 A	FP-POS=1; BUFFER-TIME=15 0				30 Secs (30 Secs) [==>]	[1]
	5	1589-3 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=3; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
	6	1589-4 (COS.sp.147 3508)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FP-POS=4; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]
7	1623-1 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=1; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	
<i>Comments: COS.sp.1473353 gives count rate for bright BOP screening spectrum. Peak local 0.178 cnts/pix/s S/N for integration of all 4 settings (1156s) for the 4x "Faint" spectrum is given by COS.sp.1473352.</i>											
8	1623-2 (COS.sp.147 3509)	(1) V-TW-HYA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	FP-POS=2; BUFFER-TIME=19 1				301 Secs (301 Secs) [==>]	[1]	

