

# 14854 - COS FUV Spectroscopic Sensitivity Monitoring

Cycle: 24, Proposal Category: CAL/COS (Availability Mode: RESTRICTED)

## **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) WD0308-565	COS/FUV COS/NUV	1	13-Sep-2017 16:01:41.0	yes
02	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:01:44.0	yes
03	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	1	13-Sep-2017 16:01:45.0	yes
04	(1) WD0308-565	COS/FUV COS/NUV	1	13-Sep-2017 16:01:46.0	yes

Proposal 14854 (STScI Edit Number: 2, Created: Wednesday, September 13, 2017 3:02:10 PM EST) - Overview

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	l Last Orbit Planner Run	OP Current with Visit?
05	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:01:48.0	yes
06	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	1	13-Sep-2017 16:01:50.0	yes
07	(1) WD0308-565	COS/FUV COS/NUV	1	13-Sep-2017 16:01:51.0	yes
08	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:01:52.0	yes
09	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	1	13-Sep-2017 16:01:54.0	yes
10	(1) WD0308-565	COS/FUV COS/NUV	1	13-Sep-2017 16:01:55.0	yes
11	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:01:57.0	yes
13	(1) WD0308-565	COS/FUV COS/NUV	1	13-Sep-2017 16:01:59.0	yes
17	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:02:00.0	yes
18	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	1	13-Sep-2017 16:02:03.0	yes
19	(1) WD0308-565	COS/FUV COS/NUV	1	13-Sep-2017 16:02:04.0	yes

Proposal 14854 (STScI Edit Number: 2, Created: Wednesday, September 13, 2017 3:02:10 PM EST) - Overview

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
20	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:02:05.0	yes
21	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	1	13-Sep-2017 16:02:07.0	yes
22	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	2	13-Sep-2017 16:02:08.0	yes
23	(2) GD71	COS/FUV COS/NUV	1	13-Sep-2017 16:02:09.0	yes

26 Total Orbits Used

#### **ABSTRACT**

Monitor the sensitivity of each FUV grating mode to detect any change due to contamination or other causes. The FUV gratings are the most heavily used modes on COS and have also experienced several changes in the time-dependent spectroscopic sensitivity since launch. These trends are grating, segment, and wavelength dependent.

## **OBSERVING DESCRIPTION**

To track the TDS as a function of wavelength we obtain exposures with all FUV gratings every month. There are 2 types of monitoring sequences which occur on alternating months. (i) Full monitoring sequence every other month (except May - Jul when GD71 is unavailable): 3 orbits in 2 visits. The 1 orbit visit (GD71) covers the G130M/1096/FUVB, G160M/1577/FUVA, and G160M/1623/FUVA modes. The 2 orbit visit (WD0308) covers G130M/1222, G130M/1291, G130M/1327, G130M/1055/FUVA, G160M/1577/FUVB, G160M/1623/FUVB, G140L/1105, G140L/1280 modes. These comprise the reddest and bluest central wavelengths of each grating with additional coverage of the G130M blue modes. (ii) Reduced monitoring sequence in alternating months: 1 orbit visit (WD0308) to monitor the complete wavelength range of the standard modes using one central wavelength per grating. The modes covered are G130M/1291, G160M/1623, and G140L/1280. To transition from LP3 to LP4 we will execute a complete visit in July at LP4 instead of a reduced one (total of 2 orbits since GD71 is not visible), and a correspondent complete orbit at LP3 (2 orbits, standard mode only). In case of zero point issues in the LP3-LP4 transfer we will reinstate one contingency GD71 orbit at LP3 to be

Proposal 14854 (STScI Edit Number: 2, Created: Wednesday, September 13, 2017 3:02:10 PM EST) - Overview executed in August.

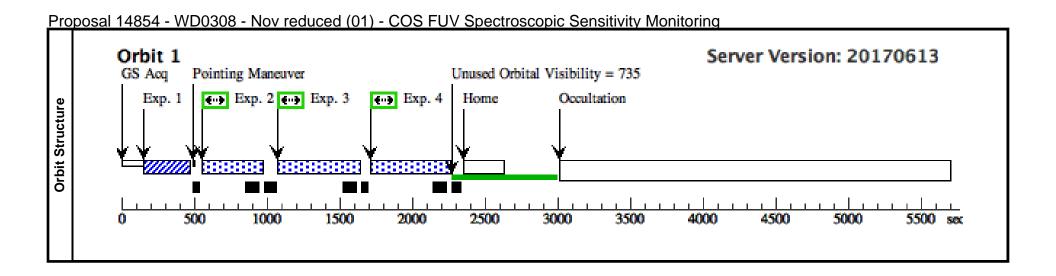
# SNR requirements:

- SNR of 15 per resel at wavelength of least sensitivity for the standard modes, SNR of 25 per resel at wavelength of most sensitivity for the blue modes. For the blue modes, this will ensure S/N > 15 for I > 1030 ang for I = 1030 Ang
- TDS calibration better than 2% for standard modes and 10% for blue modes

## Time constraints:

- Reduced monitoring sequence should occur every 2 months starting in November 2016
- Complete monitoring sequence should occur every 2 months starting in December 2016
- GD71 is unschedulable May-July 2017
- April complete visit to be executed within 2 weeks from LP4 special calibration program. Visit on hold until special program dates are set.
- July complete visits to be executed before and after LP4 move. Visits on hold until LP4 move dates are set.

	Proposal 14854, WD0308 - Nov red	duced (01), completed					Wed Sep 13 20:02:10	OGMT 201		
5	Diagnostic Status: Error	-					_			
2	Scientific Instruments: COS/FUV, C	COS/NUV								
	Special Requirements: SCHED 1009	%; BETWEEN 21-NOV-2016:00:00:00 A	AND 27-NOV-2016	:00:00:00						
3	(G130M/1291 (01.002)) Error (Form	n): LIFETIME-POS is required with G13	0M when not in Sup	ported mode.						
5	(WD0308 - Nov reduced (01)) Warn setting. See full description for detail		s strongly recommen	nded that the maximum	number of allowed	ed FP-POS positions is u	used when observing at a given COS CENW	VAVE		
2	setting. See run description for detail	18.								
Diagnostics										
200	# Name	Target Coordinates		Coord. Corrections		Fluxes	Miscellaneous			
, T	(1) WD0308-565	RA: 03 09 47.9200 (47.4496667d)		Motion RA: 0.018141	•	V=14.07+/-0.02	Reference Frame: ICRS			
-		Dec: -56 23 49.41 (-56.39706d)		Motion Dec: 0.0643 at	csec/yr					
ָט ע	Comments: Coordinates from Charl	Equinox: J2000	Epocn	of Position: 2000						
	Extended=NO	e s proposui								
	# Label Target (ETC Run)	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
	1 ACQ/IM (1) WD0308-565	5 COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)			
	(839564)						[==>]	[1]		
	Comments: cycle 24 comment: expo.	sure times not reduced following updated	ETC calculations, of	differences negligible.						
	2 G130M/129 (1) WD0308-565	5 COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=14	1		244 Secs (244 Secs)			
	1 (COS.sp.839 565)		1291 A	4; FP-POS=3			[==>]	[1]		
	Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS									
מ	cycle 24 comment: exposure times n	ot reduced following updated ETC calcul	ations, differences n	ot enough to affect orb	it requested.					
5	3 G160M/162 (1) WD0308-565	5 COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			400 Secs (400 Secs)			
Exposures	3 (COS.sp.839 566)		1623 A	BUFFER-TIME=3 0	0		[==>]	[1]		
	Target has been observed before no	Comments: ETC buffer time is 719, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300								
	cycle 24 comment: exposure times n	ot reduced following updated ETC calcul	ations, differences n	ot enough to affect orb	it requested.					
	4 G140L/1280 (1) WD0308-563	5 COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=1	3		280 Secs (280 Secs)			
	(COS.sp.839 567)		1280 A	0; FP-POS=3			I = => J	[1]		



Proposal 14854 - WD0308 - Dec complete (02) - COS FUV Spectroscopic Sensitivity Moni	toring
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Proposal 14854, WD0308 - Dec complete (02), completed

Wed Sep 13 20:02:10 GMT 2017

Diagnostic Status: Error

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-DEC-2016:00:00:00 AND 01-JAN-2017:00:00:00

Comments: George Chapman added Exposure 9

**Diagnostics** 

(G130M/1222 (02.002)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1291 (02.003)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1327 (02.004)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1055/FUVA (02.005)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(WD0308 - Dec complete (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.

(G130M/1327 (02.004)) Warning (Form): Defaults for SEGMENT have changed in APT25.2 for use of LP4 with G130M. See full description for details.

ts	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
g	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS				
<u>a</u>			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr						
12			Equinox: J2000	Epoch of Position: 2000						
×	Comments: Coordinates from Charle's proposal									
ΙŒ	Extended=	=NO								

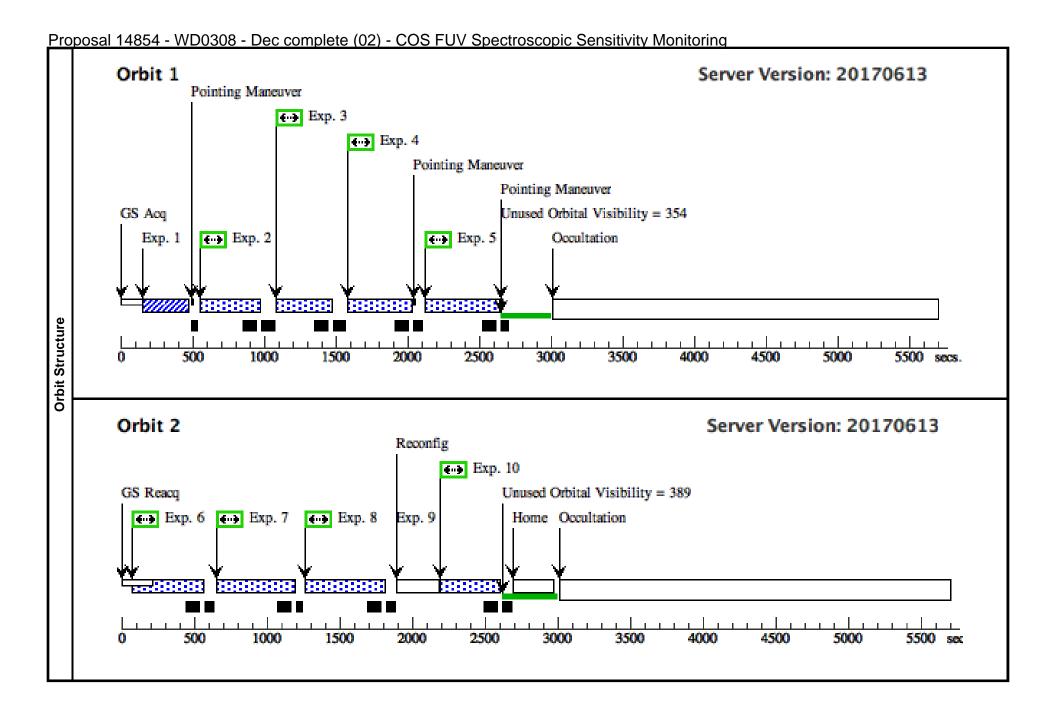
Proposal 14854 - WD0308 - Dec complete (02) - COS FUV Spectroscopic Sensitivity Monitoring Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACQ/IMAGE, BOA MIRRORA GS ACO SCENARI 45 Secs (45 Secs) O BASE1B3 (839564)[1] I = = > 1Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/122 (1) WD0308-565 COS/FUV. TIME-TAG. PSA G130M BUFFER-TIME=12 226 Secs (226 Secs) 1222 A *[==>1* (COS.sp.839 [1] FP-POS=3 568) Comments: ETC buffer time is 395 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 126Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/129 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=14 244 Secs (244 Secs) 1291 A I = = > 1(COS.sp.839 [1] FP-POS=3 565) Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=21 312 Secs (312 Secs) 2; 1327 A I = = > 1(COS.sp.839 [1] FP-POS=3 Comments: ETC buffer time is 320 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 212Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. 334 Secs (334 Secs) G130M/105 (1) WD0308-565 COS/FUV. TIME-TAG, PSA BUFFER-TIME=23 G130M 5/FUVA 4; 1055 A [==>] (COS.sp.839 FP-POS=3; [1] 570) SEGMENT=BOTH Comments: ETC buffer time is larger than exptime (1482) Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 224Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. While the program is optimized for FUVA we use the low SNR FUVB data to constraint the blue edge of the wavelength range. G160M/157 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 290 Secs (290 Secs) 1577 A BUFFER-TIME=19 I ==> 1(COS.sp.839 [2] Comments: ETC buffer time is 599, larger than exptime Target has been observed before no need to 2/3 factor

Set buffer time = exptime - 100 = 190

Continue use of 1 FP-POS

Proposal 14854 - WD0308 - Dec complete (02) - COS FUV Spectroscopic Sensitivity Monitoring G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA FP-POS=3; 400 Secs (400 Secs) G160M 1623 A BUFFER-TIME=30 f = = > 1(COS.sp.839 [2] 566) Comments: ETC buffer time is 799, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G140L/1280 (1) WD0308-565 COS/FUV, TIME-TAG, PSA BUFFER-TIME=18 G140L 280 Secs (280 Secs) (COS.sp.839 0; 1280 A *[==>1* 567) [2] FP-POS=3 Comments: ETC buffer time is 451, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS DARK S/C, DATA, NONE QASISTATES COS 1 Secs (1 Secs) FUV HVLOW HVL f = = > 1[2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. 10 G140L/1105 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=18 280 Secs (280 Secs) /FUVA 0; 1105 A [==>] (COS.sp.839 FP-POS=3; [2] 572) SEGMENT=A Comments: ETC buffer time is 362, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180

Continue use of 1 FP-POS



Proposal 14854 - GD71 - Dec complete (03) - COS FUV Spectroscopic Sensitivity Monitoring

**Proposal 14854, GD71 - Dec complete (03), completed**Wed Sep 13 20:02:10 GMT 2017

Diagnostic Status: Error

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 26-DEC-2016:00:00:00 AND 01-JAN-2017:00:00:00

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation

George Chapman added Exposure 3

Optimized the exposure time for the G130M/1096 setting to increase its SNR (exp time = 744 s) while remaining within the allocated time.

(G130M/1096/FUVB (03.002)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1096/FUVA WAVECAL (03.004)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

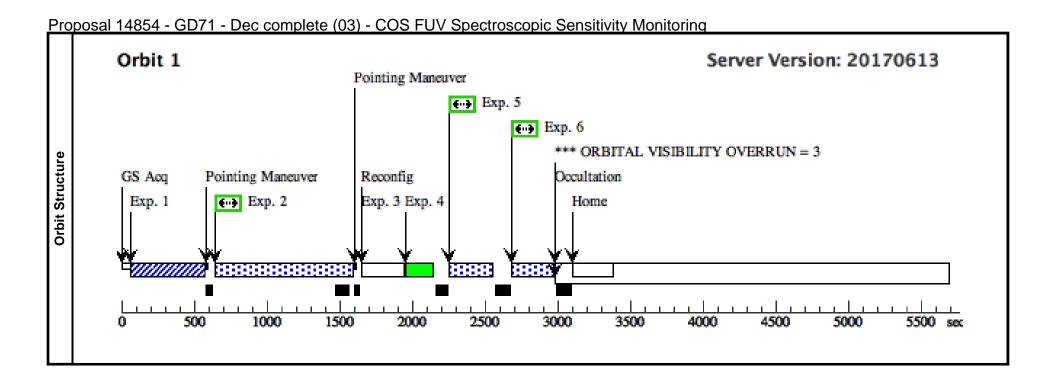
(GD71 - Dec complete (03)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

(GD71 - Dec complete (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

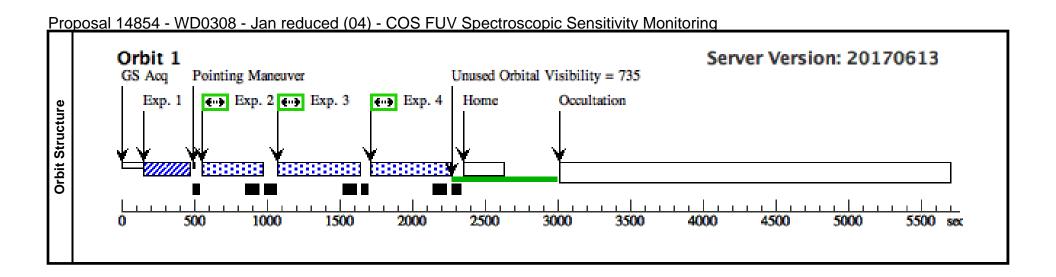
ţs	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
l ge	(2) GD71	RA: 05 52 27.6100 (88.1150417d)	Proper Motion RA: 85 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS
Ta I		Dec: +15 53 13.80 (15.88717d)	Proper Motion Dec: -174 mas/yr		
وٰ [		Equinox: J2000	Epoch of Position: 2000		
	Comments: Use sma R Extended=NO	A, DEC amd PM as in proposal 12392 by Bohlin et al.			

Proposal 14854 - GD71 - Dec complete (03) - COS FUV Spectroscopic Sensitivity Monitoring

	Label Target (ETC Run)	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
1	ACQ/IM (2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)			
	(COS.ta.839 574)						[==>]	[1]		
Con	mments: Exptime for S/N of 60 is 10	05.5 sec, using 90 sec leads to S/N of 55	•					1		
2	G130M/109 (2) GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=64			744 Secs (744 Secs)			
	6/FUVB (COS.sp.839		1096 A	4;			[==>]			
	576)			FP-POS=3; SEGMENT=B				[1]		
Con	mments: FUVB only (all ETC warn	ings come from FUVA)		SEGWIEN I-B			L			
	buffer-time = $exptime - 100 sec = 6$									
3	DARK	S/C, DATA, NONE			QASISTATES COS		1 Secs (1 Secs)			
					FUV HVLOW HVI OW	_	[==>]	[1]		
Con	mments: Work-around to efficiently	schedule the SEG-B to SEG-A reconfig	uration. Eliminate.	s SPSS induced gaps.						
4	G130M/109 WAVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			140 Secs (140 Secs)			
	6/FUVA W AVECAL		1096 A	SEGMENT=A;			[==>]	[1]		
5				FLASH=NO				[1]		
5	G160M/157 (2) GD71 7/FUVA	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10 2;			102 Secs (102 Secs)			
	(COS.sp.839		1577 A	FP-POS=3;			[==>]	[1]		
	579)			SEGMENT=A				[1]		
Con	Comments: FUVA only (all ETC warnings come from FUVB).									
2.35 651 Set	5e6 is the number of events that eac 3 cts/sec is the count rate in FUVA buffer-time = exptime b/c exptime	, per ETC calculation above - 100 < 80 which is the minimum exptin	пе	ŕ						
Cyc		lower than ETC prediction, so no need		,	be larger than 13)		154.0 (154.0 )	T		
6	G160M/162 (2) GD71 3/FUVA	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=15 4;			154 Secs (154 Secs) [==>]			
	(COS.sp.839 581)		1023 A	FP-POS=3;			[==>]	[1]		
	301)			SEGMENT=A						
Con	mments: FUVA only (all ETC warn	ings come from FUVB).								
2.35 651	, 5e6 is the number of events that each 3 cts/sec is the count rate in FUVA	= 360 sec, which is larger than exp time ch buffer can record , per ETC calculation above - 100 < 80 which is the minimum exptin	, ,,	to exptime.						



	Proposal 14854, WD0308 - Jan re	duced (04), completed					Wed Sep 13 20:02:11	I GMT 2017	
Visit	Diagnostic Status: Error								
Ë	Scientific Instruments: COS/FUV, 0	COS/NUV							
	Special Requirements: SCHED 100	%; BETWEEN 23-JAN-2017:00:00:00 A	ND 29-JAN-2017:0	00:00:00					
CS	(G130M/1291 (04.002)) Error (For	m): LIFETIME-POS is required with G13	0M when not in Sup	oported mode.					
Diagnostic	(WD0308 - Jan reduced (04)) Warn setting. See full description for deta		strongly recommen	ded that the maximum r	number of allowe	ed FP-POS positions is us	sed when observing at a given COS CENWA	AVE	
ŭ	setting. See run description for detail								
įã									
		<b></b>		a 1 a		71			
<b>Targets</b>	# Name	Target Coordinates		Coord. Corrections	S:: /	Fluxes	Miscellaneous		
ğ	(1) WD0308-565	RA: 03 09 47.9200 (47.4496667d)		r Motion RA: 0.018141	•	V=14.07+/-0.02	Reference Frame: ICRS		
		Dec: -56 23 49.41 (-56.39706d)		r Motion Dec: 0.0643 ar	csec/yr				
ed	Comments: Coordinates from Char	Equinox: J2000	Epocn	of Position: 2000					
Fixed	Extended=NO	ie s proposai							
_	# Label Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs	. Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	(ETC Run)								
	1 ACQ/IM (1) WD0308-56 (839564)	55 COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)		
	, , ,		ETC 1 1 C	1.00 111			[==>]	[1]	
	2 G130M/129 (1) WD0308-56	osure times not reduced following updated COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=14	1		244 Saga (244 Saga)		
	1	55 COS/FUV, TIME-TAG, PSA	1291 A	4;	•		244 Secs (244 Secs) [==>]		
	(COS.sp.839 565)		1291 A	FP-POS=3			1>1	[1]	
	Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS								
res	cycle 24 comment: exposure times r	not reduced following updated ETC calcul	ations, differences r	not enough to affect orbi	it requested.				
su	3 G160M/162 (1) WD0308-56	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			400 Secs (400 Secs)		
Exposure	(COS.sp.839 566)		1623 A	BUFFER-TIME=3 0	0		[==>]	[1]	
_	Comments: ETC buffer time is 719, Target has been observed before no Set buffer time = exptime - 100 = 30	need to 2/3 factor							
	cycle 24 comment: exposure times r	not reduced following updated ETC calcul	ations, differences r	not enough to affect orbi	it requested.				
	4 G140L/1280 (1) WD0308-56	55 COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18	3		280 Secs (280 Secs)		
	(COS.sp.839 567)		1280 A	0;			[==>]	[1]	
				FP-POS=3			1	L±J	



Proposal 14854, WD0308 - Feb complete (05), complete

Proposal 14854, WD0308 - Feb complete (05), complete

Diagnostic Status: Error

Scientific Instruments: S/C, COS/FUV, COS/NUV

Scientific Instruments: SCHED 100%; BETWEEN 20-FEB-2017:00:00:00 AND 26-FEB-2017:00:00:00

Comments: George Chapman added Exposure 9

(G130M/1222 (05.002)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1291 (05.003)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1055/FUVA (05.005)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(WD0308 - Feb complete (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.

(G130M/1327 (05.004)) Warning (Form): Defaults for SEGMENT have changed in APT25.2 for use of LP4 with G130M. See full description for details.

(G130M/1327 (05.004)) Warning (Form): Defaults for SEGMENT have changed in APT25.2 for use of LP4 with G130M. See full description for details.

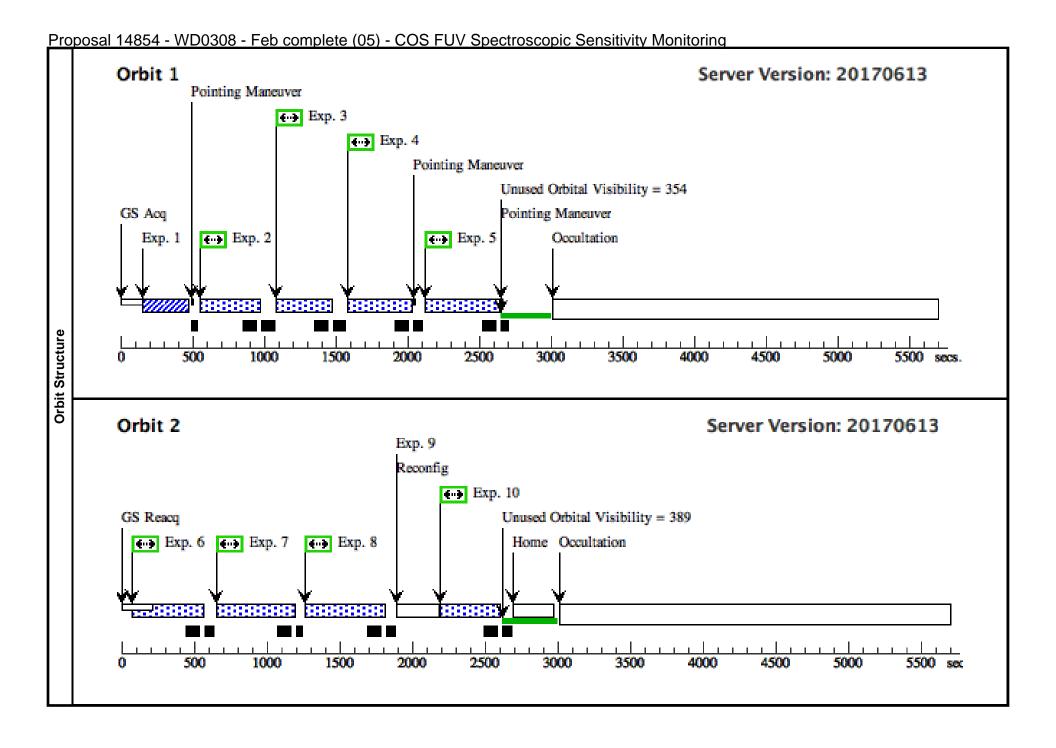
ts	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
g	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS
ā			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr		
ا ا			Equinox: J2000	Epoch of Position: 2000		
<u>×</u>	Comments.	: Coordinates from Charle'.	's proposal			l

Proposal 14854 - WD0308 - Feb complete (05) - COS FUV Spectroscopic Sensitivity Monitoring

	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(ETC Run) ACQ/IM	(1) WD0308-565	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		GS ACQ SCENARI		45 Secs (45 Secs)	
		(839564)					O BASE1B3		[==>]	[1]
	Cor	nments: cycle	24 comment: exposui	re times not reduced following updated	ETC calculations, a	lifferences not enough to	affect orbit requested.			
	2		(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=12			226 Secs (226 Secs)	
		2 (COS.sp.839 568)	9		1222 A	6; FP-POS=3			[==>]	[1]
	Sin		larger than exptime u	. Target has been observed before and ise buffer time = exptime -100 sec to m						
	cyc	le 24 comment	t: exposure times not	reduced following updated ETC calcul	ations, differences n	ot enough to affect orbit	requested.			
	3		(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=14			244 Secs (244 Secs)	
		1 (COS.sp.839 565)	9		1291 A	4; FP-POS=3			[==>]	[1]
	Sin	nments: ETC l	larger than exptime u	. Target has been observed before and use buffer time = exptime -100 sec to m						
	cyc	le 24 comment	t: exposure times not	reduced following updated ETC calcul	ations, differences n	ot enough to affect orbit	requested.			
	4	G130M/132	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=21			312 Secs (312 Secs)	
ທູ		(COS.sp.839 569)	9		1327 A	2; FP-POS=3			[==>]	[1]
Exposures	Coi	ntinue use of 1 le 24 comment	### FP-POS  ### exposure times not  ### (1) WD0308-565	use buffer time = exptime -100 sec to m reduced following updated ETC calcul COS/FUV, TIME-TAG, PSA	·		requested.		334 Secs (334 Secs) [==>]	[1]
	Tar Set Cor	get has been o buffer time = ntinue use of 1 le 24 comment	t: exposure times not		ations, differences n constraint the blue o	SEGMENT=BOTH  ot enough to affect orbit edge of the wavelength re	requested. ange.			
	6	G160M/157	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			290 Secs (290 Secs)	
		7 (COS.sp.839 571)	9		1577 A	BUFFER-TIME=19 0			[==>]	[2]
	Tar Set	mments: ETC i get has been o	buffer time is 599, lar bsserved before no ne exptime - 100 = 190 FP-POS	ger than exptime ed to 2/3 factor						1
	сус	le 24 commeni	t: exposure times not	reduced following updated ETC calcul	ations, differences n	ot enough to affect orbit	requested.			

Proposal 14854 - WD0308 - Feb complete (05) - COS FUV Spectroscopic Sensitivity Monitoring G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA FP-POS=3; 400 Secs (400 Secs) G160M 1623 A BUFFER-TIME=30 f = = > 1(COS.sp.839 [2] 566) Comments: ETC buffer time is 799, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G140L/1280 (1) WD0308-565 COS/FUV, TIME-TAG, PSA BUFFER-TIME=18 G140L 280 Secs (280 Secs) (COS.sp.839 0; 1280 A *[==>1* 567) [2] FP-POS=3 Comments: ETC buffer time is 451, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS DARK S/C, DATA, NONE QASISTATES COS 1 Secs (1 Secs) FUV HVLOW HVL f = = > 1[2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. 10 G140L/1105 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=18 280 Secs (280 Secs) /FUVA 0; 1105 A [==>] (COS.sp.839 FP-POS=3; [2] 572) SEGMENT=A Comments: ETC buffer time is 362, larger than exptime Target has been observed before no need to 2/3 factor

Set buffer time = exptime - 100 = 180 Continue use of 1 FP-POS



Proposal 14854 - GD71 - Feb complete (06) - COS FUV Spectroscopic Sensitivity Monitoring

**Proposal 14854, GD71 - Feb complete (06), completed**Wed Sep 13 20:02:11 GMT 2017

Diagnostic Status: Error

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 20-FEB-2017:00:00:00 AND 26-FEB-2017:00:00:00

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation

George Chapman added Exposure 3

Optimized the exposure time for the G130M/1096 setting to increase its SNR (exp time = 744 s) while remaining within the allocated time.

(G130M/1096/FUVB (06.002)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1096/FUVA WAVECAL (06.004)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

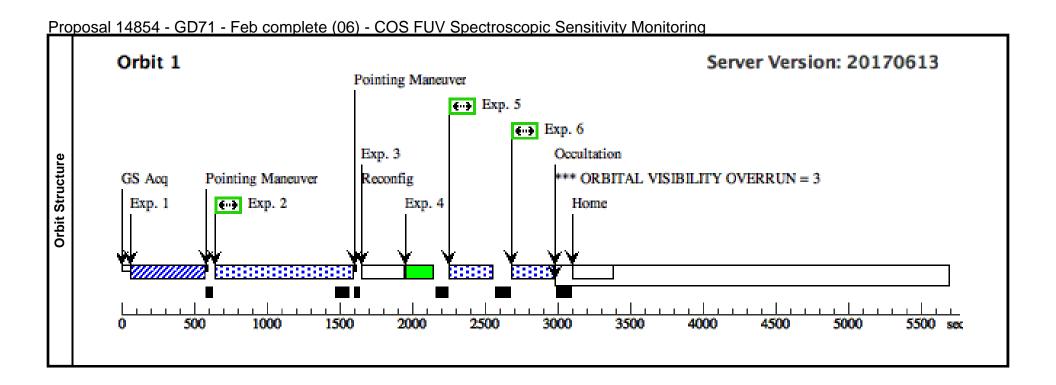
(GD71 - Feb complete (06)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

(GD71 - Feb complete (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

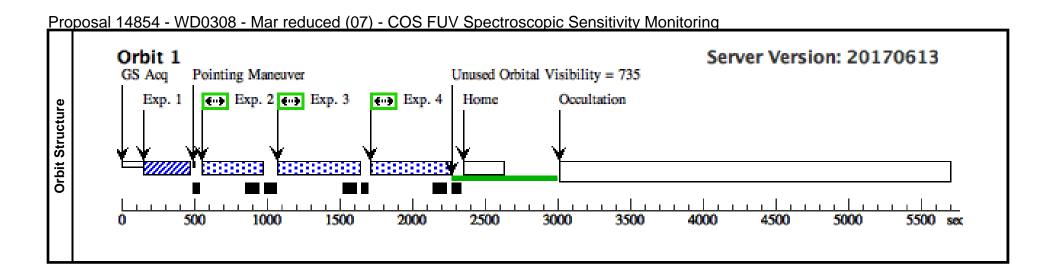
ets	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous		
ge	(2) GD71	RA: 05 52 27.6100 (88.1150417d)	Proper Motion RA: 85 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS		
<u>a</u>		Dec: +15 53 13.80 (15.88717d)	Proper Motion Dec: -174 mas/yr				
ا ت		Equinox: J2000	Epoch of Position: 2000				
Fixe	Comments: Use sma RA, DEC amd PM as in proposal 12392 by Bohlin et al. Extended=NO						

Proposal 14854 - GD71 - Feb complete (06) - COS FUV Spectroscopic Sensitivity Monitoring

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
1	ACQ/IM	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)		
	(COS.ta.839 574)							[==>]	[1]	
Con	nments: Exptime	e for S/N of 60 is	105.5 sec, using 90 sec leads to S/N of 5.	5.					1	
2	G130M/109	(2) GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=64			744 Secs (744 Secs)		
	6/FUVB (COS.sp.839			1096 A	4;			[==>]		
	576)				FP-POS=3;				[1]	
Com	mm anta, EIIVD	only (all FTC we	ernings come from FUVA).		SEGMENT=B					
			= 644 to maximize time on target.							
3		DARK	S/C, DATA, NONE			QASISTATES CO		1 Secs (1 Secs)		
						FUV HVLOW HV OW	L	[==>]	[1]	
Con	nments: Work-a	round to efficien	tly schedule the SEG-B to SEG-A reconfi							
4	G130M/109	WAVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			140 Secs (140 Secs)		
	6/FUVA W AVECAL			1096 A	SEGMENT=A;			[==>]	[1]	
					FLASH=NO				[1]	
5	G160M/157	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			102 Secs (102 Secs)		
-	7/FUVA (COS.sp.839 579)		1577 A	2; FP-POS=3;			[==>]			
i				SEGMENT=A				[1]		
Con	mments: FUVA o	only (all ETC wa	ernings come from FUVB).		SEGMENT-11				!	
2.35 651. Set	Comments: FUVA only (all ETC warnings come from FUVB).  Buffer-time for FUVA is 2.35e6/6513 = 360 sec, which is larger than exp time, so set buffer time to exptime. 2.35e6 is the number of events that each buffer can record 6513 cts/sec is the count rate in FUVA, per ETC calculation above Set buffer-time = exptime b/c exptime - 100 < 80 which is the minimum exptime  Cycle 24 comment: FUVA TDS is shallower than ETC prediction, so no need to update exposure time (SNR @ 1749 will be larger than 13)									
6	G160M/162		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=15	e targer man 10)		154 Secs (154 Secs)		
	3/FUVA (COS.sp.839	( )		1623 A	4;			[==>]		
	581)				FP-POS=3;				[1]	
		1 / 11 ETC	· C FIND)		SEGMENT=A					
Con	mments: FUVA only (all ETC warnings come from FUVB).									
2.35 651.	, 5e6 is the numbe '3 cts/sec is the o	er of events that count rate in FU	3 = 360 sec, which is larger than exp tim each buffer can record VA, per ETC calculation above ne - 100 < 80 which is the minimum exptin		to exptime.					
Set										



Pr	oposal 14854 - WD0308 - M	Mar reduced (07) - CO	S FUV Spec	ctroscopic Sen	sitivity Mo	nitoring		
	Proposal 14854, WD0308 - Mar reduced	(07), completed					Wed Sep 13 20:02:11	GMT 2017
Visit	Diagnostic Status: Error							
5	Scientific Instruments: COS/FUV, COS/NU	JV						
	Special Requirements: SCHED 100%; BET	TWEEN 20-MAR-2017:00:00:00 AM	ND 26-MAR-2017:	00:00:00				
SS	(G130M/1291 (07.002)) Error (Form): LIFI	ETIME-POS is required with G130N	M when not in Supp	orted mode.				
Diagnostic	(WD0308 - Mar reduced (07)) Warning (Fosetting. See full description for details.	orm): For the best data quality, it is s	trongly recommend	led that the maximum r	number of allowed	d FP-POS positions is used v	when observing at a given COS CENWA	AVE
_		rget Coordinates	Targ. C	Coord. Corrections		Fluxes	Miscellaneous	
Targets	(1) WD0308-565 RA	a: 03 09 47.9200 (47.4496667d)		Motion RA: 0.018141 s		V=14.07+/-0.02	Reference Frame: ICRS	
a.	Dec	c: -56 23 49.41 (-56.39706d)	Proper I	Motion Dec: 0.0643 arc	sec/yr			
١Ę	Equ	uinox: J2000		of Position: 2000	•			
Fixed	Comments: Coordinates from Charle's prop Extended=NO	posal	-					
	# Label Target (ETC Run)	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 ACQ/IM (1) WD0308-565 (839564)	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	[1]
ı	Comments: cycle 24 comment: exposure tin	nes not reduced following updated E	TC calculations, di	ifferences negligible.				
	2 G130M/129 (1) WD0308-565 (	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=14			244 Secs (244 Secs)	
	1 (COS.sp.839 565)		1291 A	4; FP-POS=3			[==>]	[1]
	Comments: ETC buffer time is 322 sec. Tar Since buffer time larger than exptime use by Continue use of 1 FP-POS							
ě	cycle 24 comment: exposure times not redu				requested.			
l s	3 G160M/162 (1) WD0308-565 G	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			400 Secs (400 Secs)	
Exposures	(COS.sp.839 566)		1623 A	BUFFER-TIME=30 0	1		[==>]	[1]
	Comments: ETC buffer time is 719, larger t Target has been observed before no need to Set buffer time = exptime - 100 = 300							
	cycle 24 comment: exposure times not redu							
		COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18			280 Secs (280 Secs)	
	(COS.sp.839 567)		1280 A	0; FP-POS=3			[==>]	[1]
	Comments: ETC buffer time is 451, larger t Target has been observed before no need to Set buffer time = exptime - 100 = 180 Continue use of 1 FP-POS	o 2/3 factor	1/6					
	cycle 24 comment: exposure times not redu							



Proposal 14854	- WD0308 - Apr complete	(08) - COS FUV	Spectroscopic Sensitivity Monitor	ina
I IUDUSAI ITUST	VVD0000 / Vpi complete	1001 000101	Opening Ochania in a minimum	II IQ

Proposal 14854, WD0308 - Apr complete (08), completed
Diagnostic Status: Error

Wed Sep 13 20:02:11 GMT 2017

Diagnostic Status: Erro

**Diagnostics** 

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 10-APR-2017:00:00:00 AND 28-APR-2017:00:00:00

Comments: George Chapman added Exposure 9

Cycle 24 comment: April complete visit to be executed within 2 weeks from LP4 special calibration program. On hold until date of special program is set.

(G130M/1222 (08.002)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1291 (08.003)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1327 (08.004)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1055/FUVA (08.005)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(WD0308 - Apr complete (08)) 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.

(G130M/1327 (08.004)) Warning (Form): Defaults for SEGMENT have changed in APT25.2 for use of LP4 with G130M. See full description for details.

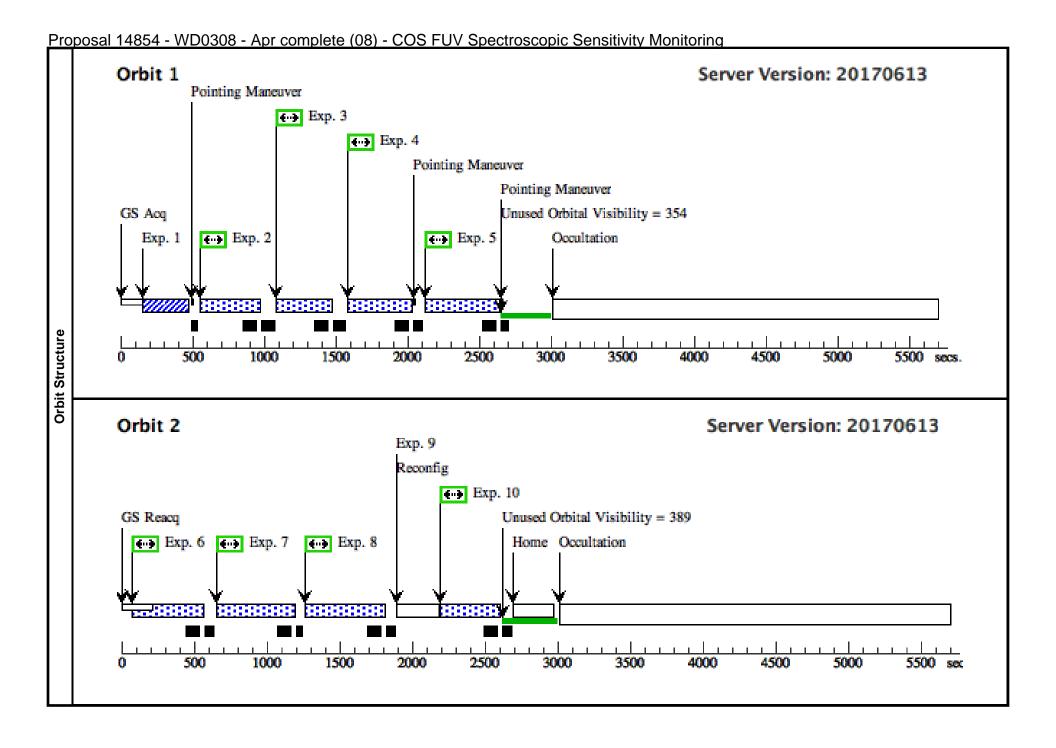
ts	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
ge.	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS	
Га			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr			
ნ			Equinox: J2000	Epoch of Position: 2000			
	Comments: Coordinates from Charle's proposal						
	Comment Extended		e's proposal				

Proposal 14854 - WD0308 - Apr complete (08) - COS FUV Spectroscopic Sensitivity Monitoring Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACQ/IMAGE, BOA MIRRORA GS ACO SCENARI 45 Secs (45 Secs) O BASE1B3 (839564)[1] I = = > 1Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/122 (1) WD0308-565 COS/FUV. TIME-TAG. PSA G130M BUFFER-TIME=12 226 Secs (226 Secs) 1222 A [==>] (COS.sp.839 [1] FP-POS=3 568) Comments: ETC buffer time is 395 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 126Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/129 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=14 244 Secs (244 Secs) 1291 A I = = > 1(COS.sp.839 [1] FP-POS=3 565) Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=21 312 Secs (312 Secs) 2; 1327 A I = = > 1(COS.sp.839 [1] FP-POS=3 Comments: ETC buffer time is 320 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 212Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. 334 Secs (334 Secs) G130M/105 (1) WD0308-565 COS/FUV. TIME-TAG, PSA BUFFER-TIME=23 G130M 5/FUVA 4; 1055 A [==>] (COS.sp.839 FP-POS=3; [1] 570) SEGMENT=BOTH Comments: ETC buffer time is larger than exptime (1482) Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 224Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. While the program is optimized for FUVA we use the low SNR FUVB data to constraint the blue edge of the wavelength range. G160M/157 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 290 Secs (290 Secs) 1577 A BUFFER-TIME=19 I ==> 1(COS.sp.839 [2] Comments: ETC buffer time is 599, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 190

Continue use of 1 FP-POS

Proposal 14854 - WD0308 - Apr complete (08) - COS FUV Spectroscopic Sensitivity Monitoring G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA FP-POS=3; 400 Secs (400 Secs) G160M 1623 A BUFFER-TIME=30 f = = > 1(COS.sp.839 [2] 566) Comments: ETC buffer time is 799, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G140L/1280 (1) WD0308-565 COS/FUV, TIME-TAG, PSA BUFFER-TIME=18 G140L 280 Secs (280 Secs) (COS.sp.839 0; 1280 A *[==>1* 567) [2] FP-POS=3 Comments: ETC buffer time is 451, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS DARK 1 Secs (1 Secs) S/C, DATA, NONE QASISTATES COS FUV HVLOW HVL f = = > 1[2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. 10 G140L/1105 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=18 280 Secs (280 Secs) /FUVA 0; 1105 A [==>] (COS.sp.839 FP-POS=3; [2] 572) SEGMENT=A Comments: ETC buffer time is 362, larger than exptime Target has been observed before no need to 2/3 factor

Set buffer time = exptime - 100 = 180 Continue use of 1 FP-POS



Proposal 14854 - GD71 - Apr complete (09) - COS FUV Spectroscopic Sensitivity Monitoring

Proposal 14854, GD71 - Apr complete (09), completed Wed Sep 13 20:02:11 GMT 2017

Diagnostic Status: Error

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 03-APR-2017:00:00:00 AND 08-APR-2017:00:00:00

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation

George Chapman added Exposure 3

Optimized the exposure time for the G130M/1096 setting to increase its SNR (exp time = 744 s) while remaining within the allocated time.

Cycle 24 comment: April complete visit to be executed within 2 weeks from LP4 special calibration program. On hold until date of special program is defined.

(G130M/1096/FUVB (09.002)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

(G130M/1096/FUVA WAVECAL (09.004)) Error (Form): LIFETIME-POS is required with G130M when not in Supported mode.

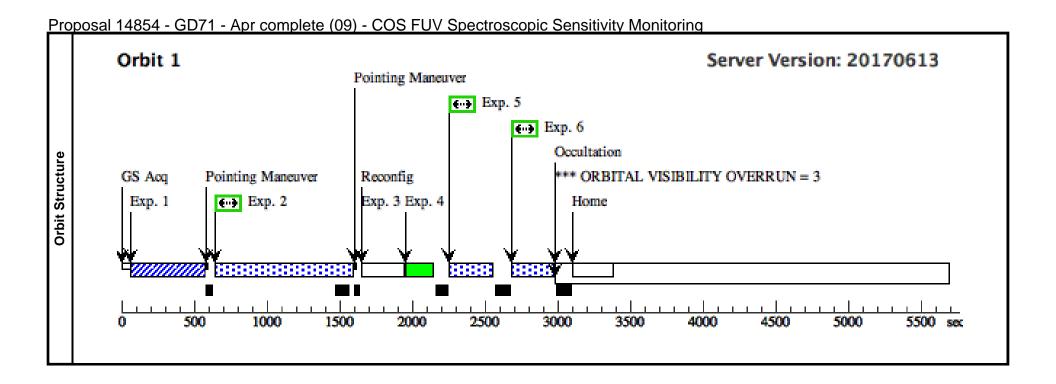
(GD71 - Apr complete (09)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

(GD71 - Apr complete (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

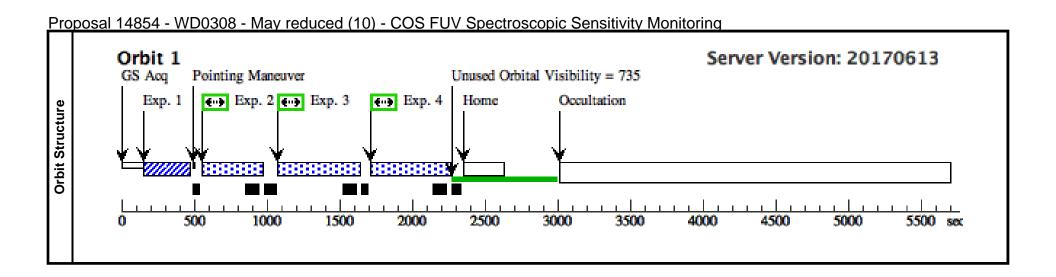
ts	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
g	(2)	GD71	RA: 05 52 27.6100 (88.1150417d)	Proper Motion RA: 85 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS
Ta'			Dec: +15 53 13.80 (15.88717d)	Proper Motion Dec: -174 mas/yr		
٦			Equinox: J2000	Epoch of Position: 2000		
	Commen Extended		DEC amd PM as in proposal 12392 by Bohlin et al.			

Proposal 14854 - GD71 - Apr complete (09) - COS FUV Spectroscopic Sensitivity Monitoring

#	Label Ta (ETC Run)	rget	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit			
1		GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)				
	(COS.ta.839 574)							[==>]	[1]			
Con	nments: Exptime fo	or S/N of 60 is	105.5 sec, using 90 sec leads to S/N of 55	5.								
2	G130M/109 (2)	GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=64			744 Secs (744 Secs)				
	6/FUVB (COS.sp.839			1096 A	4;			[==>]				
	576)				FP-POS=3; SEGMENT=B				[1]			
			rnings come from FUVA).	SEGMENT-B								
Set i		me - 100 sec : ARK	= 644 to maximize time on target. S/C, DATA, NONE			OASISTATES CO	C	1 Sags (1 Sags)				
3	Di	AKK	S/C, DATA, NONE			FUV HVLOW HV		1 Secs (1 Secs)				
						OW		[==>]	[1]			
Con		***	tly schedule the SEG-B to SEG-A reconfig					140.5 (140.5 )	I			
4	G130M/109 W 6/FUVA W	AVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			140 Secs (140 Secs)				
	AVECAL			1096 A	SEGMENT=A; FLASH=NO			[==>]	[1]			
5	G160M/157 (2)	) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			102 Secs (102 Secs)				
_	7/FUVA (COS.sp.839 579)		1577 A	2;			[==>]					
				FP-POS=3;				[1]				
		/ 11 ETC	· C FILID		SEGMENT=A							
Con	Comments: FUVA only (all ETC warnings come from FUVB).											
2.35 651.	5e6 is the number of 3 cts/sec is the cou	of events that e nt rate in FU\	3 = 360 sec, which is larger than exp time each buffer can record VA, per ETC calculation above e - 100 < 80 which is the minimum exptin		to exptime.							
	33 1	•	allower than ETC prediction, so no need		time (SNR @ 1749 will l	be larger than 13)						
6	G160M/162 (2)	) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=15			154 Secs (154 Secs)				
	3/FUVA (COS.sp.839			1623 A	4;			[==>]				
	581)				FP-POS=3;				[1]			
Con	nments: FIIVA onl	v (all FTC wa	rnings come from FUVB).		SEGMENT=A							
	•	,	,	. 1 . 00 .								
2.35 651.	5e6 is the number of 3 cts/sec is the cou	of events that e nt rate in FU\	3 = 360 sec, which is larger than exp time each buffer can record VA, per ETC calculation above e - 100 < 80 which is the minimum exptin		to exptime.							
Set	Cycle 24 comment: FUVA TDS is shallower than ETC prediction, so no need to update exposure time (SNR @ 1749 will be larger than 13)											



Pr	oposal 14854, WD0308	· May reduced (10), completed					Wed Sep 13 20:02:11	GMT 201		
Dia	agnostic Status: Error	•					•			
	entific Instruments: COS	/FUV, COS/NUV								
Sp	ecial Requirements: SCH	ED 100%; BETWEEN 22-MAY-2017:0	0:00:00 AND 28-MAY-201	17:00:00:00						
(G	130M/1291 (10.002)) Err									
	D0308 - May reduced (1 ting. See full description		ality, it is strongly recomm	ended that the maximun	number of allow	ed FP-POS positions is u	used when observing at a given COS CENW	/AVE		
#	Name	Target Coordinates	Targ	. Coord. Corrections		Fluxes	Miscellaneous			
(1)		RA: 03 09 47.9200 (47.4496		er Motion RA: 0.018141	sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS			
		Dec: -56 23 49.41 (-56.3970	6d) Prope	er Motion Dec: 0.0643 a	rcsec/yr					
		Equinox: J2000	Epocl	h of Position: 2000	·					
	mments: Coordinates fro	m Charle's proposal	•							
Ex	tended=NO									
#	Label Target (ETC Run)	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
1		0308-565 COS/NUV, ACQ/IMAGE	E, BOA MIRRORA				45 Secs (45 Secs)			
	(839564)						[==>]	[1]		
Co	Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences negligible.									
2	G130M/129 (1) WD	0308-565 COS/FUV, TIME-TAG, F		BUFFER-TIME=1 4;	4		244 Secs (244 Secs)			
	(COS.sp.839 565)		1291 A	FP-POS=3			[==>]	[1]		
Sin Co	Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested.									
3	G160M/162 (1) WD			FP-POS=3;	•		400 Secs (400 Secs)			
3	3 (COS.sp.839 566)		1623 A	BUFFER-TIME=3	30		[==>]	[1]		
Co Ta	mments: ETC buffer time	is 719, larger than exptime efore no need to 2/3 factor 100 = 300								
cyc	cle 24 comment: exposure	times not reduced following updated ET		0 00			1			
4	G140L/1280 (1) WD	0308-565 COS/FUV, TIME-TAG, F		BUFFER-TIME=1	8		280 Secs (280 Secs)			
	(COS.sp.839 567)		1280 A	0; ED DOS-2			[==>]	[1]		
1	ETC buffer the	is 451, larger than exptime		FP-POS=3						
~										



4	10	posai 14654 - WDosoo - Juli complete (11)	- COSTOV Specifoscopic Serisitivit	y Mornioning			
ı		Proposal 14854, WD0308 - Jun complete (11), completed			Wed Sep 13 20:02:11 GMT 2017		
ı	±	Diagnostic Status: Error					
ı	/is	Scientific Instruments: S/C, COS/FUV, COS/NUV					
ı		Special Requirements: SCHED 100%; BETWEEN 26-JUN-2017:00:0	0:00 AND 02-JUL-2017:00:00				
L		Comments: George Chapman added Exposure 9					
I		(G130M/1222 (11.002)) Error (Form): LIFETIME-POS is required with	h G130M when not in Supported mode.				
ı	ics	(G130M/1291 (11.003)) Error (Form): LIFETIME-POS is required with	h G130M when not in Supported mode.				
ı	St	(G130M/1327 (11.004)) Error (Form): LIFETIME-POS is required with	h G130M when not in Supported mode.				
ı	gnc	(G130M/1055/FUVA (11.005)) Error (Form): LIFETIME-POS is requ	ired with G130M when not in Supported mode.				
	Diaç	(WD0308 - Jun complete (11)) 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.					
L		(G130M/1327 (11.004)) Warning (Form): Defaults for SEGMENT have	re changed in APT25.2 for use of LP4 with G130M. See full	description for details.			
Г	S	# Name Target Coordinates	Targ Coord Corrections	Fluves	Miscellaneous		

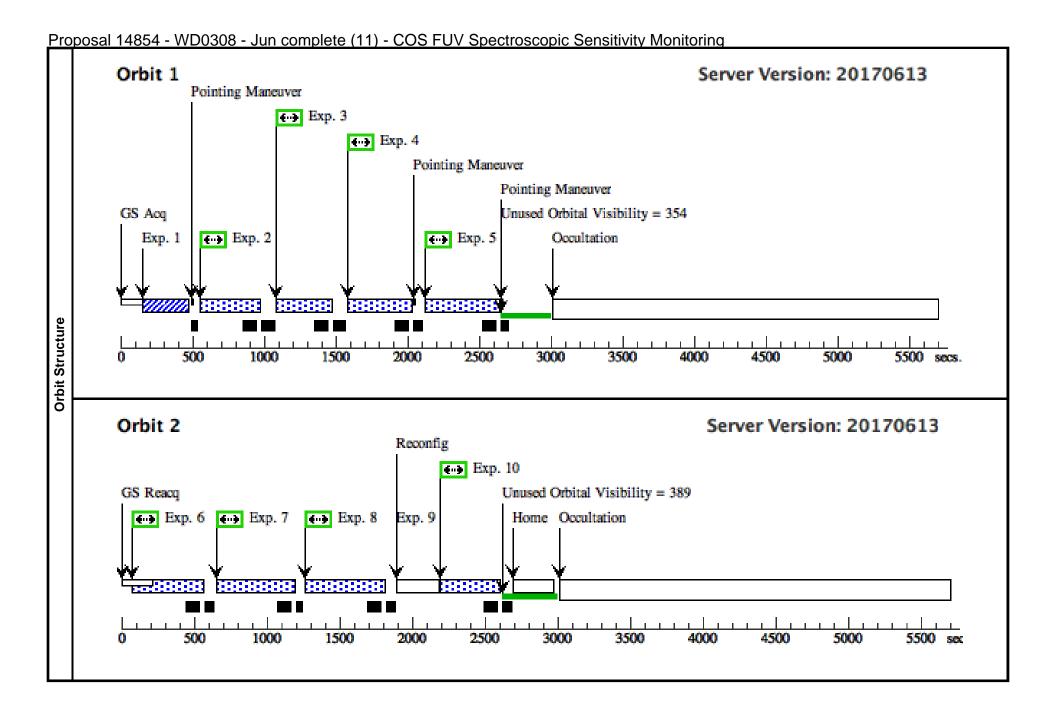
ts	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
] a6	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS
<u>a</u>			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr		
٦ ا			Equinox: J2000	Epoch of Position: 2000		
<u>چ</u> ا	Co	omments: Coordinates from Charle's	s proposal			

Proposal 14854 - WD0308 - Jun complete (11) - COS FUV Spectroscopic Sensitivity Monitoring Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACQ/IMAGE, BOA MIRRORA GS ACO SCENARI 45 Secs (45 Secs) O BASE1B3 (839564)[1] I = = > 1Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/122 (1) WD0308-565 COS/FUV. TIME-TAG. PSA G130M BUFFER-TIME=12 226 Secs (226 Secs) 1222 A *[==>1* (COS.sp.839 [1] FP-POS=3 568) Comments: ETC buffer time is 395 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 126Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/129 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=14 244 Secs (244 Secs) 1291 A I = = > 1(COS.sp.839 [1] FP-POS=3 565) Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=21 312 Secs (312 Secs) 2; 1327 A *[==>1* (COS.sp.839 [1] FP-POS=3 Comments: ETC buffer time is 320 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 212Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. 334 Secs (334 Secs) G130M/105 (1) WD0308-565 COS/FUV. TIME-TAG, PSA BUFFER-TIME=23 G130M 5/FUVA 4; 1055 A [==>] (COS.sp.839 FP-POS=3; [1] 570) SEGMENT=BOTH Comments: ETC buffer time is larger than exptime (1482) Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 224Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. While the program is optimized for FUVA we use the low SNR FUVB data to constraint the blue edge of the wavelength range. G160M/157 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 290 Secs (290 Secs) 1577 A BUFFER-TIME=19 I ==> 1(COS.sp.839 [2] Comments: ETC buffer time is 599, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 190

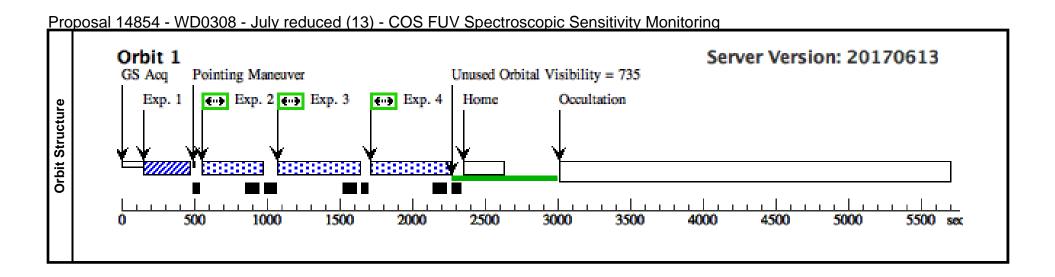
Continue use of 1 FP-POS

Proposal 14854 - WD0308 - Jun complete (11) - COS FUV Spectroscopic Sensitivity Monitoring G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA FP-POS=3; 400 Secs (400 Secs) G160M 1623 A BUFFER-TIME=30 f = = > 1(COS.sp.839 [2] 566) Comments: ETC buffer time is 799, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G140L/1280 (1) WD0308-565 COS/FUV, TIME-TAG, PSA BUFFER-TIME=18 G140L 280 Secs (280 Secs) (COS.sp.839 0; 1280 A *[==>1* 567) [2] FP-POS=3 Comments: ETC buffer time is 451, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS DARK S/C, DATA, NONE QASISTATES COS 1 Secs (1 Secs) FUV HVLOW HVL f = = > 1[2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. 10 G140L/1105 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=18 280 Secs (280 Secs) /FUVA 0; 1105 A [==>] (COS.sp.839 FP-POS=3; [2] 572) SEGMENT=A Comments: ETC buffer time is 362, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180

Continue use of 1 FP-POS



Proposal 14854 - WD0308 - July reduced (13) - COS FUV Spectroscopic Sensitivity Monitoring Proposal 14854, WD0308 - July reduced (13), completed Wed Sep 13 20:02:11 GMT 2017 **Diagnostic Status: Warning** Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BETWEEN 24-JUL-2017:00:00:00 AND 30-JUL-2017:00:00:00 **Diagnostics** (WD0308 - July reduced (13)) 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 Target Coordinates** Fluxes Miscellaneous Name Targ. Coord. Corrections (1) WD0308-565 RA: 03 09 47.9200 (47.4496667d) Proper Motion RA: 0.018141 sec of time/yr V=14.07+/-0.02Reference Frame: ICRS Dec: -56 23 49.41 (-56.39706d) Proper Motion Dec: 0.0643 arcsec/yr Equinox: J2000 Epoch of Position: 2000 Comments: Coordinates from Charle's proposal Extended=NO Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Reqs. Exp. Time (Total)/[Actual Dur.] Orbit Groups (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACO/IMAGE, BOA MIRRORA 45 Secs (45 Secs) (839564)[1] Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences negligible. G130M/129 (1) WD0308-565 244 Secs (244 Secs) COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=14 1291 A [==>] (COS.sp.839 FP-POS=3: 565) [1] LIFETIME-POS=L Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS Exposures cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 400 Secs (400 Secs) 1623 A BUFFER-TIME=30 I = = > 1(COS.sp.839 [1] 566) Comments: ETC buffer time is 719, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G140L/1280 (1) WD0308-565 BUFFER-TIME=18 COS/FUV, TIME-TAG, PSA G140L 280 Secs (280 Secs) (COS.sp.839 0: 1280 A I = = > 1567) [1] FP-POS=3 Comments: ETC buffer time is 451, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested.



Proposal 14854 - WD0308 - Aug complete (17) - COS FUV Spectroscopic Sensitivity Monitoring
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Proposal 14854, WD0308 - Aug complete (17), completed

Wed Sep 13 20:02:11 GMT 2017

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Diagnostic Status: Warning

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 21-AUG-2017:00:00:00 AND 27-AUG-2017:00:00:00

Comments: George Chapman added Exposure 9

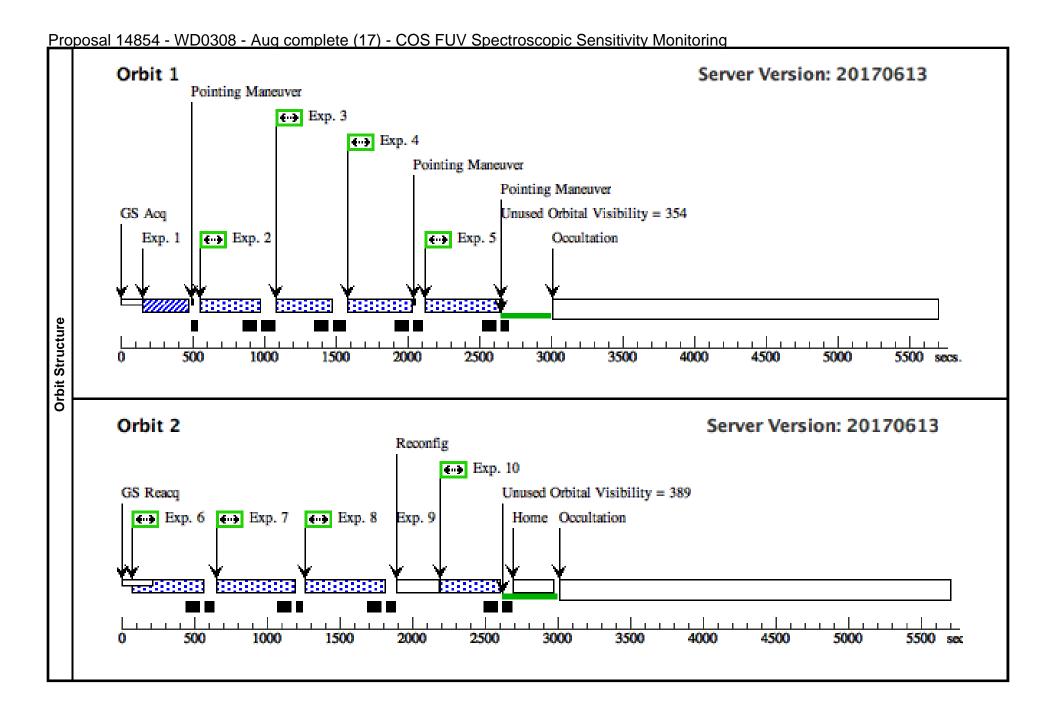
(WD0308 - Aug complete (17)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

ts	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
g	(1) WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS
<u>a</u>		Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr		
۵.		Equinox: J2000	Epoch of Position: 2000		
Fixe	Comments: Coordinates from Extended=NO	n Charle's proposal			

Proposal 14854 - WD0308 - Aug complete (17) - COS FUV Spectroscopic Sensitivity Monitoring Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACQ/IMAGE, BOA MIRRORA GS ACO SCENARI 45 Secs (45 Secs) O BASE1B3 (839564)[1] I = = > 1Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/122 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=12 226 Secs (226 Secs) 1222 A *[==>1* (COS.sp.839 FP-POS=3; 568) [1] LIFETIME-POS=L Comments: ETC buffer time is 395 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 126 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/129 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=14 244 Secs (244 Secs) 1291 A I = = > 1(COS.sp.839 FP-POS=3; 565) [1] LIFETIME-POS=L Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. Exposures G130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=21 312 Secs (312 Secs) 2; 1327 A [==>] (COS.sp.839 FP-POS=3; 569) [1] LIFETIME-POS=L Comments: ETC buffer time is 320 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 212 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/105 (1) WD0308-565 COS/FUV. TIME-TAG. PSA BUFFER-TIME=23 334 Secs (334 Secs) G130M 5/FUVA 4; 1055 A [==>] (COS.sp.839 FP-POS=3; 570) SEGMENT=BOTH; [1] LIFETIME-POS=L P2 Comments: ETC buffer time is larger than exptime (1482) Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 224Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested.

While the program is optimized for FUVA we use the low SNR FUVB data to constraint the blue edge of the wavelength range.

pos	al 14854 - WD0308 -	Aug complete (17) - C	OS FUV S	pectroscopic Sensitivity Monitoring		
6	G160M/157 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	290 Secs (290 Secs)	
	7 (COS.sp.839 571)		1577 A	BUFFER-TIME=19 0	[==>]	[2]
Targe	nents: ETC buffer time is 599, larg et has been observed before no nee uffer time = exptime - 100 = 190					
Conti	inue use of 1 FP-POS					
cycle	24 comment: exposure times not re	educed following updated ETC calcu	lations, difference:	s not enough to affect orbit requested.		
	G160M/162 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	400 Secs (400 Secs)	
	3 (COS.sp.839 566)		1623 A	BUFFER-TIME=30 0	[==>]	[2]
Targe Set bi Conti	nents: ETC buffer time is 799, larg et has been observed before no nee uffer time = exptime - 100 = 300 inue use of 1 FP-POS	d to 2/3 factor	lations difference	s not enough to affect orbit requested.		
_	G140L/1280 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18	280 Secs (280 Secs)	
	(COS.sp.839 567)		1280 A	0; FP-POS=3	[==>]	[2]
Targe Set b	nents: ETC buffer time is 451, larg et has been observed before no nee uffer time = exptime - 100 = 180 inue use of 1 FP-POS					
9	DARK	S/C, DATA, NONE		QASISTATES COS	1 Secs (1 Secs)	
				FUV HVLOW HVL OW	[==>]	[2]
Com	nents: Work-around to efficiently s	chedule the reconfiguration to SEG-	A. Eliminates SPS	S induced gaps.		
	G140L/1105 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18	280 Secs (280 Secs)	
	/FUVA (COS.sp.839		1105 A	0; FD DOG 2	I = => J	
	572)			FP-POS=3; SEGMENT=A		[2]
Targe Set bi	ments: ETC buffer time is 362, larg et has been observed before no nee uffer time = exptime - 100 = 180 inue use of 1 FP-POS					



Proposal 14854 - GD71 - Aug complete (18) - COS FUV Spectroscopic Sensitivity Monitoring

Proposal 14854, GD71 - Aug complete (18), completed Wed Sep 13 20:02:11 GMT 2017

**Diagnostic Status: Warning** 

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 21-AUG-2017:00:00:00 AND 27-AUG-2017:00:00:00

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation

George Chapman added Exposure 3

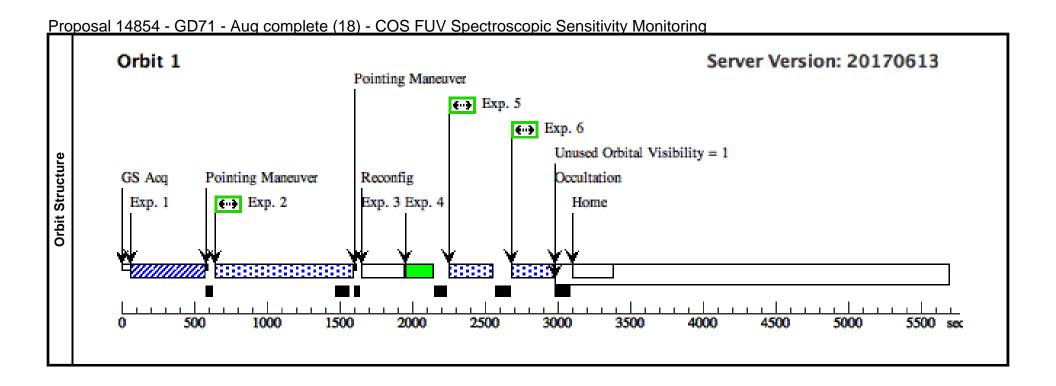
Optimized the exposure time for the G130M/1096 setting to increase its SNR (exp time = 744 s) while remaining within the allocated time.

(GD71 - Aug complete (18)) 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.

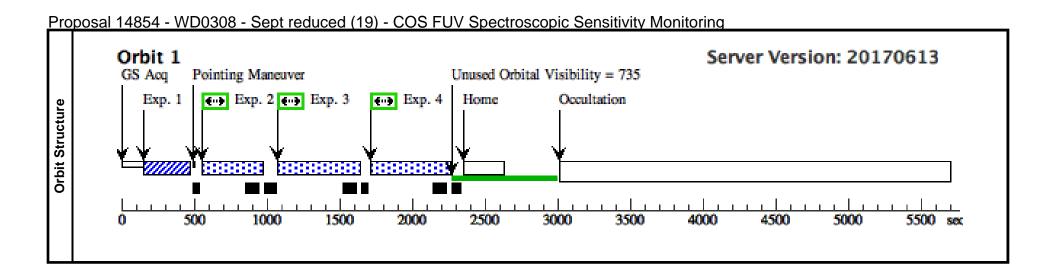
ets	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
ge	(2) GD71	RA: 05 52 27.6100 (88.1150417d)	Proper Motion RA: 85 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS
<u>a</u>		Dec: +15 53 13.80 (15.88717d)	Proper Motion Dec: -174 mas/yr		
ا ت		Equinox: J2000	Epoch of Position: 2000		
Fixe	Comments: Use sma RA, DEC Extended=NO	amd PM as in proposal 12392 by Bohlin et al.			

Proposal 14854 - GD71 - Aug complete (18) - COS FUV Spectroscopic Sensitivity Monitoring

7	# Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Ī	1 ACQ/IM (COS.ta.839	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)	
	574)							[==>]	[1]
Ŀ	Comments: Exptim	e for S/N of 60 is	s 105.5 sec, using 90 sec leads to S/N of 55	<del>.</del>					
2	2 G130M/109 6/FUVB	(2) GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=64			740 Secs (740 Secs)	
	(COS.sp.839			1096 A	4; FP-POS=3;			[==>]	
	576)				SEGMENT=B;				[1]
					LIFETIME-POS=L P2				[1]
			arnings come from FUVA). = 644 to maximize time on target.						
3	3	DARK	S/C, DATA, NONE			QASISTATES CO		1 Secs (1 Secs)	
						FUV HVLOW HV OW	L	[==>]	[1]
Į,	Comments: Work-a	around to efficien	ntly schedule the SEG-B to SEG-A reconfig	guration. Eliminate	s SPSS induced gaps.				Į.
2	4 G130M/109	WAVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			140 Secs (140 Secs)	
	6/FUVA W AVECAL			1096 A	SEGMENT=A;			[==>]	
	AVECAL				FLASH=NO;				[1]
					LIFETIME-POS=L P2				'-'
- [	5 G160M/157	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			102 Secs (102 Secs)	
	7/FUVA (COS.sp.839			1577 A	2;			[==>]	
	579)				FP-POS=3;				[1]
	C FINA	1 / 11 FTC	· C FIND		SEGMENT=A				
زا	Buffer-time for FU	VA is 2.35e6/651	arnings come from FUVB). 13 = 360 sec, which is larger than exp tim each buffer can record	e, so set buffer time	to exptime.				
(	6513 cts/sec is the	count rate in FU	each ougjer can record VA, per ETC calculation above ne - 100 < 80 which is the minimum exptir	ne					
ļ	*		hallower than ETC prediction, so no need		,	be larger than 13)			1
(	6 G160M/162 3/FUVA	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=15 4;			154 Secs (154 Secs)	-
	(COS.sp.839			1623 A	FP-POS=3;			[==>]	[1]
	581)				SEGMENT=A				[1]
- [,	Comments: FUVA	only (all ETC wa	arnings come from FUVB).						1
1	Buffer-time for FU 2.35e6 is the numbe 6513 cts/sec is the	VA is 2.35e6/651 er of events that count rate in FU	13 = 360 sec, which is larger than exp time each buffer can record VA, per ETC calculation above ne - 100 < 80 which is the minimum exptir		to exptime.				
	C. ala 24 a a	FIWA TDC ic cl	hallower than ETC prediction, so no need	to undate exposure	time (SNP @ 1740 will b	be larger than 13)			



Pro	<u>posai 14854</u>	<u>4 - WD0308</u>	- Sept reduced (19) - Co	<u>US FUV Sp</u>	<u>ectroscopic Se</u>	<u>nsitivity M</u>	<u>onitoring</u>		
	Proposal 14854, V	VD0308 - Sept red	uced (19), implementation					Wed Sep 13 20:02:11	GMT 2017
<u>:</u> =	Diagnostic Status	: Warning							
Visit	Scientific Instrume	ents: COS/FUV, CO	OS/NUV						
	Special Requireme	ents: SCHED 100%;	; BETWEEN 25-DEC-2017:00:00:00 A	ND 01-JAN-2018:0	00:00:00; ON HOLD				
			OS strategy at LP4 is defined						
Diagnostics	(WD0308 - Sept re setting. See full de	educed (19)) Warnir scription for details		s strongly recommen	nded that the maximum	number of allow	ed FP-POS positions is us	sed when observing at a given COS CENW.	AVE
şţs	# Name	2	Target Coordinates	Targ.	Coord. Corrections		Fluxes	Miscellaneous	
ğ	(1) WD03	308-565	RA: 03 09 47.9200 (47.4496667d)	Proper	r Motion RA: 0.018141 s	sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS	
Ī			Dec: -56 23 49.41 (-56.39706d)	Proper	r Motion Dec: 0.0643 ard	esec/yr			
Ď			Equinox: J2000	Epoch	of Position: 2000				
Fixed Targets		inates from Charle's	s proposal						
<u>ш</u>	Extended=NO								
	# Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 ACO/IM	(1) WD0308-565	COS/NUV, ACO/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
	(839564)	(1)20000 000	000,110 0,110 0,111102, 2011					[==>1	[1]
	Comments: cycle 2	94 comment: exposu	ure times not reduced following updated	ETC calculations	differences neolioihle			[]	[-1
		(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=14			244 Secs (244 Secs)	
	1	,		1291 A	4;			[==>]	
	(COS.sp.839 565)			12,111	FP-POS=3;				F17
	303)				LIFETIME-POS=L	,			[1]
					P3				
		arger than exptime	c. Target has been observed before and . use buffer time = exptime -100 sec to m						
ē			and the definition of the LETC and all	1:00					
Exposures		(1) WD0308-565	reduced following updated ETC calculations COS/FUV, TIME-TAG, PSA	ations, differences r G160M	rot enough to affect orbi	i requestea.		400 Secs (400 Secs)	
8	3	. ,	COS/TOV, TIME-TAG, FSA	1623 A	BUFFER-TIME=30	)		$\int ==> 1$	
Ä	(COS.sp.839 566)			1023 A	0	,		[==>]	[1]
	Target has been ol	uffer time is 719, la bserved before no no xptime - 100 = 300	eed to 2/3 factor						
	cycle 24 comment:	exposure times not	reduced following updated ETC calcul	ations, differences r	not enough to affect orbi	t requested.			
	4 G140L/1280	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18			280 Secs (280 Secs)	
	(COS.sp.839 567)			1280 A	0;			[==>]	[1]
	,				FP-POS=3				[1]
	Target has been ol	uffer time is 451, la bserved before no no xptime - 100 = 180 FP-POS	eed to 2/3 factor						
	cycle 24 comment:	exposure times not	reduced following updated ETC calcula	ations, differences r	not enough to affect orbi	t requested.			



Proposal 14854 - WD0308	<ul> <li>LP3 reconnection (:</li> </ul>	(20) - COS FUV Sp	pectroscopic Sensitivity	√ Monitorina

Proposal 14854, WD0308 - LP3 reconnection (20), implementation

Wed Sep 13 20:02:11 GMT 2017

S C

Diagnostic Status: Warning

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 24-SEP-2017:00:00:00 AND 01-OCT-2017:00:00:00

Comments: George Chapman added Exposure 9

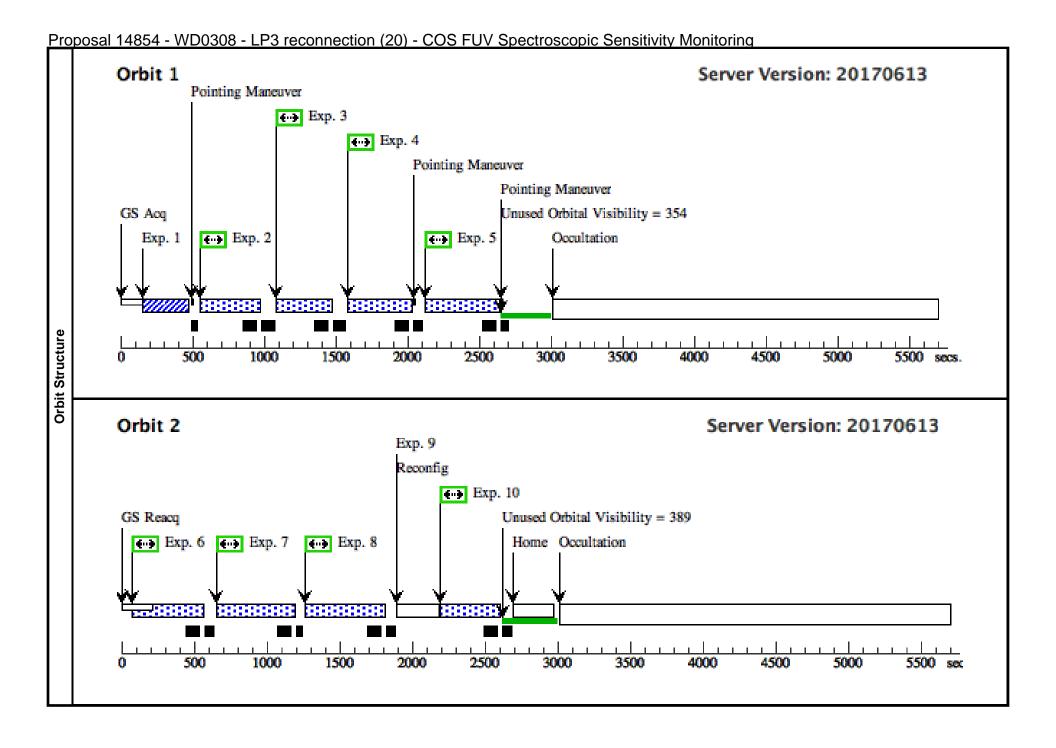
(WD0308 - LP3 reconnection (20)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

ts	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
] B	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS
⊒ I			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr		
اق			Equinox: J2000	Epoch of Position: 2000		
Fixe	Comment Extended	ts: Coordinates from Charle !=NO	s's proposal			

Proposal 14854 - WD0308 - LP3 reconnection (20) - COS FUV Spectroscopic Sensitivity Monitoring Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACQ/IMAGE, BOA MIRRORA GS ACO SCENARI 45 Secs (45 Secs) O BASE1B3 (839564)[1] I = = > 1Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/122 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=12 226 Secs (226 Secs) 1222 A f = = > 1(COS.sp.839 FP-POS=3; 568) [1] LIFETIME-POS=L Comments: ETC buffer time is 395 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 126 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/129 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=14 244 Secs (244 Secs) 1291 A I = = > 1(COS.sp.839 FP-POS=3; 565) [1] LIFETIME-POS=L Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. Exposures G130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=21 312 Secs (312 Secs) 2; 1327 A [==>] (COS.sp.839 FP-POS=3; 569) [1] LIFETIME-POS=L Comments: ETC buffer time is 320 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 212 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/105 (1) WD0308-565 COS/FUV. TIME-TAG. PSA BUFFER-TIME=23 334 Secs (334 Secs) G130M 5/FUVA 4; 1055 A [==>] (COS.sp.839 FP-POS=3; 570) SEGMENT=BOTH; [1] LIFETIME-POS=L P2 Comments: ETC buffer time is larger than exptime (1482) Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 224Continue use of 1 FP-POS

cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. While the program is optimized for FUVA we use the low SNR FUVB data to constraint the blue edge of the wavelength range.

G160M/157 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	290 Secs (290 Secs)	
7 (COS.sp.839		1577 A	BUFFER-TIME=19	[==>]	
571)			0;		[2
			LIFETIME-POS=L P3		
Comments: ETC buffer time is 599, larg Target has been observed before no nee Tet buffer time = exptime - 100 = 190					,
Continue use of 1 FP-POS					
ycle 24 comment: exposure times not re	educed following updated ETC calcu	lations, difference	s not enough to affect orbit requested.		
G160M/162 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	400 Secs (400 Secs)	
3 (COS.sp.839		1623 A	BUFFER-TIME=30	[==>]	
566)			0; LIFETIME-POS=L		[2
			P3		
Comments: ETC buffer time is 799, larg Carget has been observed before no nee let buffer time = exptime - 100 = 300 Continue use of 1 FP-POS	d to 2/3 factor				
arget has been observed before no nee et buffer time = exptime - 100 = 300	d to 2/3 factor	lations, difference G140L 1280 A	s not enough to affect orbit requested.  BUFFER-TIME=18 0; FP-POS=3;	$\frac{280 \text{ Secs } (280 \text{ Secs})}{I = = > J}$	
arget has been observed before no nee et buffer time = exptime - 100 = 300 Continue use of 1 FP-POS ycle 24 comment: exposure times not re G140L/1280 (1) WD0308-565 (COS.sp.839	d to 2/3 factor educed following updated ETC calcu	G140L	BUFFER-TIME=18 0;		I.
Carget has been observed before no needet buffer time = exptime - 100 = 300  Continue use of 1 FP-POS  ycle 24 comment: exposure times not recommend of the comment of the	ed to 2/3 factor  educed following updated ETC calcu  COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L		[2
Target has been observed before no need to buffer time = exptime - 100 = 300  Continue use of 1 FP-POS  Sycle 24 comment: exposure times not reconstruction of the comments of	ed to 2/3 factor  educed following updated ETC calcu  COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3  QASISTATES COS		
Target has been observed before no need to buffer time = exptime - 100 = 300 Continue use of 1 FP-POS  Sycle 24 comment: exposure times not recognition of the continue use of 1 WD0308-565 (COS.sp.839 567)  Comments: ETC buffer time is 451, larget has been observed before no need to buffer time = exptime - 100 = 180 Continue use of 1 FP-POS	ed to 2/3 factor  educed following updated ETC calcu COS/FUV, TIME-TAG, PSA  ger than exptime d to 2/3 factor	G140L	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3	[==>]	[.
Comments: ETC buffer time is 451, larger has been observed before no need to buffer time = exptime - 100 = 300  Continue use of 1 FP-POS  ycle 24 comment: exposure times not recomments: ETC buffer time is 451, larger has been observed before no needet buffer time = exptime - 100 = 180  Continue use of 1 FP-POS	educed following updated ETC calcu COS/FUV, TIME-TAG, PSA  eer than exptime d to 2/3 factor  S/C, DATA, NONE	G140L 1280 A	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3  QASISTATES COS FUV HVLOW HVL OW	[==>]  1 Secs (1 Secs)	
arget has been observed before no need to uffer time = exptime - 100 = 300 Continue use of 1 FP-POS  ycle 24 comment: exposure times not regregated to the comments: ETC buffer time is 451, large arget has been observed before no needet buffer time = exptime - 100 = 180 Continue use of 1 FP-POS  DARK  Comments: Work-around to efficiently so 0 G140L/1105 (1) WD0308-565	educed following updated ETC calcu COS/FUV, TIME-TAG, PSA  eer than exptime d to 2/3 factor  S/C, DATA, NONE	G140L 1280 A	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3  QASISTATES COS FUV HVLOW HVL OW  S induced gaps. BUFFER-TIME=18	[==>]  1 Secs (1 Secs)	
Comments: ETC buffer time is 451, large thas been observed before no need to buffer time = exptime - 100 = 300  Sontinue use of 1 FP-POS  ycle 24 comment: exposure times not recognition of the comments of the comment of the	educed following updated ETC calcu COS/FUV, TIME-TAG, PSA  ger than exptime d to 2/3 factor  S/C, DATA, NONE	G140L 1280 A A. Eliminates SPS	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3  QASISTATES COS FUV HVLOW HVL OW  SS induced gaps.  BUFFER-TIME=18 0;	[==>]  1 Secs (1 Secs) [==>]	
arget has been observed before no need buffer time = exptime - 100 = 300 Continue use of 1 FP-POS  Sycle 24 comment: exposure times not read G140L/1280 (1) WD0308-565 (COS.sp.839 567)  Comments: ETC buffer time is 451, larguaget has been observed before no need buffer time = exptime - 100 = 180 Continue use of 1 FP-POS  DARK  Comments: Work-around to efficiently so G140L/1105 (1) WD0308-565 (FUVA	educed following updated ETC calcu COS/FUV, TIME-TAG, PSA  ger than exptime d to 2/3 factor  S/C, DATA, NONE	G140L 1280 A A. Eliminates SPS G140L	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3  QASISTATES COS FUV HVLOW HVL OW  SS induced gaps. BUFFER-TIME=18 0; FP-POS=3;	$[l] = > J$ $\frac{1 \text{ Secs } (1 \text{ Secs})}{[l] = > J}$ $\frac{280 \text{ Secs } (280 \text{ Secs})}{[l] = 280 \text{ Secs}}$	[.
Comments: ETC buffer time is 451, large thas been observed before no need to buffer time = exptime - 100 = 300  Sontinue use of 1 FP-POS  ycle 24 comment: exposure times not recognition of the comments of the comment of the	educed following updated ETC calcu COS/FUV, TIME-TAG, PSA  ger than exptime d to 2/3 factor  S/C, DATA, NONE	G140L 1280 A A. Eliminates SPS G140L	BUFFER-TIME=18 0; FP-POS=3; LIFETIME-POS=L P3  QASISTATES COS FUV HVLOW HVL OW  SS induced gaps.  BUFFER-TIME=18 0;	$[l] = > J$ $\frac{1 \text{ Secs } (1 \text{ Secs})}{[l] = > J}$ $\frac{280 \text{ Secs } (280 \text{ Secs})}{[l] = 280 \text{ Secs}}$	



Proposal 14854 - GD71 - LP3 reconnection (21) - COS FUV Spectroscopic Sensitivity Monitoring

Proposal 14854, GD71 - LP3 reconnection (21), implementation Wed Sep 13 20:02:11 GMT 2017

**Diagnostic Status: Warning** 

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 24-SEP-2017:00:00:00 AND 01-OCT-2017:00:00:00

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation

George Chapman added Exposure 3

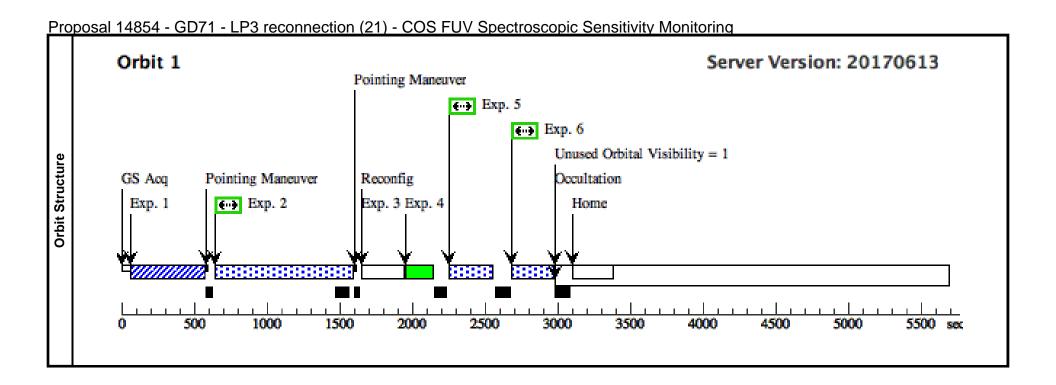
Optimized the exposure time for the G130M/1096 setting to increase its SNR (exp time = 744 s) while remaining within the allocated time.

(GD71 - LP3 reconnection (21)) 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.

ets	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
ge	(2) GD71	RA: 05 52 27.6100 (88.1150417d)	Proper Motion RA: 85 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS
<u>a</u>		Dec: +15 53 13.80 (15.88717d)	Proper Motion Dec: -174 mas/yr		
ا ت		Equinox: J2000	Epoch of Position: 2000		
Fixe	Comments: Use sma RA, DEC Extended=NO	amd PM as in proposal 12392 by Bohlin et al.			

Proposal 14854 - GD71 - LP3 reconnection (21) - COS FUV Spectroscopic Sensitivity Monitoring

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IM	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)	
	(COS.ta.839 574)							[==>]	[1]
Con	nments: Exptim	e for S/N of 60 is	105.5 sec, using 90 sec leads to S/N of 55.						
2	G130M/109	(2) GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=64			740 Secs (740 Secs)	
	6/FUVB (COS.sp.839			1096 A	4;			[==>]	
	576)				FP-POS=3; SEGMENT=B;				[1]
					LIFETIME-POS=L P2				
			rnings come from FUVA). = 644 to maximize time on target.						
3	*/*/	DARK	S/C, DATA, NONE			QASISTATES COS		1 Secs (1 Secs)	
						FUV HVLOW HVI OW	_	[==>]	[1]
Con	nments: Work-a	around to efficient	tly schedule the SEG-B to SEG-A reconfig	uration. Eliminate:	s SPSS induced gaps.				-
4	G130M/109	WAVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			140 Secs (140 Secs)	
	6/FUVA W AVECAL			1096 A	SEGMENT=A;			[==>]	
					FLASH=NO;				[1]
3					LIFETIME-POS=L P2				
5	G160M/157	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			102 Secs (102 Secs)	
	7/FUVA (COS.sp.839			1577 A	2;			[==>]	
<u> </u>	579)				FP-POS=3;				
					SEGMENT=A;				[1]
					LIFETIME-POS=L P3				
Con	nments: FUVA	only (all ETC wa	rnings come from FUVB).						-
2.35 651 Set	5e6 is the numb 3 cts/sec is the buffer-time = e	er of events that e count rate in FUV xptime b/c exptim	3 = 360 sec, which is larger than exp time ach buffer can record VA, per ETC calculation above e - 100 < 80 which is the minimum exptim	ne					
			allower than ETC prediction, so no need to		1	pe larger than 13)		154.0 (154.0 )	
6	G160M/162 3/FUVA	(2) GD/1	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=15 4;			154 Secs (154 Secs)	
	(COS.sp.839 581)			1023 A	FP-POS=3;			[==>]	
	361)				SEGMENT=A;				[1]
					LIFETIME-POS=L P3				
Con	nments: FUVA	only (all ETC wa	rnings come from FUVB).						
2.35 651	5e6 is the numb 3 cts/sec is the	er of events that e count rate in FU\	3 = 360 sec, which is larger than exp time ach buffer can record VA, per ETC calculation above e - 100 < 80 which is the minimum exptim		to exptime.				
Cvc	le 24 comment.	· FUVA TDS is sh	allower than ETC prediction, so no need t	to update exposure	time (SNR @ 1749 will b	oe larger than 13)			



Proposal 14854 - WD0308 - LP4 reconnection (22) - COS FUV Spectroscopic Sensitivity Monitori	Proposal 14854	- WD0308 - LP	4 reconnection (22	) - COS FUV S	Spectroscopic Sensitivity	/ Monitoring
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Proposal 14854, WD0308 - LP4 reconnection (22), implementation Wed Sep 13 20:02:11 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: S/C, COS/FUV, COS/NUV

Special Requirements: SCHED 100%; BETWEEN 02-OCT-2017:00:00:00 AND 09-OCT-2017:00:00:00

Comments: George Chapman added Exposure 9 No LP2 exposures needed

(WD0308 - LP4 reconnection (22)) 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.

ts	# Name Target Coordinates		Targ. Coord. Corrections	Fluxes	Miscellaneous			
] e	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 0.018141 sec of time/yr	V=14.07+/-0.02	Reference Frame: ICRS		
آa			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 0.0643 arcsec/yr				
م ا		Equinox: J2000		Epoch of Position: 2000				
Fixe	Comments: Coordinates from Charle's proposal Extended=NO							

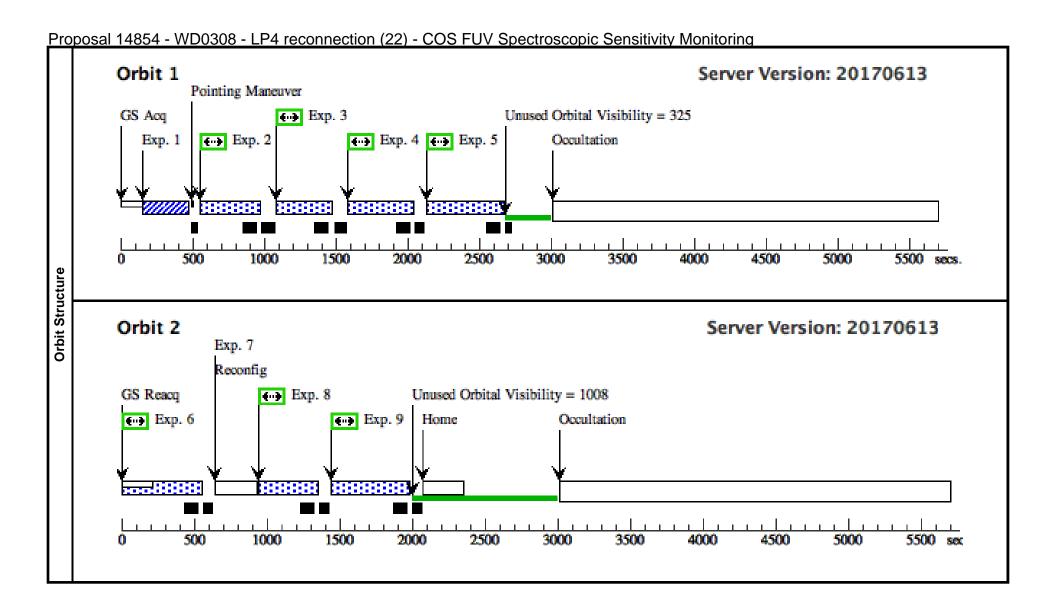
Proposal 14854 - WD0308 - LP4 reconnection (22) - COS FUV Spectroscopic Sensitivity Monitoring Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Reqs. Groups Exp. Time (Total)/[Actual Dur.] Orbit (ETC Run) ACO/IM (1) WD0308-565 COS/NUV, ACQ/IMAGE, BOA MIRRORA GS ACQ SCENARI 45 Secs (45 Secs) O BASE1B3 (839564)[1] I = = > 1Comments: cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/122 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=12 226 Secs (226 Secs) 1222 A [==>] (COS.sp.839 FP-POS=3; 568) LIFETIME-POS=L [1] SEGMENT=BOTH Comments: ETC buffer time is 395 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 126 Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G130M/129 (1) WD0308-565 BUFFER-TIME=14 COS/FUV. TIME-TAG. PSA G130M 244 Secs (244 Secs) 4; 1291 A [==>] (COS.sp.839 FP-POS=3; 565) LIFETIME-POS=L [1] P4; SEGMENT=BOTH Comments: ETC buffer time is 322 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 144 Exposures Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. G160M/157 (1) WD0308-565 FP-POS=3; COS/FUV. TIME-TAG. PSA G160M 290 Secs (290 Secs) 1577 A BUFFER-TIME=19 [==>1 (COS.sp.839 571) LIFETIME-POS=L [1] SEGMENT=BOTH Comments: ETC buffer time is 599, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 190Continue use of 1 FP-POS cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested. 400 Secs (400 Secs) G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 1623 A BUFFER-TIME=30 I = = > 1(COS.sp.839 566) LIFETIME-POS=L [1] SEGMENT=BOTH Comments: ETC buffer time is 799, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 300Continue use of 1 FP-POS

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cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested.

Proposal 14854 - WD0308 - LP4 reconnection (22) - COS FUV Spectroscopic Sensitivity Monitoring G140L/1280 (1) WD0308-565 BUFFER-TIME=18 COS/FUV, TIME-TAG, PSA G140L 280 Secs (280 Secs) (COS.sp.839 567) 0: 1280 A *[==>1* FP-POS=3; LIFETIME-POS=L [2] P4; SEGMENT=BOTH Comments: ETC buffer time is 451, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS DARK S/C, DATA, NONE **QASISTATES COS** 1 Secs (1 Secs) **FUV HVLOW HVL** I = = > 1[2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. G140L/1105 (1) WD0308-565 COS/FUV. TIME-TAG. PSA G140L BUFFER-TIME=18 280 Secs (280 Secs) /FUVA 1105 A *[==>]* (COS.sp.839 FP-POS=3; <del>572</del>) SEGMENT=A; [2] LIFETIME-POS=L Comments: ETC buffer time is 362, larger than exptime Target has been observed before no need to 2/3 factor Set buffer time = exptime - 100 = 180Continue use of 1 FP-POS G130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=21 312 Secs (312 Secs) 7/FUVA 1327 A I = = > 1(COS.sp.839 FP-POS=3; 569) LIFETIME-POS=L [2] P4; SEGMENT=A Comments: ETC buffer time is 320 sec. Target has been observed before and so no need for 2/3 safety margin. Since buffer time larger than exptime use buffer time = exptime -100 sec to maximize time on target = 212 Continue use of 1 FP-POS

cycle 24 comment: exposure times not reduced following updated ETC calculations, differences not enough to affect orbit requested.



Pro	<u> </u>	LP4 reconnection (23) - 0	COS FUV S	<u>pectroscopic S</u>	ensitivity Mo	onitoring							
	Proposal 14854, GD71 - LP4 recor	Wed Sep 13 20:02:11 GMT 2017											
Visit	Diagnostic Status: Warning												
	Scientific Instruments: COS/FUV, COS/NUV												
	Special Requirements: SCHED 100%; BETWEEN 02-OCT-2017:00:00:00 AND 09-OCT-2017:00:00:00												
	Comments: No LP2 exposures needed												
Diagnostics	(GD71 - LP4 reconnection (23)) Wasetting. See full description for detail		is strongly recomm	ended that the maximun	number of allowe	d FP-POS positions i	s used when observing at a given COS CENV	VAVE					
Fixed Targets	# Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous						
	(2) GD71	RA: 05 52 27.6100 (88.1150417d)	Proper Motion RA: 85 mas/yr		V	=13.06+/-0.01	Reference Frame: ICRS						
<u>a</u>		Dec: +15 53 13.80 (15.88717d)	Proper	Motion Dec: -174 mas/y	y <b>r</b>								
<u>8</u>		Epoch of Position: 2000											
Fixe													
	# Label Target (ETC Run)	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit					
	1 ACQ/IM (2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)						
	(COS.ta.839 574)						[==>]	[1]					
	<b>'</b>	: 105.5 sec, using 90 sec leads to S/N of 55						1					
	2 G160M/157 (2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			102 Secs (102 Secs)						
	7/FUVA		1577 A	2;			[==>1						
	(COS.sp.839 579)			FP-POS=3;									
	,			SEGMENT=A;				[1]					
				LIFETIME-POS=L P4									
۱ "	Comments: FUVA only (all ETC wa	arnings come from FUVB).											
Exposures	Buffer-time for FUVA is $2.35e6/6513 = 360$ sec, which is larger than exp time, so set buffer time to exptime. $2.35e6$ is the number of events that each buffer can record $6513$ cts/sec is the count rate in FUVA, per ETC calculation above Set buffer-time = exptime $b/c$ exptime - $100 < 80$ which is the minimum exptime												
Ш	Cycle 24 comment: FUVA TDS is sh	hallower than ETC prediction, so no need	to update exposure	time (SNR @ 1749 will l	be larger than 13)								
	3 G160M/162 (2) GD71	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=15			154 Secs (154 Secs)						
	3/FUVA (COS.sp.839			4;			[==>]						
	581)			FP-POS=3;									
				SEGMENT=A;				[1]					
				LIFETIME-POS=L P4									
	Comments: FUVA only (all ETC wa	urnings come from FUVB).		- 1			L	1					
	Buffer-time for FUVA is 2.35e6/651 2.35e6 is the number of events that 6513 cts/sec is the count rate in FU Set buffer-time = exptime b/c exptim												
l	Civile 24 comments FINA TDS is shallower than FTC mediation so no need to undate exposure time (SNP @ 1740 will be larger than 12)												

