

# 16332 - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Cycle: 28, 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 DARK	COS/FUV COS/NUV S/C	3	30-Jun-2021 10:00:56.0	yes
02	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	2	30-Jun-2021 10:00:57.0	yes
03	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	3	30-Jun-2021 10:00:59.0	yes
04	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	2	30-Jun-2021 10:01:01.0	yes

Proposal 16332 (STScI Edit Number: 0, Created: Wednesday, June 30, 2021 at 9:01:13 AM Eastern Standard Time) - Overview

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
05	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	3	30-Jun-2021 10:01:03.0	yes
06	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	2	30-Jun-2021 10:01:04.0	yes
07	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	3	30-Jun-2021 10:01:06.0	yes
08	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	3	30-Jun-2021 10:01:09.0	yes
09	(2) GD71 DARK WAVE	COS/FUV COS/NUV S/C	2	30-Jun-2021 10:01:10.0	yes
10	(1) WD0308-565 DARK	COS/FUV COS/NUV S/C	3	30-Jun-2021 10:01:12.0	yes

26 Total Orbits Used

## **ABSTRACT**

The FUV gratings are the most used modes on COS. They have experienced changes in sensitivity since the instrument was installed. The trends in the time-dependent spectroscopic sensitivity depend on the grating, segment and wavelength. Each cycle a calibration proposal to monitor the sensitivity of each FUV grating mode at several cenwave settings is implemented. The monitor runs on an approximate schedule of one set of visits every two months. This program is contingency program that will be triggered in the case that the sensitivity of any grating/mode is found to be rapidly decreasing and therefore requiring a higher cadence of observations.

## **OBSERVING DESCRIPTION**

Proposal 16332 (STScI Edit Number: 0, Created: Wednesday, June 30, 2021 at 9:01:13 AM Eastern Standard Time) - Overview The description below is from program 16324, the main COS FUV Spectroscopic Sensitivity Monitor for Cycle 28. This is a contingency program, and the exposure sequence in each visit are identical to those in the main program. However, there are no "between" constraints as yet specified for each of these visits. If it is necessary to trigger the contigency observations, the required dates will be provided.

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As part of the standard monitoring sequence the standard stars, WD0308-565 and GD71, will be observed every two months (except for May-July, during which time GD71 is unavailable).

Each sequence consists of 5 orbits: a 3 orbit visit (target WD0308-565) that covers

G130M/1055/FUVA,

G130M/1222,

G130M/1291,

G130M/1327/FUVA,

G160M/1533/FUVB

G160M/1577/FUVB,

G160M/1623/FUVB,

G140L/800/FUVA

G140L/1105/FUVA,

G140L/1280,

and a 2 orbit visit (target GD71) that covers

G130M/1096/FUVB,

G160M/1533/FUVA,

G160M/1577/FUVA,

G160M/1623/FUVA.

These comprise the shortest and longest central wavelengths of the normal modes with each grating. Additionally, G130M/1055, and 1096 (the blue modes) and G130M/1291 are included. Also included is G160M/1577, which used to be the shortest cenwave before the introduction of

Proposal 16332 (STScI Edit Number: 0, Created: Wednesday, June 30, 2021 at 9:01:13 AM Eastern Standard Time) - Overview G160M/1533 in Cycle 26. The observations will be done at LP4, except for G130M/1055 and G130M/1096, which will be done at LP2.

Contingency visit 10 exposures would occur after the move to LP5 and LP3 in October 2021. G130M/1291 and 1300 exposures have been changed from LP4 to LP5, and G140L exposures have been changed from LP4 to LP3. G160M and G130M/1055/1096/1222 cenwaves are unchanged.

# SNR requirements:

- The general requirement is for an SNR of 15 per resel at the wavelength of least sensitivity for the standard modes, and SNR of 15 per resel beyond some minimum wavelength for the blue modes and c1222. The G140L/800 and 1280 modes have slightly different criteria, to provide SNR of >~5 per resel at wavelengths below ~1080 Ang.
- The aim is to obtain TDS calibration better than 2% for standard modes and 10% for blue modes.

## ETC calculations:

- The ETC calculations use CALSPEC standard model versions wd0308\_565\_mod\_003.fits and gd71\_mod\_010.fits against which the TDS model slopes are referenced.
- The ETC calculations are specified by requiring SNR of 15 at specific wavelengths, except for the following:

G140L/800 SNR of 6 per resel at 1045 Ang (only FUVA is used)

G140L/1280 SNR of 12 per resel at 1090 Ang (lies on FUVB)

- For the blue modes and c1222, the wavelengths specified for SNR of 15 are:

990 Ang for c1096 (Only FUVB is used)

1120 Ang for c1055 (lies on FUVA)

1130 Ang for c1222 (lies on FUVB)

## Time constraints:

- Complete monitoring sequence should occur every 2 months starting in December 2018.
- GD71 is unschedulable May-July 2018, and therefore that sequence will consist of only one visit.

The exposure times and organization of visits follows the scheme used in Cycle 27. As in Cycle 27, for all but one set of the WD0308-565 observations using G160M, the specifications now are SEGMENT=B (i.e. segment A is turned off). The one exception is the June sequence (visit

Proposal 16332 (STScI Edit Number: 0, Created: Wednesday, June 30, 2021 at 9:01:13 AM Eastern Standard Time) - Overview 07) for which the specifications are SEGMENT=BOTH for these modes, because GD71 is not available during this period.

Proposal 16332 - WD0308-C1 (01) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

		sal 16332, WD0308-C1 (0	· · · · · · · · · · · · · · · · · · ·	5 V Change in Opediroscopio C		Wed Jun 30 14:01:13 GMT 2021			
l <u>.</u> <u>.</u>	Diagno	ostic Status: No Diagnost	ics						
/is	Scienti	ific Instruments: S/C, COS							
1	Specia	Special Requirements: SCHED 100%							
	Comm	ents: All G160M observati	ons are with $SEGMENT = B$ (i.e. segment A is tur	rned off).					
1	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
ets	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 149.241 mas/yr	V=14.07+/-0.02	Reference Frame: ICRS			
۱ğ	ı.		Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 66.919 mas/yr					
ā			Equinox: J2000	Epoch of Position: 2000					
Fixed	Proper Catego Descri	ents: Coordinates carried or motions changed to mas/y ory=STAR ption=[DB] led=NO	over from Cycle 25 proposal, checked against SIN vr, from SIMBAD, also using the GAIA DR2 catal	MBAD, which uses the GAIA DR2 catalog. og.					

Proposal 16332 - WD0308-C1 (01) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

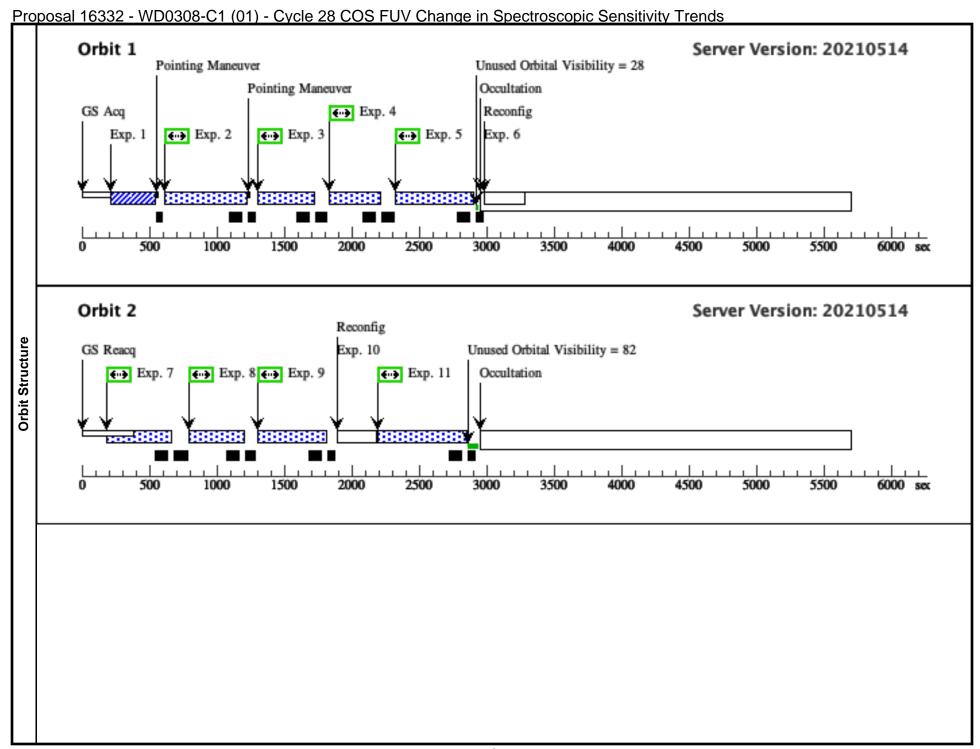
# Label (ETC R	Target in)	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1 ACQ/IM		COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
(839564)							[==>]	[1]
Comments: cy Cycle 28 comm	cle 24 comment: exposu nent: we continue to use	re times not reduced following updated the same exposure time since differenc	ETC calculations, on the second secon	differences not enough to it request.	affect orbit requested	d.		
	105 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=28			393 Secs (393 Secs)	
5/LP2 (COS.sp	145		1055 A	3;			[==>]	
7645)	143			FP-POS=3;				
				SEGMENT=BOTH:	;			[1]
				LIFETIME-POS=L P2				
Comments: ET Set buffer time	C buffer time is 1831 se = exptime - 110 sec	ес						
	122 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=15			267 Secs (267 Secs)	
2	1.45		1222 A	7;			[==>]	
(COS.sp 7646)	143			FP-POS=3;				
				LIFETIME-POS=L				[1]
				P4;				
C F3	C 1 ( :			SEGMENT=BOTH				
Set buffer time	C buffer time is 392 sec = exptime - 110 sec	·.						
4 G130M/	129 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=12			236 Secs (236 Secs)	
1 (COS.sp	1.45		1291 A	6;			[==>]	
7647)	143			FP-POS=3;				
				LIFETIME-POS=L P4;				[1]
				SEGMENT=BOTH				
Comments: ET	C buffer time is 323 sec	2		SEGMENT-BOTH				
	= exptime - 110 sec 280 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=25			366 Secs (366 Secs)	
(COS.sp			1280 A	6;			[==>]	
7781)			120011	FP-POS=3;			1	
				LIFETIME-POS=L				[1]
				P4;				
				SEGMENT=BOTH				
Comments: ET Set buffer time	C buffer time is 460 sec = exptime - 110 sec	<b>.</b> .						
6	DARK	S/C, DATA, NONE			QASISTATES CO	S	1 Secs (1 Secs)	
					FUV HVLOW HV	L	[==>]	[1]
Comments: W	ork around to afficiently	schedule the reconfiguration to SEG-A	Fliminatas CDCC	induced cans	OW			[-]
	153 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			223 Secs (223 Secs)	
3/B		COS/TOV, THVIE-TAG, FSA	1533 A	BUFFER-TIME=11			[==>]	
(COS.sp 7649)	145		1555 A	3;			1>1	
7049)				LIFETIME-POS=L P4;				[2]
				SEGMENT=B				
Comments: ET	C buffer time is 502 sec	2.						
Set buffer time	= exptime - 110 sec.							

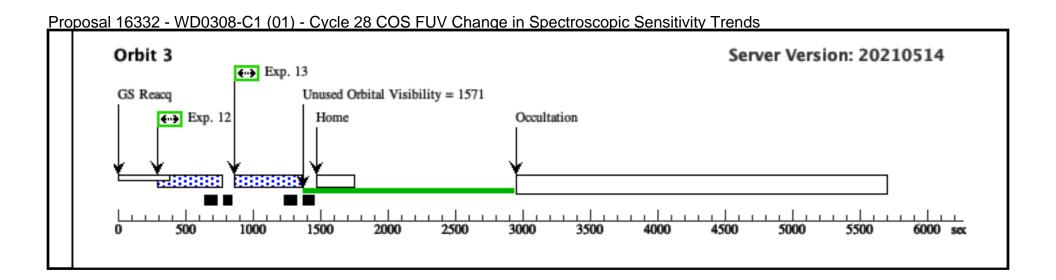
Proposal 16332 - WD0308-C1 (01) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends G160M/157 (1) WD0308-565 FP-POS=3: COS/FUV, TIME-TAG, PSA G160M 275 Secs (275 Secs) 7/B 1577 A BUFFER-TIME=16 *[==>1* (COS.sp.145 7650) LIFETIME-POS=L [2] P4; SEGMENT=B Comments: ETC buffer time is 606 sec. Set buffer time = exptime - 110 secG160M/162 (1) WD0308-565 FP-POS=3; 372 Secs (372 Secs) COS/FUV, TIME-TAG, PSA G160M 3/B 1623 A [==>] BUFFER-TIME=26 (COS.sp.145 7651) LIFETIME-POS=L [2] P4; SEGMENT=B Comments: ETC buffer time is 760 sec. Set buffer time = exptime - 110 sec 10 DARK S/C, DATA, NONE 1 Secs (1 Secs) **OASISTATES COS** FUV HVLOW HVL f = = > 1[2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. G140L/800/ (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=25 367 Secs (367 Secs) **FUVA** 7; 800 A *[==>1* (COS.sp.145 FP-POS=3; 7778) SEGMENT=A; [2] LIFETIME-POS=L P4 Comments: ETC buffer time is 350 sec. Set buffer time = exptime - 110 sec12 G140L/1105 (1) WD0308-565 332 Secs (332 Secs) COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=22 /FUVA 2; 1105 A [==>1 (COS.sp.145 FP-POS=3; 7846) SEGMENT=A; [3] LIFETIME-POS=L P4 Comments: ETC buffer time is 358 sec. Set buffer time = exptime - 110 secG130M/132 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G130M BUFFER-TIME=16 274 Secs (274 Secs) 7/FUVA 4; 1327 A [==>] (COS.sp.145 FP-POS=3; 7657) LIFETIME-POS=L [3]

P4;

Comments: ETC buffer time is 324 sec. set buffer time = exptime - 110 sec

SEGMENT=A





Proposal 16332 - GD71-C1 (02) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Proposal 16332, GD71-C1 (02), implementation Wed Jun 30 14:01:13 GMT 2021

Diagnostic Status: No Diagnostics

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

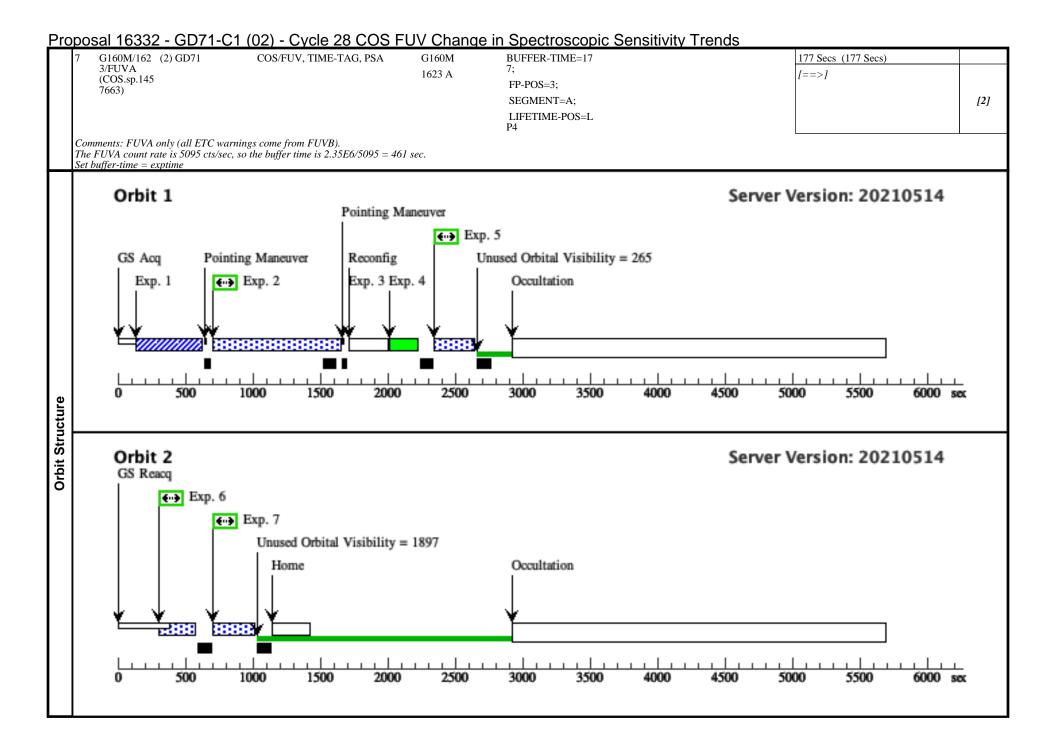
Special Requirements: SCHED 100%

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation George Chapman added Exposure 3
All G160M observations are with SEGMENT = A (i.e. segment B is turned off).

	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous		
ts	(2)	GD71	RA: 05 52 27.6200 (88.1150833d)	Proper Motion RA: 76.841 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS		
get			Dec: +15 53 13.23 (15.88701d)	Proper Motion Dec: -172.944 mas/yr				
⊒			Equinox: J2000	Epoch of Position: 2000				
Fixed	Comments: Co-ordinates and proper motions updated with values from SIMBAD, which uses the GAIA DR2 catalog.  Differences from previous co-ordinates are in decimal places in seconds of time and arcsec, within the stated errors.  Category=STAR  Description=[DA]  Extended=NO							

Proposal 16332 - GD71-C1 (02) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit			
ľ	1	ACQ/IM	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)				
		(COS.ta.839 574)							[==>]	[1]			
				05.5 sec, using 90 sec leads to S/N of 55.e the same exposure time since difference		it reauest							
ŀ	2	G130M/109		COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=63			744 Secs (744 Secs)				
		6/FUVB/LP 2			1096 A	4;			[==>]				
		(COS.sp.145 7659)				FP-POS=3; SEGMENT=B;				[1]			
		7039)				LIFETIME-POS=L P2							
	The	Comments: FUVB only (all ETC warnings come from FUVA). The FUVB count rate is 585 cts/sec, so the buffer time is 2.35E6/585 = 4017 sec. Set buffer-time = exptime - 110 sec											
Ī	3		DARK	S/C, DATA, NONE			QASISTATES COS	5	1 Secs (1 Secs)				
							FUV HVLOW HVI OW		[==>]	[1]			
	Con	nments: Work-	around to efficiently	y schedule the SEG-B to SEG-A reconfig	uration. Eliminate:	s SPSS induced gaps.							
	4	G130M/109 6/FUVA W	WAVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			160 Secs (160 Secs)				
		AVECAL/L			1096 A	SEGMENT=A;			[==>]				
		P2				FLASH=NO;				[1]			
es						LIFETIME-POS=L P2							
Exposures	Con mbe	Comments: Cycle 28: the exposure time has been updated to 160 seconds. This was determined after characterizing the decrease by about 12 percent in the summed count-rate with time over the period between Dece											
ğ	5	G160M/153	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			106 Secs (106 Secs)				
۳ ا		3/FUVA (COS.sp.145			1533 A	6; FP-POS=3;			[==>]				
		7660)				SEGMENT=A;				[1]			
						LIFETIME-POS=L				[1]			
						P4							
	The	nments: FUVA : FUVA count r buffer-time = e	ate is 9240 cts/sec,	nings come from FUVB). so the buffer time is $2.35E6/9240 = 254$	sec.								
1	6	G160M/157		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=13			135 Secs (135 Secs)				
		7/FUVA (COS.sp.145			1577 A	5;			[==>]				
		7661)				FP-POS=3;				[2]			
						SEGMENT=A; LIFETIME-POS=L				[2]			
						P4							
	The	nments: FUVA FUVA count r buffer-time = ε	ate is 6674 cts/sec,	nings come from FUVB). so the buffer time is 2.35E6/6674 = 352	sec.								



Proposal 16332 - WD0308-C2 (03) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

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	Proposa	al 16332, WD0308-C2 (	03), implementation			Wed Jun 30 14:01:13 GMT 2021			
<u>.</u>	Diagnos	stic Status: No Diagnos							
/is	Scientif	ic Instruments: S/C, COS							
1-	Special	Special Requirements: SCHED 100%							
	Comme	nts: All G160M observat	ions are with $SEGMENT = B$ (i.e. segment A is tur	rned off).					
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
ts	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 149.241 mas/yr	V=14.07+/-0.02	Reference Frame: ICRS			
۱ğ	)		Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 66.919 mas/yr					
<u>a</u> ∐			Equinox: J2000	Epoch of Position: 2000					

Comments: Coordinates carried over from Cycle 25 proposal, checked against SIMBAD, which uses the GAIA DR2 catalog. Proper motions changed to mas/yr, from SIMBAD, also using the GAIA DR2 catalog. Category=STAR
Description=[DB]
Extended=NO

Proposal 16332 - WD0308-C2 (03) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

ode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
					[==>]	[1]
, TIME-TAG, PSA	G130M	BUFFER-TIME=28			393 Secs (393 Secs)	
, 11012 1110, 1511	1055 A	3;			[==>]	
		FP-POS=3;				
		SEGMENT=BOTH;				[1]
		LIFETIME-POS=L P2				
, TIME-TAG, PSA	G130M	BUFFER-TIME=15 7;			267 Secs (267 Secs)	
	1222 A	FP-POS=3;			[==>]	
		LIFETIME-POS=L				[1]
		P4;				
		SEGMENT=BOTH				
, TIME-TAG, PSA	G130M	BUFFER-TIME=12			236 Secs (236 Secs)	
, 11012 1110, 1011	1291 A	6;			[==>]	
		FP-POS=3;				
		LIFETIME-POS=L P4;				[1]
		SEGMENT=BOTH				
						1
, TIME-TAG, PSA	G140L	BUFFER-TIME=25			366 Secs (366 Secs)	
	1280 A	6; FP-POS=3;			[==>]	
		LIFETIME-POS=L				[1]
		P4;				123
		SEGMENT=BOTH				
A, NONE			OACICTATES CO	AC.	1 Secs (1 Secs)	
A, NONE			QASISTATES CO FUV HVLOW HV	L L	[==>]	[1]
econfiguration to SEG-	A Fliminates SPSS	induced gans	OW		1 7	[1]
, TIME-TAG, PSA	G160M	FP-POS=3;			223 Secs (223 Secs)	
	1533 A	BUFFER-TIME=11			[==>]	
		3;				
		LIFETIME-POS=L P4:				[2]
		SEGMENT=B				
			LIFETIME-POS=L P4;	LIFETIME-POS=L P4;	LIFETIME-POS=L P4;	LIFETIME-POS=L P4;

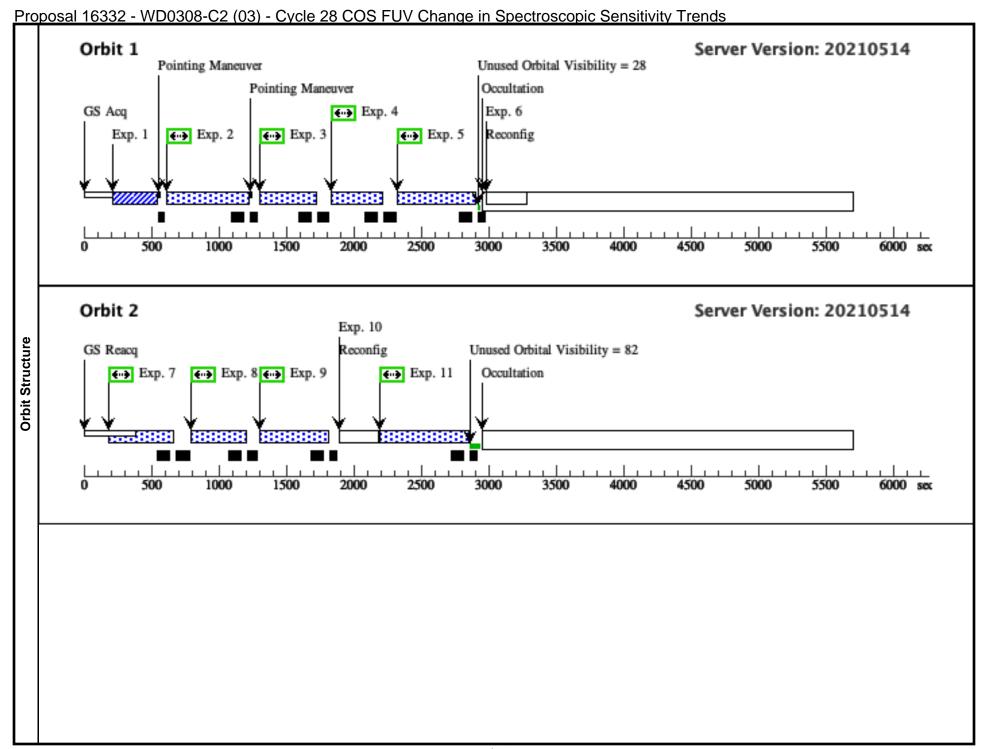
Comments: See Visit 01 comments.			SEGMENT=B			
9 G160M/162 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;		372 Secs (372 Secs)	
3/B (COS.sp.145 7651)		1623 A	BUFFER-TIME=26 2; LIFETIME-POS=L P4; SEGMENT=B		[==>]	[2]
Comments: See Visit 01 comments.						
10 DARK	S/C, DATA, NONE			TATES COS	1 Secs (1 Secs)	
			FUV H' OW	FUV HVLOW HVL OW		[2]
Comments: Work-around to efficiently s	schedule the reconfiguration to SEG-	A. Eliminates SPS	S induced gaps.			

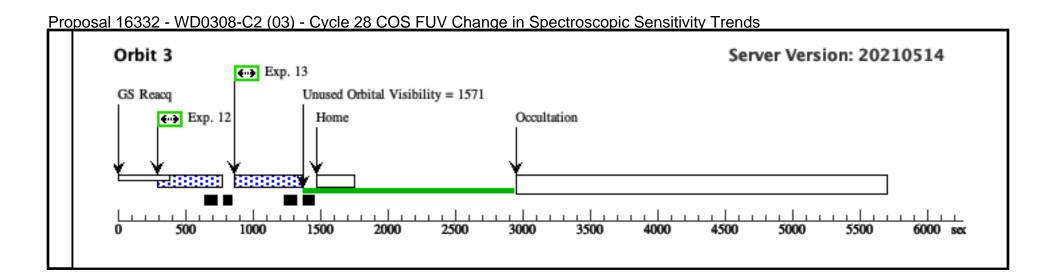
			OW	[==>]	[2]
Comments: Work-around to efficiently se	chedule the reconfiguration to SEG-A	A. Eliminates SPS	S induced gaps.		
11 G140L/800/ (1) WD0308-565 FUVA (COS.sp.145 7778)	COS/FUV, TIME-TAG, PSA	G140L 800 A	BUFFER-TIME=25 7; FP-POS=3; SEGMENT=A; LIFETIME-POS=L P4	367 Secs (367 Secs) [==>]	[2]
Comments: See Visit 01 comments.					
12 G140L/1105 (1) WD0308-565		BUFFER-TIME=22	332 Secs (332 Secs)		
/FUVA		1105 A	2;	I==>1	

00	minerial See Tible of Comments.					
12		COS/FUV, TIME-TAG, PSA	G140L BUFFER-TIME=22	BUFFER-TIME=22	332 Secs (332 Secs)	
	/FUVA		1105 A	2;	f==>1	
	(COS.sp.145 7846)			FP-POS=3;		
	, 6.6)			SEGMENT=A;		[3]
				LIFETIME-POS=L		
				P4		

			P4		
Comments: See Visit 01 comments.				·	
13 G130M/132 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=16	274 Secs (274 Secs)	
7/FUVA		1327 A	4;	I==>1	
(COS.sp.145 7657)			FP-POS=3;		
7657)			LIFETIME-POS=L		[3]
			P4;		
			SEGMENT=A		

Comments: See Visit 01 comments.





Proposal 16332 - GD71-C2 (04) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Proposal 16332, GD71-C2 (04), implementation Wed Jun 30 14:01:14 GMT 2021

Diagnostic Status: No Diagnostics

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

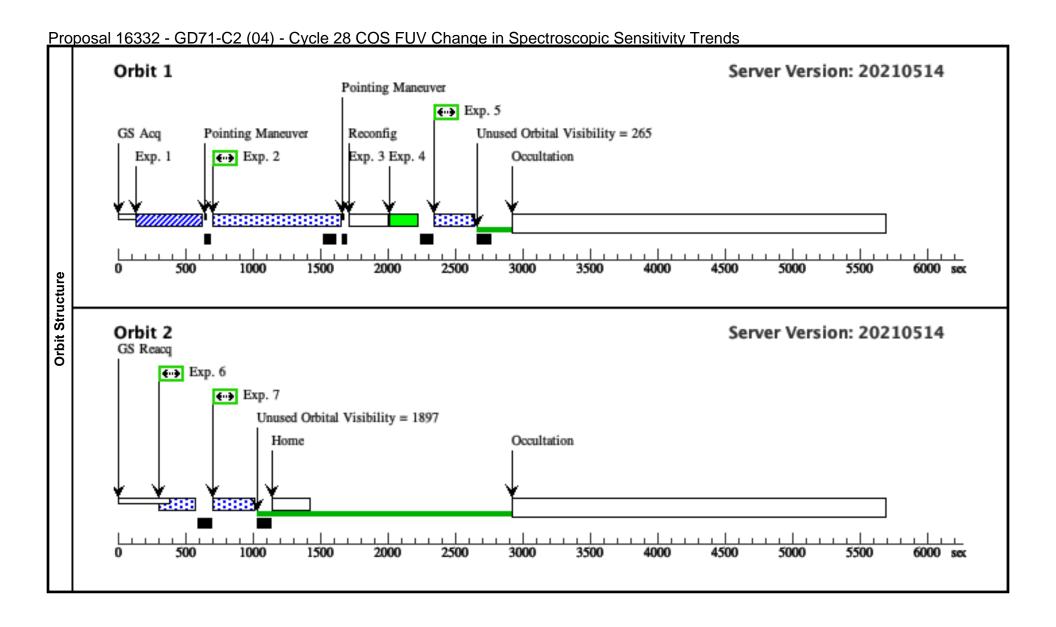
Special Requirements: SCHED 100%

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation George Chapman added Exposure 3
All G160M observations are with SEGMENT = A (i.e. segment B is turned off).

	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
ts	(2)	GD71	RA: 05 52 27.6200 (88.1150833d)	Proper Motion RA: 76.841 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS	
rget			Dec: +15 53 13.23 (15.88701d)	Proper Motion Dec: -172.944 mas/yr			
<u>a</u>			Equinox: J2000	Epoch of Position: 2000			
Comments: Co-ordinates and proper motions updated with values from SIMBAD, which uses the GAIA DR2 catalog. Differences from previous co-ordinates are in decimal places in seconds of time and arcsec, within the stated errors. Category=STAR Description=[DA] Extended=NO							

Proposal 16332 - GD71-C2 (04) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IM (COS.ta.839	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)	
	574)							[==>]	[1]
Со	mments: See Vis	sit 02 comments.							
2	G130M/109 6/FUVB/LP	(2) GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=63 4;			744 Secs (744 Secs)	
	2			1096 A	FP-POS=3;			[==>]	
	(COS.sp.145 7659)				SEGMENT=B;				[1]
	,				LIFETIME-POS=L P2				
Со	mments: See Vis	sit 02 comments.							
3		DARK	S/C, DATA, NONE			QASISTATES COS FUV HVLOW HVL		1 Secs (1 Secs)	
						OW OW		[==>]	[1]
Со			y schedule the SEG-B to SEG-A reconfig						
4	G130M/109 6/FUVA W	WAVE	COS/FUV, TIME-TAG, WCA	G130M	FP-POS=3;			160 Secs (160 Secs)	
	AVECAL/L			1096 A	SEGMENT=A;			[==>]	
	P2				FLASH=NO;				[1]
					LIFETIME-POS=L P2				
Со	mments: See Vis	sit 02 comments.							
5	G160M/153	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			106 Secs (106 Secs)	
	3/FUVA (COS.sp.145			1533 A	6; FP-POS=3;			[==>]	
	7660)				SEGMENT=A;				[1]
					LIFETIME-POS=L				[1]
					P4				
Co		sit 02 comments.							
6	G160M/157 7/FUVA	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=13 5;			135 Secs (135 Secs)	
	(COS.sp.145 7661)			1577 A	FP-POS=3;			[==>]	
	7001)				SEGMENT=A;				[2]
					LIFETIME-POS=L				
C	contac Con Wic	ait 02 a a anta			P4				
7	G160M/162	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=17			177 Secs (177 Secs)	
ľ	3/FUVA		505/101, 11ML-170, 15A	1623 A	7;			[==>]	
	(COS.sp.145 7663)			*	FP-POS=3;				
	,				SEGMENT=A;				[2]
					LIFETIME-POS=L P4				
Co	mments: See Vis	sit 02 comments			÷ ·				1



Proposal 16332 - WD0308-C3 (05) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

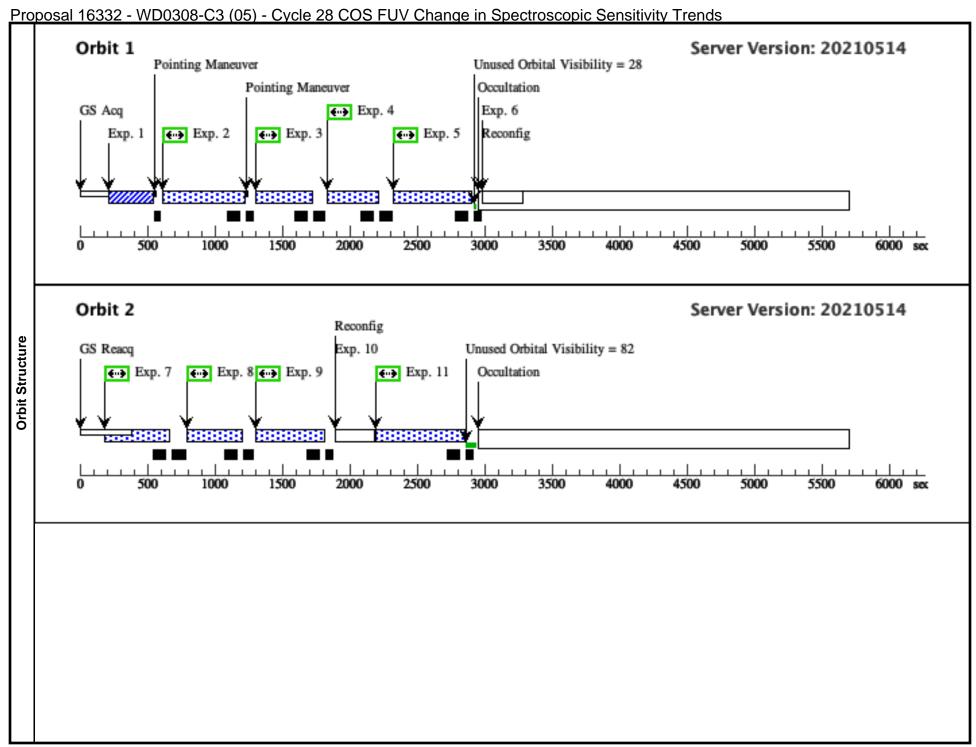
Ë	Proposal 16332, WD0308-C3 (				Wed Jun 30 14:01:14 GMT 2021
ي. ا	Diagnostic Status: No Diagnos				
/isi	Scientific Instruments: S/C, CO	S/FUV, COS/NUV			
-	Special Requirements: SCHED	100%			
	Comments: All G160M observa	tions are with $SEGMENT = B$ (i.e. segment A is tu	rned off).		
	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
gets	(1) WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 149.241 mas/yr	V=14.07+/-0.02	Reference Frame: ICRS
Ιğ		Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 66.919 mas/yr		
<u>a</u>		Equinox: J2000	Epoch of Position: 2000		
Fixed	Comments: Coordinates carried Proper motions changed to mass Category=STAR Description=[DB]	l over from Cycle 25 proposal, checked against SII /yr, from SIMBAD, also using the GAIA DR2 catal	MBAD, which uses the GAIA DR2 catalog. log.		

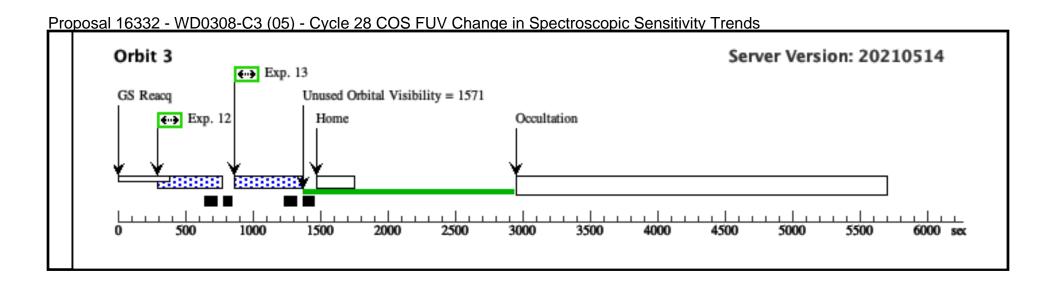
Proposal 16332 - WD0308-C3 (05) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbi
1	ACQ/IM	(1) WD0308-565	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
	(839564)							[==>]	[1]
		sit 01 comments.	COS THE THE TAG DO	G12014	DIJECTO ED C			202 5 (202 5 )	1
	G130M/105 5/LP2	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=28 3;			393 Secs (393 Secs)	
	(COS.sp.145			1055 A	FP-POS=3;			[==>]	
	7645)				SEGMENT=BOTH;				[1]
					LIFETIME-POS=L P2				
Com	ments: See Vis	sit 01 comments.			F2				
3	G130M/122	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=15			267 Secs (267 Secs)	
	(COS.sp.145			1222 A	7; FP-POS=3;			[==>]	
	7646)				LIFETIME-POS=L				[1]
					P4;				[1.
					SEGMENT=BOTH				
Com	ments: See Vis	sit 01 comments.							
4	G130M/129	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=12 6;			236 Secs (236 Secs)	
	(COS.sp.145 7647)			1291 A	FP-POS=3;			[==>]	
	7647)				LIFETIME-POS=L				[1
					P4;				1 2-
					SEGMENT=BOTH				
		sit 01 comments.							1
5	G140L/1280 (COS.sp.145	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=25 6;			366 Secs (366 Secs)	
	7781)			1280 A	FP-POS=3;			[==>]	
					LIFETIME-POS=L				[1]
					P4;				
Com		sit 01 comments.			SEGMENT=BOTH				
6	menis: see vis	DARK	S/C, DATA, NONE			QASISTATES CO	OS	1 Secs (1 Secs)	
						FUV HVLOW HY OW	VL	[==>]	[1]
Com	ments: Work-a	around to efficiently s	schedule the reconfiguration to SEG-A	. Eliminates SPSS	induced gaps.	011			
		(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			223 Secs (223 Secs)	
	3/B (COS.sp.145			1533 A	BUFFER-TIME=11			[==>]	
	7649)				3;				
					LIFETIME-POS=L P4;				[2]
					SEGMENT=B				
Com	ments: See Vis	sit 01 comments.							•

Proposal 16332 - WD0308-C3 (05) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends G160M/157 (1) WD0308-565 G160M FP-POS=3; 275 Secs (275 Secs) COS/FUV, TIME-TAG, PSA 7/B (COS.sp.145 7650) 1577 A BUFFER-TIME=16 [==>] LIFETIME-POS=L [2] P4; SEGMENT=B Comments: See Visit 01 comments. G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 372 Secs (372 Secs) 1623 A BUFFER-TIME=26 [==>] (COS.sp.145 7651) LIFETIME-POS=L [2] SEGMENT=B Comments: See Visit 01 comments. 10 DARK S/C, DATA, NONE QASISTATES COS 1 Secs (1 Secs) FUV HVLOW HVL *[==>]* [2] OW Comments: Work-around to efficiently schedule the reconfiguration to SEG-A. Eliminates SPSS induced gaps. G140L/800/ (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=25 367 Secs (367 Secs) **FUVA** 7; 800 A [==>] (COS.sp.145 FP-POS=3; 7778) [2] SEGMENT=A;

Communication of the state of t			LIFETIME-POS=L P4		[2]
Comments: See Visit 01 comments.	COC/EIN/ TIME TAC DCA	C140I	DIJEEED TIME 22	222 9 (222 9)	
12 G140L/1105 (1) WD0308-565 /FUVA (COS.sp.145 7846)	COS/FUV, TIME-TAG, PSA	G140L 1105 A	BUFFER-TIME=22 2; FP-POS=3; SEGMENT=A; LIFETIME-POS=L P4	332 Secs (332 Secs) [==>]	[3]
Comments: See Visit 01 comments.					
13 G130M/132 (1) WD0308-565 7/FUVA (COS.sp.145 7657)	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=16 4; FP-POS=3; LIFETIME-POS=L P4; SEGMENT=A	274 Secs (274 Secs) [==>]	[3]
Comments: See Visit 01 comments.					





Proposal 16332 - GD71-C3 (06) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Proposal 16332, GD71-C3 (06), implementation Wed Jun 30 14:01:14 GMT 2021

Diagnostic Status: No Diagnostics

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

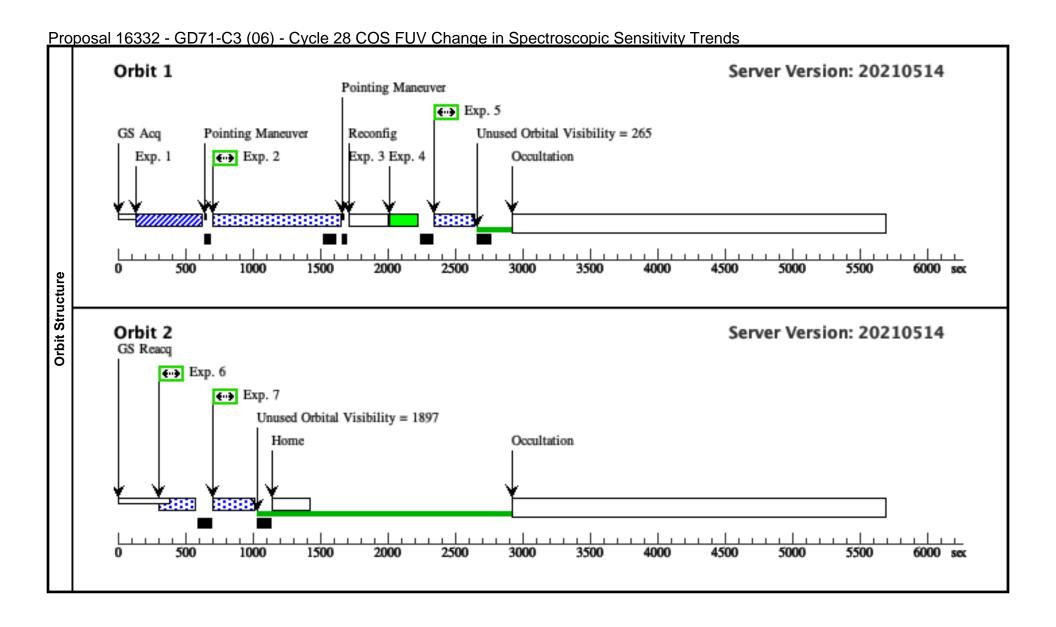
Special Requirements: SCHED 100%

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation George Chapman added Exposure 3
All G160M observations are with SEGMENT = A (i.e. segment B is turned off).

	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
ets	(2)	GD71	RA: 05 52 27.6200 (88.1150833d)	Proper Motion RA: 76.841 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS
g			Dec: +15 53 13.23 (15.88701d)	Proper Motion Dec: -172.944 mas/yr		
<u>a</u>			Equinox: J2000	Epoch of Position: 2000		
Fixed		s from previous co-ordinate STAR n=[DA]	notions updated with values from SIMBAD, which s are in decimal places in seconds of time and arcs			

Proposal 16332 - GD71-C3 (06) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IM (COS.ta.839	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs) [==>]	
<u> </u>	574)							[==>]	[1]
Con 2	mments: See Vis G130M/109	(2) GD71	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=63			744 Secs (744 Secs)	
_	6/FUVB/LP	(2) 3271	200/1017, 111112 1710, 1511	1096 A	4;			[==>]	
	(COS.sp.145				FP-POS=3;				
	7659)				SEGMENT=B; LIFETIME-POS=L				[1]
					P2				
	nments: FUVB Visit 02 comm		rnings come from FUVA).						
3		DARK	S/C, DATA, NONE			QASISTATES COS	S	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;			160 Secs (160 Secs)	
	6/FUVA W AVECAL/L			1096 A	SEGMENT=A;			[==>]	
	P2				FLASH=NO;				[1]
					LIFETIME-POS=L P2				
Con	nments: See Vis	sit 02 comments.							
5	G160M/153	(2) GD71	COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			106 Secs (106 Secs)	
	3/FUVA (COS.sp.145			1533 A	6; FP-POS=3;			[==>]	
	7660)				SEGMENT=A;				[1]
					LIFETIME-POS=L				[1]
					P4				
Con See	nments: FUVA Visit 02 comm	only (all ETC war ents.	rnings come from FUVB).						
6	G160M/157		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=13			135 Secs (135 Secs)	
	7/FUVA (COS.sp.145			1577 A	5;			[==>]	
	7661)				FP-POS=3; SEGMENT=A;				[2]
					LIFETIME-POS=L				[2]
					P4				
	nments: FUVA Visit 02 comm		rnings come from FUVB).						
7	G160M/162		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=17			177 Secs (177 Secs)	
	3/FUVA (COS.sp.145			1623 A	7;			[==>]	
	7663)				FP-POS=3; SEGMENT=A:				[2]
					LIFETIME-POS=L				[2]
					P4				
Can	nments: FIIVA	only (all ETC war	rnings come from FUVB).						



Proposal 16332 - WD0308-C4 (07) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Proposal 16332, WD0308-C4 (07), implementation Wed Jun 30 14:01:14 GMT 202

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: All G160M observations are with SEGMENT = B (i.e. segment A is turned off) for all other WD0308-565 visits.

However, for the June visit, since GD71 is not available, we use SEGMENT = BOTH to keep track of the segment A response, and the first DARK exposure (exp 006 in the other visits) has been re

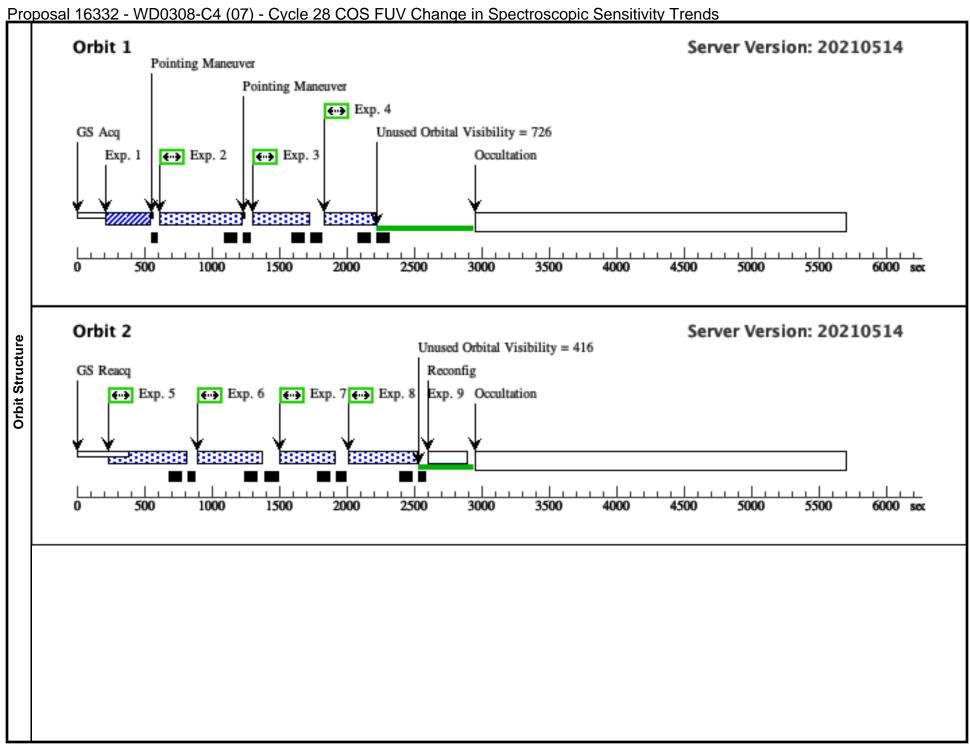
-	However		· · · · · · · · · · · · · · · · · · ·	11H to keep track of the segment A response, and t	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	-
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
ets	(1)	WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 149.241 mas/yr	V=14.07+/-0.02	Reference Frame: ICRS	
۱ğ			Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 66.919 mas/yr			
]a ∐a			Equinox: J2000	Epoch of Position: 2000			
Fixed	Proper n Category	notions changed to mas/ y=STAR	over from Cycle 25 proposal, checked against SI. /yr, from SIMBAD, also using the GAIA DR2 cata	MBAD, which uses the GAIA DR2 catalog. log.			
	Descript Extended	tion=[DB] d=NO					

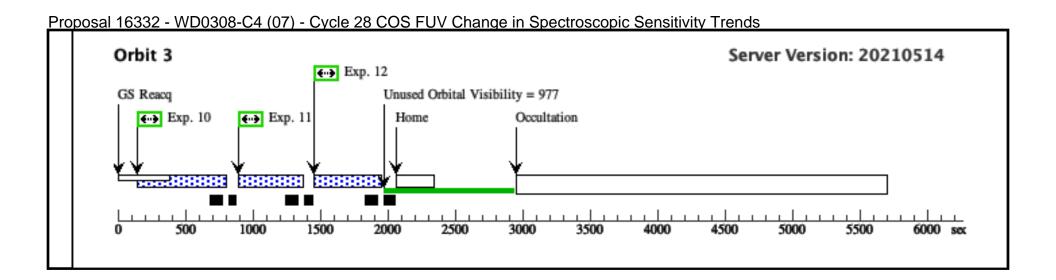
Proposal 16332 - WD0308-C4 (07) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

	# Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 ACQ/IM (839564)	(1) WD0308-565	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
	· · · · ·							[==>]	[1]
ŀ	Comments: See Vi	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=28			393 Secs (393 Secs)	
	5/LP2		COS/FUV, TIME-TAG, FSA	1055 A	3;			[==>]	
	(COS.sp.145 7645)			1033 71	FP-POS=3;			11	
	70.0)				SEGMENT=BOTH	•			[1]
					LIFETIME-POS=L P2				
	Comments: See Vi	sit 01 comments.			12				
	3 G130M/122	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=15			267 Secs (267 Secs)	
	(COS.sp.145			1222 A	7; FP-POS=3;			[==>]	
	7646)				LIFETIME-POS=L				[1]
					P4;				[1]
					SEGMENT=BOTH				
ŀ	Comments: See Vi								
	4 G130M/129 1	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=12 6;			236 Secs (236 Secs) [==>]	
	(COS.sp.145 7647)			1291 A	FP-POS=3;			[==>]	
Ş	7047)				LIFETIME-POS=L				[1]
ü					P4; SEGMENT=BOTH				
Exposures	Comments: See Vi	sit 01 comments			SEGMENT=BOTH				
EX	5 G140L/1280	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=25			366 Secs (366 Secs)	
	(COS.sp.145 7781)			1280 A	6;			[==>]	
	7701)				FP-POS=3;				<i>(2)</i>
					LIFETIME-POS=L P4;				[2]
					SEGMENT=BOTH				
	Comments: See Vi								
	6 G160M/153 3/Both	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			223 Secs (223 Secs)	
	(COS.sp.145			1533 A	BUFFER-TIME=11 3;			[==>]	
	7649)				LIFETIME-POS=L				[2]
					P4;				
	Comments: See Vi	sit 01 comments			SEGMENT=BOTH				
ŀ			COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			275 Secs (275 Secs)	
	7/Both (COS.sp.145		,,	1577 A	BUFFER-TIME=16	j		[==>]	
	7650)				5;				
					LIFETIME-POS=L P4;				[2]
					SEGMENT=BOTH				
	Comments: See Vi	sit 01 comments.							

Proposal 16332 - WD0308-C4 (07) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

	0M/162 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;		372 Secs (372 Secs)	
3/Bot (COS 7651)	S.sp.145		1623 A	BUFFER-TIME=26 2;	5	[==>]	
,	,			LIFETIME-POS=L P4;			[2
				SEGMENT=BOTH			
Comments:	: See Visit 01 comments.						
9	DARK	S/C, DATA, NONE			QASISTATES COS	1 Secs (1 Secs)	
					FUV HVLOW HVL OW	[==>]	l
Comments:	: Work-around to efficiently :	schedule the reconfiguration to SEG	A. Eliminates SPS	SS induced gaps.			
	L/800/ (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=25		367 Secs (367 Secs)	
FUV. (COS	A S.sp.145		800 A	7;		[==>]	
7778)				FP-POS=3;			
				SEGMENT=A;			
				LIFETIME-POS=L P4			
Comments:	: See Visit 01 comments.			• .			
11 G140	0L/1105 (1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=22		332 Secs (332 Secs)	
/FUV	'A		1105 A	2;		f==>1	
7846)	S.sp.145			FP-POS=3;			
,	,			SEGMENT=A;			
				LIFETIME-POS=L			
<i>a</i>	G 17: 1: 01			P4			
	See Visit 01 comments.	COC/ELIV TIME TAC DCA	G130M	BUFFER-TIME=16		274 \$ (274 \$)	
12 G130 7/FU	0M/132 (1) WD0308-565 VA	COS/FUV, TIME-TAG, PSA		4;		274 Secs (274 Secs)	
(COS	S.sp.145		1327 A	FP-POS=3;		[==>]	
7657)	)			LIFETIME-POS=L			
				P4;			
							1
				SEGMENT=A			





Proposal 16332 - WD0308-C5 (08) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Ë	Proposal 16332, WD0308-C5 (6	08), implementation	or original opening of the control o	<u> </u>	Wed Jun 30 14:01:14 GMT 2021					
ي. ا	Diagnostic Status: No Diagnostics									
/is	Scientific Instruments: S/C, COS									
-	Special Requirements: SCHED 1	100%								
	Comments: All G160M observation	ions are with SEGMENT = B (i.e. segment A is tu	rned off).							
	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
gets	(1) WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 149.241 mas/yr	V=14.07+/-0.02	Reference Frame: ICRS					
Ιğ		Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 66.919 mas/yr							
<u>a</u>		Equinox: J2000	Epoch of Position: 2000							
Fixed	Comments: Coordinates carried Proper motions changed to mas/ Category=STAR Description=[DB] Extended=NO	over from Cycle 25 proposal, checked against SII yr, from SIMBAD, also using the GAIA DR2 catal	MBAD, which uses the GAIA DR2 catalog. log.							

Proposal 16332 - WD0308-C5 (08) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

	Label Targe (ETC Run)	et	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IM (1) WI	D0308-565	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
	(839564)							[==>]	[1]
Con	nments: See Visit 01 co								1
2	G130M/105 (1) WI 5/LP2	D0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=28 3;			393 Secs (393 Secs)	
	(COS.sp.145			1055 A	FP-POS=3;			[==>]	
	7645)				SEGMENT=BOTH;				[1]
					LIFETIME-POS=L P2				[2]
Con	nments: See Visit 01 co	omments.							•
3	G130M/122 (1) WI	D0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=15			267 Secs (267 Secs)	
	2 (COS.sp.145			1222 A	7;			[==>]	
	7646)				FP-POS=3;				
					LIFETIME-POS=L P4;				[1]
					SEGMENT=BOTH				
Con	nments: See Visit 01 co	omments.							
4	G130M/129 (1) WI	D0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=12			236 Secs (236 Secs)	
	1 (COS.sp.145			1291 A	6;			[==>]	
	7647)				FP-POS=3;				
					LIFETIME-POS=L P4;				[1]
					SEGMENT=BOTH				
Con	nments: See Visit 01 co	omments.							
5	G140L/1280 (1) WI	D0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=25			366 Secs (366 Secs)	
	(COS.sp.145 7781)			1280 A	6;			[==>]	
	7701)				FP-POS=3;				
					LIFETIME-POS=L P4;				[1]
					SEGMENT=BOTH				
Con	nments: See Visit 01 cc	omments.							
6	DARK	K	S/C, DATA, NONE			QASISTATES CO	OS	1 Secs (1 Secs)	
						FUV HVLOW HV OW	/L	[==>]	[1]
Con	nments: Work-around	to efficiently so	chedule the reconfiguration to SEG-A	. Eliminates SPSS	induced gaps.				
7	G160M/153 (1) WI		COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			223 Secs (223 Secs)	
	3/B (COS.sp.145			1533 A	BUFFER-TIME=11			[==>]	
	7649)				3;				
					LIFETIME-POS=L P4;				[2]
					SEGMENT=B				
					SEGMENT-D				

Proposal 16332 - WD0308-C5 (08) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends FP-POS=3; G160M/157 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M 275 Secs (275 Secs) 7/B 1577 A BUFFER-TIME=16 [==>] (COS.sp.145 7650) LIFETIME-POS=L [2] P4; SEGMENT=B Comments: See Visit 01 comments. G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 372 Secs (372 Secs) 3/B 1623 A BUFFER-TIME=26 [==>] (COS.sp.145 7651) LIFETIME-POS=L [2] SEGMENT=B Comments: See Visit 01 comments. 10 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. G140L/800/ (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=25 367 Secs (367 Secs) **FUVA** 800 A [==>] (COS.sp.145 FP-POS=3; 7778) SEGMENT=A; [2] LIFETIME-POS=L P4 Comments: See Visit 01 comments. 12 G140L/1105 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=22 332 Secs (332 Secs) /FUVA 1105 A *[==>1* (COS.sp.145 FP-POS=3; 7846) SEGMENT=A; [3] LIFETIME-POS=L

BUFFER-TIME=16

LIFETIME-POS=L

FP-POS=3;

SEGMENT=A

P4;

274 Secs (274 Secs)

[3]

*[==>1* 

Comments: See Visit 01 comments.

13 G130M/132 (1) WD0308-565

Comments: See Visit 01 comments.

7/FUVA

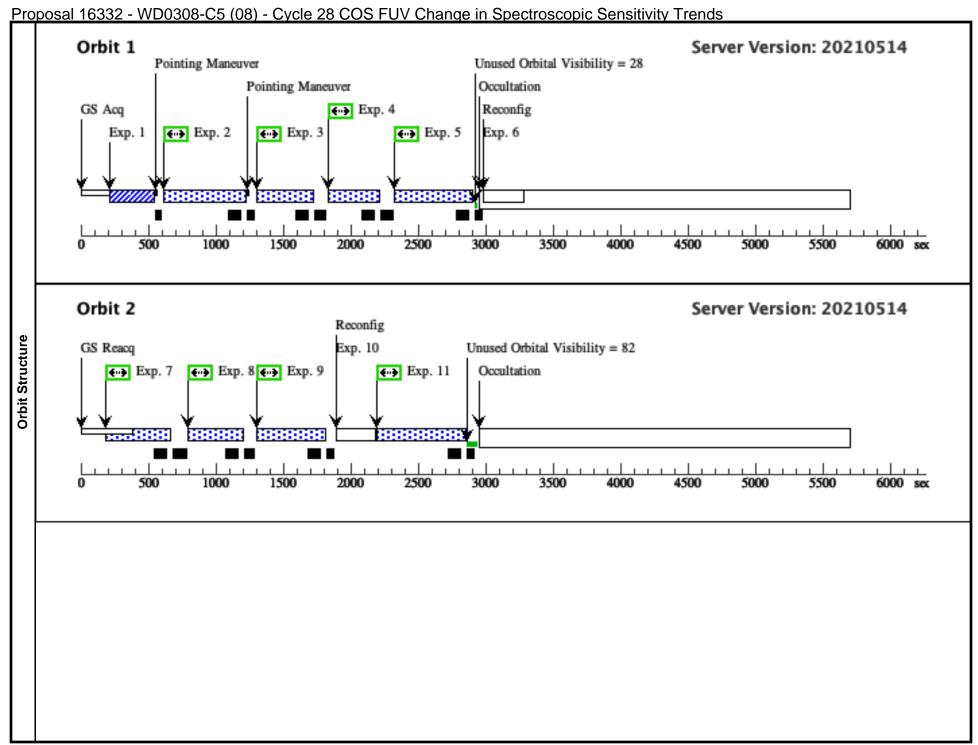
7657)

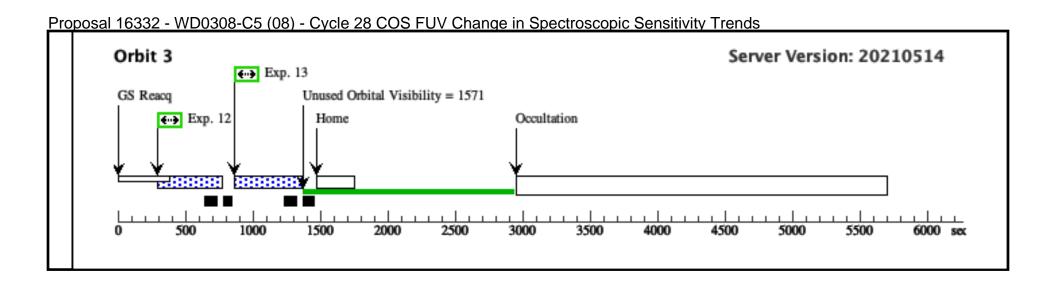
(COS.sp.145

G130M

1327 A

COS/FUV, TIME-TAG, PSA





Proposal 16332 - GD71-C4 (09) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Proposal 16332, GD71-C4 (09), implementation Wed Jun 30 14:01:14 GMT 2021

Diagnostic Status: No Diagnostics

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

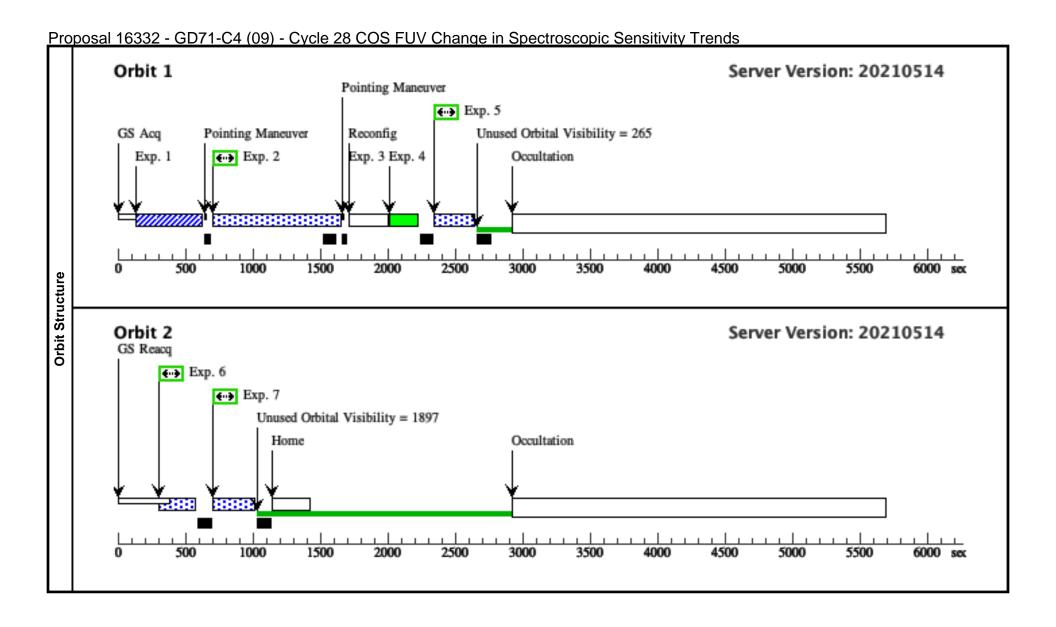
Special Requirements: SCHED 100%

Comments: exposure 4: GO wavecal to calculate the OSM shifts of the G130M/1096/FUVB observation George Chapman added Exposure 3
All G160M observations are with SEGMENT = A (i.e. segment B is turned off).

	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous		
ts	(2) GD71	RA: 05 52 27.6200 (88.1150833d)	Proper Motion RA: 76.841 mas/yr	V=13.06+/-0.01	Reference Frame: ICRS		
۱ğ		Dec: +15 53 13.23 (15.88701d)	Proper Motion Dec: -172.944 mas/yr				
<u>a</u> l		Equinox: J2000	Epoch of Position: 2000				
1 8	Comments: Co-ordinates and proper motions updated with values from SIMBAD, which uses the GAIA DR2 catalog.  Differences from previous co-ordinates are in decimal places in seconds of time and arcsec, within the stated errors.  Category=STAR  Description=[DA]  Extended=NO						

Proposal 16332 - GD71-C4 (09) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IM (COS.ta.839	(2) GD71	COS/NUV, ACQ/IMAGE, BOA	MIRRORB				90 Secs (90 Secs)	F17
Com	574)	sit 02 comments.						1>1	[1]
2	G130M/109		COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=63			744 Secs (744 Secs)	
	6/FUVB/LP 2			1096 A	4; FP-POS=3;			[==>]	
	(COS.sp.145 7659)				SEGMENT=B;				[1]
	7007)				LIFETIME-POS=L P2				[1]
	nments: FUVB Visit 02 comm		ings come from FUVA).		1 2				-
3	visii 02 comme	DARK	S/C, DATA, NONE			QASISTATES COS		1 Secs (1 Secs)	
						FUV HVLOW HVL OW	_	[==>]	[1]
Con	nments: Work-a	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;			160 Secs (160 Secs)	
	6/FUVA W AVECAL/L			1096 A	SEGMENT=A;			[==>]	
	P2				FLASH=NO;				[1
					LIFETIME-POS=L P2				
Con	nments: See Vis	sit 02 comments.							1
5	G160M/153		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=10			106 Secs (106 Secs)	
	3/FUVA (COS.sp.145			1533 A	6;			[==>]	
	7660)				FP-POS=3;				[1
					SEGMENT=A; LIFETIME-POS=L				[1
					P4				
	nments: FUVA Visit 02 comm		ings come from FUVB).						
5	G160M/157		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=13			135 Secs (135 Secs)	
	7/FUVA (COS.sp.145			1577 A	5;			[==>]	
	7661)				FP-POS=3;				
					SEGMENT=A; LIFETIME-POS=L				[2
					P4				
Con See	nments: FUVA Visit 02 comm	only (all ETC warn	ings come from FUVB).						
7	G160M/162		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=17			177 Secs (177 Secs)	
	3/FUVA (COS.sp.145			1623 A	7;			[==>]	
	7663)				FP-POS=3;				
					SEGMENT=A;				[2
					LIFETIME-POS=L P4				
		only (all FTC warm	sings come from FUVB).						•



Proposal 16332 - WD0308-C6 (10) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

Proposal 16332, WD0308-C6 (10), implementation Wed Jun 30 14:01:14 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: SCHED 100%

Comments: All G160M observations are with SEGMENT = B (i.e. segment A is turned off).

Contingency visit 10 exposures would occur after the move to LP5 and LP3 in October 2021. G130M/1291 and 1300 exposures have been changed from LP4 to LP5, and G140L exposures have been changed from LP4 to LP3. G160M and G130M/1055/1096/1222 cenwayes are unchanged.

	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	
ets	(1) WD0308-565	RA: 03 09 47.9200 (47.4496667d)	Proper Motion RA: 149.241 mas/yr	V=14.07+/-0.02	Reference Frame: ICRS	
§		Dec: -56 23 49.41 (-56.39706d)	Proper Motion Dec: 66.919 mas/yr			
<u>a</u>		Equinox: J2000	Epoch of Position: 2000			
Ϊ́Ε	Comments: Coordinates carried over from Cycle 25 proposal, checked against SIMBAD, which uses the GAIA DR2 catalog.  Proper motions changed to mas/yr, from SIMBAD, also using the GAIA DR2 catalog.					

Proposal 16332 - WD0308-C6 (10) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IM	(1) WD0308-565	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				45 Secs (45 Secs)	
Com	(839564)	sit 01 comments.						[==>]	[1]
2		(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=28			393 Secs (393 Secs)	
_	5/LP2	. ,	CO5/1 C V, TIME-1AG, 15A	1055 A	3;			[==>]	
	(COS.sp.145 7645)			1033 71	FP-POS=3;			1>1	
	7013)				SEGMENT=BOTH;				[1]
					LIFETIME-POS=L P2				
Com	ments: See Vis	sit 01 comments.							
3	G130M/122	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=15			267 Secs (267 Secs)	
	(COS.sp.145			1222 A	7; FP-POS=3;			[==>]	
	7646)				LIFETIME-POS=L				[1]
					P4;				[1]
					SEGMENT=BOTH				
Com	ments: See Vis	sit 01 comments.							
4	G130M/129	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=12			236 Secs (236 Secs)	
	(COS.sp.145 7647)			1291 A	6; FP-POS=3;			[==>]	
	7647)				LIFETIME-POS=L				[1]
					P5;				[1]
					SEGMENT=BOTH				
Com		sit 01 comments.							
5	G140L/1280 (COS.sp.145	(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G140L	BUFFER-TIME=25			366 Secs (366 Secs)	
	7781)			1280 A	6; FP-POS=3;			[==>]	
					LIFETIME-POS=L				[1]
					P3;				123
					SEGMENT=BOTH				
Com	ments: See Vis	sit 01 comments.							
6		DARK	S/C, DATA, NONE			QASISTATES CO FUV HVLOW HV	OS ZI	1 Secs (1 Secs)	
						OW	L	[==>]	[1]
Com	ments: Work-a	around to efficiently :	schedule the reconfiguration to SEG-A	. Eliminates SPSS	induced gaps.				
7		(1) WD0308-565	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			223 Secs (223 Secs)	
	3/B (COS.sp.145			1533 A	BUFFER-TIME=11			[==>]	
	7649)				3;				[2]
					LIFETIME-POS=L P4;				[2]
					SEGMENT=B				

Proposal 16332 - WD0308-C6 (10) - Cycle 28 COS FUV Change in Spectroscopic Sensitivity Trends FP-POS=3; G160M/157 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M 275 Secs (275 Secs) 7/B 1577 A BUFFER-TIME=16 [==>] (COS.sp.145 7650) LIFETIME-POS=L [2] P4; SEGMENT=B Comments: See Visit 01 comments. G160M/162 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; 372 Secs (372 Secs) 3/B 1623 A BUFFER-TIME=26 [==>] (COS.sp.145 7651) LIFETIME-POS=L [2] SEGMENT=B Comments: See Visit 01 comments. 10 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. G140L/800/ (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=25 367 Secs (367 Secs) **FUVA** 800 A [==>] (COS.sp.145 FP-POS=3; 7778) SEGMENT=A; [2] LIFETIME-POS=L P3 Comments: See Visit 01 comments. 12 G140L/1105 (1) WD0308-565 COS/FUV, TIME-TAG, PSA G140L BUFFER-TIME=22 332 Secs (332 Secs)

FP-POS=3;

FP-POS=3;

P5;

SEGMENT=A;

LIFETIME-POS=L

BUFFER-TIME=16

LIFETIME-POS=L

SEGMENT=A

*[==>1* 

*[==>1* 

274 Secs (274 Secs)

[3]

[3]

1105 A

G130M

1327 A

COS/FUV, TIME-TAG, PSA

/FUVA

7846)

7/FUVA

7657)

(COS.sp.145

(COS.sp.145

Comments: See Visit 01 comments.

13 G130M/132 (1) WD0308-565

Comments: See Visit 01 comments.

