

14841 - Optimization of COS/FUV spectrum placement at lifetime position 4

Cycle: 23, Proposal Category: CAL/COS (Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used		OP Current with Visit?
01	(2) WD0308-565	cos	3	07-Sep-2016 19:13:08.0	yes
	DARK	COS/FUV			
	NONE	COS/NUV			
		S/C			

³ Total Orbits Used

ABSTRACT

Predictions for the gain sag at the third lifetime position of COS require a move to the fourth lifetime position by July 2017. This program aims at obtaining deep (S/N = 60 per resel) exposures of WD0308-565 with G130M/1291 and G130M/1222 to optimize the location of LP4. We selected the 1222 and 1291 cenwaves because they have the widest footprint on the detector. To determine the position at which there is no overlap between the LP3 gain sagged areas and the LP4 profiles, we will will derive preliminary spectral profiles and compare their footprints to the underlying gain maps

Proposal 14841 (STScI Edit Number: 1, Created: Wednesday, September 7, 2016 6:13:09 PM EST) - Overview obtained at the beginning of July (PID=14525).

OBSERVING DESCRIPTION

We are obtaining WD0308-565 spectra positioned at -2.52" (cross-dispersion) and +0" (dispersion) from LP3 to determine optimal placement of the spectra at LP4. Observations are taken with the G130M/1222 and G130M/1291 cenwaves, which have the widest footprints on the detector. Under the assumption of typical pointing uncertainties of 0.3", we seek to determine the position at which the G130M/1291 and G130M/1222 cenwaves can successfully be extracted against the LP3 gain sagged regions. These data will also provide preliminary cross-dispersion profiles and aperture traces.

The observations consists of one visit with three orbits. The G130M/1291 cenwave is observed at HV (FUVA/B)=163,163, and focus=+40 (with respect to LP3 focus), while the G130M/1222 cenwave is observed at HV (FUVA/B)=163,167, and focus=+142 (wrt LP3). Optimal values of HV and focus have been obtained from the analysis of the LP4 exploratory programs gain map program (PID: 14525) and mini focus sweep program (PID: 14527) ran at the beginning of July.

We assume a plate scale of -1"/21 motor steps in the XAPER (cross-dispersion) direction and 1"/19 motor steps in the YAPER (dispersion) direction, following Table 1 of TIR 2013-03, and we set the home position to LP3 so XAPER and YAPER are relative to that position.

Our target is a total S/N of ~60 across all FP-POS at 1210 Angstroms for G130M/1291, and at 1130 Angstroms for G130M/1222 to ensure adequate spectral extraction near sagged regions of the FUVB segment.

We request the data to be fast tracked once the execution is complete.

Proposal 14841 - G130M/1291-G130M//1222 (01) - Optimization of COS/FUV spectrum placement at lifetime position 4

Proposal 14841, G130M/1291-G130M//1222 (01), implementation Wed Sep 07 23:13:09 GMT 2016 **Diagnostic Status: Warning** Scientific Instruments: S/C, COS, COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 06-SEP-2016:00:00:00 Comments: Use HV levels=163/163 for G130M/1291, and HV levels=163/167 for G130M/1222 and take external exposures of WD 0308-565 at aperture position = -2.52" away from LP3. First exposure is an ACQ/IMAGE, which should provide very good acquisition and positioning of the spectrum. This is followed by a short science exposure to define the reference point for subsequent ALIGN/APER exposures. The first ALIGN/APER moves the AM by -2.52", assuming -21 motor steps/". Buffer times are equivalent to the ETC returned values multiplied by 0.9 as a safety margin. Based on the FUV monitoring programs, we do not use the 2/3 safety margin based on the fact that the target has been observed before and its SED is well characterized. (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE iagnostic (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (G130M/1291-G130M//1222 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE Name **Target Coordinates** Targ. Coord. Corrections Fluxes Miscellaneous Fixed Targets (2) WD0308-565 RA: 03 09 47.9200 (47.4496667d) Proper Motion RA: 150.6 mas/yr V=14.07+/-0.02 Reference Frame: ICRS Alt Name1: GSC08495-Dec: -56 23 49.41 (-56.39706d) Proper Motion Dec: 64.3 mas/yr Equinox: J2000 Epoch of Position: 2000 Alt Name2: 3UC068-Radial Velocity: -68 km/sec 006526 Comments: Position and proper motions from the Third U.S. Naval Observatory CCD Astrograph Catalog (UCAC3) Zacharias et al. 2009 Extended=NO

Proposal 14841 - G130M/1291-G130M//1222 (01) - Optimization of COS/FUV spectrum placement at lifetime position 4

Opt. Params.

Special Reqs.

Groups

Exp. Time (Total)/[Actual Dur.]

Orbit

Spectral Els.

Config,Mode,Aperture

Label

Target

	(ETC Run)							• • • • • • • • • • • • • • • • • • • •	
1	HVA 163; H	DARK	S/C, DATA, NONE			SAA CONTOUR 31;		244 Secs (244 Secs)	
	VB 163					SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN			
						OM;			<i>[11]</i>
						QESIPARM ENDC TSB 163;			[1]
						QESIPARM ENDC TSA 163;			
						QESIPARM SEGM ENT AB			
Com	ments: SQL re	quired for qexposure	e to specify the si_used = "COS"						
The	overhead on th	nis exposure can actu	ally be hidden under the guide star ex	posure and the prev	vious occultation, but this	s is not reflected by APT	and so the visits do n	ot appear to fit within the allocated or	bits
Ove	rhead on the ro	ump-up is calculated	per Alan Welty's stated formula for the	e timing:					
expt	ime=55+SECI	PERCT x (MAX(END	CTSA,ENDCTSB)-100)						
	PERCT=3 s X(ENDCTSA,E	(NDCTSB)= 163							
expt	ime=244								
	es: 1. Special o	observation reauirem	ent SAA = 31 needed whenever execut	ing special comma	nds (SAA = 31 is implice	tlv assumed for all stand	dard COS commands).	. 2. Once HV is set through S/C only a	nother S/C
Note			e it (no need to reset HV after OSM m		T				
	ACQ/IM	(2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA	MIRRORA				42 Secs (42 Secs)	
	ACQ/IM (826629)	(2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA					[==>]	[1]
	ACQ/IM (826629) G130M/129			G130M	FP-POS=1;			[==>] 12 Secs (12 Secs)	[1]
	ACQ/IM (826629)	(2) WD0308-565 (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA		FP-POS=1; BUFFER-TIME=29			[==>]	[1]
	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52	(2) WD0308-565 (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA	G130M	BUFFER-TIME=29			[==>] 12 Secs (12 Secs)	
	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3	(2) WD0308-565 (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA	G130M	BUFFER-TIME=29			[==>] 12 Secs (12 Secs) [==>]	
2 3 4 <i>Com</i>	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0)	(2) WD0308-565 (2) WD0308-565 NONE	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER for XAPER (X-Dispersion)	G130M	BUFFER-TIME=29 0 XAPER=53;			[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs)	[1]
2 3 4 <i>Com</i>	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0)	(2) WD0308-565 (2) WD0308-565 NONE	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER for XAPER (X-Dispersion)	G130M	BUFFER-TIME=29 0 XAPER=53;			[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs)	[1]
2 3 4 Com Assu	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) uments: Assuma ume - 19 motor	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (it is moved it will not	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER or XAPER (X-Dispersion) Dispersion) t be reset as long as the config (COS/F	G130M 1291 A	BUFFER-TIME=29 0 XAPER=53; YAPER=0		's email).	[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs) [==>]	[1]
2 3 4 Com. Note	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) aments: Assuma ame - 19 motor e: once the API	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (it is moved it will not	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER or XAPER (X-Dispersion) Dispersion)	G130M 1291 A	BUFFER-TIME=29 0 XAPER=53; YAPER=0		's email).	[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs) [==>]	[1]
2 3 4 Com. Note	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) ments: Assumance - 19 motor e: once the API FOCUS adju st 1291	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if the steps/" for YAPER (if the steps/" NONE	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER for XAPER (X-Dispersion) Dispersion) to be reset as long as the config (COS/F) COS, ALIGN/OSM	G130M 1291 A	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't confocus=40	hange (from Alan Welty'	's email).	[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs) [==>] 0 Secs (0 Secs) [==>]	[1]
2 3 4 Common Assurance Notes	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) aments: Assuma ex: once the API FOCUS adju st 1291	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if its moved it will not NONE (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER or XAPER (X-Dispersion) Dispersion) t be reset as long as the config (COS/F	G130M 1291 A EUV) and aperture of G130M	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't confocus=40 FP-POS=1;	hange (from Alan Welty) POS TARG null,-2.5	's email).	==> 12 Secs (12 Secs) ==> 10.0 Secs (0 Secs) ==> 10.0 Secs (0 Secs) ==> 10.0 Secs (0 Secs) 10.0 Secs	[1]
2 3 4 Com Assu	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) aments: Assuma e: once the API FOCUS adju st 1291 G130M/129 1 (COS.sp.826	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if its moved it will not NONE (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER for XAPER (X-Dispersion) Dispersion) to be reset as long as the config (COS/F) COS, ALIGN/OSM	G130M 1291 A	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't confocus=40	hange (from Alan Welty) POS TARG null,-2.5	's email).	[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs) [==>] 0 Secs (0 Secs) [==>]	[1]
2 3 4 Com. Note	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) aments: Assuma ex: once the API FOCUS adju st 1291	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if its moved it will not NONE (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER for XAPER (X-Dispersion) Dispersion) to be reset as long as the config (COS/F) COS, ALIGN/OSM	G130M 1291 A EUV) and aperture of G130M	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't composition FOCUS=40 FP-POS=1; BUFFER-TIME=29	hange (from Alan Welty) POS TARG null,-2.5	's email).	==> 12 Secs (12 Secs) ==> 10.0 Secs (0 Secs) ==> 10.0 Secs (0 Secs) ==> 10.0 Secs (0 Secs) 10.0 Secs	[1]
2 3 4 Commandation of the	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) ments: Assumance - 19 motor e: once the API FOCUS adju st 1291 G130M/129 1 (COS.sp.826 631)	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if its moved it will not NONE (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER for XAPER (X-Dispersion) Dispersion) to be reset as long as the config (COS/F) COS, ALIGN/OSM	G130M 1291 A EUV) and aperture of G130M	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't compared to the second to t	hange (from Alan Welty) POS TARG null,-2.5	's email).	==> 12 Secs (12 Secs) ==> 10.0 Secs (0 Secs) ==> 10.0 Secs (0 Secs) ==> 10.0 Secs (0 Secs) 10.0 Secs	[1]
2 3 4 Com Assure	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D) from LP3 (0) mments: Assume - 19 motor e: once the AP/ FOCUS adju st 1291 G130M/129 1 (COS.sp.826 631) G130M/129 1	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if is moved it will not NONE (2) WD0308-565 (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER For XAPER (X-Dispersion) Dispersion) to be reset as long as the config (COS/F) COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA	G130M 1291 A EUV) and aperture of G130M 1291 A	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't compared to the second seco	POS TARG null,-2.5	's email).	[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs) [==>] 0 Secs (0 Secs) [==>] 468 Secs (468 Secs) [==>]	[1]
2 3 4 Com. Assu. Note	ACQ/IM (826629) G130M/129 1 Setup (COS.sp.826 631) move -2.52 arcsec (XD) +0 arcsec(D)) from LP3 (0) ments: Assumance - 19 motor e: once the API FOCUS adju st 1291 G130M/129 1 (COS.sp.826 631)	(2) WD0308-565 (2) WD0308-565 NONE e - 21 motor steps/" for YAPER (if is moved it will not NONE (2) WD0308-565 (2) WD0308-565	COS/NUV, ACQ/IMAGE, BOA COS/FUV, TIME-TAG, PSA COS, ALIGN/APER For XAPER (X-Dispersion) Dispersion) to be reset as long as the config (COS/F) COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA	G130M 1291 A EUV) and aperture of G130M 1291 A	BUFFER-TIME=29 0 XAPER=53; YAPER=0 & LP (PSA, LP3) don't composition for the second	POS TARG null,-2.5	's email).	[==>] 12 Secs (12 Secs) [==>] 0.0 Secs (0 Secs) [==>] 0 Secs (0 Secs) [==>] 468 Secs (468 Secs) 468 Secs (468 Secs)	[1]

	G130M/129 (2) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,-2.5	468 Secs (468 Secs)	
	1 (COS.sp.826		1291 A	BUFFER-TIME=29	2	[==>]	
	631)			0; FLASH=S0060D03 0			[1
9	G130M/129 (2) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=4;	POS TARG null,-2.5	468 Secs (468 Secs)	
	1 (COS.sp.826		1291 A	BUFFER-TIME=29	2	[==>]	
	631)			0;			[2
				FLASH=S0060D03			
10	HVA 163; H DARK	S/C, DATA, NONE			SAA CONTOUR 31;	44 Secs (44 Secs)	
	VB 167				SPEC COM INSTR ELHVADJPROP;	[==>]	
					QESIPARM ENDC		[2
					TSB 167		
Con	mments: Set HV to 163/167.						
Ехр	oosure time has been calculated follo	owing the rule by Alan Welty:					
If n	either segment is being set higher: E	Exp time = $39 s$					
		•					
	e: Exp time = 39 + ceiling (max_up						
HV	V change (167-163) = 4 for Segment	B. Therefore, exposure time is 39 sec	conds + ceiling(4*)	(1.1) = 44 seconds			
Not	tes: Special observation requiremen	t SAA = 31 needed whenever executi	ng special comma	nds (SAA = 31 is implicetly	assumed for all standard COS com	nmands).	
11	Initialize G1 (2) WD0308-565 30M/1222 f	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=1;	POS TARG null,-2.5	0.1 Secs (0.1 Secs)	
	JUNI/ 1 Z Z Z 1		1222 A	BUFFER-TIME=35	2	1 6 7	l l
	ocus		1222 A			[==>]	
	(COS.sp.826		1222 A	4;		[==>]	[2
			1222 A			[==>]	[2
Con	(COS.sp.826 632)	rigger HV or aperture change	1222 A	4; FLASH=NO;		[==>]	[2
	(COS.sp.826 632) mments: Note: OSM move does not t FOCUS adju NONE	rigger HV or aperture change COS, ALIGN/OSM	1222 A	4; FLASH=NO;		0 Secs (0 Secs)	[2
	(COS.sp.826 632) mments: Note: OSM move does not t		1222 A	4; FLASH=NO; WAVECAL=NO			[2
	(COS.sp.826 632) mments: Note: OSM move does not t FOCUS adju NONE		G130M	4; FLASH=NO; WAVECAL=NO	POS TARG null,-2.5	0 Secs (0 Secs)	
12	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2	COS, ALIGN/OSM		4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35	2	0 Secs (0 Secs) [==>]	
12	(COS.sp.826 632) mments: Note: OSM move does not t FOCUS adju NONE st 1222	COS, ALIGN/OSM	G130M	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4;	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs)	[2
12	(COS.sp.826 632) mments: Note: OSM move does not t FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826	COS, ALIGN/OSM	G130M	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs)	[2
12	(COS.sp.826 632) mments: Note: OSM move does not t FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565	COS, ALIGN/OSM	G130M	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs)	
12	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA	G130M 1222 A	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>]	[2
12	(COS.sp.826 632) mments: Note: OSM move does not t FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4;	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs)	[2
12	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs)	[2
12	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=3;	2	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs)	[2
12 13 14	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632)	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M 1222 A	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=3; BUFFER-TIME=35	POS TARG null,-2.5	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs) [==>]	[.
12 13 14	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632)	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M 1222 A	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=3; BUFFER-TIME=35 4;	POS TARG null,-2.5	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs) [==>] 1000 Secs (1000 Secs)	
12 13 14	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632)	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M 1222 A	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=3; BUFFER-TIME=35	POS TARG null,-2.5	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs) [==>] 1000 Secs (1000 Secs)	[2
12 13 14	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632)	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M 1222 A	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=3; BUFFER-TIME=35 4;	POS TARG null,-2.5	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs) [==>] 1000 Secs (1000 Secs)	
12 13 14	(COS.sp.826 632) mments: Note: OSM move does not to FOCUS adju NONE st 1222 G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632) G130M/122 (2) WD0308-565 2 (COS.sp.826 632)	COS, ALIGN/OSM COS/FUV, TIME-TAG, PSA COS/FUV, TIME-TAG, PSA	G130M 1222 A G130M 1222 A	4; FLASH=NO; WAVECAL=NO FOCUS=142 FP-POS=1; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=2; BUFFER-TIME=35 4; FLASH=S0250D10 0 FP-POS=3; BUFFER-TIME=35 4;	POS TARG null,-2.5	0 Secs (0 Secs) [==>] 865 Secs (865 Secs) [==>] 865 Secs (865 Secs) [==>] 1000 Secs (1000 Secs)	[2

Proposal 14841 - G130M/1291-G130M//1222 (01) - Optimization of COS/FUV spectrum placement at lifetime position 4

16	G130M/122 (2) WD0308-565	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=4;	POS TARG null,-2.5	1000 Secs (1000 Secs)	
	2 (COS.sp.826		1222 A	BUFFER-TIME=35	5 2	[==>]	
	632)			4;			[3]
				FLASH=S0250D10 0			
17	Return to no DARK	S/C, DATA, NONE			SAA CONTOUR 31;	44 Secs (44 Secs)	
	minal HV va lues: HVA 1 67; HVB 16				SPEC COM INSTR ELHVADJPROP;	[==>]	
	9				QESIPARM ENDC TSB 169;		[3]
					QESIPARM ENDC TSA 167		
Con	nments: Return to nominal HV 16	7/169 (from 163/167).					
Exp	osure time has been calculated fo	llowing the rule by Alan Welty:					
If ne	either segment is being set higher	$Exp\ time = 39\ s$					
Else	$E: Exp \ time = 39 + ceiling \ (max_a)$	_upward_count_delta * 1.1)					
HV	change (167-163) = 4 for Segme	nt A, HV change (169-167) = 2 for Seg.	ment B. Therefore,	exposure time is 39 secon	ds + ceiling(4*1.1) = 44 seconds		
Note	es: Special observation requirem	ent SAA = 31 needed whenever executi	ng special comma	ads(SAA = 31 is implicetly)	assumed for all standard COS com	nmands)	



