Proposal 16326 (STScI Edit Number: 2, Created: Wednesday, December 16, 2020 at 12:00:21 PM Eastern Standard Time) - Overview



16326 - Cycle 28 COS FUV Target Acquisition Monitor

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		OP Current with Visit?
25	(1) WD-1657+343	COS/FUV	2	16-Dec-2020 12:00:19.0	yes
		COS/NUV			

² Total Orbits Used

ABSTRACT

The COS Target Acquisition (TA) monitor is divided into two pieces, NUV and FUV. This program is the FUV portion and is designed specifically for FUV LP4. FUV LP4 uses NUM_POS > 1 PEAKXDs for cross-dispersion TA. All previous LPs used NUM_POS=1 PEAKXDs. The NUM_POS=1 PEAKXDs required the routine monitoring of the grating-dependent WCA-to-PSA offsets. The NUM_POS > 1 PEAKXDs do not use these flight software (FSW) patchable constants as they use the LTAPKD FSW macro used in ACQ/PEAKD, but re-purposed for use in the cross-dispersion (XD).

This program uses the HST standard star WD1657+343. This target was used previously in the COS TA Monitor programs, 13124 (C20), 13526 (C21), 13972 (C22), 14440 (C23), 14857 (C24), 15386 (C25), 15537 (C26) and 15775 (C27). We re-use this target here as it is safe with

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OBSERVING DESCRIPTION

This program contains a single two-visit annual visit on a target with year-round visibility (WD1657+343). We request that this program execute in early 2021 (via a BETWEEN), and within 30 days of Visit PB of Program 16331 (via a visit-level comment).

The program is divided into 3 parts, one for each FUV grating, at LP4. The central wavelengths tested are C1291, C1280, and C1600. Each non-interruptable sequence follows the same initial steps.

- 1) Center the target with a PSA/MIRRORA ACQ/IMAGE
- 2) Take an NUV image of the target and the lamp to verify target centering
- 3) Take a low S/N spectrum (~5/RE) before any FUV tests CENTERED in XD
- 4) Take a low S/N spectrum before any FUV tests at +1.3" in XD (exposure time adjusted to obtain similar S/N as CENTERED)
- 5) Take a low S/N spectrum before any FUV tests at -1.3" in XD (exposure time adjusted to obtain similar S/N as CENTERED)
- 6) Perform a NUM_POS=3, STEP_SIZE=1.3, CENTER=FLUX-WT PEAKXD at LP4
- 7) Take a confirmation low S/N spectrum CENTERED in XD, after the PEAKXD

For G130M only (C1291) this series is extended to compare NUM_POS=5 PEAKXDs to NUM_POS=3 PEAKXDs, and to monitor PEAKD with the following exposures:

- 8) Take a low S/N spectrum at +1.8" in XD (exposure time adjusted to obtain similar S/N as CENTERED)
- 9) Take a low S/N spectrum at +0.9" in XD (exposure time adjusted to obtain similar S/N as CENTERED)
- 10) Take a low S/N spectrum at -0.9" in XD (exposure time adjusted to obtain similar S/N as CENTERED)
- 11) Take a low S/N spectrum at -1.8" in XD (exposure time adjusted to obtain similar S/N as CENTERED)
- 12) Perform a NUM_POS=5, STEP_SIZE=0.9, CENTER=FLUX-WT-FLR PEAKXD at LP4
- 13) Take a low S/N spectrum CENTERED in XD, after the PEAKXD
- 14) Perform a NUM_POS=5, STEP_SIZE=0.9, CENTER=FLUX-WT-FLR PEAKD at LP4
- 15) Take a final low S/N spectrum CENTERED in XD, after the PEAKD

Offsets achieved by "Y" POS_TARGs in the offset spectra.

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All of the G130M exposures are in the first orbit, all the G140L and G160M are in the second orbit.

Other Notes:

- * The default PEAKXD STEP-SIZE is 1.0" when NUM_POS=5. However, at +/- 2", the POS_TARGS would not create enough counts to track the operation of the NUM_POS=5 PEAKXD. 5x0.9" is used instead.
- * Comments for each exposure give the Buffer Time calculations. However, in most cases we use slighter shorter buffer times in case the targets are brighter than expected. The logic being that if any of the PEAKXDs are not exactly perfect, the followup POS-TARGs may be off and give different count rates than expected.

Proposal 16326 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - Cycle 28 COS FUV Target Acquisition Monitor Proposal 16326, PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25), implementation Wed Dec 16 17:00:21 GMT 2020 **Diagnostic Status: Warning** Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 80%; BETWEEN 01-JAN-2021:00:00:00 AND 31-JAN-2021:00:00:00 Comments: This visit has the following timing requirement: * It should execute between 1/1/21 and 1/31/21 * It should execute within 30 days of visit PB of program 16331 Note that there are 8 exposures with "Y" POS_TARGs to intentionally offset the target in XD by +/- 1.3" all gratings, and then +/- 0.9 and +/- 1.8 in a different sequence for G130M. (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE Diagnostic (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT **Target Coordinates** Targ. Coord. Corrections Miscellaneous Fluxes Name (1) WD-1657+343 RA: 16 58 51.1202 (254.7130008d) Proper Motion RA: 11 mas/yr V = 16.1Reference Frame: ICRS Dec: +34 18 53.29 (34.31480d) Proper Motion Dec: -31 mas/yr Equinox: J2000 Epoch of Position: 2000 Radial Velocity: 78 km/sec Comments: COS.ta.1032496 indicates S/N = 40 in 5.2s. SIMBAD cordinates are 16 58 51.1202 +34 18 53.293 Proper Motion from SIMBAD is Proper motions mas/yr: 11-31 [3 3 133] C 2011MNRAS.417.1210G, RV=78 B 16.12 [~] D ~ u (AB) 15.749 [0.005] B 2013yCat.5139....0A

B 16.12 [~] D ~ u (AB) 15.749 [0.005] B 2013yCat.5139....0A g (AB) 16.139 [0.003] B 2013yCat.5139....0A r (AB) 16.691 [0.004] B 2013yCat.5139....0A i (AB) 17.054 [0.005] B 2013yCat.5139....0A z (AB) 17.388 [0.015] C 2013yCat.5139....0A Category=STAR

Description=[DA] Extended=NO Proposal 16326 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - Cycle 28 COS FUV Target Acquisition Monitor

	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbi
	PSA/MIRR ORB ACQ/I MAGE (COS.ta.103 2496)	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)		[1]
For th Repor	he Lamp, LAI rted Lamp Eve	MP/CURRENT USEL ents = 3316 counts : I	t BA of 14857 (ldozbadhq). Bck subt. D = P2/Medium, LAMP EXPTIME = Rate = 276.33334 counts/s	12.000 s		= 73.69, ET=13s			
Lamp Actua	Background al Lamp Event	events in 50x300 TA . s = 3204 counts : Rai	BOX for lampflash time $(12s) = 112$ te = 267.026 counts/s	$cts: Rate = 9.308 \ co$	ounts/s				
2			COS/NUV, TIME-TAG, PSA	MIRRORB	0;	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	<i>I</i> 1	[1]
Comn USEL	,	2	urrent, see above for expected count r	ates. To get PtNe La	amp 2, there are 2 QESIP	ARMs set:			
	PSA/C1291/ 3 - CENTE R (COS.sp.103 2420)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; FLASH=YES; BUFFER-TIME=30 0;	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)		[1]
		andard Star, S/N ~ 5 (1) WD-1657+343	in 25s COS/FUV, TIME-TAG, PSA	G130M	LIFETIME-POS=L P4 FP-POS=3;	POS TARG null,1.3;	Sequence 1-15 Non-I	55 Secs (55 Secs)	
	3 +1.3arcsec onds in XD (COS.sp.103 2420)			1291 A	FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring	r . 7	[1]
Comn	nents: At R=1	.3", the throughput is	s ~45%. To get the same counts, we n	eed to increase the e	exposure time.				
	PSA/C1291/ 3 -1.3arcsec onds in XD	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; FLASH=YES;		3 Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	` ′	
	(COS.sp.103 2420)				BUFFER-TIME=50 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM			[1]
Comn	nents: At R=1	.3", the throughput is	s ~45%. To get the same counts, we n	need to increase the e	P4 exposure time.	ENT MEDIUM			1

ó	PSA/C1291/ (1) WD-1657+343 PEAKXD/N P=3/DEF (COS.sa.103 2423)	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A	LIFETIME-POS=LP 4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)		[1]
Con	,	IZE are not included to make sure tha	t the correct DE	EFAULTS of NUM_POS=3 a	and STEP_SIZE=1.3",	` '	-WT are still inserted.	
Tar	eet is the HST Standard Star:WD-165	57+343		• –				
	uested Signal/Noise Ratio = 40.000 f s: Time = 0.4206 seconds Time Required for Requested SNR Time Required for Requested SNR	for Segment A and Segment B combine in Segment A only: 1.2717 in Segment B only: 0.6284	ed					
7		COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;		Sequence 1-15 Non-I	25 Secs (25 Secs)	
	3 - After NU M_POS=3 P		1291 A	FLASH=YES;	MP LINE2; QESIPARM CURR	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	EAKXD (COS.sp.103			BUFFER-TIME=30 0;	ENT MEDIUM	FUV TA Monitoring (25)		[1]
	2420)			LIFETIME-POS=L P4				
3	PSA/C1291/ (1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,1.8;	Sequence 1-15 Non-I	182 Secs (182 Secs)	
	3 +1.8arcsec onds in XD		1291 A	FLASH=YES;	QESIPARM USELA	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	(COS.sp.103 2420)			BUFFER-TIME=10 00;	MP LINE2; QESIPARM CURR ENT MEDIUM	FUV TA Monitoring		/1
	2420)			LIFETIME-POS=L				11.
				P4				
Con	ments: At R=1.8", the throughput is PSA/C1291/ (1) WD-1657+343	~13%. To get the same counts, we need COS/FUV, TIME-TAG, PSA	ed to increase th G130M	ne exposure time. FP-POS=3:	POS TARG pull 0.0:	Sequence 1-15 Non-I	35 Secs (35 Secs)	
	3 +0.9arcsec onds in XD (COS.sp.103 2420)	COSTOV, TIME THO, TOX	1291 A	FLASH=YES;		nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring	` '	
				BUFFER-TIME=40	,			
				0;	QESIPARM CURR ENT MEDIUM			[1
				LIFETIME-POS=L P4				
Con		~71%. To get the same counts, we nee					T	
0	PSA/C1291/ (1) WD-1657+343 3 -0.9arcsec	COS/FUV, TIME-TAG, PSA	G130M	A FLASH=YES; ; nt in PSA/MIRROR B ACQ/IMAGE then	` '			
	onds in XD (COS.sp.103 2420)		1291 A		, QESIPARM USELA	A B ACQ/IMAGE then FUV TA Monitoring (25)	[==>]	
				BUFFER-TIME=40 0;	MP LINE2;			[1
				LIFETIME-POS=L P4	QESIPARM CURR ENT MEDIUM			
Con	nments: At R=0.9", the throughput is	~71%. To get the same counts, we need	ed to increase th	ne exposure time.				I
1	PSA/C1291/ (1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,-1.8	Sequence 1-15 Non-I	182 Secs (182 Secs)	
	3 -1.8arcsec onds in XD (COS.sp.103 2420)		1291 A	FLASH=YES;	, OESIPARM LISELA	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring	[==>]	
				BUFFER-TIME=10 00:	MP LINE2;	(25)		[1]
				LIFETIME-POS=L P4	QESIPARM CURR ENT MEDIUM			,
Con	ments: At R=1.8", the throughput is	~13%. To get the same counts, we nee	ed to increase th	± ·				
	, , , , , , , , , , , , , , , , , , , ,							

Proposal 16326 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - Cycle 28 COS FUV Target Acquisition Monitor LIFETIME-POS=LP QESIPARM USELA Sequence 1-15 Non-I | 2 Secs (2 Secs) PSA/C1291/ (1) WD-1657+343 COS/FUV, ACO/PEAKXD, PSA G130M PEAKXD/N MP LINE2; nt in PSA/MIRROR 4; 1291 A P=5/DEF B ACO/IMAGE then NUM-POS=5; OESIPARM CURR [1] (COS.sa.103 **FUV TA Monitoring** ENT MEDIUM STEP-SIZE=0.9 2423) Comments: The default STEP-SIZE is 1.0", but at +/- 2", the POS_TARGS would not create enough counts to track the operation of the NUM_POS=5 PEAKXD. 5x0.9" is used instead. Double check that the DEFAUL T CENTER=FLUX-WT-FLR is used. It is left unspecified to test that the default APT logic is still correctly choosing the correct CENTER algorithm. PSA/C1291/ (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G130M FP-POS=3; QESIPARM USELA Sequence 1-15 Non-I 25 Secs (25 Secs) nt in PSA/MIRROR 3 - After NU MP LINE2; 1291 A FLASH=YES; [==>1 M_POS=5 P B ACQ/IMAGE then **OESIPARM CURR** EĀKXD BUFFER-TIME=30 FUV TA Monitoring ENT MEDIUM (25)(COS.sp.103 [1] 2420) LIFETIME-POS=L Comments: HST Standard Star, S/N ~ 5 in 25s PSA/C1291/ (1) WD-1657+343 COS/FUV. ACO/PEAKD. PSA G130M LIFETIME-POS=LP OESIPARM USELA Sequence 1-15 Non-I 3 Secs (3 Secs) MP LINE2; nt in PSA/MIRROR PEAKD/NP 1291 A B ACO/IMAGE then =5/DEF NUM-POS=5; **OESIPARM CURR** [1] (COS.sa.103 **FUV TA Monitoring** ENT MEDIUM 2423) STEP-SIZE=0.9 (25)Comments: We want to check the AD NUV to FUV SIAF alignment, so perform a good PEAKD. Double check that the DEFAULT CENTER=FLUX-WT-FLR is used. It is left unspecified to test that the default APT log ic is still correctly choosing the correct CENTER algorithm. PSA/C1291/ (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G130M FP-POS=3; QESIPARM USELA Sequence 1-15 Non-I 25 Secs (25 Secs) 3 - After PE nt in PSA/MIRROR MP LINE2: 1291 A FLASH=YES; AKD B ACO/IMAGE then OESIPARM CURR BUFFER-TIME=30 **FUV TA Monitoring** (COS.sp.103 **ENT MEDIUM** 2420) (25)[1] LIFETIME-POS=L P4 Comments: HST Standard Star, S/N ~ 5 in 25s. PSA/MIRR (1) WD-1657+343 COS/NUV, ACQ/IMAGE, PSA MIRRORB Sequence 16-22 Non 13 Secs (13 Secs) ORB ACO/I -Int in PSA/MIRRO r==>1 RB ACQ/IMAGE th MAGE [2] (COS.ta.103 en FUV TA Monitori 2496) ng (25) PSA/MIRR (1) WD-1657+343 COS/NUV, TIME-TAG, PSA MIRRORB BUFFER-TIME=15 QESIPARM USELA Sequence 16-22 Non 15.0 Secs (15 Secs) ORB LAMP MP LINE2: -Int in PSA/MIRRO r = > 1+TARGET I RB ACQ/IMAGE th FLASH=S0060D01 OESIPARM CURR MAGE (P2/ en FUV TA Monitori **ENT MEDIUM** [2] MEDIUM) ng (25) (COS.ta.103 CURRENT=MEDI 2496) UM Comments: PSA/MIRRORB/P2/ME. To get PtNe Lamp 2, there are 2 QESIPARMs set: USELAMP = LINE2CURRENT = MEDIUMPSA/G140L (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G140L FP-POS=3; QESIPARM USELA Sequence 16-22 Non 20 Secs (20 Secs) /1280/3 - CE MP LINE2; -Int in PSA/MIRRO 1280 A FLASH=YES: NTER RB ACO/IMAGE th **OESIPARM CURR** (COS.sp.103 BUFFER-TIME=40 en FUV TA Monitori ENT MEDIUM 2431) ng (25) [2] LIFETIME-POS=L P4 Comments: COS.sp.1032431 S/N Ratio = 10 at wavelength 1310. (per RE): Time = 18.5567 sec.

19	PSA/G140L	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	POS TARG null,1.3;	Sequence 16-22 Non	144 Secs (44 Secs)	
.,	/1280/3 +1.3 arcseconds i n XD (COS.sp.103 2431)	(1) 112 10371313	COURT IN THE THE THE TENT	1280 A	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori	[==>]	[2]
					P4				
Com	ments: At R=1	.3", the throughput is	~45%. To get the same counts, we need	ed to increase the	exposure time.			T	
20		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	POS TARG null,-1.3	Sequence 16-22 Non	44 Secs (44 Secs)	
	/1280/3 -1.3 arcseconds i			1280 A	FLASH=YES;	;	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	n XD				BUFFER-TIME=80	QESIPARM USELA MP LINE2;	en FUV TA Monitori		
	(COS.sp.103 2431)				0;	QESIPARM CURR	ng (25)		[2]
	2.01)				LIFETIME-POS=L P4	ENT MEDIUM			
Com	ments: At R=1	.3", the throughput is	~45%. To get the same counts, we ne	ed to increase the	exposure time.				'
21		(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G140L		QESIPARM USELA		3 Secs (3 Secs)	
	/PEAKXD/ NP=3/DEF			1280 A	4;	MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	(COS.sa.103				NUM-POS=3;	QESIPARM CURR ENT MEDIUM	en FUV TA Monitori		[2]
Com	2455)	, 1022455 Paguagtad	Signal/Noise Ratio = 40.000 for Segm	ant A and Saaman	STEP-SIZE=1.3		ng (25)		
			ired for Requested SNR in Segment A		і В сототей				
22		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;			20 Secs (20 Secs)	
	/1280/3 (COS.sp.103			1280 A	FLASH=YES;	MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	2431)				BUFFER-TIME=40	QESIPARM CURR ENT MEDIUM	en FUV TA Monitori		
					0;	Zi (I MZZIOM	ng (25)		[2]
					LIFETIME-POS=L P4				
23		(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 23-29 Non	13 Secs (13 Secs)	
	ORB ACQ/I MAGE (COS.ta.103					-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]		
							en FUV TA Monitori		[2]
	2496)						ng (25)		
24	PSA/MIRR ORB LAMP	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0:	QESIPARM USELA MP LINE2;	A Sequence 23-29 Non -Int in PSA/MIRRO RB ACQ/IMAGE th	15.0 Secs (15 Secs)	
	+TARGET I MAGE (P2/ MEDIUM)							[==>]	
				5;	ENT MEDIUM	en FUV TA Monitori ng (25)		[2]	
	(COS.ta.103				CURRENT=MEDI		ng (23)		
<i>a</i>	2496)	IDD ODD /D2 /1/ED	. T D.V. I O. I.	OFGIDADIA	UM				
USE	ments: PSA/M LAMP = LINE RENT = MED	2	rrent. To get PtNe Lamp 2, there are 2	: QESIPARMS set:					
25	PSA/G160 (1) WD-1657+343	-1657+343 COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;		Sequence 23-29 Non	82 Secs (82 Secs)		
	M/1600/3 - CENTER			1600 A	FLASH=YES;	MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	(COS.sp.103		BUFFER-TIME=80	QESIPARM CURR ENT MEDIUM	en FUV TA Monitor				
	2449)				0;	ENT WEDION	ng (25)		[2]
					LIFETIME-POS=L P4				
Com	ments: S/N Ra	tio = 4 at wavelenoth	1610.00 (per RE) gives: Time = 81.84	415 seconds	• 1				
,,,,,,	5,1, 210		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7						

Proposal 16326 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - Cycle 28 COS FUV Target Acquisition Monitor PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3: POS TARG null,1.3; Sequence 23-29 Non 153 Secs (153 Secs) M/1600/3 +-Int in PSA/MIRRO 1600 A FLASH=YES; **QESIPARM USELA** 1.3arcsecon RB ACQ/IMAGE th MP LINE2; BUFFER-TIME=10 ds in XD en FUV TA Monitori (COS.sp.103 QESIPARM CURR ng (25) [2] 2449) ENT MEDIUM LIFETIME-POS=L Comments: At R=1.3", the throughput is ~45%. To get the same counts, we need to increase the exposure time. PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; POS TARG null,-1.3 Sequence 23-29 Non | 153 Secs (153 Secs) M/1600/3 -1 -Int in PSA/MIRRO 1600 A FLASH=YES; *[==>1* .3arcseconds RB ACQ/IMAGE th **QESIPARM USELA** in XD BUFFER-TIME=10 en FUV TA Monitori MP LINE2: (COS.sp.103 00; ng (25) [2] 2449) OESIPARM CURR LIFETIME-POS=L ENT MEDIUM Comments: At R=1.3", the throughput is ~45%. To get the same counts, we need to increase the exposure time. 28 PSA/G160 (1) WD-1657+343 COS/FUV, ACQ/PEAKXD, PSA G160M LIFETIME-POS=LP QESIPARM USELA Sequence 23-29 Non 3 Secs (3 Secs) M/PEAKX MP LINE2; -Int in PSA/MIRRO 1600 A I = = > 1RB ACO/IMAGE th D/NP=3/DE NUM-POS=3; **OESIPARM CURR** en FUV TA Monitori F [2] **ENT MEDIUM** (COS.sa.103 STEP-SIZE=1.3 ng (25) 2454) Comments: COS.sa.1032454 Requested Signal/Noise Ratio = 40.000 for Segment A and Segment B combined

FP-POS=3;

FLASH=YES;

BUFFER-TIME=80

LIFETIME-POS=L

MP LINE2;

QESIPARM CURR

ENT MEDIUM

OESIPARM USELA Sequence 23-29 Non 82 Secs (82 Secs)

ng (25)

-Int in PSA/MIRRO

RB ACO/IMAGE th

en FUV TA Monitori

[2]

gives: Time = 1.0545 seconds

M/1600/3

2449)

(COS.sp.103

PSA/G160 (1) WD-1657+343

Time Required for Requested SNR in Segment A only: 5.8385 Time Required for Requested SNR in Segment B only: 1.2868

COS/FUV, TIME-TAG, PSA

G160M

1600 A



