Proposal 16942 (STScI Edit Number: 0, Created: Thursday, October 20, 2022 at 7:00:23 AM Eastern Standard Time) - Overview



16942 - Cycle 30 COS FUV Target Acquisition Monitor

Cycle: 30, Proposal Category: CAL/COS

(Calibration)

(Availability Mode: RESTRICTED)

INVESTIGATORS

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Dr. Kate Rowlands (CoI) (Contact)	Space Telescope Science Institute	krowlands@stsci.edu

VISITS

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
01	(1) WD-1657+343	COS/FUV COS/NUV	1	20-Oct-2022 08:00:15.0	yes
02	(1) WD-1657+343	COS/FUV COS/NUV	2	20-Oct-2022 08:00:19.0	yes
03	 (2) WDG-1 (3) WDG-1-OFFSET+0.7XD (4) WDG-1-OFFSET+0.3XD 	COS/FUV COS/NUV	1	20-Oct-2022 08:00:22.0	yes

4 Total Orbits Used

ABSTRACT

This program verifies that FUV spectroscopic target acquisitions are working nominally for the Cycle 30 modes: G130M at LP5, G140L at LP4, G160M at LP4, and G160M at LP6. This program is therefore unchanging from Cycle 29 (16831). For each grating the cenwave with the widest cross dispersion profile in which acquisitions are done is used, yielding the combinations G130M/1291, G140L/1280, and G160M/1600. After the

Proposal 16942 (STScl Edit Number: 0, Created: Thursday, October 20, 2022 at 7:00:23 AM Eastern Standard Time) - Overview standard target WD 1657+343 is centered using ACQ/IMAGE we take spectra at the NUM-POS positions used by the PEAKXD and PEAKD algorithms to inspect those regions of the detector and check the vignetted flux. We then perform a PEAKXD and/or PEAKD acquisition and take a spectrum to verify centering. We test PEAKXD with NUM-POS=3 (default) and 5, and PEAKD with NUM-POS=5 (default). A detailed description of the observations is given in the visit level comments.

Originally G160M at LP6 (visit 03) was not included here because this mode had been tested by program 16851 LP6 TA enabling. But because that program found an offset of about 0.1" in the XD direction that visit is being repeated here. Other than the ORIENT constraints and virtual target definitions the visit is identical to vist 03 of 16851.

OBSERVING DESCRIPTION

This program consists of three orbits, each with a non-interrupt sequence. The program is divided into two visits to allows the last two orbits to have schedulability 100, whereas the first orbit needs schedulability 80. The two orbit visit may also be separated into two visits if that facilitates scheduling.

We request that this program execute in January of 2023 (via a BETWEEN), and within 30 days of Visit PB of Program 16939 (via a visit-level comment).

The program is divided into 3 parts, one for each FUV grating. The central wavelengths tested are G130M/1291 at LP5, G140L/1280 at LP4, and G160M/1600 at LP4. These cenwaves were chosen because they provide the widest cross-dispersion profile allowed for acquisitions.

For each grating, we first acquire the target using ACQ/IMAGE, take a spectrum to verify the ACQ/IMAGE centering, take off-centered spectra using POSTARG, and then run an acquisition sequence. The visit level comments contain a detailed description of the observations.

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.

Visit 03 is a copy of visit 03 of 16851 LP6 TA enabling, with new ORIENT constraints and therefore new virtual target definitions.

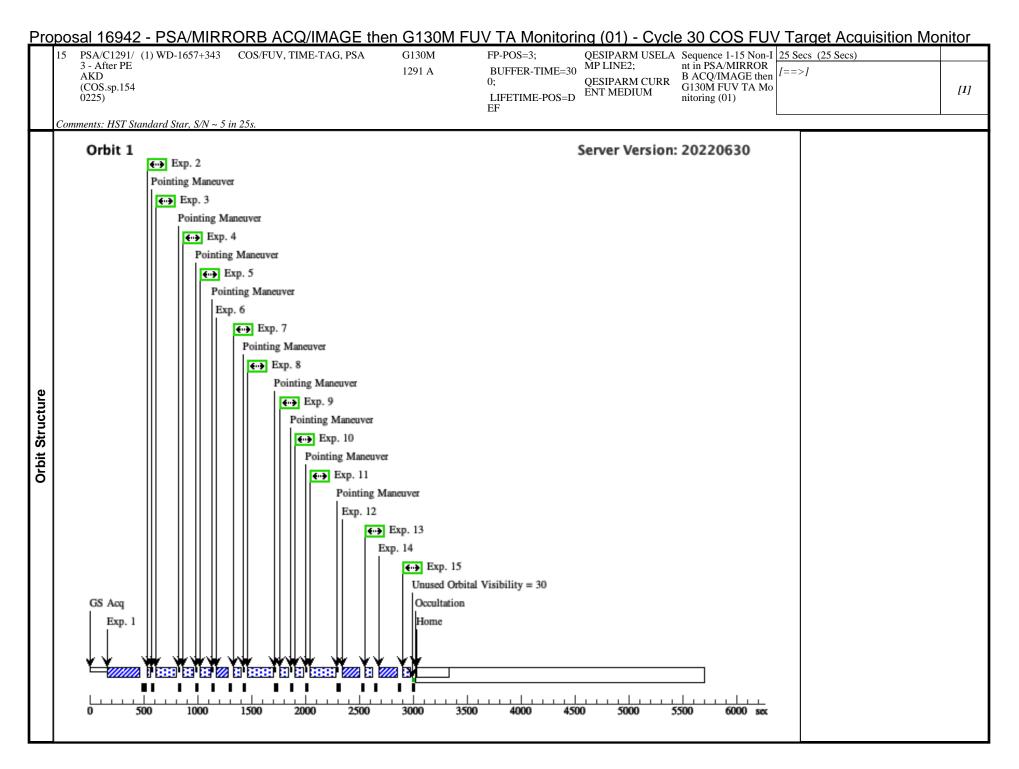
Proposal 16942 - PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Monitoring (01) - Cycle 30 COS FUV Target Acquisition Monitor

Γ ^{''}	Proposal 16942, PSA/MIRRORB ACQ/IMAGE then G	/IMAGE then G130IM FUV_IA Monitori 130M FUV TA Monitoring (01),		Thu Oct 20 12:00:23 GMT 2022					
	implementation								
	Diagnostic Status: Warning								
	Scientific Instruments: COS/FUV, COS/NUV								
	Special Requirements: SCHED 80%; BETWEEN 01-JAN-2023:00:00:00 AND 31-JAN-2023:00:00:00								
l	Comments: This visit is separated from visit 2 because this This visit has the following timing requirement: * It should execute between 1/1/23 and 1/31/23 * It should execute within 30 days of visit PB of program I								
Visit	This visit tests spectroscopic target acquisition using FUV 01.001 - NUV ACQ/IMAGE 01.002 - NUV Image with WCA lamps, to check alignment 01.003 - G130M/1291 spectrum to establish center position 01.004, 01.005 - +/-1.3" XD POSTARGS to simmulate NU 01.006 - PEAKXD with NUM-POS=3 01.007 - Verification spectrum 01.008 to 01.011 - Simulates PEAKXD with NUM-POS=5, 01.012 - PEAKXD with NUM-POS=5 01.013 - Verification spectrum 01.014 - PEAKD 01.015 - Verification spectrum	later on. n after ACQ/IMAGE IM-POS=3 PEAKXD							
Γ		onitoring (01)) Warning (Form): For the best data quality, it is g y apply to observations with G130M/1291 or G160M.	enerally required to use all four FP-POS position	s when observing at a given COS cenwave.					
	(PSA/MIRRORB ACO/IMAGE then G130M FLIV TA Monitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE								
<u>ic</u>	(PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Monitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE								
st	(PSA/MIRORB ACQ/IMAGE then G130M FUV TA Monitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE								
ĬĔ	(PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Mo	onitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE	E OF APERTURE						
Diagnostics	(PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Mo	onitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE	E OF APERTURE NO ORIENT						
	(PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Mo	onitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE	E OF APERTURE NO ORIENT						
	(PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Mo	onitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE	E OF APERTURE NO ORIENT						
	(PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Mo	onitoring (01)) Warning (Orbit Planner): POS TARG OUTSIDE	E OF APERTURE NO ORIENT						
	# Name Target Coordinat	tes Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1) WD-1657+343 RA: 16 58 51.1202	2 (254.7130008d) Proper Motion RA: 11 mas/yr	V=16.1	Reference Frame: ICRS					
	Dec: +34 18 53.29	(34.31480d) Proper Motion Dec: -31 mas/yr							
6	Equinox: J2000	Epoch of Position: 2000							
Ē		Radial Velocity: 78 km/sec							
Targets	Comments: COS.ta.1032496 indicates S/N = 40 in 5.2s. SL Proper Motion from SIMBAD is Proper motions mas/yr : 1								
Fixed	B 16.12 [~] D ~ u (AB) 15.749 [0.005] B 2013yCat.51390A g (AB) 16.139 [0.003] B 2013yCat.51390A r (AB) 16.691 [0.004] B 2013yCat.51390A i (AB) 17.054 [0.005] B 2013yCat.51390A z (AB) 17.388 [0.015] C 2013yCat.51390A Category=STAR Description=[DA] Extended=NO								

Proposal 16942 - PSA/MIRRORB ACQ/IMAGE then G130M FUV TA Monitoring (01) - Cycle 30 COS FUV Target Acquisition Monitor

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	PSA/MIRR	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 1-15 Non-I	7 Secs (7 Secs)	
	ORB ACQ/I MAGE (COS.ta.154 0223)						nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01)		[1]
2		(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB		QESIPARM USELA		15.0 Secs (15 Secs)	
	ORB LAMP +TARGET I					MP LINE2;	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	MAGE (P2/ MEDIUM) (COS.im.15 40224)				5; CURRENT=MEDI UM	QESIPARM CURR ENT MEDIUM	G130M FUV TA Mo nitoring (01)		[1]
USE	,	22	rrent, see above for expected count ra	tes. To get PtNe La		ARMs set:			
This	target was use	ed in Visit BA of 1485	7 (ldozbadhq). Bck subtracted counts	in second image =	5430 ; S/N = 73.69, ET=	=13s			
Repo Lam	orted Lamp Ev p Background	ents = 3316 counts : 1 events in 50x300 TA	0 = P2/Medium, LAMP EXPTIME = 1 Rate = 276.33334 counts/s BOX for lampflash time (12s) = 112 c te = 267.026 counts/s		punts/s				
3		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;		Sequence 1-15 Non-I	25 Secs (25 Secs)	
	3 - CENTE R			1291 A	BUFFER-TIME=30	MP LINE2;	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	(COS.sp.154				0; LIFETIME-POS=D	QESIPARM CURR ENT MEDIUM	G130M FUV TA Mo		[1]
	0225)				EF		nitoring (01)		
Com	iments: HST St	andard Star, S/N ~ 5	in 25s						
<u>Com</u> 4		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,1.3;		55 Secs (55 Secs)	
	3 +1.3arcsec onds in XD			1291 A	BUFFER-TIME=50		nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	(COS.sp.154 0225)				0; LIFETIME-POS=D EF	MP LINE2; QESIPARM CURR ENT MEDIUM	G130M FUV TA Mo nitoring (01)		[1]
Com	iments: At R=1	.3", the throughput is	~45%. To get the same counts, we ne	ed to increase the e	exposure time to 55s.				-
5		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,-1.3	Sequence 1-15 Non-I	55 Secs (55 Secs)	
	3 -1.3arcsec onds in XD			1291 A	BUFFER-TIME=50	;	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	(COS.sp.154				0;	QESIPARM USELA MP LINE2;	G130M FUV TA Mo		[1]
	0225)				LIFETIME-POS=D EF	QESIPARM CURR ENT MEDIUM	nitoring (01)		[1]
Com	iments: At R=1	.3", the throughput is	~45%. To get the same counts, we ne	ed to increase the e	exposure time to 55s.				
6	PSA/C1291/ PEAKXD/N	(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G130M	LIFETIME-POS=D EF		Sequence 1-15 Non-I nt in PSA/MIRROR	`````	
	P=3/DEF (COS.sa.154 0226)			1291 A	El	QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01)	[==>]	[1]
Com	,	UM_POS and STEP_S	SIZE are not included to make sure the	at the correct DEFA	AULTS of NUM_POS=3	and STEP_SIZE=1.3",	-	-WT are still inserted.	
					· _ ·	_ ,			
	-								
	s: Time = 0.42 Time Require	05 seconds ed for Requested SNR	for Segment A and Segment B combine in Segment A only: 1.2676 in Segment B only: 0.6292	ed					

7	PSA/C1291/ (1) W	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	QESIPARM USELA	Sequence 1-15 Non-I	25 Secs (25 Secs)	
	3 - After NU M_POS=3 P			1291 A	BUFFER-TIME=30		nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	EAKXD				0;	QESIPARM CURR	G130M FUV TA Mo		[1
	(COS.sp.154 0225)				LIFETIME-POS=D EF	ENT MEDIUM	nitoring (01)		[1]
8	PSA/C1291/ (1) W	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,1.8;		192 Secs (192 Secs)	
	3 +1.8arcsec onds in XD (COS.sp.154			1291 A	BUFFER-TIME=10 00;	MP LINE2; B ACQ/IMAGE then C G130M FUV TA Mo	[==>]	[1	
	0225)				LIFETIME-POS=D EF	QESIPARM CURR ENT MEDIUM			
Com	ments: At R=1.8", the	he throughput is	~13%. To get the same counts, we ne	ed to increase the	exposure time.				
9	PSA/C1291/ (1) W	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,0.9;	Sequence 1-15 Non-I	35 Secs (35 Secs)	
	3 +0.9arcsec onds in XD (COS.sp.154			1291 A	BUFFER-TIME=40 0;	QESIPARM USELA MP LINE2;	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo		
	0225)				LIFETIME-POS=D EF	QESIPARM CURR ENT MEDIUM			[1
Com	uments: At R=0.9", the	he throughput is	~71%. To get the same counts, we ne	ed to increase the	exposure time.				
10	PSA/C1291/ (1) W	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,-0.9	Sequence 1-15 Non-I	35 Secs (35 Secs)	
	3 -0.9arcsec			1291 A	BUFFER-TIME=40		nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	onds in XD (COS.sp.154 0225)			0; LIFETIME-POS=D	QESIPARM USELA	G130M FUV TA Mo nitoring (01)		[1	
				EF Q	QESIPARM CURR	Intornig (01)			
						ENT MEDIUM			
Com	nments: At R=0.9", th	he throughput is	~71%. To get the same counts, we ne	ed to increase the	exposure time.	ENT MEDIUM			
					<i>exposure time.</i> FP-POS=3:		Sequence 1-15 Non-I	192 Secs (192 Secs)	
	PSA/C1291/ (1) W 3 -1.8arcsec		~71%. To get the same counts, we ne COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;		Sequence 1-15 Non-I nt in PSA/MIRROR	[]	
	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154				FP-POS=3; FLASH=YES; BUFFER-TIME=10		nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo	[]	
	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD			G130M	FP-POS=3; FLASH=YES;	POS TARG null,-1.8 ; QESIPARM USELA	nt in PSA/MIRROR B ACQ/IMAGE then	[]	[1
11	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225)	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo	[]	[1
11 Com	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) mments: At R=1.8", the	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M 1291 A red to increase the	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF exposure time.	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01)	[==>]	[1
11 Com	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) mments: At R=1.8", the	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M 1291 A wed to increase the G130M	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo	[==>] 2 Secs (2 Secs)	
11 Com	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W	VD-1657+343	COS/FUV, TIME-TAG, PSA	G130M 1291 A red to increase the	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF <i>exposure time.</i> LIFETIME-POS=D	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo	$[==>]$ $2 \operatorname{Secs} (2 \operatorname{Secs})$ $[==>]$	
11 <u>Com</u> 12 Com	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At $R=1.8$ ", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default SI	ND-1657+343 <u>the throughput is</u> ND-1657+343 STEP-SIZE is 1.0	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA ", but at +/- 2", the POS_TARGS wo	G130M 1291 A <u>red to increase the</u> G130M 1291 A uld not create end	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF exposure time. LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 ough counts to track the op	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_PA	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. 5x0.9'	$[==>]$ $\frac{2 \operatorname{Secs} (2 \operatorname{Secs})}{[==>]}$	
11 <u>Com</u> 12 <u>Com</u> <u>T CE</u>	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default ST ENTER=FLUX-WT-F	ND-1657+343 <u>the throughput is</u> ND-1657+343 STEP-SIZE is 1.0 FLR is used. It is	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A <u>red to increase the</u> G130M 1291 A uld not create end	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF exposure time. LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 ough counts to track the op	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_Parect CENTER algorit	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. 5x0.9'	[==>] 2 Secs (2 Secs) [==>] ' is used instead. Double check	[1
11 <u>Com</u> 12 <u>Com</u> <u>T CH</u>	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default S' ENTER=FLUX-WT-F PSA/C1291/ (1) W 3 - After NU	ND-1657+343 <u>the throughput is</u> ND-1657+343 STEP-SIZE is 1.0 FLR is used. It is	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA ", but at +/- 2", the POS_TARGS wo left unspecified to test that the defau	G130M 1291 A eed to increase the G130M 1291 A uld not create end th APT logic is sti G130M	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF exposure time. LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 ough counts to track the op- ll correctly choosing the co- FP-POS=3;	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_Parect CENTER algorit	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. $5x0.9'hm.Sequence 1-15 Non-Int in PSA/MIRROR$	$[==>]$ $2 \operatorname{Secs} (2 \operatorname{Secs})$ $[==>]$ $2 \operatorname{Secs} (25 \operatorname{Secs})$ $[==>]$	
11 <u>Com</u> 12 <u>Com</u> <u>T CE</u>	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default St ENTER=FLUX-WT-F PSA/C1291/ (1) W 3 - After NU M_POS=5 P	ND-1657+343 <u>the throughput is</u> ND-1657+343 STEP-SIZE is 1.0 FLR is used. It is	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA ", but at +/- 2", the POS_TARGS wo left unspecified to test that the defau	G130M 1291 A eed to increase the G130M 1291 A uld not create end It APT logic is sti	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF exposure time. LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 bugh counts to track the op. Il correctly choosing the co	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_Proprect CENTER algorit QESIPARM USELA MP LINE2; QESIPARM CURR	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. 5x0.9' hm. Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then	[==>] 2 Secs (2 Secs) [==>] ' is used instead. Double check 25 Secs (25 Secs) [==>]	[i
11 <u>Com</u> 12 <u>Com</u> <u>T CH</u>	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default S' ENTER=FLUX-WT-F PSA/C1291/ (1) W 3 - After NU	ND-1657+343 <u>the throughput is</u> ND-1657+343 STEP-SIZE is 1.0 FLR is used. It is	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA ", but at +/- 2", the POS_TARGS wo left unspecified to test that the defau	G130M 1291 A eed to increase the G130M 1291 A uld not create end th APT logic is sti G130M	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 bugh counts to track the op. Il correctly choosing the co FP-POS=3; BUFFER-TIME=30	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_Poprect CENTER algorit QESIPARM USELA MP LINE2; QESIPARM USELA	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. 5x0.9' hm. Sequence 1-15 Non-I nt in PSA/MIRROR	[==>] 2 Secs (2 Secs) [==>] ' is used instead. Double check 25 Secs (25 Secs) [==>]	[1]
11 <u>Com</u> 12 <u>Com</u> <u>T CP</u> 13	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default SI ENTER=FLUX-WT-F PSA/C1291/ (1) W 3 - After NU M_POS=5 P EAKXD (COS.sp.154	VD-1657+343 <i>he throughput is</i> VD-1657+343 <i>STEP-SIZE is 1.0</i> <i>FLR is used. It is</i> VD-1657+343	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA)", but at +/- 2", the POS_TARGS wo !left unspecified to test that the defau COS/FUV, TIME-TAG, PSA	G130M 1291 A eed to increase the G130M 1291 A uld not create end th APT logic is sti G130M	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 bugh counts to track the op. Il correctly choosing the co FP-POS=3; BUFFER-TIME=30 0; LIFETIME-POS=D	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_Poprect CENTER algorit QESIPARM USELA MP LINE2; QESIPARM USELA	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. 5x0.9' hm. Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo	[==>] 2 Secs (2 Secs) [==>] ' is used instead. Double check 25 Secs (25 Secs) [==>]	
11 <u>Com</u> 12 <u>Com</u> <u>T CP</u> 13	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PEAKXD/N P=5/DEF (COS.sa.154 0226) ments: The default SI ENTER=FLUX-WT-F PSA/C1291/ (1) W 3 - After NU M_POS=5 P EAKXD (COS.sp.154 0225)	VD-1657+343 <i>he throughput is</i> VD-1657+343 <i>STEP-SIZE is 1.0</i> <i>FLR is used. It is</i> VD-1657+343 VD-1657+343	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA)", but at +/- 2", the POS_TARGS wo !left unspecified to test that the defau COS/FUV, TIME-TAG, PSA	G130M 1291 A eed to increase the G130M 1291 A uld not create end th APT logic is sti G130M	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 bugh counts to track the op. Il correctly choosing the co FP-POS=3; BUFFER-TIME=30 0; LIFETIME-POS=D	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_PA prrect CENTER algorit QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. 5x0.9' hm. Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I	[==>] 2 Secs (2 Secs) [==>] ' is used instead. Double check 25 Secs (25 Secs) [==>]	[1]
11 <u>Com</u> 12 <u>Com</u> <u>T CP</u> 13	PSA/C1291/ (1) W 3 -1.8arcsec onds in XD (COS.sp.154 0225) ments: At R=1.8", the PSA/C1291/ (1) W PE5/DEF (COS.sa.154 0226) ments: The default S: ENTER=FLUX-WT-F PSA/C1291/ (1) W 3 - After NU M_POS=5 P EAKXD (COS.sp.154 0225) ments: HST Standard	VD-1657+343 <i>he throughput is</i> VD-1657+343 <i>STEP-SIZE is 1.0</i> <i>FLR is used. It is</i> VD-1657+343 VD-1657+343	COS/FUV, TIME-TAG, PSA ~13%. To get the same counts, we ne COS/FUV, ACQ/PEAKXD, PSA ", but at +/- 2", the POS_TARGS wo left unspecified to test that the defau COS/FUV, TIME-TAG, PSA	G130M 1291 A eed to increase the G130M 1291 A uld not create end th APT logic is sti G130M 1291 A	FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=D EF exposure time. LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9 ough counts to track the op. Il correctly choosing the co FP-POS=3; BUFFER-TIME=30 0; LIFETIME-POS=D EF	POS TARG null,-1.8 ; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM eration of the NUM_Pa prrect CENTER algorit QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G130M FUV TA Mo nitoring (01) OS=5 PEAKXD. $5x0.9'hm.Sequence 1-15 Non-Int in PSA/MIRRORB ACQ/IMAGE thenG130M FUV TA Monitoring (01)$	[==>] 2 Secs (2 Secs) [==>] ' is used instead. Double check 25 Secs (25 Secs) [==>]	[1]



Pr

Pro	oposal 16942 - PSA/MIRRORB ACQ/IMAGE then G140L and G160M FUV TA monitor (02) - Cycle 30 COS FUV	Target Acquisition
	Proposal 16942, PSA/MIRRORB ACQ/IMAGE then G140L and G160M FUV TA monitor (02), implementation	Thu Oct 20 12:00:23 GMT 2022
	Diagnostic Status: Warning	
	Scientific Instruments: COS/FUV, COS/NUV	
	Special Requirements: SCHED 100%; BETWEEN 01-JAN-2023:00:00:00 AND 31-JAN-2023:00:00:00	
	Comments: These two orbits are in a different visit because they can use schedulability 100. The orbit in visit 1 requires schedulability 80. The 2 orbits in this visit may also be placed i with scheduling, so long as the non-interrupt sequences and the BETWEEN are respected.	nto individual visits if it helps
	Unlike the previous cycle, all dwell points use the same exposure time when taking spectra for manual centroiding because that is what the FSW does. the goal should not be to obtain to vighnetted. This unofrm exposure time is much longer than the actual acquisition dwell time, and can be truncated during analysis if desired.	he same SN when the target gets
	This visit has the following timing requirement: * It should execute between 1/1/23 and 1/31/23 * It should execute within 30 days of visit PB of program 16939 This visit has two orbits, each with a non-interrupt sequence. Each orbit is structured as follows	
	First orbit, tests FUV G140L/1280 spectroscopic acquisition	
Ŀ.	Note on exposure times: COS.sp.1540229 shows that it takes 20 seconds to obtain SN~10 per resel for a centered spectrum. COS.sa.1540230 shows that it takes only 1.7 seconds per do needed for a FUV acquisition. As we did in the past, we use 3 seconds to be safe. Exposures 02.004 through 02.006 and 02.009 through 09.013 simulate the acquisition centroiding algo needed to manually centroid the target as a verification of what the FSW is doing. In the past we adapted the exposure times to compensate for vignetting as the target is offset so as to through an acquisition sweep. However, that is not what the flight software does. If the exposure time for a spectroscopic acquisition is set to X seconds in APT then every dwell point is exposed for X seconds, regardless of offset. So long as we reach the SN requirement for the acquisitions (40 in this case), there is no need to expose longer at vignetted offsets. Here we 20 seconds, which is about 10 times more than the required acquisition exposure time in COS.sa.1540230. The additional exposure time would allow us to better detect any anomalous fitting within the orbit.	orithm and provide the counts get the same SN in all positions n that acqwuisition will be still expose all dwell points for
Visit	02.001 - ACQ/IMAGE 02.002 - NUV image with WCA lamps to verify alignment 02.003 - Spectrum centered after ACQ/IMAGE, for comparison, at LP3 (default) See note below 02.004 - Spectrum centered at LP4 for detector mapping and centroiding See note below 02.005, 02.006 - simulate PEAKXD with NUM-POS=3 at LP4 for detector mapping and centroiding 02.007 - PEAKXD with NUM-POS=3 (at LP4, default) 02.008 - Verification spectrum at LP3 (default) 02.009 - spectrum centered at LP4 for detector mapping and centroiding 02.010 to 02.013 - Simulate PEAKXD with NUM-POS=5 at LP4 for detector mapping and centroiding 02.014 - PEAKXD with NUM-POS=5 (at LP4, default) 02.015 - Verification spectrum (at LP3, default)	
	Note on 02.003 and 02.004: The centered exposure serves two purposes. first, it allows for a determination of the location of the spectrum, which is a test of acquisition accuracy. Second central position, which is needed to simulate the flux centroiding done in the FUV acquisition. If FUV acquisition and science were done in the same LP then only one of these exposure G140L the acquisition is done at LP4 and the science is done at LP3. We therefore need to take two exposures, one at each LP. 02.003 tells us the location of the final science spectrum manually calculate the centroid at LP4.	es would be needed. However for
	Orbit 2, tests FUV G160M/1600 spectroscopic acquisition 02.016 - ACQ/IMAGE 02.017 - NUV image with WCA lamps to verify alignment 02.018 - spectrum centered after ACQ/IMAGE 02.019, 02.020 - simulate PEAKXD with NUM-POS=3 02.021 - PEAKXD with NUM-POS=3 02.022 - verification spectrum 02.023 - PEAKD with NUM-POS=5 02.024 - verification spectrum	

Proposal 16942 - PSA/MIRRORB ACQ/IMAGE then G140L and G160M FUV TA monitor (02) - Cycle 30 COS FUV Target Acquisition ...

				enerally required to use all f	our FP-POS positions when observing at a given COS
		andbook for exceptions that may apply to observ			
	````	n G140L and G160M FUV TA monitor (02)) Wa	e v ,		
	````	n G140L and G160M FUV TA monitor (02)) Wa	e v ,		
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gnostic	· · · · · ·	n G140L and G160M FUV TA monitor (02)) Wa	e v ,		
۱ ő		n G140L and G160M FUV TA monitor (02)) Wa	e · ·		
lg		n G140L and G160M FUV TA monitor (02)) Wa	e · ·		
Dia		n G140L and G160M FUV TA monitor (02)) Wa	e · ·		
1-	· ·	n G140L and G160M FUV TA monitor (02)) Wa	e (
		n G140L and G160M FUV TA monitor (02)) Wa	e · ·		
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		n G140L and G160M FUV TA monitor (02)) Wa	e · ·		
		a G140L and G160M FUV TA monitor (02)) Wa			
	# Name	Tanget Coordinates	Tana Canal Compations	Element	Manallana
		Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1) WD-1657+343	RA: 16 58 51.1202 (254.7130008d)	Proper Motion RA: 11 mas/yr	V=16.1	Reference Frame: ICRS
		RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d)	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr		
s		RA: 16 58 51.1202 (254.7130008d)	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000		
ets	(1) WD-1657+343	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d) Equinox: J2000	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec		
Targets	(1) WD-1657+343	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d)	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec 58 51.1202 +34 18 53.293		
Targ	 WD-1657+343 Comments: COS.ta.1032496 indicate Proper Motion from SIMBAD is Prop B 16.12 [~] D ~ 	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d) Equinox: J2000 es S/N = 40 in 5.2s. SIMBAD cordinates are 16 : per motions mas/yr : 11 -31 [3 3 133] C 2011Ma	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec 58 51.1202 +34 18 53.293		
Fixed Targets	 (1) WD-1657+343 Comments: COS.ta.1032496 indicate Proper Motion from SIMBAD is Prop B 16.12 [~] D ~ u (AB) 15.749 [0.005] B 2013yCat.5 g (AB) 16.139 [0.003] B 2013yCat.5 	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d) Equinox: J2000 es S/N = 40 in 5.2s. SIMBAD cordinates are 16 : per motions mas/yr : 11 -31 [3 3 133] C 2011Mi 1390A 1390A	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec 58 51.1202 +34 18 53.293		
Targ	 (1) WD-1657+343 Comments: COS.ta.1032496 indicate Proper Motion from SIMBAD is Prop B 16.12 [~] D ~ u (AB) 15.749 [0.005] B 2013yCat.5. g (AB) 16.139 [0.003] B 2013yCat.5. r (AB) 16.691 [0.004] B 2013yCat.5. 	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d) Equinox: J2000 es S/N = 40 in 5.2s. SIMBAD cordinates are 16 s per motions mas/yr : 11 -31 [3 3 133] C 2011MA 1390A 1390A 1390A	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec 58 51.1202 +34 18 53.293		
Targ	 (1) WD-1657+343 Comments: COS.ta.1032496 indicate Proper Motion from SIMBAD is Prop B 16.12 [~] D~ u (AB) 15.749 [0.005] B 2013yCat.5 g (AB) 16.139 [0.003] B 2013yCat.5 r (AB) 16.051 [0.004] B 2013yCat.51 i (AB) 17.054 [0.005] B 2013yCat.51 z (AB) 17.388 [0.015] C 2013yCat.51 	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d) Equinox: J2000 28 S/N = 40 in 5.2s. SIMBAD cordinates are 16 3 per motions mas/yr : 11 -31 [3 3 133] C 2011Mi 1390A 1390A 1390A	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec 58 51.1202 +34 18 53.293		
Targ	 (1) WD-1657+343 Comments: COS.ta.1032496 indicate Proper Motion from SIMBAD is Prop B 16.12 [~] D ~ u (AB) 15.749 [0.005] B 2013yCat.5 g (AB) 16.139 [0.003] B 2013yCat.5 i (AB) 17.054 [0.005] B 2013yCat.51 	RA: 16 58 51.1202 (254.7130008d) Dec: +34 18 53.29 (34.31480d) Equinox: J2000 28 S/N = 40 in 5.2s. SIMBAD cordinates are 16 3 per motions mas/yr : 11 -31 [3 3 133] C 2011Mi 1390A 1390A 1390A	Proper Motion RA: 11 mas/yr Proper Motion Dec: -31 mas/yr Epoch of Position: 2000 Radial Velocity: 78 km/sec 58 51.1202 +34 18 53.293		

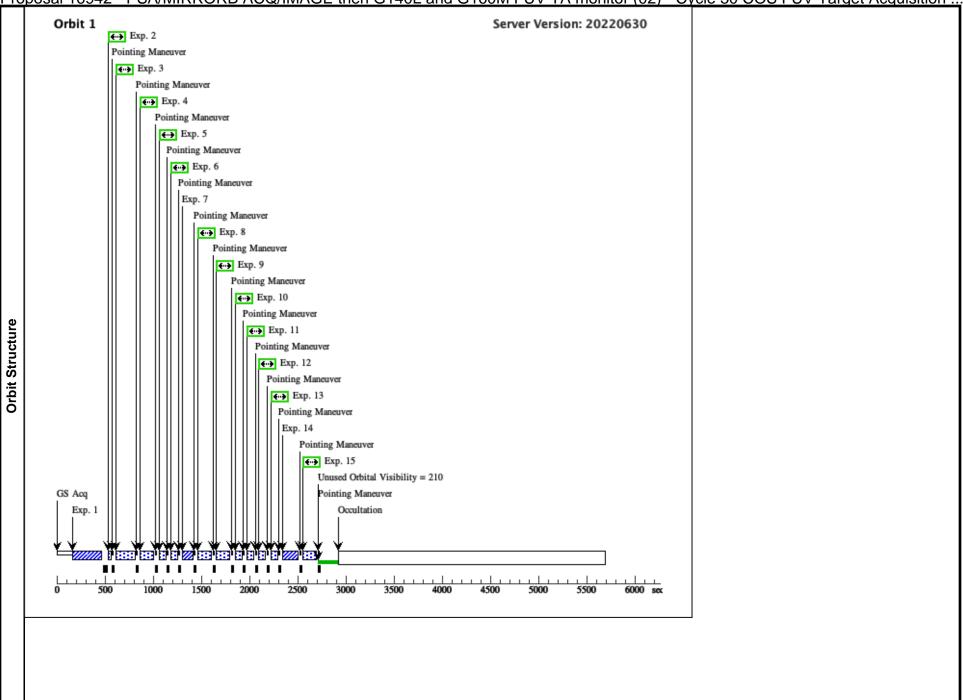
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbi
1	PSA/MIRR ORB ACQ/I MAGE (COS.ta.154 0223)	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	7 Secs (7 Secs) [==>]	[1]
2	ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.im.15 40224)	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0; FLASH=S0060D01 5; CURRENT=MEDI UM	MP LINE2;	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	15.0 Secs (15 Secs) [==>]	[1]
PSA/ USE	ments: Identico /MIRRORB/P2 LAMP = LINE PRENT = MED	ME. To get PtNe Lar 2	np 2, there are 2 QESIPARMs set:						
3	PSA/G140L /1280/3 - CE NTER at LP 3 (default) (COS.sp.154 0229)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; BUFFER-TIME=40 0; LIFETIME-POS=D EF	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	[]	[1]
Com	ments: COS.sp	o.1540229 S/N Ratio	= 10 at wavelength 1310. (per RE) :	Time = 20 sec.					
4	PSA/G140L /1280/3 - CE NTER at LP 4 for detecto r mapping a nd centroidi ng (COS.sp.154 0229)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; BUFFER-TIME=40 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	20 Secs (20 Secs) [==>]	[1]
Com	ments: See als	o COS.sa.1540230, si	ince we are replicating a spectroscop	pic acquisition. See v	visit level note on exposur				
5	PSA/G140L /1280/3 +1.3 arcseconds i n XD at LP4 for detector mapping and centroiding (COS.sp.154 0229)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	0;	POS TARG null,1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	20 Secs (20 Secs) [==>]	[1]
		.3", the throughput is 540230, since we are a	~45%. replicating a spectroscopic acquisition	on. See visit level no	te on exposure times.				
6		· · · ·	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	POS TARG null,-1.3	Sequence 1-15 Non-I	20 Secs (20 Secs)	
	/1280/3 -1.3 arcseconds i n XD at LP4 for detector mapping and centroiding (COS.sp.154 0229)			1280 A	BUFFER-TIME=80 0; LIFETIME-POS=L P4	; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02	[==>]	[1]

/	PSA/G140L /PEAKXD/ NP=3/DEF (default, don e at LP4 the n move to L P3) (COS.sa.154 0230)	(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G140L 1280 A	LIFETIME-POS=D EF; NUM-POS=3; STEP-SIZE=1.3	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM		[>]	[1]
			Signal/Noise Ratio = 40.000 for Segm to be safe. Time Required for Request			s used)			
8	PSA/G140L /1280/3 CE NTER at LP 3 (default) (COS.sp.103 2431)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; BUFFER-TIME=40 0; LIFETIME-POS=D EF	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	· · · · · ·	[1]
9	,	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; BUFFER-TIME=40 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	[>]	[1]
Com	ments: See als	o COS.sa.1540230, si	ince we are replicating a spectroscopi	c acquisition. See	visit level note on exposur			I	
10	PSA/G140L /1280/3 +1.8 arcseconds i n XD at LP4 for detector mapping and centroiding (COS.sp.154 0229)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	0;	QESIPARM USELA MP LINE2;	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	20 Secs (20 Secs) [==>]	[1]
Con	ments: See als	o COS.sa.1540230, si	ince we are replicating a spectroscopic	c acquisition. See	visit level note on exposur	e times.			
11	PSA/G140L /1280/3 +0.9 arcseconds i n XD at LP4 for detector mapping and centroiding (COS.sp.154 0229)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	0;	QESIPARM USELA MP LINE2;	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	[>]	[1]
Com	ments: See als	o COS.sa.1540230, si	ince we are replicating a spectroscopic	c acquisition. See	visit level note on exposur	e times.			
12	PSA/G140L /1280/3 -0.9 arcseconds i n XD at LP4 for detector mapping and centroiding (COS.sp.154 0229)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; BUFFER-TIME=40 0; LIFETIME-POS=L P4		Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	[>]	[1]

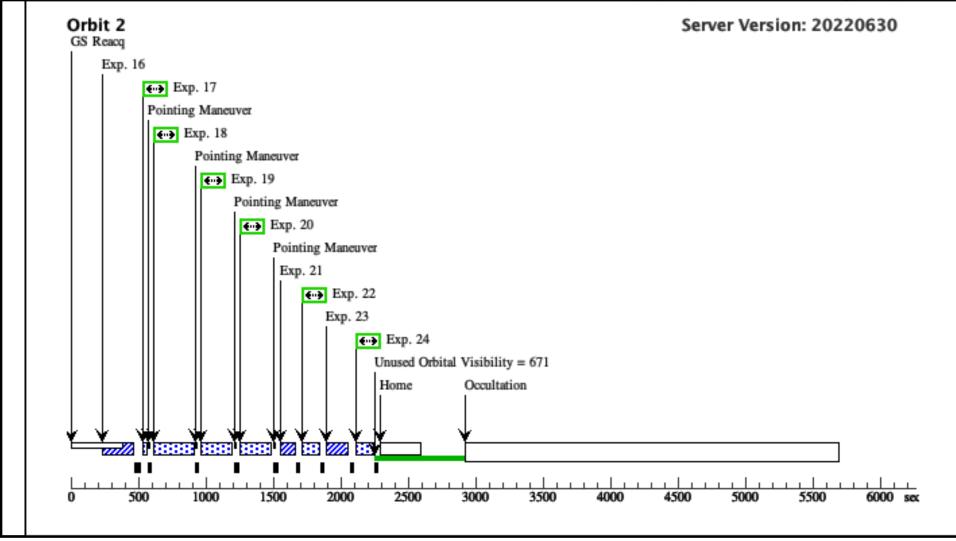
	ai 16942	<u>2 - PSA/MIRF</u>	RORB ACQ/IMAGE the	II G 140L ai		TA MONILOI (U			Acquisitic
	/1280/3 -1.8 arcseconds i n XD at LP4 for detector mapping and centroiding (COS.sp.103 2431)	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; BUFFER-TIME=40 0; LIFETIME-POS=L P4	; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02)	[==>]	[
			ince we are replicating a spectroscop				0 1.15 N. I	2.5 (2.5)	
	PSA/G140L /PEAKXD/ NP=5/DEF (COS.sa.154 0230)	(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G140L 1280 A	LIFETIME-POS=D EF; NUM-POS=5; STEP-SIZE=0.9	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-15 Non-I nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M FUV TA monitor (02	[>]	Γ
Com	nents: COS.so	1.1032455 Requested	Signal/Noise Ratio = 40.000 for Segn uired for Requested SNR in Segment A	nent A and Segmen	t B combined		,		
		1	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	OESIPARM USELA	Sequence 1-15 Non-I	20 Secs (20 Secs)	
	/1280/3 (COS.sp.103 2431)	(1) 112 1007 10 10		1280 A	BUFFER-TIME=40 0;	MP LINE2; QESIPARM CURR	nt in PSA/MIRROR B ACQ/IMAGE then G140L and G160M	[>]	
	- /				LIFETIME-POS=D EF	ENT MEDIUM	FUV TA monitor (02)		
16	PSA/MIRR ORB ACQ/I MAGE	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th	7 Secs (7 Secs) [==>]	
	(COS.ta.154 0223)						en G140L and G160 M FUV TA monitor (02)		
17	PSA/MIRR (1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB			A Sequence 16-24 Non	15.0 Secs (15 Secs)		
	ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.im.15				0; FLASH=S0060D01 5; CURRENT=MEDI	MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160 M FUV TA monitor (02)	[==>]	l
Comi PSA/I USEI		2	02 t PtNe Lamp 2, there are 2 QESIPAR	Ms set:	UM				
	PSA/G160	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;		Sequence 16-24 Non	82 Secs (82 Secs)	
	M/1600/3 - CENTER (COS.sp.154 0231)			1600 A	BUFFER-TIME=80 0; LIFETIME-POS=L P4	MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160 M FUV TA monitor (02)	[==>]	
		ure time (seconds) = 8 89 (per resolution eler	82.0000 at wavelength 1602.00 ment)				x/		I
,	PSA/G160	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	POS TARG null,1.3;	Sequence 16-24 Non	182 Secs (182 Secs)	
	M/1600/3 + 1.3arcsecon ds in XD			1600 A	00;	QESIPARM USELA MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160	[==>]	
					LIFETIME-POS=L		M FUV TA monitor		
	(COS.sp.154 0231)				P4	ENT MEDIUM	(02)		

						TA IIIOIIIIOI (U		<u>COS FUV Target Acqu</u>	<u> </u>
20		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	POS TARG null,-1.3	Sequence 16-24 Non	182 Secs (182 Secs)	
	M/1600/3 -1 .3arcseconds			1600 A	FLASH=YES;	;	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	in XD				BUFFER-TIME=10	QESIPARM USELA MP LINE2:	en G140L and G160		
	(COS.sp.154 0231)				00;	QESIPARM CURR	M FUV TA monitor (02)		[2]
	0201)				LIFETIME-POS=L P4	ENT MEDIUM	(02)		
Com	ments: At R=1.	3", the throughput is	~45%. To get the same counts, we ne	ed to increase the ex	posure time.				1
21		(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G160M		QESIPARM USELA		3 Secs (3 Secs)	
	M/PEAKX D/NP=3/DE			1600 A	4;	MP LINE2;	-Int in PSA/MIRRO RB ACO/IMAGE th	[==>]	
	F				NUM-POS=3;	QESIPARM CURR	en G140L and G160		[2]
	(COS.sa.154 0232)				STEP-SIZE=1.3		M FUV TA monitor (02)		
22	Time Required	d for Requested SNR	in Segment A only: 5.7791 in Segment B only: 1.2792	G160M	FP_POS-3.	OESIDARM LISELA	Sequence 16-24 Non	87 Secs (87 Secs)	
22		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;	QESIPARM USELA	Sequence 16-24 Non	82 Secs (82 Secs)	
	M/1600/3 (COS.sp.154			1600 A	BUFFER-TIME=80 0:	MP LINE2; QESIPARM CURR	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	0231)				-)	ENT MEDIUM	en G140L and G160		
					I IEETIME DOG_I	ENT MEDIUM			[2]
 					LIFETIME-POS=L P4	ENT MEDIUM	M FUV TA monitor (02)		[2]
23		(1) WD-1657+343	COS/FUV, ACQ/PEAKD, PSA	G160M	P4 LIFETIME-POS=LP	ENT MEDIUM	M FUV TA monitor (02) Sequence 16-24 Non	3 Secs (3 Secs)	[2]
23	M/1600/PE	(1) WD-1657+343	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	P4 LIFETIME-POS=LP 4;	ENT MEDIUM	M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO	3 Secs (3 Secs) [==>]	[2]
23	M/1600/PE AKD/NP=5/ DEF	(1) WD-1657+343	COS/FUV, ACQ/PEAKD, PSA		P4 LIFETIME-POS=LP 4; NUM-POS=5;		M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160		[2]
23	M/1600/PE AKD/NP=5/ DEF (COS.sa.154	(1) WD-1657+343	COS/FUV, ACQ/PEAKD, PSA		P4 LIFETIME-POS=LP 4;		M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160 M FUV TA monitor		
	M/1600/PE AKD/NP=5/ DEF (COS.sa.154 0232)	. ,	COS/FUV, ACQ/PEAKD, PSA	1600 A	P4 LIFETIME-POS=LP 4; NUM-POS=5; STEP-SIZE=0.9		M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160		
Com	M/1600/PE AKD/NP=5/ DEF (COS.sa.154 0232) ments: Analogo PSA/G160	. ,		1600 A	P4 LIFETIME-POS=LP 4; NUM-POS=5; STEP-SIZE=0.9	QESIPARM USELA	M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160 M FUV TA monitor (02) Sequence 16-24 Non	[==>]	
Com	M/1600/PE AKD/NP=5/ DEF (COS.sa.154 0232) ments: Analogo PSA/G160 M/1600/3	ous to exposure 01.0	14 carried over from previous cycles,	1600 A but this time to test	P4 LIFETIME-POS=LP 4; NUM-POS=5; STEP-SIZE=0.9 PEAKD at LP4. FP-POS=3; BUFFER-TIME=80	QESIPARM USELA MP LINE2;	M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160 M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO	[==>]	
Com	M/1600/PE AKD/NP=5/ DEF (COS.sa.154 0232) ments: Analogo PSA/G160	ous to exposure 01.0	14 carried over from previous cycles,	1600 A <u>but this time to test</u> G160M	P4 LIFETIME-POS=LP 4; NUM-POS=5; STEP-SIZE=0.9 PEAKD at LP4. FP-POS=3;	QESIPARM USELA	M FUV TA monitor (02) Sequence 16-24 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en G140L and G160 M FUV TA monitor (02) Sequence 16-24 Non	[==>] 82 Secs (82 Secs)	

Proposal 16942 - PSA/MIRRORB ACQ/IMAGE then G140L and G160M FUV TA monitor (02) - Cycle 30 COS FUV Target Acquisition ...



Proposal 16942 - PSA/MIRRORB ACQ/IMAGE then G140L and G160M FUV TA monitor (02) - Cycle 30 COS FUV Target Acquisition ...



Г	Proposal 16942, ACQ/PEAKXD LP6 enabling repeat test (03), implementation Thu Oct 20 12:00:23 GMT	Г 2022
	Diagnostic Status: Warning	
	Scientific Instruments: COS/FUV, COS/NUV	
	Special Requirements: SCHED 90%; ORIENT 97.5D TO 98.5 D; BETWEEN 22-JAN-2023:00:00 AND 01-FEB-2023:00:00:00	
	Comments: Visit 03 of the LP6 TA enabling program (16851) ran in June of 2022 and found that LP6 PEAKXD was slightly off-center by about 0.1". At that time it was decided that the only necessary action would to monitor the condition frequently. That visit is therefore repeated here six months after the original enabling program. there are only two changes: 1 - ORIENT constraint was changed to reflect new time of the year, and consequently the offsets defining the virtual targets changed. 2 - LP-POS is now changed from LP6 to DEF.	ıld be
	This visit tests PEAKXD. It is a copy of vist 02 of 16851, PEAKD test, with X and Y displacements inverted. The process is entirely symmetrical. First we perform an ACQ/IMAGE and take a G160M/1577 high SN spectrum and use it as the baseline for comparing the position of the other spectra.	
1 i oi N	****	
	CHANGE THIS ONCE ORIENTS ARE KNOWN The Between for this visit is 22 January 2023 to 01 February 2023. The virtual targets are set for orient=98. Any ORIENT is possible, but if the ORIENT changes then the PI will have to change the offsets for the virtual targets (not hard to do). *********	
	We simulate a 5x0.8" ACQ/PEAXKD taking short spectra. We start with the centered (0) position then go to -1.6" in Y and proceed in steps of 0.8" out to +1.6" Y. These exposures serve two purposes. First, they inspect the detector for anomalies. Second, the flux weighted centroid of all 5 exposures should provide the same result as the acquisition. We then perform an actual 5x0.8" (NUM-POS=5, STEP-SIZE=0.8") ACQ/PEAKXD on the centered target and take a spectrum. The position of this spectrum should be centered to the same specifications as the y weighted centroiding in the previous step.	
	We then use virtual targets to perform 5x0.9" ACQ/PEAKXD starting from offsets of -0.7" XD and +0.7" XD. We then repeat the process for a 3x1.3 ACQ/PEAKD for offsets of -0.3" XD and +0.3" XD.	
	Default is NUM-POS=3, CENTER=FLUX-WT, STEP-SIZE=1.3 If using NUM-POS=5 then CENTER=FLUX-WT-FLR, STEP-SIZE=0.9	
	(ACQ/PEAKXD LP6 enabling repeat test (03)) Warning (Form): COS ACQ/PEAKXD exposure should be followed by an ACQ/PEAKD exposure in the Visit.	
001100	(ACQ/PEAKXD LP6 enabling repeat test (03)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrume Handbook for exceptions that may apply to observations with G130M/1291 or G160M.	ent
	Handbook for exceptions that may apply to observations with G130M/1291 or G160M. (ACQ/PEAKXD LP6 enabling repeat test (03)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE	
	(ACQ/PEAKXD LP6 enabling repeat test (03)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE	
Ľ		•

	# Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(2) WDG-1	RA: 01 41 42.0729 (25.4253038d)	Proper Motion RA: 2.6618321082955913E-4	V=11.84	Reference Frame: ICRS					
	Alt Name1: SK191	Dec: -73 50 38.21 (-73.84395d)	sec of time/yr							
		Equinox: J2000	Proper Motion Dec: - 0.0013640000361192506 arcsec/yr							
			Epoch of Position: 2015.5							
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Blue supergiant in periphery of SMC. Has previous COS spectrum.									
	Decimal degree coordinates: 025.42	52866734441 -73.8439408698315								
	SIMBAD: http://simbad.u-strasbg.fr	/simbad/sim-id?Ident=WDG+1&NbIdent=1&R	adius=2&Radius.unit=arcmin&submit=submit+id							
	B 11.86 [~] E ~ V 11.84 [~] E ~									
	G 11.8193 [0.0015] C 2018yCat.134 J 11.904 [0.024] C 2003yCat.2246	450G								
S	H 11.957 [0.025] C 2003vCat.2246.	0C								
gets	K 11.906 [0.023] C 2003yCat.2246. Category=STAR	0C								
ar	Description=[B0-B2 III-I]									
μ	Extended=NO									
Fixed	(3) WDG-1-OFFSET+0.7X			V=11.8	Offset Position (WDG-1-OFFSET+0.7XD)					
ii.		RA Offset: -4.2044879E-4 Degrees								
		Dec Offset: 0.55904486 Arcsec								
	Delta(RA) = (Delta(AD)*sin(ORIE))	OS, going from offsets in AD and XD to offsets in TT - 45) + Delta(XD)*cos(ORIENT - 135) will y NT - 45) + Delta(XD)*sin(ORIENT - 135))/(360 2.2. Use the IDL procedure cosvirtualtarget.pro	in ra and dec: ield the result in arcseconds, which is what APT wan 00. * cos(dec)) will yield the result in decimal degrees	nts. s of RA, which is what APT wants.						
	(4) WDG-1-OFFSET+0.3X	CD Offset from WDG-1		V=11.8	Offset Position (WDG-1-OFFSET+0.3XD)					
		RA Offset: -1.8019235E-4 Degrees			, , , , , , , , , , , , , , ,					
		Dec Offset: 0.23959067 Arcsec								
	Delta(dec) = Delta(AD)*cos(ORIEN) Delta(RA) = (Delta(AD)*sin(ORIEN)	OS, going from offsets in AD and XD to offsets i VT - 45) + Delta(XD)*cos(ORIENT - 135) will y NT - 45) + Delta(XD)*sin(ORIENT - 135))/(360 2.2. Use the IDL procedure cosvirtualtarget.pro	vield the result in arcseconds, which is what APT wan 00. * cos(dec)) will yield the result in decimal degrees	nts. s of RA, which is what APT wants.						

I NUV ACQ 1 (2) WDG-1 COS/NUV, ACQ 4MAGE, BOA MIRRORB Sequence 1-16 Non-1 22 Sec: (32 Sec:) IIII ACQ/PEAKDD Comments: ACQ MAGE to determine center, libratical to exposure 01/00. See comments there. Sequence 1-16 Non-1 25 Sec: (32 Sec:) IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Comments: ACQ/IMAGE to determine center. Identical to exposure 01.001. See comments there. Comments: ACQ/IMAGE to determine center. Identical to exposure 01.001. See comments there. Sequence 1.16 Not.] 25 Sees (20 Sees) 2 Baschine see (2) MDG-1 COS/FUV, TIME-TAG, PSA G160M BUFFER-TIME=23 Sequence 1.16 Not.] 25 Sees (20 Sees) (COX sp. 154 FP-OS-52; FF FASH=NO; WAVECAL=NO; IF IF (COX sp. 154 FP-OS-52; FF FF FF Sequence 1.16 Not.] 25 Sees (20 Sees) IF 3 ACQ/FEAK (2) WDG-1 COS/FUV, ACQ/FEAKXD, PSA G160M IF IF FF Sequence 1.16 Not.] 25 Sees (20 Sees) IF (COS sn. 154 IS77 A IF IF FF NUM-POS=5; IF	1	MAGE (COS.ta.154	(2) WDG-1	COS/NUV, ACQ/IMAGE, BOA	MIRRORB			nt in ACQ/PEAKXD LP6 enabling repeat t		[1]
2 Buschin spe (2) WDG-1 COSFUV, TIME-TAG, PSA G160M BUFFER-TIME=23 Sequence 1-16 Non-1 [25 Secs. (20 Secs.)] (COS sp.154 1577 A FP-POS=3; FI-ASH-NO; LP6 cnabling repeat est (G3) [25 Secs. (20 Secs.]] (COS sp.154 1218) FI-ASH-NO; WAVECAL=NO; LIFETIME-POS=D [26 cnabling repeat est (G3)] [25 Secs. (20 Secs.]] 3 ACO/FFAK (2) WDG-1 COSFUV, ACQ/FEAKXD, PSA G160M LIFETIME-POS=D Sequence 1-16 Non-1 [25 Secs.]] (COS sa.154 1577 A FF LP6 cnabling repeat ist (FN ord ast (F	Com	<i>,</i>	MAGE to determir	ve center. Identical to exposure 01.001. S	ee comments there.					
FLASH=N0; WAYECAL=N0; LIFETIME-POS=D EF Comments: Spectrum to determine location after ACQ/IMAGE centering, Need high SN for determining position of other spectra, exposure time 100s vields SN-7 per rest. 3 ACQ/PEAK (2) WDG-1 (205 sta.154 COS/FUV, ACQ./PEAKXD, PSA (1209) G160M LIFETIME-POS=D EF Sequence 1-16 Non-1 in ACQ/PEAKXD 2 Sees (2 Sees) [==>1 (COS sta.154 1209) 1577 A FF. STEP-SIZE=0.8; CFNTRE-FLUX-W T-FLR LP6 enabling repeat (2 Sees) [==>1 Comments: ACQ/PEAKXD of a centered target on the same 5x0.8/m patient. NUM-POS=5; CRNTRE-FLUX-W T-FLR est 0.03 [==>1 This ACQ/PEAKXD of a centered target on the same 5x0.8/m patient. NUM-POS=5: CRNTRE-FLUX-W T-FLR est 0.03 [==>1 This ACQ/PEAKXD of a centered target on the same 5x0.8/m patient. NUM-POS=5: CRNTRE-FLUX-W T-FLR est 0.03 [==>1 This ACQ/PEAKXD of a centered target on the same 5x0.8/m patient. NUM-POS=5: CRNTRE-FLUX-W [==>1 [==>1 [==>1 This ACQ/PEAKXD of a centered target on the same 5x0.8/m patient. NUM-POS=5: CRNTRE-FLUX-W [==>1 [==>1 [==>1 Time Equired for Requested SNR in Segment A and Segment B conbined (S005 sp.154 [==>20.000 for Segment A and Segment B only: 0.2466 [==>20.000 for Segment A and Segment B only: 0.2466 [==>20.000 for Segment A and Segme	2	Baseline spe ctrum (COS.sp.154			G160M	0;		nt in ACQ/PEAKXD LP6 enabling repeat t		
Comments: Spectrum to determine location after ACQ/IMAGE centering. Need high SN for determining position of other spectra. exposure time 100x yields SN-7 per resel. 3 ACQ/PEAK (2) WDG-1 XD (COS.sa.154 1209) COS/FUV, ACQ/PEAKXD, PSA 1577 A G160M 1577 A LIPETIME-POS=D FF: NUM-POS=5; CENTER-FLUX-W T-FLR Sequence 1-16 Non-1 2 Secs (2 Secs) 2 Secs (2 Secs) Comments: ACQ/PEAKXD of a centered target on the same 5x0.80 ^m pattern. This ACQ/PEAKXD goes through the same positions that exposures 03.002 through 03 006 did The flux weighted centroid of those exposures should yield the same center as this PEAKXD. Here we do not us and SEP_SIZE-6x08; Requested Signal/Noise Ratio = 40.000 for Segment A and Segment B combined gives: Time = 0.1885 seconds Time Required for Requested SIX in Segment A only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7998 Time Required for Requested SIX in Segment B only: 0.7908 Time Required for Requested SIX in Segment B only: 0.7908 Time Required for Requested SIX in Segment B only: 0.7908 Time Required for Requested SIX in Segment B only: 0.2906 25 Secs: (0 Secs] 25 Secs: (0 Sec		1210)			WAVECAL=NO; LIFETIME-POS=D				[1]	
3 ACQ/PEAK (2) WDG-1 ND, WD, COS/FUV, ACQ/PEAKXD, PSA G160M LIFETIME-POS=D Sequence 1-16 Nor-1 m in ACQ/PEAKXD 2 Sees (2 Secs) 1209) 1209) 1577 A NUM-POS=5; STEP-SIZE=0.8; CENTER-FLUX-W 1576 A 164 cm Comments: ACQ/PEAKXD of a centered target on the same 5x0.8 ^{rm} pattern. This ACQ/PEAKXD gas entered target on the same positions that exposures 03.002 through 03 006 did. The flux weighted centroid of those exposures should yield the same center as this PEAKXD. Here we do not us auti STEP-SIZE because we would like to replicate the mapping done in exposures 03.002 to 03.006. Using STEP-SIZE=0.9 there would have yielded too low a flux to inspect the detector. 1577 A From COS.sa. 154/1200, we use 2 seconds. Requested SINR in Segment A and Segment B combined gives: Time Equired for Requested SNR in Segment A only: 0.7998 Time Required for Requested SNR in Segment A only: 0.7998 Time Required for Requested SNR in Segment B only: 0.2466 Sequence 1-16 Nor-1 COS/FUV, TIME-TAG, PSA 25 Sees (20 Sees) 1577 A 4 Verification (2) WDG-1 (COS, sp. 154 COS/FUV, TIME-TAG, PSA G160M BUFFER-TIME=23 FL-SSE Sequence 1-16 Nor-1 m in ACQ/PEAKXD, EF 25 Sees (87 Sees) 1==>20.0 Sees J 5 POSTARG (2) WDG-1 (COS, sp. 154 COS/FUV, TIME-TAG, PSA G160M BUFFER-TIME=23 POS TARG 0,-1.6 0; FLASH=NO; LIFETIME-POS=D EF; Sequence 1-16 Nor-1 0; FLASH=NO; LIFETIME-POS=D Sequence 1-16 Nor-1 0; FLASH=NO; LIFETIME-POS=D Sequence 1-16 Nor-1 0; FLASH	Com	ments: Spectri	um to determine lo	ocation after ACO/IMAGE centering. Net	ed high SN for deter	21	spectra, exposure time	e 100s vields SN~7 per ro	esel.	
XD (COS sa, 154 (209)1577 AFF; FF; NUE Post2E=0.8; CENTER=FLUX-W T-FLRnt in ACQ/PEAKXD est (03) $[==>]$ Comments: ACQ/PEAKXD of a centered target on the same 5x0.8"" pattern, This ACQ/PEAKXD goes through the same positions that exposures 03.002 through 03.006 did. The flux weighted centroid of those exposures should yield the same center as this PEAKXD. Here we do not us attist STEP-SIZE because we would like to reprint doet in exposures 03.002 to 03.006. Using STEP-SIZE=0.9 there would have yielded too low a flux to inspect the detector.From COS sa 1541209, we use 2 seconds. Requested Signal/Noise Katin = 40.000 for Segment A and Segment B combined spectrum (COS sp.154 1218)BUFFER-TIME=23 FP-POS=3; FP-POS=3; FFR-TIME=23 <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	3									
CENTER-FLUX-W T-FLR		(COS.sa.154			1577 A	NUM-POS=5;		LP6 enabling repeat t	[==>]	[]]
This ACQ/PEAXD goes through the same positions that exposures 03.002 through 03.006 did. The flux weighted centroid of those exposures should yield the same center as this PEAKDD. Here we do not us aut STEP-SIZE because we would like to replicate the mapping done in exposures 03.002 to 03.006. Using STEP-SIZE=0.9 there would have yielded too low a flux to inspect the detector. From COS.sa.1541209, we use 2 seconds. Requested Signal/Noise Ratio = 40.000 for Segment A and Segment B combined gives: Time = 0.1885 seconds Sequence 1-16 Non-I of the sequested SNR in Segment A only: 0.7998 Time Required for Requested SNR in Segment B only: 0.2466 Sequence 1-16 Non-I of the sequested SNR in Segment B only: 0.2466 Image: Seconds Sequence 1-16 Non-I of the sequested SNR in Segment B only: 0.2466 Image: Seconds						CENTER=FLUX-W	7			[1]
$\begin{array}{c c} spectrum \\ (COS, sp. 154 \\ 1218) \end{array} & 1577 A \\ \hline \\ I \\ 1218) \end{array} & 1577 A \\ \hline \\ FP-POS=3; \\ FLASH=NO; \\ WAVECAL=NO; \\ LIFETIME-POS=D \\ EF \\ \hline \\ \hline \\ Comments: Spectrum to determine location after ACQ/PEAKXD. \\ \hline \\ FPOSTARG (2) WDG-1 \\ + SPECTR \\ UM1 (-1.6) \\ (COS, sp. 154 \\ 1205) \end{array} & \hline \\ \hline \\ COS/FUV, TIME-TAG, PSA \\ I \\ FP-POS=3; \\ FLASH=NO; \\ UM1 (-1.6) \\ (COS, sp. 154 \\ 1205) \end{array} & \hline \\ \hline \\ FP-POS=3; \\ FLASH=NO; \\ LIFETIME-POS=D \\ EF; \\ \hline \\ \hline \\ FP-POS=3; \\ FLASH=NO; \\ LIFETIME-POS=D \\ EF; \\ \hline \\ $	4	Time Require	d for Requested S.	NR in Segment B only: 0.2466	C160M	DI IEEED TIME_22		Saguanaa 1 16 Non I	25 Saas (20 Saas)	1
WAVECAL=NO; LIFETIME-POS=D EF Comments: Spectrum to determine location after ACQ/PEAKXD. 5 POSTARG (2) WDG-1 COS/FUV, TIME-TAG, PSA G160M BUFFER-TIME=23 POS TARG 0,-1.6 Sequence 1-16 Non-I nt in ACQ/PEAKXD 92 Secs (87 Secs) I 5 POSTARG (2) WDG-1 COS/FUV, TIME-TAG, PSA G160M BUFFER-TIME=23 POS TARG 0,-1.6 Sequence 1-16 Non-I nt in ACQ/PEAKXD 92 Secs (87 Secs) I 1001 (COS.sp.154) 1577 A 0; LP6 enabling repeat t est (03) I=>87.0 Secs J I205) FLASH=NO; IIFETIME-POS=D EF; EF; IIFETIME-POS=D EF;	4	spectrum (COS.sp.154	(2) WDG-1	COS/FUV, HIME-TAO, PSA		0;		nt in ACQ/PEAKXD		
5 POSTARG (2) WDG-1 COS/FUV, TIME-TAG, PSA G160M BUFFER-TIME=23 POS TARG 0,-1.6 Sequence 1-16 Non-I 92 Secs (87 Secs) + SPECTR 1577 A 0; nt in ACQ/PEAKXD LP6 enabling repeat t [==>87.0 Secs] (COS,sp.154 1205) FLASH=NO; LIFETIME-POS=D EF; LIFETIME-POS=D EF;						11 1 05 0,			[==>20.0 Secs]	
+ SPECTR UM1 (-1.6) (COS.sp.154 1205) 1577 A 1577 A 1577 A 0; FP-POS=3; FLASH=NO; LIFETIME-POS=D EF; 1577 A 0; nt in ACQ/PEAKXD LP6 enabling repeat t est (03) [==>87.0 Secs]						FLASH=NO; WAVECAL=NO; LIFETIME-POS=D			[==>20.0 Secs]	[1]
UM1 (-1.6) (COS.sp.154 1205) IDF POS=3; FP-POS=3; FLASH=NO; LIFETIME-POS=D EF; LIFETIME-POS=D	Com	ments: Spectri	um to determine lo	cation after ACQ/PEAKXD.		FLASH=NO; WAVECAL=NO; LIFETIME-POS=D			[==>20.0 Secs]	[1]
LIFETIME-POS=D EF;		POSTARG			G160M	FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF BUFFER-TIME=23	POS TARG 0,-1.6	est (03) Sequence 1-16 Non-I	[>20.0 Secs]	[1]
WAVECAL -NO		POSTARG + SPECTR UM1 (-1.6) (COS.sp.154				FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF BUFFER-TIME=23 0; FP-POS=3;	POS TARG 0,-1.6	est (03) Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t	92 Secs (87 Secs)	[1]
WAVECAL=NO Comments: POSTARG to simulate 5x0.8" (NUM-POS=5, STEP-SIZE=0.8") ACQ/PEAKXD. This is the y= -1.6 " position. Here we strive for SN~5.5 per resel. If the beam was not vignetted that would happen		POSTARG + SPECTR UM1 (-1.6) (COS.sp.154				FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; LIFETIME-POS=D	POS TARG 0,-1.6	est (03) Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t	92 Secs (87 Secs)	[1]

	, TIME-TAG, PSA	G160M	BUFFER-TIME=23	POS TARG 0,-0.8	Sequence 1-16 Non-I	31 Secs (26 Secs)	
+ SPECTR UM3 (-0.8)		1577 A	0;		nt in ACQ/PEAKXD LP6 enabling repeat t	[==>26.0 Secs]	
(COS.sp.154			FP-POS=3;		est (03)		
1205)			FLASH=NO;				[1]
			LIFETIME-POS=D EF;				[1]
			WAVECAL=NO				
Comments: POSTARG to simulate 5x0.8" (NUM-POS exposure. But vignetting at y=-0.8" is 20%. 25s/(1-0.2	S=5, STEP-SIZE=0.8") A(CQ/PEAKXD. Th	his is the $y = -0.8$ " position. H	Here we strive for Si	N~5.5 per resel. If the bea	m was not vignetted that would	happen in a
	, TIME-TAG, PSA	G160M	BUFFER-TIME=23		Sequence 1-16 Non-I		
+ SPECTR UM3 (+0.8)		1577 A	0;		nt in ACQ/PEAKXD LP6 enabling repeat t	I = >26.0 Secs]	
(COS.sp.154			FP-POS=3;		est (03)		
1205)			FLASH=NO;				[1]
			LIFETIME-POS=D				[1]
			EF;				
		20 (DD (1910)	WAVECAL=NO				
Comments: POSTARG to simulate 5x0.8" (NUM-POS s exposure. But vignetting at y=+0.8" is 20%. 25s/(1-0	(=5, STEP-SIZE=0.8") A $(0.20)=31s$. While the defi	CQ/PEAKXD. In ault STEP-SIZE f	is is the y= +0.8 " position. for NUM-POS=5 is 0.9", that	Here we strive for S t would not allow en	N~5.5 per resel. If the bea ough light through to insp	am was not vignetted that would pect the detector, so we use STE	l happen in a EP-SIZE=0.8"
his exposure is symmetric to 02.004 8 POSTARG (2) WDG-1 COS/FUV,	, TIME-TAG, PSA	G160M	BUFFER-TIME=23	POSTARCOLE	Sequence 1-16 Non-I	22 Sect. (87 Sect.)	
+ SPECTR (2) who is a costruct, $+$ spectr	TIME-TAO, PSA		0;	POS TARO 0,1.0	nt in ACO/PEAKXD	$V = = > 87.0 \ Secs \ l$	
UM1 (+1.6)		1577 A	FP-POS=3;		LP6 enabling repeat t	==>07.0 Secs j	
(COS.sp.154 1205)			FLASH=NO;		est (03)		
			LIFETIME-POS=D				[1]
			EF;				
			WAVECAL=NO				
Comments: POSTARG to simulate $5x0.8"$ (NUM-POS s exposure. But vignetting at $y=+1.6"$ is 73% . $25s / (1)$	S=5, STEP-SIZE=0.8") A (-0.73)=92s. While the de	CQ/PEAKXD. Th fault STEP-SIZE	his is the $y = +1.6$ " position. for NUM-POS=5 is 0.9", the	Here we strive for S at would not allow e	N~5.5 per resel. If the bee mough light through to in	am was not vignetted that would spect the detector, so we use SI	l happen in a 2 EP-SIZE=0.8'
This exposure is symmetric to 02.003							
$0 \qquad ACO/DEAK (3) WDG 1 OEESET COS/EUV$	ACO/DEAKYD DSA	G160M	I IFETIME POS-D		Sequence 1 16 Non L	Sace (2 Sace)	
XD on offse +0.7XD	, ACQ/PEAKXD, PSA	G160M	LIFETIME-POS=D EF;		Sequence 1-16 Non-I	· /	
XD on offse +0.7XD t -0.7 XD	, ACQ/PEAKXD, PSA	G160M 1577 A			nt in ACQ/PEAKXD LP6 enabling repeat t	2 Secs (2 Secs) [==>]	
XD on offse $+0.7$ XD	, ACQ/PEAKXD, PSA		EF;		nt in ACQ/PEAKXD	· /	[1]
XD on offse +0.7XD t -0.7 XD (COS.sa.154	, ACQ/PEAKXD, PSA		EF; CENTER=FLUX-W		nt in ACQ/PEAKXD LP6 enabling repeat t	· /	[1]
XD on offse +0.7XD t -0.7 XD (COS.sa.154	, ACQ/PEAKXD, PSA		EF; CENTER=FLUX-W T-FLR;		nt in ACQ/PEAKXD LP6 enabling repeat t	· /	[1]
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered of	-	1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	'==>]	
XD on offse +0.7XD t-0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered in the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV,	target. The virtual target	1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I	the real target is offset -0.7" fr	
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered in the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD	target. The virtual target	1577 A is defined as bein	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD	the real target is offset -0.7" fr	
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154	target. The virtual target	1577 A is defined as bein G160M	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I	the real target is offset -0.7" fr 25 Secs (20 Secs)	
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered in the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD	target. The virtual target	1577 A is defined as bein G160M	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0;	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t	the real target is offset -0.7" fr 25 Secs (20 Secs)	om the center
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154	target. The virtual target	1577 A is defined as bein G160M	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3;	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t	the real target is offset -0.7" fr 25 Secs (20 Secs)	
XD on offse +0.7XD t-0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154)	target. The virtual target	1577 A is defined as bein G160M	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D	real target. So at th	nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t	the real target is offset -0.7" fr 25 Secs (20 Secs)	om the center
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154 1218)	target. The virtual target , TIME-TAG, PSA	1577 A <i>is defined as bein</i> G160M 1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF		nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	<pre>[==>] the real target is offset -0.7" fr 25 Secs (20 Secs) [==>20.0 Secs]</pre>	om the center
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154 1218)	target. The virtual target , TIME-TAG, PSA	1577 A <i>is defined as bein</i> G160M 1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF		nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	<pre>[==>] the real target is offset -0.7" fr 25 Secs (20 Secs) [==>20.0 Secs]</pre>	om the center
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154 1218)	target. The virtual target , TIME-TAG, PSA	1577 A <i>is defined as bein</i> G160M 1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF		nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	<pre>[==>] the real target is offset -0.7" fr 25 Secs (20 Secs) [==>20.0 Secs]</pre>	om the center
XD on offse +0.7XD t-0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154)	target. The virtual target , TIME-TAG, PSA	1577 A <i>is defined as bein</i> G160M 1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF		nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	<pre>[==>] the real target is offset -0.7" fr 25 Secs (20 Secs) [==>20.0 Secs]</pre>	om the center
XD on offse +0.7XD t -0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154 1218)	target. The virtual target , TIME-TAG, PSA	1577 A <i>is defined as bein</i> G160M 1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF		nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	<pre>[==>] the real target is offset -0.7" fr 25 Secs (20 Secs) [==>20.0 Secs]</pre>	om the center
XD on offse +0.7XD t-0.7 XD (COS.sa.154 1209) Comments: 5x0.9" ACQ/PEAKXD on an off centered to the field of view. 10 Verification (3) WDG-1-OFFSET COS/FUV, spectrum +0.7XD (COS.sp.154 1218)	target. The virtual target , TIME-TAG, PSA	1577 A <i>is defined as bein</i> G160M 1577 A	EF; CENTER=FLUX-W T-FLR; NUM-POS=5; STEP-SIZE=0.9 ng at a +0.7" offset from the BUFFER-TIME=23 0; FP-POS=3; FLASH=NO; WAVECAL=NO; LIFETIME-POS=D EF		nt in ACQ/PEAKXD LP6 enabling repeat t est (03) e beginning of acquisition Sequence 1-16 Non-I nt in ACQ/PEAKXD LP6 enabling repeat t est (03)	<pre>[==>] the real target is offset -0.7" fr 25 Secs (20 Secs) [==>20.0 Secs]</pre>	om the center

1	ACQ/PEAK XD on offse	(2) WDG-1	COS/FUV, ACQ/PEAKXD, PSA	G160M 1577 A	LIFETIME-POS=D EF;	Sequence 1-16 Non-I nt in ACQ/PEAKXD		
	t +0.7 AD (COS.sa.154 1209)		13// A	CENTER=FLUX-W T-FLR;	LP6 enabling repeat t est (03)			
	120))				NUM-POS=5;			
					STEP-SIZE=0.9			
om	ments: 5x0.9" A	ACQ/PEAKXD on a	in off centered target. From the previou inates of the real target. That moves the	s acquisition, the	e telescope thinks it's at $+0.7XD$ from the real target is at $+0.7''$	he real target, but the real target is	actually centered in the field	l of view. Now
	Verification		COS/FUV, TIME-TAG, PSA	G160M	BUFFER-TIME=23	Sequence 1-16 Non-I	25 Secs (20 Secs)	
	(COS.sp.154		1577 A	0;	nt in ACQ/PEAKXD LP6 enabling repeat t	[==>20.0 Secs]		
	1218)				FP-POS=3;	est (03)		
	,				FLASH=NO;			
					WAVECAL=NO;			
					LIFETIME-POS=D			
					EF			
			ution after ACQ/PEAKXD. This exposur			C	2 5 (2 5)	
5	XD on offse		ET COS/FUV, ACQ/PEAKXD, PSA	G160M	LIFETIME-POS=D EF;	Sequence 1-16 Non-I nt in ACQ/PEAKXD		
	t -0.3 AD			1577 A	CENTER=FLUX-W	LP6 enabling repeat t	[==>]	
	(COS.sa.154 1209)				T;	est (03)		
	1209)		NUM-POS=3;					
			STEP-SIZE=1.3					
	Verification	(4) WDG-1-OFFSI	XD from the real target. That places the ET COS/FUV, TIME-TAG, PSA	<u>e real target at -0</u> G160M 1577 A	BUFFER-TIME=23	Sequence 1-16 Non-I	25 Secs (20 Secs)	
	spectrum (COS.sp.154	+0.3XD			0;	nt in ACQ/PEAKXD LP6 enabling repeat t	[==>20.0 Secs]	
	(COS.sp.154 1218)		FP-POS=3;	est (03)				
			FLASH=NO;					
			WAVECAL=NO;					
					LIFETIME-POS=D EF			
			ation after ACQ/PEAKXD. This exposur			<u> </u>		
5	ACQ/PEAK (2) WDG-1 COS/FUV, ACQ/PEAKXD, P XD on offse	COS/FUV, ACQ/PEAKXD, PSA	G160M	LIFETIME-POS=D EF;	Sequence 1-16 Non-I nt in ACQ/PEAKXD			
	t +0.3 AD (COS.sa.154 1209)		1577 A	CENTER=FLUX-W	LP6 enabling repeat t	[==>]		
			T;	est (03)				
	1209)	209)		NUM-POS=3:				
				STEP-SIZE=1.3				
om	ments: 3x1.3" A	ACQ/PEAXKD on c	in off centered target. From the previou	s acquisition, the	e telescope thinks it's at +0.3XD from t	he real target, but the real target is	actually centered in the field	l of view. Nov
	telescope to go Verification		inates of the real target. That moves the COS/FUV, TIME-TAG, PSA	telescope -0.3"X G160M	(D. So now the real target is at +0.3"X) BUFFER-TIME=23	D. Sequence 1-16 Non-I	25 Secs (20 Secs)	
5	spectrum	spectrum	1577 A	0;	nt in ACQ/PEAKXD	[==>20.0 Secs]		
	(COS.sp.154			FP-POS=3;	LP6 enabling repeat t	120.0 sets j		
	1210)			FLASH=NO;	est (03)			
				WAVECAL=NO;				
					LIFETIME-POS=D			



