

# 15386 - COS FUV Target Acquisition Monitor

Cycle: 25, 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 COS/NUV	2	06-Feb-2018 16:02:21.0	yes
90	(1) WD-1657+343	COS/FUV COS/NUV	1	06-Feb-2018 16:02:26.0	yes
91	(1) WD-1657+343	COS/FUV COS/NUV	1	06-Feb-2018 16:02:29.0	yes

<sup>4</sup> Total Orbits Used

### **ABSTRACT**

Starting in Cycle 25, the COS Target Acquisition (TA) monitor has been divided into two pieces, NUV (15389) and FUV (15386). 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).

Proposal 15386 (STScI Edit Number: 3, Created: Tuesday, February 6, 2018 4:02:30 PM EST) - Overview

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). In these programs, this target was used to co-align the PSA/MIRRORB and BOA/MIRRORA ACQ/IMAGE modes. We re-use this target here as it is safe with PSA/MIRRORA and visible almost year-round.

Note that when presented to the mission office, the target 206W3 was listed as the target for this program. This target was a backup target in previous TA monitor programs and was the faintest of the 3 targets in the program. Switching to the next brighter target (WD1657+343) allows all the goals of this program to be accomplished in just 2 orbits. Also, as this target has been used for every generation of this program, the FUV monitoring can be bootstrapped to previous programs, if needed. See the observing description for more details.

The LTAIMAGE that started the second orbit of Visit 26 had the TDF down and the shutter closed. This caused the ACQ/IMAGE to miscenter the target by about 1.3".

Visit 90 was added as a partial repeat from HOPR 89665. This visit is as close to a repeat of the 2nd orbit of Visi t 25 as possible. Due to time lost doing a full acq instead of a RE-ACQ, the following changes were made:

- 1) Changed Visit number to 90
- 2) Schedulability set to 90%
- 3) Before date set to Feb-19-2018, but the earlier the better (this is negotiable)
- 4) Increased Buffer Time for Exposures 90.010 and 90.014 to 976s (2/3 \* ETC time)
- 5) Increased Buffer Time for Exposes 90.011 and 90.012 to 2000s (976/0.45 = 2168s)
- 6) Changed exposures times for 90.011 and 90.012 from 182 to 180s.

Visit 90 had a GS problem (RGA hold failure) and the entire visit had the shutter closed. HSTAR 14932 was filed along with the approved HOPR 89896. Visit 90 was copied to Visit 91 with the following changes:

- 1) Changed Visit number to 91
- 2) Before changed from 19-FEB-2018 to 19-MAR-2018

Note that there are 4 exposures with "Y" POS\_TARGs in Visit 91 to intentionally offset the target in XD by +/- 1.3"; 2 are G140L and 2 are G160M.

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We request that previously used, known good, Guide Stars be used, if possible.

### **OBSERVING DESCRIPTION**

A single two-visit annual visit on a target with year-round visibility (WD1657+343). We have requested (via a "BEFORE") that this program execute in 2017.

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 a picture 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 (ET adjusted to obtain ~ same S/N as CENTERED)
- 5) Take a low S/N spectrum before any FUV tests at -1.3" in XD (ET adjusted to obtain ~ same 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 (ET adjusted to obtain ~ same S/N as CENTERED)
- 9) Take a low S/N spectrum at +0.9" in XD (ET adjusted to obtain ~ same S/N as CENTERED)
- 10) Take a low S/N spectrum at -0.9" in XD (ET adjusted to obtain ~ same S/N as CENTERED)
- 11) Take a low S/N spectrum at -1.8" in XD (ET adjusted to obtain ~ same 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

Proposal 15386 (STScI Edit Number: 3, Created: Tuesday, February 6, 2018 4:02:30 PM EST) - Overview Offsets achieved by "Y" POS\_TARGs in the offset spectra.

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

Note that when presented to the mission office, the target 206W3 was listed as the target for this program. This target was a backup target in previous TA monitor programs and was the faintest of the 3 targets in those programs. Switching to the next brighter target in those monitors (WD1657+343) allows all the goals of this program to be accomplished in just 2 orbits. Also, as this target has been used for every generation of this program, the FUV monitoring can be bootstrapped to previous cycles and lifetime positions, if needed.

In addition, the NUM\_POS=5 test of the G130M test can now be achieved at S/N=40, which was not possible with the fainter 206W3. AND, WD1657+343 has even better visibility than 206W3 allowing this program to execute essentially anytime during the year. The ACQ/IMAGE was changed from PSA/MIRRORA to PSA/MIRRORB to accommodate the brighter WD1657+343.

### 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 will may be off and give different count rates than expected.

# Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - COS FUV Target Acquisition Monitor

Proposal 15386, PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring (25), failed Tue Feb 06 21:02:30 GMT 2018 **Diagnostic Status: Warning** Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100%; BEFORE 31-DEC-2017:00:00:00 Comments: This visit has been defined with a timing requirement of executing during 2017. This requirement is designed to ensure that this programs' first execution is relatively early during the LP4 FUV tenure. 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 ACO/IMAGE then FUV TA Monitoring (25)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details. (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 (PSA/MIRRORB ACO/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 Diagnostic (PSA/MIRRORB ACO/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 NO ORIENT (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACO/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 ACO/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring (25)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT Name **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 = 16.1Reference 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 g (AB) 16.139 [0.003] B 2013yCat.5139....0A (AB) 16.691 [0.004] B 2013yCat.5139....0A (AB) 17.054 [0.005] B 2013yCat.5139....0A z (AB) 17.388 [0.015] C 2013yCat.5139....0A Category=STAR  $Description = \lceil DA \rceil$ Extended=NO

Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - 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 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)	I>1	[1]
Con	mments: This ta	rget was most recenti	ly used in Visit BA of 14857 (ldozbad	lhq). Bck subtracted	counts in second image =	= 5430 ; S/N = 73.69, I	ET=13s		
Rep Lan	oorted Lamp Eve np Background	ents = 3316 counts : . events in 50x300 TA	D = P2/Medium, LAMP EXPTIME = Rate = 276.33334 counts/s BOX for lampflash time (12s) = 112 te = 267.026 counts/s		ounts/s				
2	PSA/MIRR ORB LAMP	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0;	QESIPARM USELA MP LINE2;	Sequence 1-15 Non-I nt in PSA/MIRROR	· · · · · ·	
	+TARGET I				<i>'</i>	QESIPARM CURR	B ACQ/IMAGE then	[==>]	
	MAGE (P2/ MEDIUM)				5;	ENT MEDIUM	FUV TA Monitoring (25)		[1]
	(COS.ta.103 2496)				CURRENT=MEDI UM		. ,		
USI	*	2	urrent, see 25.001 for expected count	rates. To get PtNe L		PARMs set:			
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	FLASH=YES;	MP LINE2; QESIPARM CURR	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	(COS.sp.103 2420)				BUFFER-TIME=30 0;	ENT MEDIUM	FUV TA Monitoring (25)		[1]
	2420)						(23)		[1]
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Brigger Br Counce C C C C C C C C C C C C C C C C C C C	ghtest Pixel (sin rightest Pixel in rightest Pixel in unt rate entire d Count rate Segm PSA/C1291/3 + 1.3arcse conds in XD (COS.sp.103 2420)  mments: At R=I r than expected. PSA/C1291/3 - 1.3arcsec onds in XD (COS.sp.103 2420)	gle exposure) (at 121 Segment A (at 1301. Segment B (at 1216.2 etector 4,851.724 ent A 1,834.935 ent B 3,016.789 (1) WD-1657+343	16.21) 0.106 2.64 46) 0.030 21) 0.106 COS/FUV, TIME-TAG, PSA s ~45%. To get the same counts, we r	G130M 1291 A need an exposure time G130M 1291 A	P4 that 326 s is a good BT, v  FP-POS=3; FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4 e of 25/0.45 = 55s. BT <  FP-POS=3; FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4	POS TARG null,1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM 326/0.45 = 725. Anyth POS TARG null,-1.3; QESIPARM USELA MP LINE2; QESIPARM CURR	Sequence 1-15 Non-Int in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)  ing BT less that 725s is  Sequence 1-15 Non-Int in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring	55 Secs (55 Secs) [==>]  a good BT, we use 500s in case the to  55 Secs (55 Secs)	erget is bri
Brigger Br Counce C C C C C C C C C C C C C C C C C C C	ghtest Pixel (sin rightest Pixel in rightest Pixel in unt rate entire d Count rate Segm PSA/C1291/3 + 1.3arcse conds in XD (COS.sp.103 2420)  mments: At R=I r than expected. PSA/C1291/3 - 1.3arcsec onds in XD (COS.sp.103 2420)	gle exposure) (at 121 Segment A (at 1301. Segment B (at 1216.2 etector 4,851.724 ent A 1,834.935 ent B 3,016.789 (1) WD-1657+343	16.21) 0.106 2.64 46) 0.030 21) 0.106  COS/FUV, TIME-TAG, PSA  s ~45%. To get the same counts, we recovered the same counts.	G130M 1291 A need an exposure time G130M 1291 A	P4 that 326 s is a good BT, v  FP-POS=3; FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4 e of 25/0.45 = 55s. BT <  FP-POS=3; FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4	POS TARG null,1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM 326/0.45 = 725. Anyth POS TARG null,-1.3; QESIPARM USELA MP LINE2; QESIPARM CURR	Sequence 1-15 Non-Int in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)  ing BT less that 725s is  Sequence 1-15 Non-Int in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring	55 Secs (55 Secs) [==>]  a good BT, we use 500s in case the to  55 Secs (55 Secs)	arget is br
Brigger Br Counce C C C C C C C C C C C C C C C C C C C	ghtest Pixel (sin rightest Pixel in rightest Pixel in unt rate entire d Count rate Segm PSA/C1291/3 + 1.3arcse conds in XD (COS.sp.103 2420)  mments: At R=I r than expected. PSA/C1291/3 - 1.3arcsec onds in XD (COS.sp.103 2420)	gle exposure) (at 121 Segment A (at 1301. Segment B (at 1216.2 etector 4,851.724 ent A 1,834.935 ent B 3,016.789 (1) WD-1657+343	16.21) 0.106 2.64 46) 0.030 21) 0.106  COS/FUV, TIME-TAG, PSA  s ~45%. To get the same counts, we recovered the same counts.	G130M 1291 A need an exposure time G130M 1291 A	P4 that 326 s is a good BT, v  FP-POS=3; FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4 e of 25/0.45 = 55s. BT <  FP-POS=3; FLASH=YES; BUFFER-TIME=50 0; LIFETIME-POS=L P4	POS TARG null,1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM 326/0.45 = 725. Anyth POS TARG null,-1.3; QESIPARM USELA MP LINE2; QESIPARM CURR	Sequence 1-15 Non-Int in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)  ing BT less that 725s is  Sequence 1-15 Non-Int in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring	55 Secs (55 Secs)  [==>]  a good BT, we use 500s in case to  55 Secs (55 Secs)	he ta

posal 15386 - PSA/MIRF 6 PSA/C1291/ (1) WD-1657+343	COS/FUV, ACO/PEAKXD, PSA	G130M			Sequence 1-15 Non-I		
PEAKXD/N P=3/DEF (COS.sa.103 2423)		1291 A	4	MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	[==>]	[1]
Comments: The NUM_POS and STEP	SIZE are not included to make sure th	at the correct DEF	TAULTS of NUM_POS=3	and STEP_SIZE=1.3",	and CENTER = FLUX	-WT are still inserted.	
Target is the HST Standard Star:WD-16	557+343						
Requested Signal/Noise Ratio = 40.000 gives: Time = 0.4206 seconds Time Required for Requested SNR Time Required for Requested SNR	in Segment A only: 1.2717	ed					
Brightest Pixel (single exposure) (at 121 Brightest Pixel in Segment A (at 1301. Brightest Pixel in Segment B (at 1216. Count rate entire detector 4,898.533 Count rate Segment A 1,856.745 Count rate Segment B 3,041.787	46) 0.030						
7 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 NU M_POS=3 P EAKXD (COS.sp.103 2420)		1291 A	FLASH=YES; BUFFER-TIME=30 0; LIFETIME-POS=L P4	MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	[==>]	[1]
Comments: See comment in 25.003			14				
8 PSA/C1291/ (1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	POS TARG null,1.8;		194 Secs (194 Secs)	
3 + 1.8arcse conds in XD (COS.sp.103 2420)		1291 A	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	[==>]	[1]
Comments: At R=1.8", the throughput is ghter than expected.	s ~13%. To get the same counts, we ne	ed an exposure tin	ne of 25/0.13 = 194s. BT <	< 320 / 0.13 = 2500. Ai	ny BT less that 2500s is	a good BT, we use 1000s in case the t	target is bri
9 PSA/C1291/ (1) WD-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 + 0.9arcse conds in XD (COS.sp.103 2420)		1291 A	FLASH=YES; BUFFER-TIME=40 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	[==>]	[1]
Comments: At R=0.9", the throughput is than expected.	s ~71%. To get the same counts, we ne	eed an exposure tin	ne of $25/0.71 = 35s$ . $BT <$	320 / 0.71 = 450. Any	BT less that 450s is a g	ood BT, we use 400s in case the targe	t is brighter
10 PSA/C1291/ (1) WD-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.103 2420)		1291 A	FLASH=YES; BUFFER-TIME=40 0;	; QESIPARM USELA MP LINE2;	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring (25)	[==>]	[1]
<del>_</del> _,			LIFETIME-POS=L P4	QESIPARM CURR ENT MEDIUM	\'/		[ [2]
Comments: At R=0.9", the throughput is r than expected.	s ~71%. To get the same counts, we ne	eed an exposure tin	LIFETIME-POS=L P4	ENT MEDIUM	. ,	good BT, we use 400s in case the targe	

<u>opc</u>	<u>ısai 15386</u>	<u> - PSA/MIRR</u>	<u>RORB ACQ/IMAGE ther</u>	<u>1 FUV TA M</u>	<u>onitoring (25) -</u>	<u>COS FUV Ta</u>	<u>ırget Acquisitic</u>	on Monitor	
11	PSA/C1291/	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;		Sequence 1-15 Non-I		
	3 - 1.8arcsec onds in XD			1291 A	FLASH=YES;	;	nt in PSA/MIRROR B ACQ/IMAGE then	[==>]	
	(COS.sp.103 2420)				BUFFER-TIME=10 00;	QESIPARM USELA MP LINE2;	FUV TA Monitoring (25)		[1]
	2420)				LIFETIME-POS=L	QESIPARM CURR	(23)		[1]
					P4	ENT MEDIUM			
			*		*			in case the target is brighter than exp	ected.
12	PSA/C1291/ PEAKXD/N	(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G130M	LIFETIME-POS=LP 4;	QESIPARM USELA MP LINE2;	Sequence 1-15 Non-I nt in PSA/MIRROR	, ,	
	P=5/DEF (COS.sa.103			1291 A	NUM-POS=5;	QESIPARM CURR	B ACQ/IMAGE then FUV TA Monitoring	[==>]	[1]
	2423)				STEP-SIZE=0.9	ENT MEDIUM	(25)		[-]
								is used instead. Double check that the	DEFAUL
13		(1) WD-1657+343	s left unspecified to test that the default COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;		Sequence 1-15 Non-I	25 Secs. (25 Secs.)	
	3 - After NU	(1) (12 10371313	005/101, 111/12 1110, 15/1	1291 A	FLASH=YES;	MP LINE2;	nt in PSA/MIRROR	[==>]	
	M_POS=5 P EAKXD				BUFFER-TIME=30	QESIPARM CURR ENT MEDIUM	B ACQ/IMAGE then FUV TA Monitoring	,	
	(COS.sp.103 2420)				0;	ENT MEDICM	(25)		[1]
	,				LIFETIME-POS=L P4				
Co	mments: HST Sto	andard Star, S/N ~ 5	in 25s. See comment in 25.003						
14	PSA/C1291/ PEAKD/NP	(1) WD-1657+343	COS/FUV, ACQ/PEAKD, PSA	G130M	LIFETIME-POS=LP 4;	QESIPARM USELA MP LINE2:	Sequence 1-15 Non-I nt in PSA/MIRROR	3 Secs (3 Secs)	
	=5/DEF			1291 A	NUM-POS=5;	QESIPARM CURR	B ACQ/IMAGE then	[==>]	[1]
	(COS.sa.103 2423)				STEP-SIZE=0.9	ÈNT MEDIUM	FUV TA Monitoring (25)		[1]
Co	mments: We war	it to check the AD NU	VV to FUV SIAF alignment, so perform	a good PEAKD. Do	ouble check that the DE	FAULT CENTER=FLU	UX-WT-FLR is used. It	is left unspecified to test that the defau	lt APT log
15		<u>choosing the correct (</u> (1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G130M	FP-POS=3;	OFSIPARM LISELA	Sequence 1-15 Non-I	25 Secs (25 Secs)	
13	3 - After PE	(1) WD 10371343	COS/10 V, TIME 1710, 15/1	1291 A	FLASH=YES;	MP LINE2;	nt in PSA/MIRROR	[==>]	
	AKD (COS.sp.103				BUFFER-TIME=30	QESIPARM CURR ENT MEDIUM	B ACQ/IMAGE then FUV TA Monitoring		
	2420)				0;	ENT MEDIUM	(25)		[1]
					LIFETIME-POS=L P4				
Co	mments: HST Sto	andard Star, S/N ~ 5	in 25s.						
16		(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 16-22 Non	13 Secs (13 Secs)	
	ORB ACQ/I MAGE					O BASE1B3	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	(2)
	(COS.ta.103 2496)						en FUV TA Monitori ng (25)		[2]
Co	mments: See con	nment in 25.001					8(-)		
17		(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB			Sequence 16-22 Non	15.0 Secs (15 Secs)	
	ORB LAMP +TARGET I				0; FLASH_\$0060D01	MP LINE2; QESIPARM CURR	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
	MAGE (P2/ MEDIUM)				5;	ENT MEDIUM	en FUV TA Monitori ng (25)		[2]
	(COS.ta.103 2496)				CURRENT=MEDI UM		ng (20)		
Co	*	IRRORR/P2/MFD cu	rrent, see 25.001 for expected count ra	ites To get PtNe Lar		PARMs set			
US	ELAMP = LINE	2	Tem, see 23.001 for expected country	ies. 10 gei 1 ii te Laii	np 2, mere are 2 <u>Q</u> 2511	mans see.			
	VRRENT = MED	T U WI							

<u> posal 15386 - PSA/MIRR</u>	<u>.ORB ACQ/IMAGE ther</u>	<u>1 FUV TA Mo</u>	<u> 30 nitoring (25)</u>	<u>· COS FUV Ta</u>	<u>arget Acquisitio</u>	on Monitor	
18 PSA/G140L (1) WD-1657+343 /1280/3 - CE NTER (COS.sp.103 2431)	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; FLASH=YES; BUFFER-TIME=40 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 16-22 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	20 Secs (20 Secs) [==>]	[2]
Comments: COS.sp.1032431 S/N Ratio =	= 10 at wavelength 1310. (per RE) : T	ime = 18.5567 sec. 1	$BT\ 2/3 * 725 = 500s.\ A$	ny BT less that 500s is	a good BT, we use 400	s in case the target is brighter than exp	pected.
Brightest Pixel (single exposure) (at 128 Brightest Pixel in Segment A (at 1281.07 Brightest Pixel in Segment B (at 1180.98 Count rate entire detector 3,165.106 Count rate Segment A 2,114.082 Count rate Segment B 1,051.024	7) 0.162						
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	44 Secs (44 Secs)	
/1280/3 +1.3 arcseconds i n XD (COS.sp.103 2431)		1280 A	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	[2]
Comments: At R=1.3", the throughput is ter than expected.	~45%. To get the same counts, we nee	d an exposure time o	of $20/0.45 = 44s$ . $BT <$	500/0.45 = 1100s. Any	BT less that 1100s is a	good BT, we use 800s in case the targ	et is brigh
20 PSA/G140L (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 n XD (COS.sp.103 2431)		1280 A	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4	; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	-Inf in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	[2]
Comments: At R=1.3", the throughput is	~45%. To get the same counts, we nee	d an exposure time o	of $20/0.45 = 44s$ . Any B	T less that 1100s is a g	good BT, we use 800s in	case the target is brighter than expect	ted.
21 PSA/G140L (1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G140L	LIFETIME-POS=LP	QESIPARM USELA	Sequence 16-22 Non		
/PEAKXD/ NP=3/DEF (COS.sa.103 2455)		1280 A	4; NUM-POS=3; STEP-SIZE=1.3	MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	[2]
Comments: COS.sa.1032455 Requested S gives: Time = 1.6519 seconds Time Requ	Signal/Noise Ratio = 40.000 for Segme uired for Requested SNR in Segment A	ent A and Segment B only: 1.6519	combined				
Brightest Pixel (single exposure) (at 1281 Brightest Pixel in Segment A (at 1281.0) Brightest Pixel in Segment B (at 1180.9) Count rate entire detector 3,211.915 Count rate Segment A 2,135.893 Count rate Segment B 1,076.022	7) 0.162						
22 PSA/G140L (1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;		Sequence 16-22 Non	20 Secs (20 Secs)	
/1280/3 (COS.sp.103 2431)		1280 A	FLASH=YES; BUFFER-TIME=40 0; LIFETIME-POS=L P4	MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	[2]
Comments: See comment in 25.018							

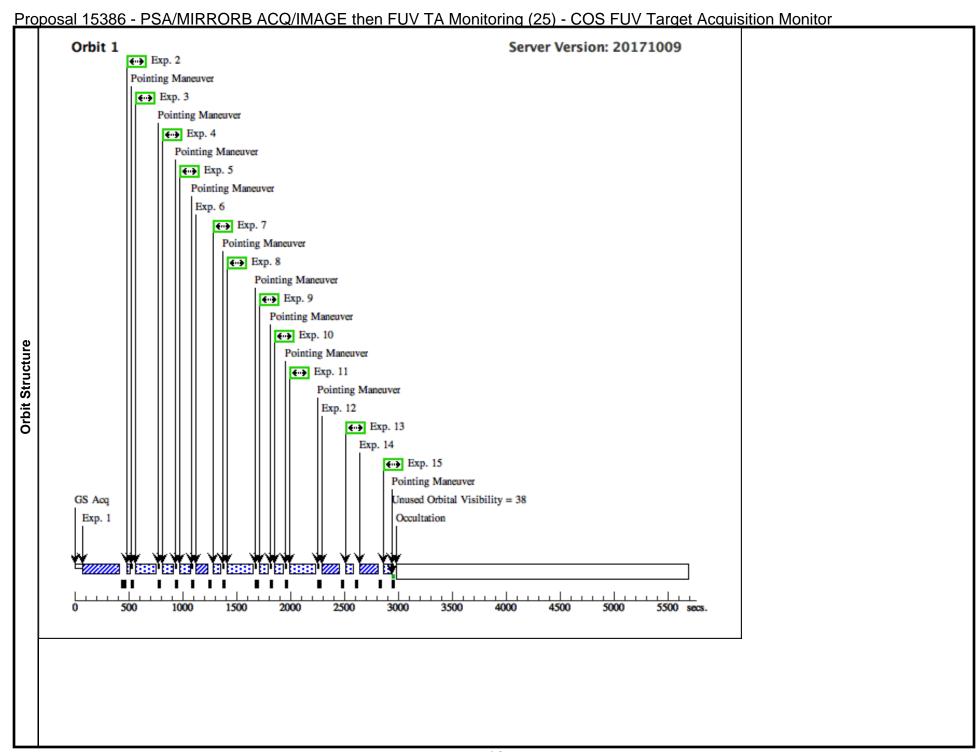
							,	
	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				13 Secs (13 Secs)	
ORB ACQ/I MAGE (COS.ta.103 2496)						-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	[2]
Comments: See con	mment in 25.001					8 ()		
	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB		QESIPARM USELA		15.0 Secs (15 Secs)	
ORB LAMP +TARGET I MAGE (P2/ MEDIUM)				0; FLASH=S0060D01 5;	MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	[2]
(COS.ta.103 2496)				CURRENT=MEDI UM				
,	E2	rrent, see 25.001 for expected count r	ates. To get PtNe L		PARMs set:			
	(1) WD-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 2449)				BUFFER-TIME=80 0;	QESIPARM CURR ENT MEDIUM	en FUV TA Monitori ng (25)		[2]
244))				LIFETIME-POS=L P4		ng (23)		[2]
Comments: S/N Ra	tio = 4 at wavelength	1610.00 (per RE) gives: Time = 81.8	415 seconds. BT <	2/3 * 1,463 = ~1000s. A	ny BT less that 1000s is	s a good BT, we use 80	Os in case the target is brighter t	than expected.
Brightest Pixel in Count rate entire a Count rate Segn	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 nent A 313.782	01) 0.005						
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 tent A 313.782 tent B 1,297.958	01) 0.005						
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn Buffer Time (sec) 1 26 PSA/G160	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 tent A 313.782 tent B 1,297.958	01) 0.005	G160M	FP-POS=3;	POS TARG null,1.3;	Sequence 23-29 Non	182 Secs (182 Secs)	
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn Buffer Time (sec) 1 26 PSA/G160 M/1600/3 + 1.3arcsecon	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 tent A 313.782 tent B 1,297.958 1,463	01) 0.005 12) 0.021	G160M 1600 A	FLASH=YES;	QESIPARM USELA	-Int in PSA/MIRRO RB ACQ/IMAGE th	[==>]	
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn Buffer Time (sec) 1 26 PSA/G160 M/1600/3 +	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 tent A 313.782 tent B 1,297.958 1,463	01) 0.005 12) 0.021		*	QESIPARM USELA MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori	[==>]	[2]
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn Buffer Time (sec) 1 26 PSA/G160 M/1600/3 + 1.3arcsecon ds in XD	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 tent A 313.782 tent B 1,297.958 1,463	01) 0.005 12) 0.021		FLASH=YES; BUFFER-TIME=10	QESIPARM USELA	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori	[==>]	[2]
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn Buffer Time (sec) 1 26 PSA/G160 M/1600/3 + 1.3arcsecon ds in XD (COS.sp.103 2449)	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 letector 1,813.782 lett B 1,297.958 lett B 1,297.958 lett B 1,297.958 lett B 1,397.958 lett B 1,297.958 lett B 1,29	01) 0.005 12) 0.021	1600 A	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>]	
Brightest Pixel in Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segm Count rate Segm Buffer Time (sec) 12  PSA/G160 M/1600/3 + 1.3arcseconds in XD (COS.sp.103 2449)  Comments: At R=1 righter than expect 27 PSA/G160	Segment A (at 1601.0 Segment B (at 1410.0 letector 1,611.740 letector 1,813.782 lett B 1,297.958 lett B 1,297.958 lett B 1,297.958 lett B 1,397.958 lett B 1,297.958 lett B 1,29	01) 0.005 12) 0.021 COS/FUV, TIME-TAG, PSA	1600 A  red an exposure tim  G160M	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L p4  te of 82/0.45 = 182s. BT	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM < 1000 /0.45 = 2222. A	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s in Sequence 23-29 Non	[==>]  is a good BT, we use 1000s in ca  182 Secs (182 Secs)	
Brightest Pixel in Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segm Count rate Segm Buffer Time (sec) 12  26 PSA/G160 M/1600/3 + 1.3arcseconds in XD (COS.sp.103 2449)  Comments: At R= 1 righter than expect 27 PSA/G160 M/1600/3 - 1. 3arcseconds in XD	Segment A (at 1601.0 Segment B (at 1410.0 Segment B (at 1410.0 Segment B (at 1410.0 Segment B 13.782 Segment B 1,297.958 Segment B 1,297.958 Segment B 1,297.958 Segment B 1,297.958 Segment B 1,397.958 Segment B 1,297.958 Segme	01) 0.005 12) 0.021  COS/FUV, TIME-TAG, PSA  ~45%. To get the same counts, we ne	1600 A  red an exposure tim	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4 the of 82/0.45 = 182s. BT	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM < 1000 /0.45 = 2222. A POS TARG null,-1.3; QESIPARM USELA MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s of Sequence 23-29 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori	[==>] is a good BT, we use 1000s in ca $[==>]$ $[==>]$	ase the target is b
Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segn Count rate Segn Buffer Time (sec) 1 26 PSA/G160 M/1600/3 + 1.3arcsecon ds in XD (COS.sp.103 2449)  Comments: At R=1 righter than expect 27 PSA/G160 M/1600/33arcseconds	Segment A (at 1601.0 Segment B (at 1410.0 Segment B (at 1410.0 Segment B (at 1410.0 Segment B 13.782 Segment B 1,297.958 Segment B 1,297.958 Segment B 1,297.958 Segment B 1,297.958 Segment B 1,397.958 Segment B 1,297.958 Segme	01) 0.005 12) 0.021  COS/FUV, TIME-TAG, PSA  ~45%. To get the same counts, we ne	1600 A  red an exposure tim  G160M	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4  te of 82/0.45 = 182s. BT  FP-POS=3; FLASH=YES; BUFFER-TIME=10	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM < 1000 /0.45 = 2222. A POS TARG null,-1.3 ; QESIPARM USELA	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s in Sequence 23-29 Non -Int in PSA/MIRRO RB ACQ/IMAGE th	[==>] is a good BT, we use 1000s in ca $[==>]$ $[==>]$	
Brightest Pixel in Brightest Pixel in Brightest Pixel in Count rate entire a Count rate Segm Count rate Segm Buffer Time (sec) 12  26 PSA/G160 M/1600/3 + 1.3arcseconds in XD (COS.sp.103 2449)  Comments: At R=1 righter than expect 27 PSA/G160 M/1600/3 - 1. 3arcseconds in XD (COS.sp.103 2449)	Segment A (at 1601.0 Segment B (at 1410.0 Segment B (at 1410.0 segment B) (at 1410.0 segment A 313.782 sent B 1,297.958 sept. 463 (1) WD-1657+343 (1) WD-1657+	01) 0.005 12) 0.021  COS/FUV, TIME-TAG, PSA  ~45%. To get the same counts, we ne	1600 A  red an exposure tim  G160M 1600 A	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4  FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM  < 1000 /0.45 = 2222. A  POS TARG null,-1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s of Sequence 23-29 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)	[==>] is a good BT, we use 1000s in ca $[==>]$ $[==>]$	ase the target is b
Brightest Pixel in Brightest Pixel in Brightest Pixel in Count rate entire a Count rate segm Count rate Segm Buffer Time (sec) 12  26 PSA/G160 M/1600/3 + 1.3arcsecond in XD (COS.sp.103 2449)  Comments: At R=irighter than expect 27 PSA/G160 M/1600/3 - 1.3arcseconds in XD (COS.sp.103 2449)  Comments: At R=irighter than expect 249  Comments: At R=irighter than expect 28 PSA/G160	Segment A (at 1601.0 Segment B (at 1410.0 Segment B (at 1410.0 segment B) (at 1410.0 segment A 313.782 sent B 1,297.958 sept. 463 (1) WD-1657+343 (1) WD-1657+	COS/FUV, TIME-TAG, PSA  ~45%. To get the same counts, we ne	1600 A  red an exposure tim  G160M 1600 A	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4  FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4  LIFETIME-POS=L LIFETIME-POS=L LIFETIME-POS=L LIFETIME-POS=L	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM  < 1000 /0.45 = 2222. A  POS TARG null,-1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM  < 1000/0.45 = 2222s. A  QESIPARM USELA MP LINE2;	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Sequence 23-29 Non -Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s  Sequence 23-29 Non	[==>]  is a good BT, we use 1000s in ca  182 Secs (182 Secs)  [==>]  is a good BT, we use 1000s in ca	ase the target is b
Brightest Pixel in Brightest Pixel in Brightest Pixel in Count rate entire a Count rate segm Count rate Segm Buffer Time (sec) 12  26 PSA/G160 M/1600/3 + 1.3arcseconds in XD (COS.sp.103 2449)  Comments: At R= 17 ighter than expect 27 PSA/G160 M/1600/3 - 1. 3arcseconds in XD (COS.sp.103 2449)  Comments: At R= 17 ighter than expect 12 ighter than expect 13 in XD (COS.sp.103 2449)	Segment A (at 1601.0 Segment B (at 1410.0 Segment B (at 1410.0 segment B) (at 1410.0 segment A) 313.782 sent B 1,297.958 sept. (1) WD-1657+343	COS/FUV, TIME-TAG, PSA  ~45%. To get the same counts, we ne  COS/FUV, TIME-TAG, PSA  ~45%. To get the same counts, we ne	1600 A  red an exposure tim  G160M  1600 A	FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4  FP-POS=3; FLASH=YES; BUFFER-TIME=10 00; LIFETIME-POS=L P4  P4  P4  P4  P4  P6	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM  < 1000 /0.45 = 2222. A  POS TARG null,-1.3; QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM  < 1000/0.45 = 22228. A	-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s at Sequence 23-29 Non-Int in PSA/MIRRO RB ACQ/IMAGE th en FUV TA Monitori ng (25)  Any BT less that 2222s	[==>] is a good BT, we use 1000s in ca $[==>]$ $[==>]$ is a good BT, we use 1000s in ca $[==>]$ $[==>]$ 3 Secs (3 Secs) $[==>]$	ase the target is b

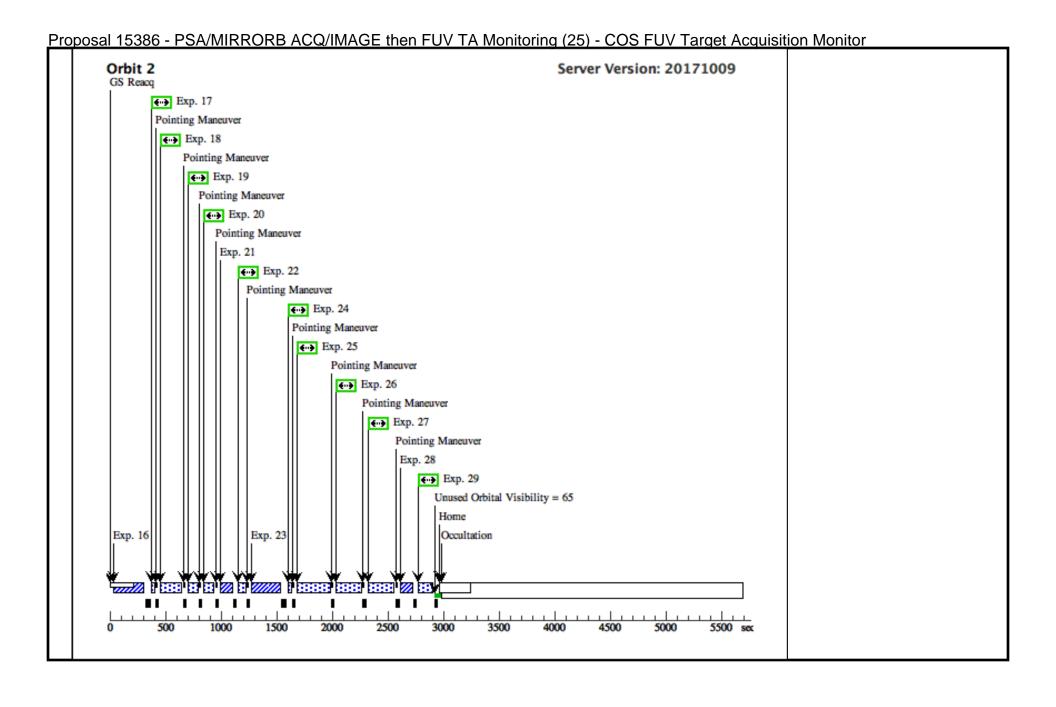
Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring (25) - COS FUV Target Acquisition Monitor

29 PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; QESIPARM USELA Sequence 23-29 Non Into in PSA/MIRRO (COS.sp.103 QESIPARM CURR ENT MEDIUM PLANE)

(COS.sp.103 QESIPARM CURR ENT MEDIUM PLOY TA Monitoring (25) [2]

Comments: See comment in 25.025





# Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90) - COS FUV Target Acquisition Monitor

Proposal 15386, PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90), completed

Tue Feb 06 21:02:31 GMT 2018

#### **Diagnostic Status: Warning**

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 90%; BEFORE 19-FEB-2018:00:00:00

Comments: This visit is a partial repeat from HOPR 89665. The LTAIMAGE that started the second orbit of Visit 26 had the TDF down and the shutter closed. This caused the ACQ/IMAGE to miscenter the target by about 1.3".

This visit is as close to a repeat of the 2nd orbit of Visi t25 as possible. Due to time lost doing a full acq instead of a RE-ACQ, the following changes were made:

- l) Changed Visit number to 90
- 2) Schedulability set to 90%
- 3) Before date set to Feb-19-2018, but the earlier the better (this is negotiable)
- 4) Increased Buffer Time for Exposures 90.010 and 90.014 to 976s (2/3 \* ETC time)
- 5) Increased Buffer Time for Exposes 90.011 and 90.012 to 2000s (976/0.45 = 2168s)
- 6) Changed exposures times for 90.011 and 90.012 from 182 to 180s.

Note that there are 8 exposures with "Y" POS\_TARGs to intentionally offset the target in XD by +/- 1.3" all G140L and G160M.

(PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Form); COS ACO/PEAKXD exposure should be followed by an ACO/PEAKD exposure in the Visit.

(PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

Diagnostic (PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACO/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
ı	(1)	WD-1657+343	RA: 16 58 51.1202 (254.7130008d)	Proper Motion RA: 11 mas/yr	V=16.1	Reference Frame: ICRS
ı			Dec: +34 18 53.29 (34.31480d)	Proper Motion Dec: -31 mas/yr		
			Equinox: J2000	Epoch of Position: 2000		1
ets				Radial Velocity: 78 km/sec		
ğ	Comments	: COS.ta.1032496 indicates	s S/N = 40 in 5.2s. SIMBAD cordinates are 16 58 5 er motions mas/yr : 11 -31 [3 3 133] C 2011MNRA	51.1202 +34 18 53.293		
Ţa	Proper Mo	otion from SIMBAD is Prope	er motions mas/yr : 11 -31 [3 3 133] C 2011MNRA	AS.417.1210G, RV=78		· ·

B 16.12 [~] D ~

u (AB) 15.749 [0.005] B 2013yCat.5139....0A g (AB) 16.139 [0.003] B 2013vCat.5139....0A

r (AB) 16.691 [0.004] B 2013yCat.5139....0A

(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

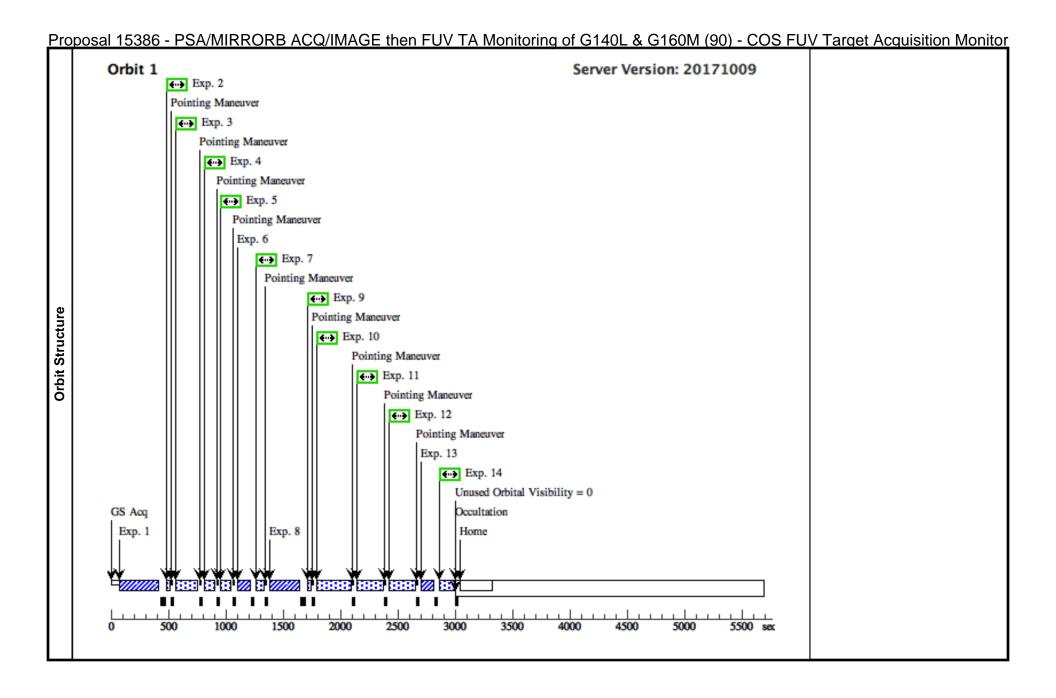
Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90) - COS FUV Target Acquisition Monitor

	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1 	ORB ACQ/I MAGE (COS.ta.103 2496)	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB		GS ACQ SCENARI O BASE1B3	Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)	13 Secs (13 Secs) [==>]	[1]
2		mment in 25.001	COGAHINA TIME TAC DOA	MIDDODD	DIJECED TIME 15	OEGIDA DALLIGELA	C 17N I	1500 (150	1
2	PSA/MIRR ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.ta.103 2496)	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0; FLASH=S0060D01 5; CURRENT=MEDI UM	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)	` ′	[1]
US	mments: PSA/M ELAMP = LINE RRENT = MEL	Ε2	urrent, see 25.001 for expected count	rates. To get PtNe Lo	amp 2, there are 2 QESIF	PARMs set:			
3		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	QESIPARM USELA	Sequence 1-7 Non-In	20 Secs (20 Secs)	
	/1280/3 - CE NTER (COS.sp.103 2431)			1280 A	FLASH=YES; BUFFER-TIME=40 0; LIFETIME-POS=L P4	MP LINE2; QESIPARM CURR ENT MEDIUM	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)	[==>]	[1]
Co	rightest Pixel in unt rate entire d Count rate Segm Count rate Segm	Segment A (at 1281.0 Segment B (at 1180.9 letector 3,165.106 nent A 2,114.082 nent B 1,051.024							
1	DC A // ÷1////I		COS/FIIV TIME TAG DSA	G140I	ED DOS-3.	DOS TADO mill 1 3:	Saguance 1 7 Non In	14 Sacs (14 Sacs)	
4	/1280/3 +1.3	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;		Sequence 1-7 Non-In t in PSA/MIRRORB	, , ,	
4			COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=3; FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2;	A : DC A /MIDD ODD	44 Secs (44 Secs) [==>]	[1]
	/1280/3 +1.3 arcseconds i n XD (COS.sp.103 2431)			1280 A	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)	, , ,	
	/1280/3 +1.3 arcseconds i n XD (COS.sp.103 2431) mments: At R=1 than expected. PSA/G140L			1280 A	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM 500/0.45 = 1100s. Any	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)  BT less that 1100s is a Sequence 1-7 Non-In	[==>] good BT, we use 800s in case the targ	
	/1280/3 +1.3 arcseconds i n XD (COS.sp.103 2431) mmnents: At R=1 than expected. PSA/G140L /1280/3 -1.3 arcseconds i n XD (COS.sp.103	1.3", the throughput is (1) WD-1657+343	s ~45%. To get the same counts, we t	1280 A need an exposure time	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4 e of 20/0.45 = 44s. BT <	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM  500/0.45 = 1100s. Any  POS TARG null,-1.3; QESIPARM USELA MP LINE2;	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90) BT less that 1100s is a Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M (	[==>] good BT, we use 800s in case the targ	
	/1280/3 +1.3 arcseconds i n XD (COS.sp.103 2431) mments: At R=1 than expected. /1280/3 -1.3 arcseconds i n XD	1.3", the throughput is (1) WD-1657+343	s ~45%. To get the same counts, we t	1280 A need an exposure time G140L	FLASH=YES; BUFFER-TIME=80 0; LIFETIME-POS=L P4 e of 20/0.45 = 44s. BT <  FP-POS=3; FLASH=YES; BUFFER-TIME=80	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM 500/0.45 = 1100s. Any POS TARG null,-1.3; QESIPARM USELA	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90) BT less that 1100s is a Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M (	[==>] good BT, we use 800s in case the target 44 Secs (44 Secs)	get is br

<u>Sai 15380</u>	<u>) - PSA/MIRE</u>	RORB ACQ/IMAGE ther	<u> 1 FUV TA N</u>	<u>lionitoring of G1</u>	<u>40L &amp; G160N</u>	<u>1 (90) - COS F</u>	UV Target Acquisition I	<u>Monitor</u>
	(1) WD-1657+343	COS/FUV, ACQ/PEAKXD, PSA	G140L				3 Secs (3 Secs)	
/PEAKXD/ NP=3/DEF (COS.sa.103 2455)			1280 A	4; NUM-POS=3; STEP-SIZE=1.3	MP LINE2; QESIPARM CURR ENT MEDIUM	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)	[==>]	[1]
				B combined				
rightest Pixel in rightest Pixel in unt rate entire d Count rate Segm	Segment A (at 1281.0 Segment B (at 1180.9 letector 3,211.915 tent A 2,135.893	07) 0.162						
PSA/G140L		COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;			20 Secs (20 Secs)	T
/1280/3 (COS.sp.103 2431)			1280 A	FLASH=YES; BUFFER-TIME=40 0; LIFETIME-POS=L	MP LINE2; QESIPARM CURR ENT MEDIUM	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 90)	[==>]	[1]
nmonts. See cor	nmont in 25 018			P4				
		COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 8-14 Non-I	13 Secs (13 Secs)	
ORB ACQ/I MAGE (COS.ta.103 2496)						nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)	[==>]	[1]
nments: See cor	nment in 25.001							
PSA/MIRR ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.ta.103 2496)	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	0;	MP LINE2;	Sequence 8-14 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)	15.0 Secs (15 Secs) [==>]	[1]
ELAMP = LINE	2	rrent, see 25.001 for expected count ra	ıtes. To get PtNe Lo	amp 2, there are 2 QESIP	'ARMs set:			
PSA/G160	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G160M	FP-POS=3;			82 Secs (82 Secs)	
M/1600/3 - CENTER (COS.sp.103 2449)			1600 A	FLASH=YES; BUFFER-TIME=97 6; LIFETIME-POS=L P4	QESIPARM CURR ENT MEDIUM	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90)	[==>]	[1]
ghtest Pixel (sin ightest Pixel in ightest Pixel in int rate entire d Count rate Segm Count rate Segm	igle exposure) (at 141 Segment A (at 1601. Segment B (at 1410.0 etector 1,611.740 tent A 313.782 tent B 1,297.958	10.02) 0.021 1.69 01) 0.005	:15 seconds. BT < 2	2/3 * 1,463 = 976s. Any 1	BT less that 1000s is a	good BT, we use 800s	in case the target is brighter than expe	ected.
	PSA/G140L /PEAKXD/ NP=3/DEF (COS.sa.103 2455)  ments: COS.sa s: Time = 1.65.  whetest Pixel in ightest Pixel in ightest Pixel in ightest Pixel in int rate entire do ount rate Segm ount rate Segm PSA/G140L /1280/3 (COS.sp.103 2431)  ments: See con PSA/MIRR ORB ACQ/I MAGE (COS.ta.103 2496)  ments: See con PSA/MIRR ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.ta.103 2496)  ments: PSA/M. ELAMP = LINE RENT = MED PSA/G160 PSA/G160 M/1600/3 -CENTER (COS.sp.103 2449)  ments: S/N Rate whitest Pixel in ightest Pixel in in rate entire edmount rate Segm ount rate Segm ount rate Segmount rate Segmou	PSA/G140L (1) WD-1657+343 /PEAKXD/ NP=3/DEF (COS.sa.103 2455)  ments: COS.sa.1032455 Requested st: Time = 1.6519 seconds Time Requested step to the st	PSA/GI40L (1) WD-1657+343 COS/FUV, ACQ/PEAKXD, PSA /PEAKXD/ NP=3/DEF (COS.sa.103 2455)  Imments: COS.sa.1032455 Requested Signal/Noise Ratio = 40.000 for Segments: Time = 1.6519 seconds Time Required for Requested SNR in Segment A threst Pixel (single exposure) (at 1281.07) 0.162 0.27 ightest Pixel in Segment A (at 1281.07) 0.162 0.27 ightest Pixel in Segment B (at 1180.98) 0.109 int rate entire detector 3,211.915 outnit rate Segment A (2,135.893 outnit rate Segment B 1,076.022  PSA/GI40L (1) WD-1657+343 COS/FUV, TIME-TAG, PSA (1280/3) (COS.sp.103 2431)  Imments: See comment in 25.018  PSA/MIRR (1) WD-1657+343 COS/NUV, ACQ/IMAGE, PSA ORB ACQ/I MAGE (COS.ta.103 2496)  Imments: See comment in 25.001  PSA/MIRR (1) WD-1657+343 COS/NUV, TIME-TAG, PSA ORB LAMP + TARGET II MAGE (P2/MEDIUM) (COS.ta.103 2496)  Imments: PSA/MIRRORB/P2/MED current, see 25.001 for expected count rate ILMEP = ILNE2 (RENT = MEDIUM)  PSA/GI60 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA M/1600/3 - CENTER (COS.sp.103 2449)  Imments: S/N Ratio = 4 at wavelength 1610.00 (per RE) gives: Time = 81.84 otherst Pixel (single exposure) (at 1410.02) 0.021 1.69 ightest Pixel in Segment A (at 1601.01) 0.005 ightest Pixel in Segment B (at 1410.02) 0.021 int rate entire detector 1.611.740 ount rate Segment A 1313.782 outnit rate Segment B 1,297.958	PSA/G140L (1) WD-1657+343 COS/FUV, ACQ/PEAKXD, PSA G140L /PEAKXD	PSA/GI40L (1) WD-1657+343   COS/FUV, ACQ/PEAKXD, PSA   G140L   LIFETIME-POS=LP   PBAXXD   NP=3DEF   (205.8x103   2345)   (235.9x103   235.9x103   2345)   (235.9x103   235.9x103   235.9x103   235.9x103   235.9x103   23	PSAGLISD. (1) WD-1657+343   COS/FUV, ACQ/PEAKXD, PSA   G140L   LIFETIME-POS-LP   QESIPARM USELA   PSAMIRR (1) WD-1657+343   COS/FUV, TIME-TAG, PSA   G140L   LIFETIME-POS-LP   QESIPARM USELA   WDLINE2:   WD-1657+343   COS/FUV, TIME-TAG, PSA   G140L   LIFETIME-POS-LP   QESIPARM USELA   WDLINE2:   WD-1657+343   COS/FUV, TIME-TAG, PSA   G140L   LIFETIME-POS-LP   QESIPARM USELA   WDLINE2:   WD-1657+343   COS/FUV, TIME-TAG, PSA   G140L   LIFETIME-POS-LP   QESIPARM USELA   WD-1657+343   COS/FUV, TIME-TAG, PSA   WD-1657+345   COS/FUV, TIME-TAG, PSA   G160M   FP-POS-3; WD-1657+345   COS/FUV, TIME-TAG, PSA   G160M   FP	PSAG_IRIOL (1) WD-1657+343	PRAGING   1   WD-1657-343   COS-PUV, ACQ-PEAKXD, PSA   140L   LIFETIME-POS-L   COS-LI   COS

Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (90) - 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 8-14 Non-I 180 Secs (180 Secs) M/1600/3 +nt in PSA/MIRROR 1600 A FLASH=YES; **QESIPARM USELA** 1.3arcsecon B ACQ/IMAGE then MP LINE2; BUFFER-TIME=20 ds in XD **FUV TA Monitoring** OESIPARM CURR of G140L & G160M (COS.sp.103 [1] 2449) ENT MEDIUM (90)LIFETIME-POS=L Comments: At R=1.3", the throughput is ~45%. To get the same counts, we need an exposure time of 82/0.45 = 182s. BT < 1000/0.45 = 2222. Any BT less that 2222s is a good BT, we use 2000s in case the target is b righter than expected. 12 PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; POS TARG null,-1.3 Sequence 8-14 Non-I 180 Secs (180 Secs) M/1600/3 -1 nt in PSA/MIRROR B ACQ/IMAGE then | [==>] 1600 A FLASH=YES; .3arcseconds QESIPARM USELA FUV TA Monitoring in XD BUFFER-TIME=20 MP LINE2; (COS.sp.103 of G140L & G160M [1] 2449) **OESIPARM CURR** (90) LIFETIME-POS=L ENT MEDIUM Comments: At R=1.3", the throughput is ~45%. To get the same counts, we need an exposure time of 82/0.45 = 182s, BT < 1000/0.45 = 2222s, Any BT less that 2222s is a good BT, we use 1000s in case the target is b righter than expected. PSA/G160 (1) WD-1657+343 COS/FUV, ACO/PEAKXD, PSA G160M LIFETIME-POS=LP OESIPARM USELA Sequence 8-14 Non-1 3 Secs (3 Secs) nt in PSA/MIRROR M/PEAKX MP LINE2; 1600 A I = = > 1B ACQ/IMAGE then D/NP=3/DENUM-POS=3: QESIPARM CURR FUV TA Monitoring [1] **ENT MEDIUM** STEP-SIZE=1.3 of G140L & G160M (COS.sa.103 2454) (90)Comments: COS.sa.1032454 Requested Signal/Noise Ratio = 40.000 for Segment A and Segment B combined gives: Time = 1.0545 seconds Time Required for Requested SNR in Segment A only: 5.8385 Time Required for Requested SNR in Segment B only: 1.2868 PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; QESIPARM USELA Sequence 8-14 Non-I 82 Secs (82 Secs) M/1600/3 MP LINE2; nt in PSA/MIRROR 1600 A FLASH=YES; I = = > 1B ACQ/IMAGE then (COS.sp.103 QESIPARM CURR FUV TA Monitoring 2449) BUFFER-TIME=97 **ENT MEDIUM** of G140L & G160M [1] (90)LIFETIME-POS=L

Comments: See comment in 25.025



# Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91) - COS FUV Target Acquisition Monitor

Proposal 15386, PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)

Tue Feb 06 21:02:31 GMT 2018

**Diagnostic Status: Warning** 

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SCHED 90%; BEFORE 19-MAR-2018:00:00:00

Comments

Diagnostic

Comments: Visit 90 had a GS problem (RGA hold failure) and the entire visit had the shutter closed. HSTAR 14932 was filed along with the approved HOPR 89896. Visit 90 was copied to Visit 91 with the following changes:

1) Changed Visit number to 91

2) Before changed from 19-FEB-2018 to 19-MAR-2018

Note that there are 4 exposures with "Y" POS\_TARGs to intentionally offset the target in XD by +/- 1.3"; 2 are G140L and 2 are G160M.

We request that previously used, known good, Guide Stars be used, if possible.

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Form): COS ACQ/PEAKXD exposure should be followed by an ACQ/PEAKD exposure in the Visit.

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Form): For the best data quality, it is strongly recommended that the maximum number of allowed FP-POS positions is used when observing at a given COS CENWAVE setting. See full description for details.

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

(PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

	#	Name	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
			Dec: +34 18 53.29 (34.31480d)	Proper Motion Dec: -31 mas/yr		
			Equinox: J2000	Epoch of Position: 2000		
ets			S/N = 40 in 5.2s SIMBAD cordinates are 16.58.5.	Radial Velocity: 78 km/sec		
Ď	Commontes	COS ta 1032406 indicatos	S/N = 40 in 5 2c SIMPAD condingtes are 16 59 5	1202 + 24 19 52 202		

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 g (AB) 16.139 [0.003] B 2013yCat.5139....0A

g (AB) 16.139 [0.003] B 2013yCat.3139....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 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91) - 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	ORB ACQ/I MAGE (COS.ta.103 2496)	(1) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB		GS ACQ SCENARI O BASE1B3	Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 91)	13 Secs (13 Secs) [==>]	[1]
Con		nment in 25.001	GOGGATUL TRUE THE REAL REAL			OF GENERAL PARTY AND A STREET	a 1537 7	1.500 (1.50)	T
2	PSA/MIRR ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.ta.103 2496)	(1) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0; FLASH=S0060D01 5; CURRENT=MEDI UM	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 91)	15.0 Secs (15 Secs) [==>]	[1]
USE	nments: PSA/M ELAMP = LINE RRENT = MED	2	rrent, see 25.001 for expected count	rates. To get PtNe L	amp 2, there are 2 QESIF	PARMs set:			
3	PSA/G140L	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;		Sequence 1-7 Non-In	20 Secs (20 Secs)	
	/1280/3 - CE NTER			1280 A	FLASH=YES;	MP LINE2;	t in PSA/MIRRORB ACQ/IMAGE then F	[==>]	
	(COS.sp.103 2431)				BUFFER-TIME=40 0;	QESIPARM CURR ENT MEDIUM	UV TA Monitoring o f G140L & G160M (		[1]
					LIFETIME-POS=L P4		91)		
Bri Cou C	ightest Pixel in int rate entire d Count rate Segm	Segment A (at 1281.0 Segment B (at 1180.9 etector 3,165.106 ent A 2,114.082 ent B 1,051.024							
4		(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	POS TARG null,1.3;	Sequence 1-7 Non-In	44 Secs (44 Secs)	
	/1280/3 +1.3 arcseconds i			1280 A	FLASH=YES;	QESIPARM USELA	t in PSA/MIRRORB ACQ/IMAGE then F	[==>]	
	n XD (COS.sp.103 2431)				BUFFER-TIME=80 0; LIFETIME-POS=L P4	MP LINE2; QESIPARM CURR ENT MEDIUM	UV TA Monitoring o f G140L & G160M ( 91)		[1]
	nments: At R=1 than expected.	.3", the throughput is	~45%. To get the same counts, we n	eed an exposure tim		500/0.45 = 1100s. Any	BT less that 1100s is a	good BT, we use 800s in case the targ	get is brigl
5	PSA/G140L /1280/3 -1.3	(1) WD-1657+343	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;	POS TARG null,-1.3	Sequence 1-7 Non-In	44 Secs (44 Secs)	
	arcseconds i n XD			1280 A	FLASH=YES; BUFFER-TIME=80	; QESIPARM USELA MP LINE2;	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o	[==>]	
	(COS.sp.103 2431)				0; LIFETIME-POS=L P4	QESIPARM CURR ENT MEDIUM	f G140L & G160M ( 91)		[1]
Con	nments: At R-1	3" the throughout is	~45% To get the same counts we n	eed an exposure tim		T less that 1100s is a o	rood BT, we use 800s is	Lase the target is brighter than expec	rted

	MINNOND ACQ/IMAC	<u>JE MEN FUV IA W</u>	ionitoring of G i	40L & G 1601V	<u>1 (91) - COS F</u>	UV Target Acquisition I	<u>vionitoi</u>
6 PSA/G140L (1) WD-16			LIFETIME-POS=LP	QESIPARM USELA	Sequence 1-7 Non-In		
/PEAKXD/ NP=3/DEF (COS.sa.103 2455)		1280 A	4; NUM-POS=3; STEP-SIZE=1.3	MP LINE2; QESIPARM CURR ENT MEDIUM	t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 91)	[==>]	[1]
	equested Signal/Noise Ratio = 40.00 Time Required for Requested SNR in		B combined				
Brightest Pixel (single exposur Brightest Pixel in Segment A ( Brightest Pixel in Segment B ( Count rate entire detector 3,21 Count rate Segment A 2,135. Count rate Segment B 1,076.	at 1281.07) 0.162 at 1180.98) 0.109 1.915 893						
7 PSA/G140L (1) WD-16		PSA G140L	FP-POS=3;	MP LINE2;	Sequence 1-7 Non-In t in PSA/MIRRORB ACQ/IMAGE then F UV TA Monitoring o f G140L & G160M ( 91)	20 Secs (20 Secs)	
/1280/3 (COS.sp.103 2431)		1280 A	0;			[==>]	[1]
			LIFETIME-POS=L P4				
Comments: See comment in 25.							
8 PSA/MIRR (1) WD-1657+343 ORB ACQ/I MAGE (COS.ta.103 2496)	57+343 COS/NUV, ACQ/IMAG	E, PSA MIRRORB			Sequence 8-14 Non-I nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)		
				] ] (		[==>]	[1]
Comments: See comment in 25.	001						
9 PSA/MIRR (1) WD-1657+343 ORB LAMP +TARGET I MAGE (P2/ MEDIUM) (COS.ta.103 2496)	57+343 COS/NUV, TIME-TAG,	, PSA MIRRORB			nt in PSA/MIRROR	15.0 Secs (15 Secs)	
			0; FLASH=S0060D01 5; CURRENT=MEDI UM	MP LINE2; QESIPARM CURR ENT MEDIUM		[==>]	[1]
Comments: PSA/MIRRORB/P2 USELAMP = LINE2 CURRENT = MEDIUM	MED current, see 25.001 for expect	ted count rates. To get PtNe La	amp 2, there are 2 QESIP.	ARMs set:			
10 PSA/G160 (1) WD-16	57+343 COS/FUV, TIME-TAG,	PSA G160M	FP-POS=3;		Sequence 8-14 Non-I	82 Secs (82 Secs)	
M/1600/3 - CENTER (COS.sp.103 2449)		1600 A	FLASH=YES; BUFFER-TIME=97 6; LIFETIME-POS=L P4	OECIDADM CUIDD	nt in PSA/MIRROR B ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91)	[==>]	[1]
Comments: S/N Ratio = 4 at we Brightest Pixel (single exposur Brightest Pixel in Segment A ( Brightest Pixel in Segment B ( Count rate entire detector 1,61	e) (at 1410.02) 0.021 1.69 at 1601.01) 0.005 at 1410.02) 0.021	me = 81.8415 seconds. BT < 2	2/3 * 1,463 = 976s. Any 1	BT less that 1000s is a	good BT, we use 800s	in case the target is brighter than expe	cted.

Proposal 15386 - PSA/MIRRORB ACQ/IMAGE then FUV TA Monitoring of G140L & G160M (91) - 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 8-14 Non-I 180 Secs (180 Secs) M/1600/3 +nt in PSA/MIRROR 1600 A FLASH=YES; **QESIPARM USELA** 1.3arcsecon B ACQ/IMAGE then MP LINE2; BUFFER-TIME=20 ds in XD **FUV TA Monitoring** OESIPARM CURR of G140L & G160M (COS.sp.103 [1] 2449) ENT MEDIUM (91)LIFETIME-POS=L Comments: At R=1.3", the throughput is ~45%. To get the same counts, we need an exposure time of 82/0.45 = 182s. BT < 1000/0.45 = 2222. Any BT less that 2222s is a good BT, we use 2000s in case the target is b righter than expected. 12 PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; POS TARG null,-1.3 Sequence 8-14 Non-I 180 Secs (180 Secs) M/1600/3 -1 nt in PSA/MIRROR B ACQ/IMAGE then | [==>] 1600 A FLASH=YES; .3arcseconds QESIPARM USELA FUV TA Monitoring in XD BUFFER-TIME=20 MP LINE2; (COS.sp.103 of G140L & G160M [1] 2449) **OESIPARM CURR** (91) LIFETIME-POS=L ENT MEDIUM Comments: At R=1.3", the throughput is ~45%. To get the same counts, we need an exposure time of 82/0.45 = 182s, BT < 1000/0.45 = 2222s, Any BT less that 2222s is a good BT, we use 1000s in case the target is b righter than expected. PSA/G160 (1) WD-1657+343 COS/FUV, ACO/PEAKXD, PSA G160M LIFETIME-POS=LP OESIPARM USELA Sequence 8-14 Non-1 3 Secs (3 Secs) nt in PSA/MIRROR M/PEAKX MP LINE2; 1600 A I = = > 1B ACQ/IMAGE then D/NP=3/DENUM-POS=3: QESIPARM CURR FUV TA Monitoring [1] **ENT MEDIUM** STEP-SIZE=1.3 of G140L & G160M (COS.sa.103 2454) (91)Comments: COS.sa.1032454 Requested Signal/Noise Ratio = 40.000 for Segment A and Segment B combined gives: Time = 1.0545 seconds Time Required for Requested SNR in Segment A only: 5.8385 Time Required for Requested SNR in Segment B only: 1.2868 PSA/G160 (1) WD-1657+343 COS/FUV, TIME-TAG, PSA G160M FP-POS=3; QESIPARM USELA Sequence 8-14 Non-I 82 Secs (82 Secs) M/1600/3 MP LINE2; nt in PSA/MIRROR 1600 A FLASH=YES; I = = > 1B ACQ/IMAGE then (COS.sp.103 QESIPARM CURR FUV TA Monitoring 2449) BUFFER-TIME=97 **ENT MEDIUM** of G140L & G160M [1] (91)LIFETIME-POS=L

Comments: See comment in 25.025

