



## 17620 - Cycle 32 COS NUV Target Acquisition Monitor

Cycle: 32, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

### INVESTIGATORS

<i>Name</i>	<i>Institution</i>
<b>Nick Indriolo (PI) (Contact)</b>	<b>Space Telescope Science Institute</b>
Jacqueline Hernandez (CoI) (Contact)	Space Telescope Science Institute
Dr. Svea S Hernandez (CoI) (ESA Member) (Contact)	Space Telescope Science Institute - ESA - JWST
Dr. Marc Rafelski (CoI) (Contact)	Space Telescope Science Institute
Dr. Leonardo Dos Santos (CoI) (Contact)	Space Telescope Science Institute

### VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
PB	(1) 206W3	COS/NUV	2	10-Jan-2025 09:00:18.0	yes
BA	(2) WD-1657+343 WAVE	COS/NUV	2	10-Jan-2025 09:00:24.0	yes
BC	(2) WD-1657+343 WAVE	COS/NUV	2	10-Jan-2025 09:00:31.0	yes
BB	(3) HIP66578 WAVE	COS/NUV	2	10-Jan-2025 09:00:37.0	yes
PN	WAVE	COS/NUV	1	10-Jan-2025 09:00:39.0	yes

9 Total Orbits Used

### ABSTRACT

Proposal 17620 (STScI Edit Number: 4, Created: Friday, January 10, 2025, 9:00:39AM Eastern Standard Time) - Overview

This program has minor changes from the cycle 31 program 17321 (revised exposure times and POSTARG offsets)

The 3 external visits contain 2 orbits each. The first orbit now consists of a flux sweep in the XD and AD directions to confirm target centering. The second orbit contains the imaging of 'adjacent' NUV TA modes and target acquisitions.

Visit PB obtains the PSA/MIRRORA to PSA/MIRRORB ACQ/IMAGE alignment.

Visit BA takes back-to-back PSA/MIRRORB & BOA/MIRRORA ACQ/IMAGEs and images (with flashes) and also takes G230L spectra to test the WCA-to-PSA offsets.

Visit BB takes back-to-back BOA/MIRRORA & BOA/MIRRORB ACQ/IMAGEs and images (with flashes) and also takes G225M and G185M spectra to test the WCA-to-PSA offsets.

Visit PN takes the Pt-Ne lamp "family portrait": P1 MirrorA, P2 MirrorA, P1 MirrorB, P2 MirrorB, and is purely internal

In all visits, lamp+target images are taken before and after the TA imaging mode that is being co-aligned (the second ACQ/IMAGE of the program.)

## **OBSERVING DESCRIPTION**

This program has minor changes from the cycle 31 program 17321 (revised exposure times and POSTARG offsets)

Each external visit consists of 2 orbits. The first orbit performs a flux sweep of the target across the aperture (i.e., step the target across the aperture in the XD and AD directions and take an image at each step). This is done using the more sensitive of the two modes being tested so as to produce the highest count rate possible. After the flux sweep, the testing of TA mode pairs progresses in the same manner as for previous cycles.

The second orbit in each visit in this program begins with a comparison of the ACQ/IMAGE centering of two ACQ/IMAGE modes out of the possible four (PSA or BOA) x (MIRRORA or MIRRORB). This will involve not only the ACQ/IMAGEs, but NUV detector images of the WCA lamp image and, if possible, coeval target images. These direct comparisons are only available for the PSA modes. For the BOA modes, the WCA lamp images and target images are taken consecutively. The assumption is that the PSA/MIRRORA ACQ/IMAGE centering has not changed since SMOV. The flux sweeps during the first orbit of each visit will test this assumption. Each of the other science aperture (SA) and MIRRORA/B

Proposal 17620 (STScI Edit Number: 4, Created: Friday, January 10, 2025, 9:00:39AM Eastern Standard Time) - Overview

ACQ/IMAGE combinations were co-aligned during SMOV and rely upon the flight software (FSW) WCA-to-SA along-dispersion (AD) and cross-dispersion (XD) offsets.

This back-to-back ACQ/IMAGE process allows us to test that TA modes are centering the target to the same point in the aperture. The Lamp+target exposures are interleaved throughout the visit to measure and verify the imaging WCA-to-SA offsets are still accurate for the remainder of the current HST Cycle. Images will usually use the PtNe#2 (P2) lamp, as it is the primary TA lamp, but some images will use PtNe#1 (P1) to monitor the lamps in imaging mode.

Visit PB (PSA/MIRRORB) of this program takes back-to-back PSA/MIRRORA & PSA/MIRRORB ACQ/IMAGEs and images (with flashes)

Visit BA (Boa/mirrorA) of this program takes back-to-back PSA/MIRRORB & BOA/MIRRORA ACQ/IMAGEs and images (with flashes) and takes G230L spectra to test the WCA-to-PSA offsets. (The G285M observations from cycle 30 and before have been removed due to low sensitivity of that observing mode).

Visit BB (Boa/mirrorB) of this program takes back-to-back BOA/MIRRORA & BOA/MIRRORB ACQ/IMAGEs and images (with flashes) and takes G225M & G185M spectra to test the WCA-to-PSA offsets.

Visit PN is a purely internal orbit that used to be part of visit BB. It takes a "family portrait" of all the P1/P2 MIRRORA/B WCA lamp images to track any drifting of the centroids, or changes in the lamps.

All lamp+target images use the QESIPARMS USELAMP and CURRENT to specifically set the lamp and current values.

See the comment of the first exposure of Visit PB for a description of the expected count rates, exposure times, & buffer times (for the lamps).

----- Additional Comments -----

Must be performed on 2 Guidestar fine-lock and must not use FGS2. Guidestar pair must be reviewed by the PC.



Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	206W3	RA: 06 08 55.4600 (92.2310833d)	Proper Motion RA: 0.5 mas/yr	V=14.53+/-0.1	Reference Frame: ICRS
	Alt Name1: MCNAM209	Dec: +24 15 39.59 (24.26100d)	Proper Motion Dec: -2.2 mas/yr	J=13.441,	
	Alt Name2: J060855.46+241539.7	Equinox: J2000	Epoch of Position: 2012.7	B=14.930	
Fixed Targets	<p><i>Comments: Target previously observed in Visit 2 of 12781.</i>  <i>According to Colin, the target coordinates given here have been adjusted to ~2012.7. I include the UCAC3 PM in case this visit is used again at a later date.</i>  <i>The PSA/MIRRORA had 21,063 counts in 60s (351 ct/s). Max pixel = 1965/60 = 32.75 ct/s</i>  <i>The PSA/MIRRORB had 12,570 counts in 300s (41.9 ct/s). Max pixel = 238/300 = 0.8 ct/s</i>  <i>So, PSA MirrorA/MirrorB = 351.0/41.9 = 8.4 (for this target)</i>  <i>This target is N8CV022007 in GSC2.3.2</i></p>				
	From SIMBAD:				
	Basic data :				
	Cl* NGC 2168 M 178 -- Star in Cluster				
	Other object types: *IC (Cl*), IR (2MASS)				
	ICRS coord. (ep=J2000) : 06 08 55.46 +24 15 39.8 ( Infrared ) [ 70 60 0 ] B 2003yCat.2246....0C				
	FK5 coord. (ep=J2000 eq=2000) : 06 08 55.46 +24 15 39.8 [ 70 60 0 ]				
	FK4 coord. (ep=B1950 eq=1950) : 06 05 51.62 +24 16 12.1 [ 70 60 0 ]				
	Gal coord. (ep=J2000) : 186.6569 +02.1612 [ 70 60 0 ]				
	Fluxes (6) :				
B 14.930 [~] E ~					
V 14.481 [~] E ~					
R 14.600 [~] E 2003yCat.2246....0C					
J 13.441 [0.023] C 2003yCat.2246....0C					
H 13.354 [0.022] C 2003yCat.2246....0C					
K 13.227 [0.026] C 2003yCat.2246....0C					
Category=STAR					
Description=[G V-IV]					
Extended=NO					

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV 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/MIRRORA ACQ/IMAGE (P2/LOW) (COS.ta.189 2807)	(1) 206W3	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		GS ACQ SCENARIO BASE103	Sequence 1-32 Non-Int in PSA/A & PSA/B (PB)	22 Secs (22 Secs) [==>]	[1]	
Exposures	<p><i>Comments: The measured direct count rates for this target in Program 13171 are (S/N are just photon statistics of the lamp or target)</i>            PSA/MIRRORA = 245 count/s (S/N = 40 in 7s, 60 in 15s)            PSA/MIRRORB = 15.6 count/s (S/N = 40 in 102s, 50 in 160, 60 in 230s)            A/B = 15.7 for this target</p> <p>WCA/P2/MIRRORA@LOW = 7s produced 2900 counts(S/N = 54)            WCA/P2/MIRRORB@LOW = 30s produced 420 counts (S/N = 21)            WCA/P2/MIRRORB@MED = 10s is estimated to produce ~4000 counts (S/N = 52 in the primary spot)            WCA/P1/MIRRORB@LOW = 82 Hz, so S/N = 50 in 30s            WCA/A(LOW)/B(LOW) = 25-30            WCA/B(MED)/B(LOW) is estimated to be 15-20</p> <p>To get everything at S/N = 50 we need at least the following exposure times            PSA(target)/A = 10s            PSA(target)/B = 160s            WCA/P2/LOW/A = 6s            WCA/P2/LOW/B = 180s (low current), S/N = 47 in 160s            WCA/P1/LOW/B is 5x brighter than lamp#2, so at least 36s            WCA/P2/MED/B is unknown, but we estimate it to be 15-20x the 2/LOW rate, so at least 12s</p> <p>For each target image, we will use the 9x9 checkbox method, so the background for PSA exposures is <math>9 \times 9 * (500 / (50 * 300) / 30s)</math> based upon 500 counts in 30s in the WCA 50x300 box. This is 1 count in 10s, so we ignore this for the PSA.</p> <p>For the WCA images, we will be working a 50x300 box, so the rate here is 18 Hz, but we are using a median to find the center, so it is not a straightforward S/N situation. We are interested in measuring the centroid in presence of the noise and 2500 lamp counts are sufficient for our needs for WCA/P2/LOW/B. Since, we are defining the WCA-to-PSA offset for WCA/P1/LOW/B and WCA/P2/MED/B, we will shoot for 3000 lamp counts.</p> <p>For the Buffer Time, we are shooting for S/N = 50. in both the target and the lamp. Lets overshoot to S/N of 60, that's 7200 counts -&gt; <math>BT = 2/3 * 326 = 217</math>. We'll be extra conservative and stay short of this.</p> <p>For PSA/MIRRORA: (COS.ta.634846) We Simulated in ETC as G5, V=13.5 (lit says 14.5), S/N = 60 gives: Time = 13 seconds. Target count rate = 275 cts/s Brightest Pixel 38 cps            PSA/MIRRORB: (COS.ta.634849) We Simulated in ETC as G5, V=13.5 (lit says 14.5), S/N = 50 gives: Time = 217 seconds. Target count rate = 11.6 cts/s Brightest Pixel 1.6 cps</p> <p>This target was also previously observed in Visit A2 of 12781, with the following REAL count rates (imaging mode)</p> <p>The PSA/A had 21,063 total counts in 60s (Target = 206W3), after background subtraction = 20,100 = 335 cts/s. PSA/A Brightest Pixel = 32.8 counts/s            The PSA/MIRRORB had 12,570 total counts in 300s, after background subtraction=7150 = 23.8 cts/s. PSA/B Brightest Pixel = 0.8 counts/s</p> <p>PSA A/B = 14x (lbx1a2ffq/lbx1a2fhq) &amp; PSA A/B (BP) = 41x</p> <p>Remember that the SED of the target is important in this ratio as the two modes have different responses.</p> <p>For PSA/A We get S/N = 60 in 3600/335 = 11s            For PSA/B, We get S/N = 60 in 3600/23.8 = 151s</p> <p>In Oct 2016, this target was observed as part of 14452 Visit A2, with the following count rates:</p> <p>The PSA/A had 21,063 total counts in 60s (Target = 206W3), after background subtraction = 20,229 = 337 cts/s, Brightest Pixel = 23.1 counts/s            The PSA/B had 14,627 total counts in 300s, after background subtraction=7655 = 25.5 cts/s. PSA/B Brightest Pixel = 1.3 counts/s</p>									
	2	Centered PS A/MIRRORA IMAGE (P2/LOW) (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=150; FLASH=S0060D020; CURRENT=LOW	QESIPARM USELAMP LINE2; QESIPARM CURRENT LOW	Sequence 1-32 Non-Int in PSA/A & PSA/B (PB)	22 Secs (22 Secs) [==>]	[1]
	<p><i>Comments: Lamp and target image to measure the WCA-to-PSA offset for PSA/MIRRORA/P2/LOW current. Expect 416 counts/s from lamp, about the same from the target. We take 20s of each. Note that CURRENT=LOW and LAMP=LINE2 are set as QESIPARMS</i></p>									

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

3	XD+0.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,.25	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
4	XD+0.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,.5	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
5	XD+0.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,.75	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
6	XD+1.0 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,1.0	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
7	XD+1.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,1.25	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
8	XD+1.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,1.5	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
9	XD+1.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=30 0	POS TARG null,1.75	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
10	XD+2.0 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=30 0	POS TARG null,2.0	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
11	XD-0.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-.25	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

12	XD-0.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-.5	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
13	XD-0.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-.75	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
14	XD-1.0 PSA /MIRRORA IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-1.0	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
15	XD-1.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-1.2 5	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
16	XD-1.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-1.5	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
17	XD-1.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=30 0	POS TARG null,-1.7 5	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
18	AD+0.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG .25,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
19	AD+0.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG .5,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
20	AD+0.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG .75,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

21	AD+1.0 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG 1.0,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
22	AD+1.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG 1.25,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
23	AD+1.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG 1.5,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
24	AD+1.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=30 0	POS TARG 1.75,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
25	AD+2.0 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=30 0	POS TARG 2.0,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
26	AD-0.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG -.25,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
27	AD-0.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG -.5,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
28	AD-0.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG -.75,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
29	AD-1.0 PSA /MIRRORA IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG -1.0,null	Sequence 1-32 Non-I nt in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

30	AD-1.25 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG -1.25,nu ll	Sequence 1-32 Non-Int in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
31	AD-1.50 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0	POS TARG -1.5,null	Sequence 1-32 Non-Int in PSA/A & PSA/ B (PB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
32	AD-1.75 PS A/MIRROR A IMAGE (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=30 0	POS TARG -1.75,nu ll	Sequence 1-32 Non-Int in PSA/A & PSA/ B (PB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~50 when target is near center of aperture.</i>									
33	PSA/MIRR ORA IMAG E (P2/LOW) (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0; FLASH=S0060D02 0; CURRENT=LOW	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-40 Non-Int in PSA/A & PS A/B (PB)	22 Secs (22 Secs) [==>]	[2]
<i>Comments: Lamp and target image to measure the WCA-to-PSA offset for PSA/MIRRORA/P2/LOW current. Expect 416 counts/s from lamp, about the same from the target. We take 20s of each. Note that CURRENT=LOW and LAMP=LINE2 are set as QESIPARMS</i>									
<i>This exposure is new in cycle 31. It provides an idea of how well-centered we are when we come back to the target for the second orbit. After this exposure, the visit executes as in cycle 30 and before.</i>									

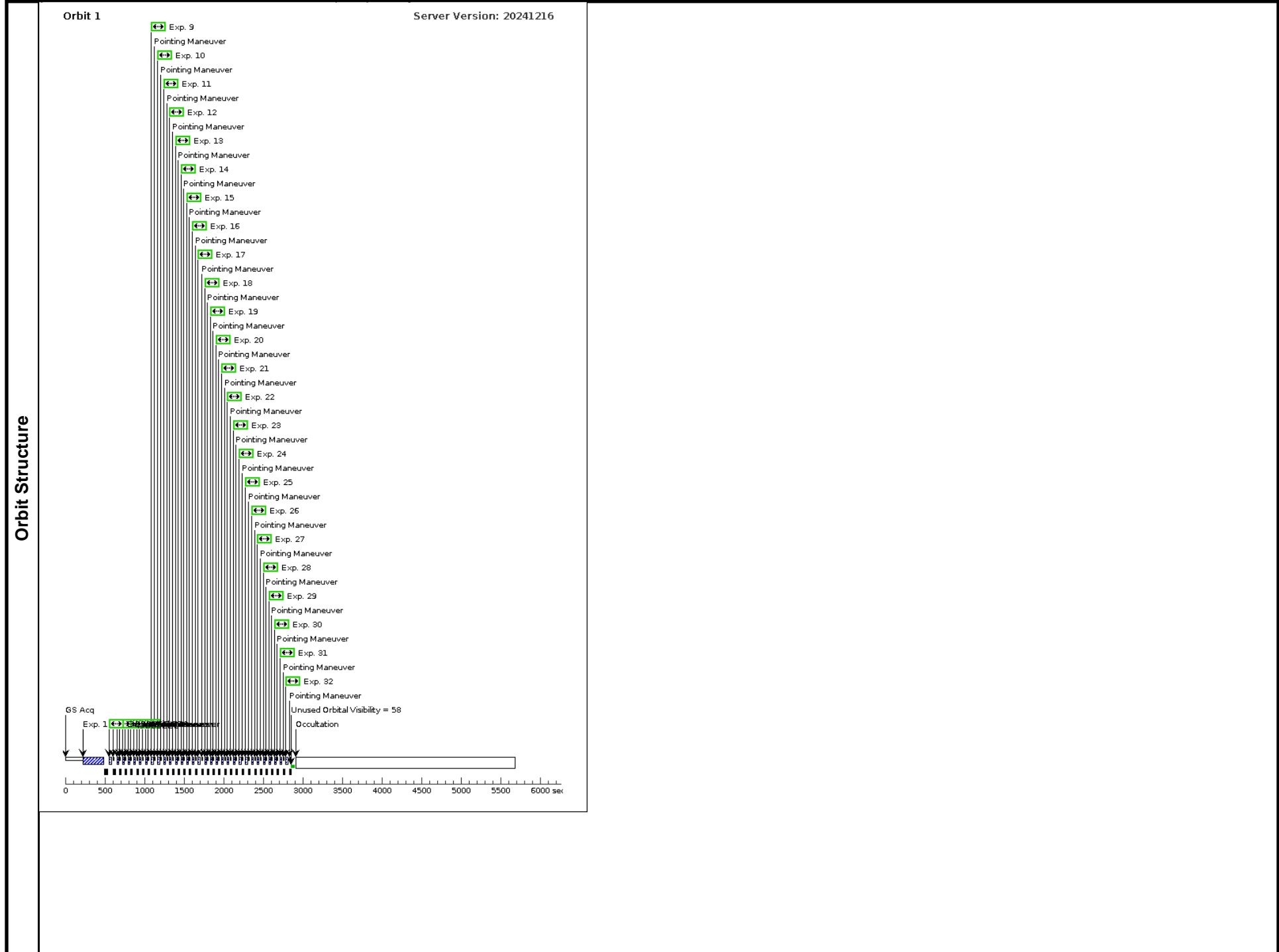
Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

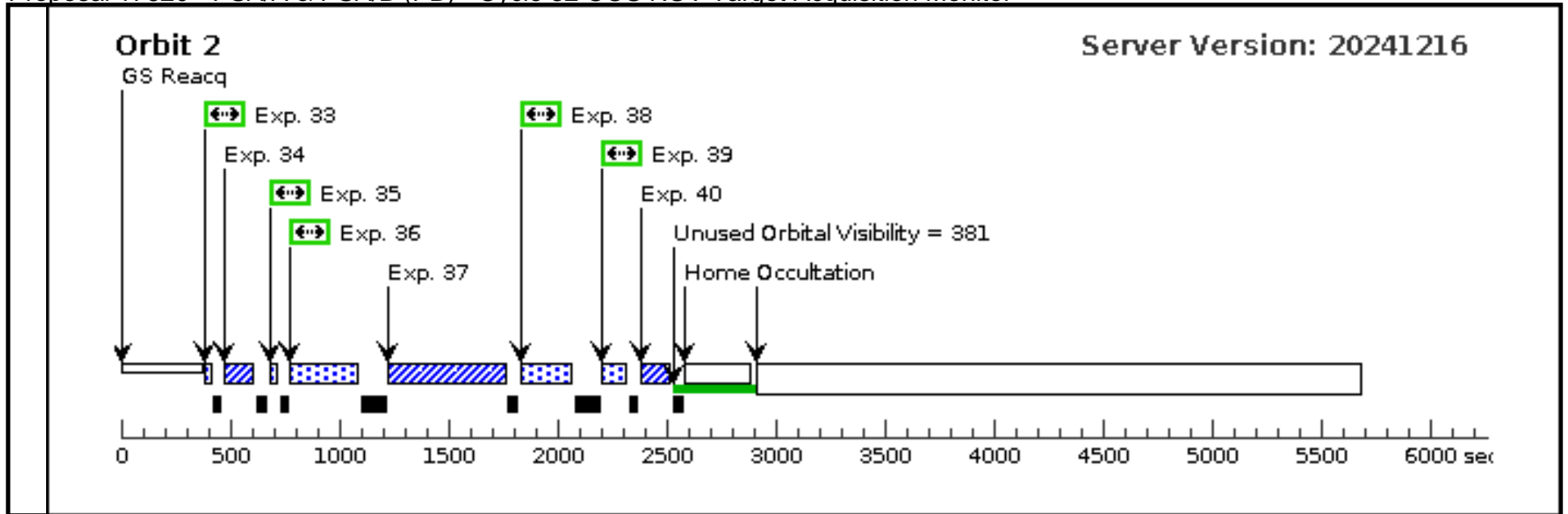
34	PSA/MIRR ORA ACQ/I MAGE (P2/ LOW) (COS.ta.189 2807)	(1) 206W3	COS/NUV, ACQ/IMAGE, PSA	MIRRORA	Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	22 Secs (22 Secs) [==>]	[2]	
<p><i>Comments: The measured direct count rates for this target in Program 13171 are (S/N are just photon statistics of the lamp or target)</i>  PSA/MIRRORA = 245 count/s (S/N = 40 in 7s, 60 in 15s)  PSA/MIRRORB = 15.6 count/s (S/N = 40 in 102s, 50 in 160, 60 in 230s)  A/B = 15.7 for this target</p> <p>WCA/P2/MIRRORA@LOW = 7s produced 2900 counts(S/N = 54)  WCA/P2/MIRRORB@LOW = 30s produced 420 counts (S/N = 21)  WCA/P2/MIRRORB@MED = 10s is estimated to produce ~4000 counts (S/N = 52 in the primary spot)  WCA/P1/MIRRORB@LOW = 82 hz, so S/N=50 in 30s  WCA/A(LOW)/B(LOW) = 25-30  WCA/B(MED)/B(LOW) is estimated to be 15-20</p> <p><i>To get everything at S/N = 50 we need at least the following exposure times</i>  PSA(target)/A = 10s  PSA(target)/B = 160s  WCA/P2/LOW/A = 6s  WCA/P2/LOW/B = 180s (low current), S/N = 47 in 160s  WCA/P1/LOW/B is 5x brighter than lamp#2, so at least 36s  WCA/P2/MED/B is unknown, but we estimate it to be 15-20x the 2/LOW rate, so at least 12s</p> <p><i>For each target image, we will use the 9x9 checkbox method, so the background for PSA exposures is 9x9*(500/(50*300)/30s) based upon 500 counts in 30s in the WCA 50x300 box. This is 1 count in 10s, so we ignore this for the PSA.</i></p> <p><i>For the WCA images, we will be working a 50x300 box, so the rate here is 18 hz, but we are using a median to find the center, so it is not a straightforward S/N situation. We are interested in measuring the centroid in presence of the noise and 2500 lamp counts are sufficient for our needs for WCA/P2/LOW/B. Since, we are defining the WCA-to-PSA offset for WCA/P1/LOW/B and WCA/P2/MED/B, we will shoot for 3000 lamp counts.</i></p> <p><i>For the Buffer Time, we are shooting for S/N = 50. in both the target and the lamp. Lets overshoot to S/N of 60, that's 7200 counts -&gt; BT = 2/3 * 326= 217. We'll be extra conservative and stay short of this.</i></p> <p><i>For PSA/MIRRORA: (COS.ta.634846) We Simulated in ETC as G5, V=13.5 (lit says 14.5), S/N = 60 gives: Time = 13 seconds. Target count rate = 275 cts/s Brightest Pixel 38 cps  PSA/MIRRORB: (COS.ta.634849) We Simulated in ETC as G5, V=13.5 (lit says 14.5), S/N = 50 gives: Time = 217 seconds. Target count rate = 11.6 cts/s Brightest Pixel 1.6 cps</i></p> <p><i>This target was also previously observed in Visit A2 of 12781, with the following REAL count rates (imaging mode)</i>  The PSA/A had 21,063 total counts in 60s (Target = 206W3), after background subtraction = 20,100 = 335 cts/s. PSA/A Brightest Pixel = 32.8 counts/s  The PSA/MIRRORB had 12,570 total counts in 300s, after background subtraction=7150 = 23.8 cts/s. PSA/B Brightest Pixel = 0.8 counts/s</p> <p>PSA A/B = 14x (lbx1a2ffq/lbx1a2fhq) &amp; PSA A/B (BP) = 41x</p> <p><i>Remember that the SED of the target is important in this ratio as the two modes have different responses.</i></p> <p><i>For PSA/A We get S/N = 60 in 3600/335 = 11s  For PSA/B, We get S/N = 60 in 3600/23.8 = 151s</i></p> <p><i>In Oct 2016, this target was observed as part of 14452 Visit A2, with the following count rates:</i>  The PSA/A had 21,063 total counts in 60s (Target = 206W3), after background subtraction = 20,229 = 337 cts/s, Brightest Pixel = 23.1 counts/s  The PSA/B had 14,627 total counts in 300s, after background subtraction=7655 = 25.5 cts/s. PSA/B Brightest Pixel = 1.3 counts/s</p>								
35	PSA/MIRR ORA IMAG E (P2/LOW) (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0; FLASH=S0060D02 0; CURRENT=LOW QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	22 Secs (22 Secs) [==>]	[2]
<p><i>Comments: Lamp and target image to measure the WCA-to-PSA offset for PSA/MIRRORA/P2/LOW current. Expect 416 counts/s from lamp, about the same from the target. We take 20s of each. Note that CURRENT=LOW and LAMP=LINE2 are set as QESIPARMS</i></p>								

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor

36	PSA/MIRR ORB IMAG E (P2/MED) (COS.im.18 92810)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=20 0; FLASH=S0120D02 0; CURRENT=MEDI UM	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	222 Secs (222 Secs) [==>]	[2]
<p><i>Comments: Lamp and target image to measure the WCA-to-PSA offset for PSA/MIRRORB/P2/MED current. Expect ~400 counts/s from the lamp. We need &gt;k160s of target time, and at least 12s of lamp time. We'll get 200s of target and 2x20 to get a good measurement. Note that CURRENT=MED and LAMP=LINE2 are set as QESIPARMS</i></p>									
37	PSA/MIRR ORB ACQ/I MAGE (P2/ MED) (COS.ta.189 2809)	(1) 206W3	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	222 Secs (222 Secs) [==>]	[2]
<p><i>Comments: PSA/MIRRORB ACQ/Image using P2/MED current.</i></p>									
38	PSA/MIRR ORB IMAG E2 (P2/ME D) (COS.im.18 92810)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=20 0; FLASH=S0120D02 0; CURRENT=MEDI UM	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	222 Secs (222 Secs) [==>]	[2]
<p><i>Comments: Lamp and target image to re-measure the WCA-to-PSA offset for PSA/MIRRORB/P2/MED current. Expect 225-400 counts/s from the lamp. We need &gt; 160s of target time, and at least 12s of lamp time. We'll get 200s of target and 2x20 of lamp to get a good measurement. Note that CURRENT=MED and LAMP=LINE2 are set as QESIPARMS</i></p>									
39	PSA/MIRR ORA IMAG E2 (P2/LO W) (COS.im.18 92804)	(1) 206W3	COS/NUV, TIME-TAG, PSA	MIRRORA	BUFFER-TIME=15 0; FLASH=S0060D02 0; CURRENT=LOW	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	22 Secs (22 Secs) [==>]	[2]
<p><i>Comments: Lamp and target image to re-measure the WCA-to-PSA offset for PSA/MIRRORA/Lamp2/LOW current. Expect 416 counts/s from lamp, about the same from the target. We need at least &gt;12s of each, we get 20s for a good measurement. Note that CURRENT=LOW and LAMP=LINE2 are set as QESIPARMS</i></p>									
40	PSA/MIRR ORA ACQ/I MAGE2 (COS.ta.189 2807)	(1) 206W3	COS/NUV, ACQ/IMAGE, PSA	MIRRORA			Sequence 33-40 Non -Int in PSA/A & PS A/B (PB)	22 Secs (22 Secs) [==>]	[2]
<p><i>Comments: Confirmation PSA/A ACQ/image, see first exposure of this visit for complete comment.</i></p>									

Proposal 17620 - PSA/A & PSA/B (PB) - Cycle 32 COS NUV Target Acquisition Monitor





Proposal 17620 - PSA/B & BOA/A (BA) - Cycle 32 COS NUV Target Acquisition Monitor

Fri Jan 10 14:00:39 GMT 2025

<b>Visit</b>	<p><b>Proposal 17620, PSA/B &amp; BOA/A (BA), failed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 01-NOV-2024:00:00:00 AND 01-MAR-2025:00:00:00; GROUP BA, BB, PB WITHIN 120D</p> <p><i>Comments: Visit BA compares the centering of PSA/MIRROB to BOA/MIRRORA. The target will be the standard star WD1657+343. 100% Schedubility. This Visit (BA) should be executed within 30 days of the other visits inthis program, but in no particular order. The closer in time that they can all be executed, the better. We also take a G230L spectrum to test the WCA-to-PSA offsets.</i></p>					
	<b>Diagnostics</b>	(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE				
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
(PSA/B & BOA/A (BA)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT						
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(2)	WD-1657+343	RA: 16 58 51.1200 (254.7130000d) Dec: +34 18 53.30 (34.31481d) Equinox: J2000		V=16.1	Reference Frame: ICRS
<p><i>Comments: COS.ta.432603 indicates this is a good PSA/MIRB to BOA/MIRA target PSA/MIRB counts = S/N=60 in 11.6s (S/N = 40 in 5.2s); COS.ta.432604 gives S/N=60 in 150.7s for BOA/MIRA</i></p> <p><i>Category=STAR</i></p> <p><i>Description=[DA]</i></p> <p><i>Extended=NO</i></p>						

Proposal 17620 - PSA/B & BOA/A (BA) - Cycle 32 COS NUV Target Acquisition Monitor

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAG E (PSA/MIR RORB/P2/ MED) (COS.ta.192 6453)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB		GS ACQ SCENARI O BASE103	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	15 Secs (15 Secs) [==>]	[1]
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 43 cps. We observed this target in Program 13124 and the target count rate was 400 cts/s, total cts = 4800 total , BP=24 cts/s That's sqrt(2/3 * 4800) = 56 (S/N)</p>									
2	Centered PS A/MIRROR B IMAGE ( P2/MED) (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=50; FLASH=S0040D01 6; CURRENT=MEDI UM	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	18 Secs (18 Secs) [==>]	[1]
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 42 cps. A previous exposure of this target (lcgq01q7q) yielded a total (lamp+target+background) count rate of 24617 counts in 16s (1538 cps). So buffer time should be &lt; 0.67 *(2.35E6/1538.) = 1024. Just be safe, we go with 500s. We insert a 16s lamp flash to make sure we get enough counts in the lamp image</p>									
3	XD+0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,.25	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
4	XD+0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
5	XD+0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,.75	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
6	XD+1.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,1.0	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
7	XD+1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,1.25	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
8	XD+1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,1.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	16 Secs (16 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									

Proposal 17620 - PSA/B & BOA/A (BA) - Cycle 32 COS NUV Target Acquisition Monitor

9	XD+1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,1.75	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
10	XD+2.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,2.0	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	31 Secs (31 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
11	XD-0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-.25	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
12	XD-0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
13	XD-0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-.75	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
14	XD-1.0 PSA /MIRRORB IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-1.0	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
15	XD-1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-1.2 5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
16	XD-1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,-1.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
17	XD-1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,-1.7 5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									

Proposal 17620 - PSA/B & BOA/A (BA) - Cycle 32 COS NUV Target Acquisition Monitor

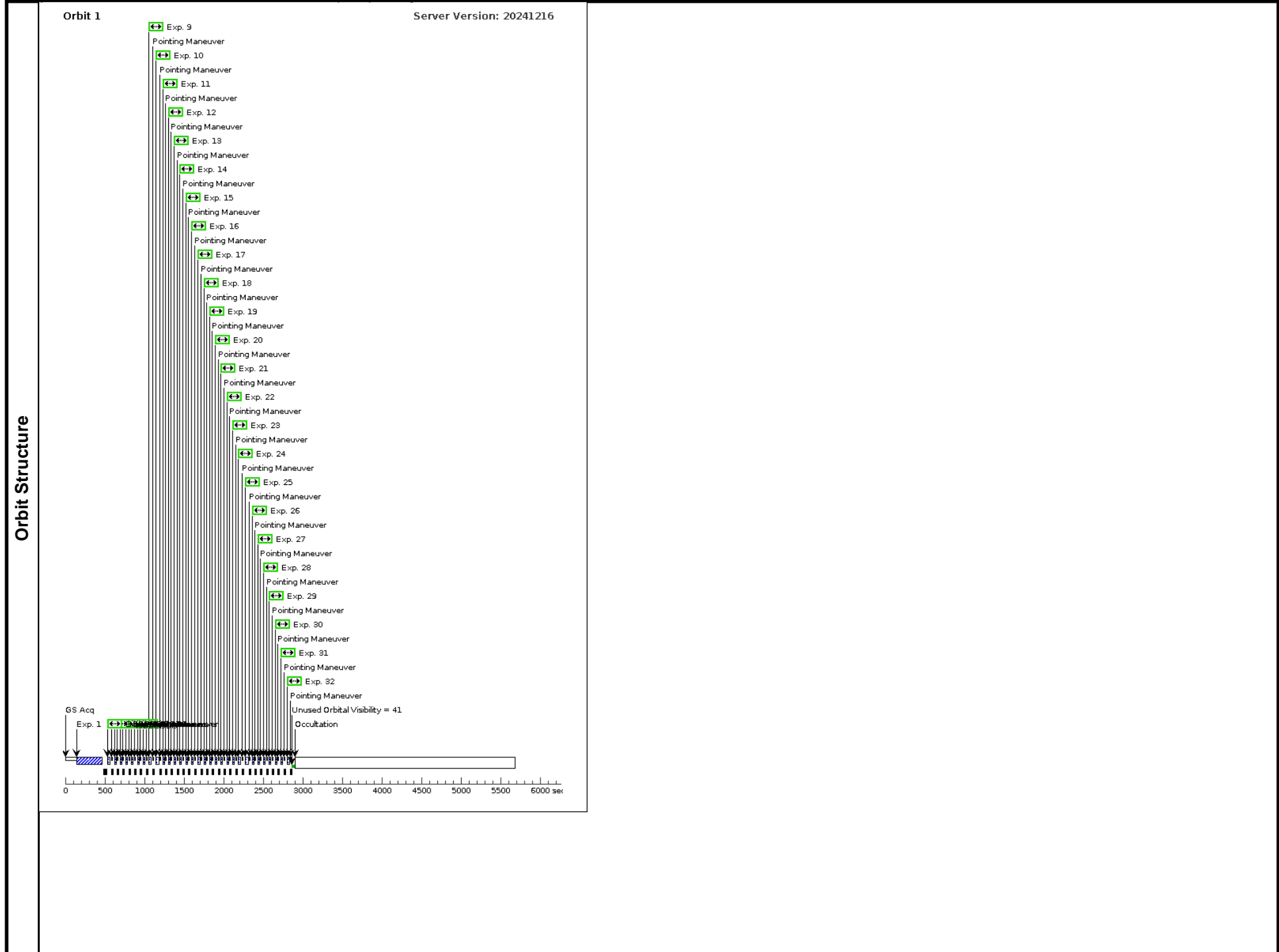
18	AD+0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG .25,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
19	AD+0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG .5,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
20	AD+0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG .75,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
21	AD+1.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG 1.0,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
22	AD+1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG 1.25,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
23	AD+1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG 1.5,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
24	AD+1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG 1.75,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
25	AD+2.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG 2.0,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	31 Secs (31 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
26	AD-0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -.25,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									

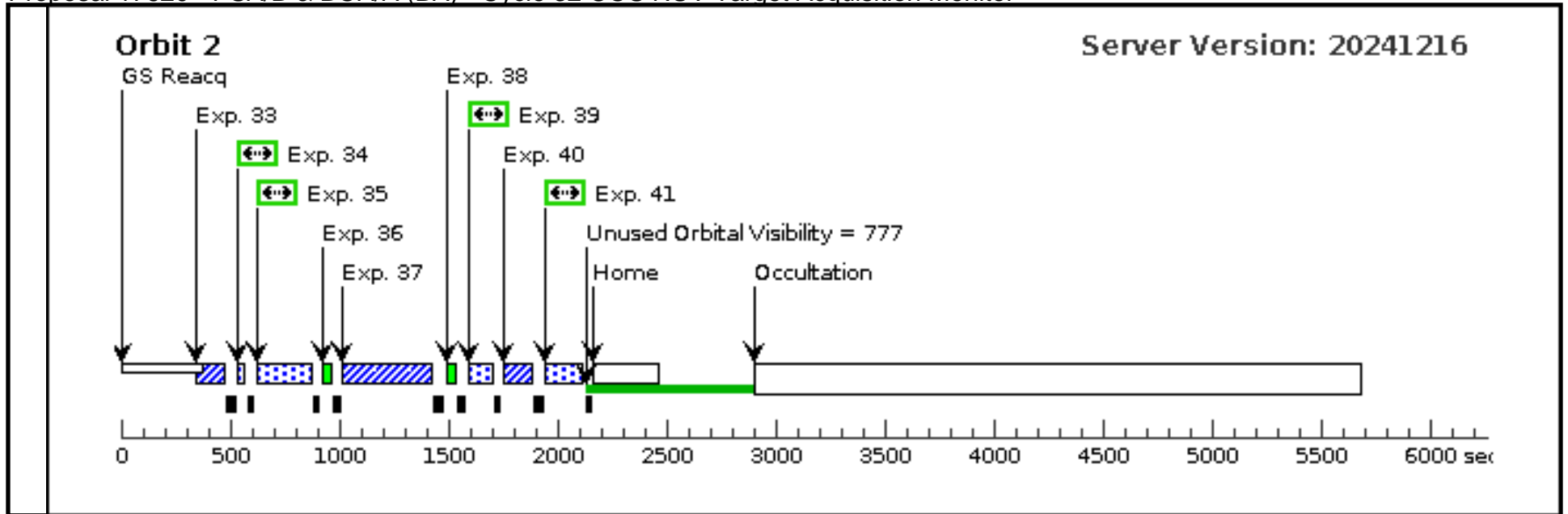
Proposal 17620 - PSA/B & BOA/A (BA) - Cycle 32 COS NUV Target Acquisition Monitor

27	AD-0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -.5,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
28	AD-0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -.75,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
29	AD-1.0 PSA /MIRRORB IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -1.0,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
30	AD-1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -1.25,nu ll	Sequence 1-32 Non-Int in PSA/B & BOA/A (BA)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
31	AD-1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG -1.5,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BA)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
32	AD-1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG -1.75,nu ll	Sequence 1-32 Non-Int in PSA/B & BOA/A (BA)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
33	ACQ/IMAG E (PSA/MIR ROB/P2/ MED) (COS.ta.192 6453)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 33-41 Non-Int in PSA/B & BOA/A (BA)	15 Secs (15 Secs) [==>]	[2]
<i>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 43 cps. We observed this target in Program 13124 and the target count rate was 400 cts/s, total cts = 4800 total, BP=24 cts/s That's sqrt(2/3 * 4800) = 56 (S/N)</i>									
34	PSA/MIRR ORB/P2/ME D + Target (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	FLASH=S0040D016 ; BUFFER-TIME=50 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-41 Non-Int in PSA/B & BOA/A (BA)	18 Secs (18 Secs) [==>]	[2]
<i>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 42 cps.</i>									
<i>A previous exposure of this target (lcgq01q7q) yielded a total (lamp+target+background) count rate of 24617 counts in 16s (1538 cps). So buffer time should be &lt; 0.67 *(2.35E6/1538.) = 1024. Just be safe, we go with 500s.</i>									
<i>We insert a 16s lamp flash to make sure we get enough counts in the lamp image</i>									

Proposal 17620 - PSA/B & BOA/A (BA) - Cycle 32 COS NUV Target Acquisition Monitor

35	BOA/MIRR ORA/Target (no lamp) (COS.im.19 26457)	(2) WD-1657+343	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=20 00	Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	150 Secs (150 Secs) [==>]	[2]	
<p>Comments: COS.ta.433949 gives S/N=60 in 150s, followed by a wavecal. The exposure time is driven by the target. We observed this target in 13124, the target count rate was 18.2 cps (2736 counts in 150s : ~312 background in 150s over a 50x50 box). This is a BOA image, so we need to add a WAVE image after this exposure. The WAVECAL=YES parameter does not trigger a separate lamp image. Buffer should be &lt; 0.67 * (2.35E6/20.) or &lt; 7800. We use 2000 just to be safe.</p>									
36	WCA/MIRR WAVE ORA/P2/LO W (no target )		COS/NUV, TIME-TAG, WCA	MIRRORA	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	12 Secs (12 Secs) [==>]	[2]	
<p>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s. Buffer Time is calculated automatically.</p>									
37	ACQ/IMAG E (BOA/MI RRORA/P2/ LOW) (COS.ta.192 6456)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	150 Secs (150 Secs) [==>]	[2]	
<p>Comments: COS.ta.433949 gives S/N=60 in 150s</p>									
38	WCA/MIRR WAVE ORA/P2/LO W (no target )		COS/NUV, TIME-TAG, WCA	MIRRORA	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	12 Secs (12 Secs) [==>]	[2]	
<p>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s</p>									
39	PSA/MIRR ORB/P2/ME D + Target (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	FLASH=S0040D016 ; BUFFER-TIME=50 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	18 Secs (18 Secs) [==>]	[2]
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 42 cps. A previous exposure of this target (lcgq01q7q) yielded a total (lamp+target+background) count rate of 24617 counts in 16s (1538 cps). So buffer time should be &lt; 0.67 *(2.35E6/1538.) = 1024. Just be safe, we go with 500s. We insert a 16s lamp flash to make sure we get enough counts in the lamp image</p>									
40	ACQ/IMAG E (PSA/MIR RORB/P2/ MED) (COS.ta.192 6453)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB		Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	15 Secs (15 Secs) [==>]	[2]	
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 43 cps. We observed this target in 13124 and the target count rate was 400 cts/s, total cts = 4800, BP=24 cts/s That's sqrt(2/3 * 4800) = 56 (S/N)</p>									
41	PSA/G230L /3000 (COS.sp.192 6458)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	G230L 3000 A	BUFFER-TIME=70 0; FP-POS=3; FLASH=S0100D03 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-41 Non -Int in PSA/B & BO A/A (BA)	60 Secs (60 Secs) [==>]	[2]
<p>Comments: COS.sp.1030028 gives S/N=10/RE in 40s, we go for 60s. BT=2/3*1300 &lt; 800 (we use 700 just to be safe) Based upon the data from 13124, we expect 3800 counts in 30s in the B-stripe. We set the lamp to the exposure time to get more counts. Note that previous version of this program had a typo in the label (it said 2950 not 3000). G230L/3000 is one of the 'approved' NUV cenwaves for TA.</p>									







Proposal 17620 - PSA/B & BOA/A (BC) - Cycle 32 COS NUV Target Acquisition Monitor

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAG E (PSA/MIR RORB/P2/ MED) (COS.ta.192 6453)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB		GS ACQ SCENARI O BASE103	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	15 Secs (15 Secs) [==>]	[1]
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 43 cps. We observed this target in Program 13124 and the target count rate was 400 cts/s, total cts = 4800 total , BP=24 cts/s That's sqrt(2/3 * 4800) = 56 (S/N)</p>									
2	Centered PS A/MIRROR B IMAGE ( P2/MED) (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=50 0; FLASH=S0040D01 6; CURRENT=MEDI UM	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	18 Secs (18 Secs) [==>]	[1]
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 42 cps.</p> <p>A previous exposure of this target (lcgq01q7q) yielded a total (lamp+target+background) count rate of 24617 counts in 16s (1538 cps). So buffer time should be &lt; 0.67 *(2.35E6/1538.) = 1024. Just be safe, we go with 500s.</p> <p>We insert a 16s lamp flash to make sure we get enough counts in the lamp image</p>									
3	XD+0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,.25	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
4	XD+0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
5	XD+0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,.75	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
6	XD+1.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,1.0	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
7	XD+1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,1.25	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									
8	XD+1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,1.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	16 Secs (16 Secs) [==>]	[1]
<p>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</p>									

Proposal 17620 - PSA/B & BOA/A (BC) - Cycle 32 COS NUV Target Acquisition Monitor

9	XD+1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,1.75	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
10	XD+2.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,2.0	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	31 Secs (31 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
11	XD-0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-.25	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
12	XD-0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
13	XD-0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-.75	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
14	XD-1.0 PSA /MIRRORB IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-1.0	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
15	XD-1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG null,-1.2 5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
16	XD-1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,-1.5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
17	XD-1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG null,-1.7 5	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									

Proposal 17620 - PSA/B & BOA/A (BC) - Cycle 32 COS NUV Target Acquisition Monitor

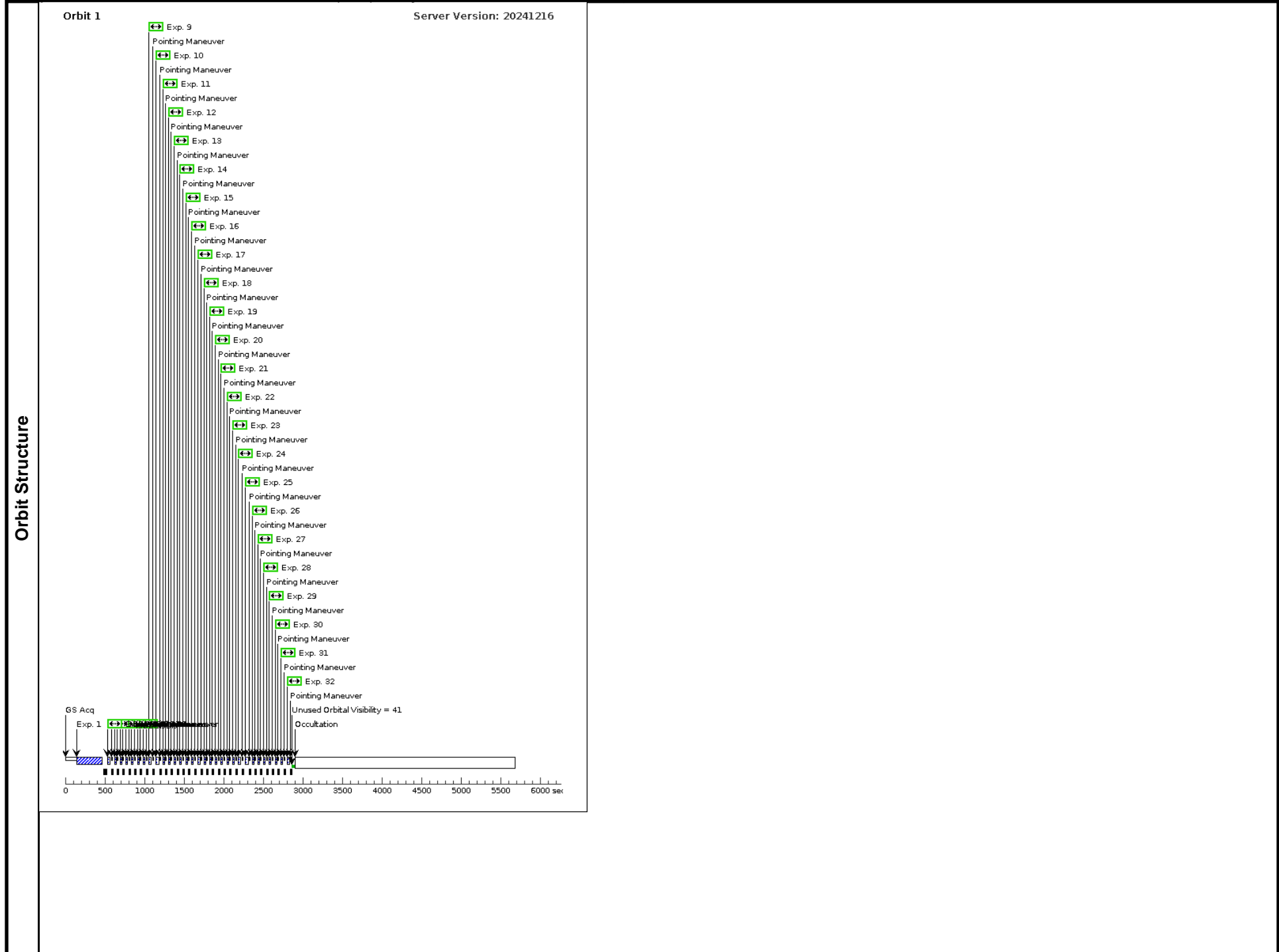
18	AD+0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG .25,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
19	AD+0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG .5,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
20	AD+0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG .75,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
21	AD+1.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG 1.0,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
22	AD+1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG 1.25,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
23	AD+1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG 1.5,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
24	AD+1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG 1.75,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
25	AD+2.0 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG 2.0,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	31 Secs (31 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
26	AD-0.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -.25,null	Sequence 1-32 Non-I nt in PSA/B & BOA/ A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									

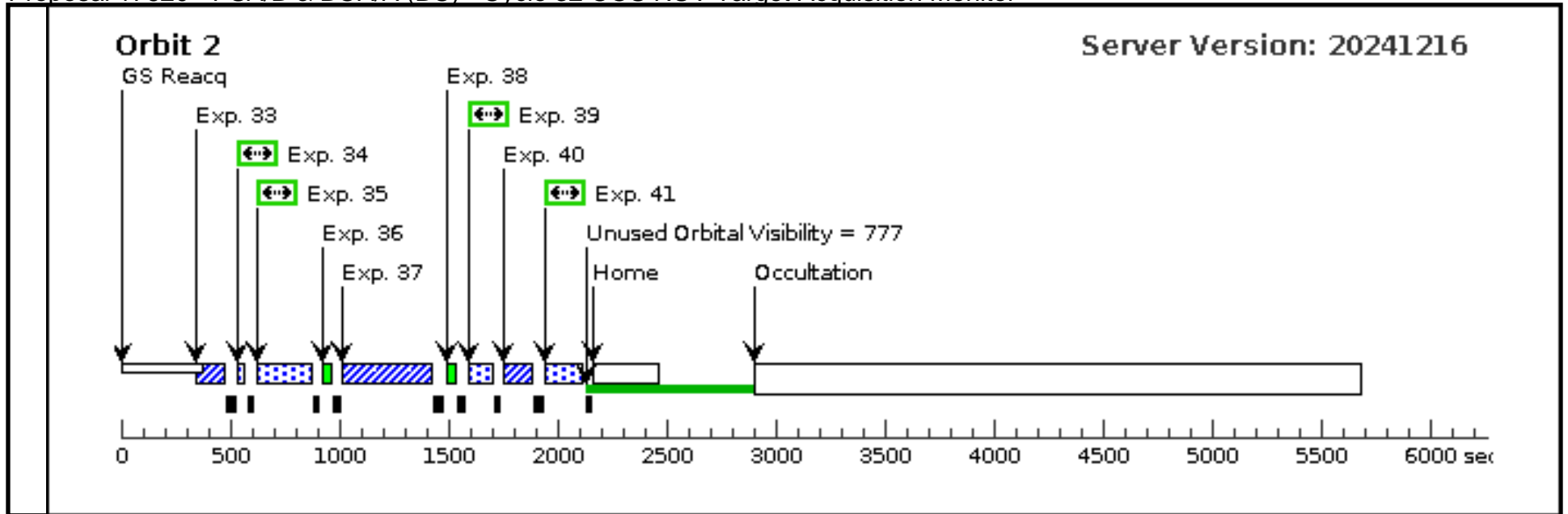
Proposal 17620 - PSA/B & BOA/A (BC) - Cycle 32 COS NUV Target Acquisition Monitor

27	AD-0.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -.5,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
28	AD-0.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -.75,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
29	AD-1.0 PSA /MIRRORB IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -1.0,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
30	AD-1.25 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=15 0	POS TARG -1.25,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BC)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
31	AD-1.50 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG -1.5,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BC)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
32	AD-1.75 PS A/MIRROR B IMAGE (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	BUFFER-TIME=30 0	POS TARG -1.75,null	Sequence 1-32 Non-Int in PSA/B & BOA/A (BC)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
33	ACQ/IMAG E (PSA/MIR ROB/P2/ MED) (COS.ta.192 6453)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			Sequence 33-41 Non-Int in PSA/B & BOA/A (BC)	15 Secs (15 Secs) [==>]	[2]
<i>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 43 cps. We observed this target in Program 13124 and the target count rate was 400 cts/s, total cts = 4800 total , BP=24 cts/s That's sqrt(2/3 * 4800) = 56 (S/N)</i>									
34	PSA/MIRR ORB/P2/ME D + Target (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	FLASH=S0040D016 ; BUFFER-TIME=50 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-41 Non-Int in PSA/B & BOA/A (BC)	18 Secs (18 Secs) [==>]	[2]
<i>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 42 cps.</i>									
<i>A previous exposure of this target (lcgq01q7q) yielded a total (lamp+target+background) count rate of 24617 counts in 16s (1538 cps). So buffer time should be &lt; 0.67 *(2.35E6/1538.) = 1024. Just be safe, we go with 500s.</i>									
<i>We insert a 16s lamp flash to make sure we get enough counts in the lamp image</i>									

Proposal 17620 - PSA/B & BOA/A (BC) - Cycle 32 COS NUV Target Acquisition Monitor

35	BOA/MIRR ORA/Target (no lamp) (COS.im.19 26457)	(2) WD-1657+343	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=20 00	Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	150 Secs (150 Secs) [==>]	[2]	
<p>Comments: COS.ta.433949 gives S/N=60 in 150s, followed by a wavecal. The exposure time is driven by the target. We observed this target in 13124, the target count rate was 18.2 cps (2736 counts in 150s : ~312 bkground in 150s over a 50x50 box). This is a BOA image, so we need to add a WAVE image after this exposure. The WAVECAL=YES parameter does not trigger a separate lamp image. Buffer should be &lt; 0.67 * (2.35E6/20.) or &lt; 7800. We use 2000 just to be safe.</p>									
36	WCA/MIRR WAVE ORA/P2/LO W (no target )		COS/NUV, TIME-TAG, WCA	MIRRORA	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	12 Secs (12 Secs) [==>]	[2]	
<p>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s. Buffer Time is calculated automatically.</p>									
37	ACQ/IMAG E (BOA/MI RRORA/P2/ LOW) (COS.ta.192 6456)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	150 Secs (150 Secs) [==>]	[2]	
<p>Comments: COS.ta.433949 gives S/N=60 in 150s</p>									
38	WCA/MIRR WAVE ORA/P2/LO W (no target )		COS/NUV, TIME-TAG, WCA	MIRRORA	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	12 Secs (12 Secs) [==>]	[2]	
<p>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s</p>									
39	PSA/MIRR ORB/P2/ME D + Target (COS.im.19 26454)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	MIRRORB	FLASH=S0040D016 ; BUFFER-TIME=50 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	18 Secs (18 Secs) [==>]	[2]
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 42 cps. A previous exposure of this target (lcgq01q7q) yielded a total (lamp+target+background) count rate of 24617 counts in 16s (1538 cps). So buffer time should be &lt; 0.67 *(2.35E6/1538.) = 1024. Just be safe, we go with 500s. We insert a 16s lamp flash to make sure we get enough counts in the lamp image</p>									
40	ACQ/IMAG E (PSA/MIR RORB/P2/ MED) (COS.ta.192 6453)	(2) WD-1657+343	COS/NUV, ACQ/IMAGE, PSA	MIRRORB		Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	15 Secs (15 Secs) [==>]	[2]	
<p>Comments: COS.ta.433946 gives S/N=60 in 11.65s. BP = 43 cps. We observed this target in 13124 and the target count rate was 400 cts/s, total cts = 4800, BP=24 cts/s That's sqrt(2/3 * 4800) = 56 (S/N)</p>									
41	PSA/G230L /3000 (COS.sp.192 6458)	(2) WD-1657+343	COS/NUV, TIME-TAG, PSA	G230L 3000 A	BUFFER-TIME=70 0; FP-POS=3; FLASH=S0100D03 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 33-41 Non -Int in PSA/B & BO A/A (BC)	60 Secs (60 Secs) [==>]	[2]
<p>Comments: COS.sp.1030028 gives S/N=10/RE in 40s, we go for 60s. BT=2/3*1300 &lt; 800 (we use 700 just to be safe) Based upon the data from 13124, we expect 3800 counts in 30s in the B-stripe. We set the lamp to the exposure time to get more counts. Note that previous version of this program had a typo in the label (it said 2950 not 3000). G230L/3000 is one of the 'approved' NUV cenwaves for TA.</p>									







Proposal 17620 - BOA/A & BOA/B (BB) - Cycle 32 COS NUV Target Acquisition Monitor

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAG E (BOA/MIR RORA/P2/ LOW) (COS.ta.192 6459)	(3) HIP66578	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		GS ACQ SCENARI O BASE103	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	18 Secs (18 Secs) [==>]	[1]
<i>Comments: Using the standard star HIP66578 to compare the centerings between the BOA/MIRRORA and BOA/MIRRORB ACQ/IMAGE centering options. The ETC gives 12 seconds to reach S/N=60 with this target in the BOA/MIRRORA mode. We observed this target in 13124, with 2961 counts in 12s (target +background in 50x50 box). We will need to follow this with a P2/LOW/WCA/A image.</i>									
2	WCA/MIR RORA/P2/LO W (no target )	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORA	BUFFER-TIME=27 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	16 Secs (16 Secs) [==>]	[1]
<i>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s. The BT for this must be &lt; 0.37*(2.35E6/4800) or &lt; 270</i>									
3	Centered B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0		Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
4	XD+0.25 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,.25	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
5	XD+0.50 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,.5	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
6	XD+0.75 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,.75	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
7	XD+1.0 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,1.0	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
8	XD+1.25 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,1.25	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
9	XD+1.50 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,1.5	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									

Proposal 17620 - BOA/A & BOA/B (BB) - Cycle 32 COS NUV Target Acquisition Monitor

10	XD+1.75 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=30 0	POS TARG null,1.75	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	21 Secs (21 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture. Exp time increased to 21 s since target falls outside of aperture.</i></p>									
11	XD+2.0 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=30 0	POS TARG null,2.0	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	21 Secs (21 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture. Exp time increased to 21 s since target falls outside of aperture.</i></p>									
12	XD-0.25 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-.25	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i></p>									
13	XD-0.50 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-.5	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i></p>									
14	XD-0.75 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-.75	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i></p>									
15	XD-1.0 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-1.0	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i></p>									
16	XD-1.25 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-1.25	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i></p>									
17	XD-1.50 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG null,-1.5	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i></p>									
18	XD-1.75 BOA/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=30 0	POS TARG null,-1.75	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	21 Secs (21 Secs) [==>]	[1]
<p><i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture. Exp time increased to 21 s since target falls outside of aperture.</i></p>									

Proposal 17620 - BOA/A & BOA/B (BB) - Cycle 32 COS NUV Target Acquisition Monitor

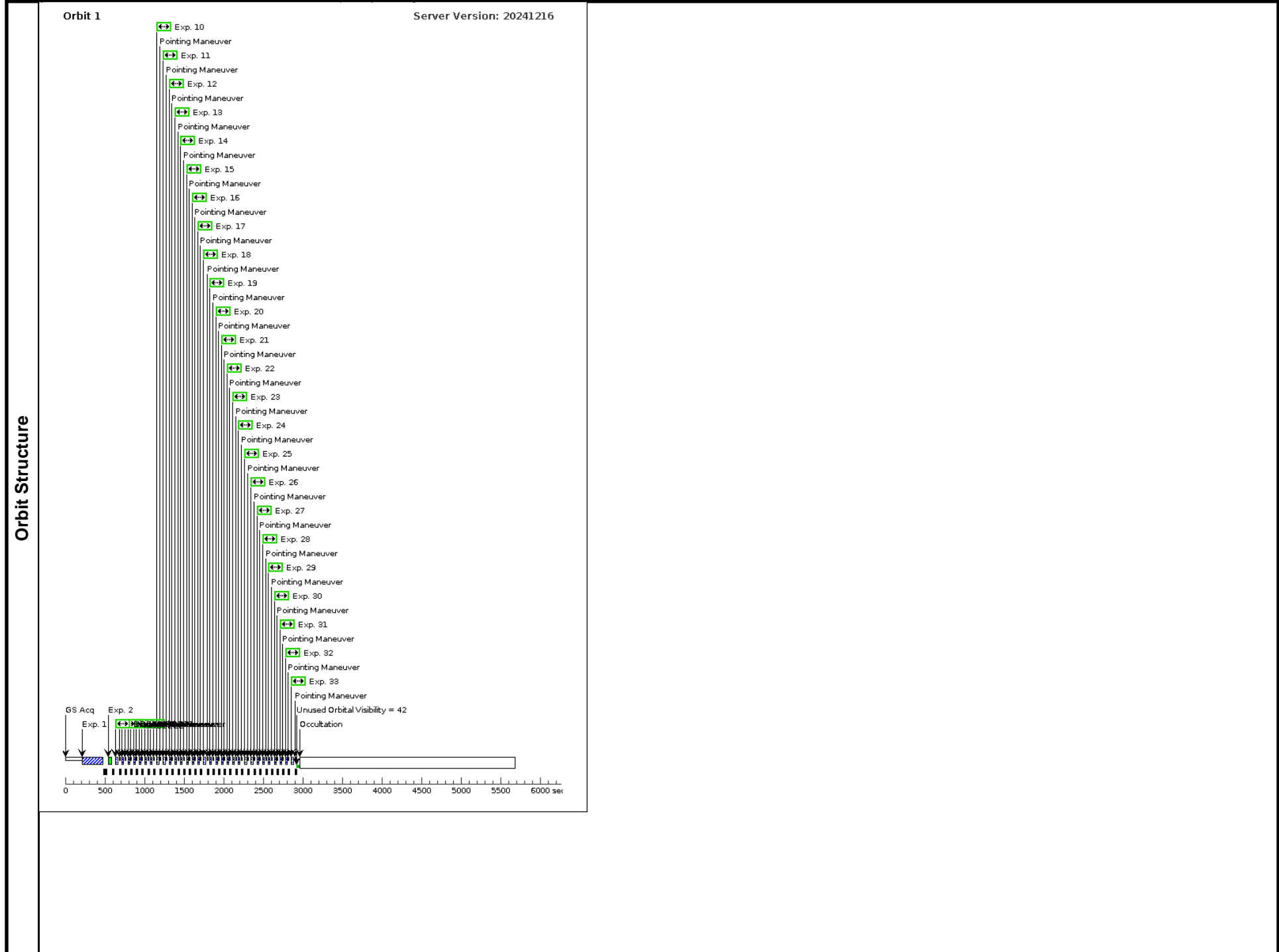
19	AD+0.25 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG .25,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
20	AD+0.50 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG .5,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
21	AD+0.75 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG .75,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
22	AD+1.0 BO A/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG 1.0,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
23	AD+1.25 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG 1.25,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
24	AD+1.50 BO OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG 1.5,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									
25	AD+1.75 B OA/MIRRO RA IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=30 0	POS TARG 1.75,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture. Exp time increased to 21 s since target falls outside of aperture.</i>									
26	AD+2.0 BO A/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=30 0	POS TARG 2.0,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture. Exp time increased to 21 s since target falls outside of aperture.</i>									
27	AD-0.25 BO A/MIRROR A IMAGE (COS.im.19 26460)	(3) HIP66578	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG -.25,null	Sequence 1-33 Non-I nt in BOA/A & BOA /B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>									

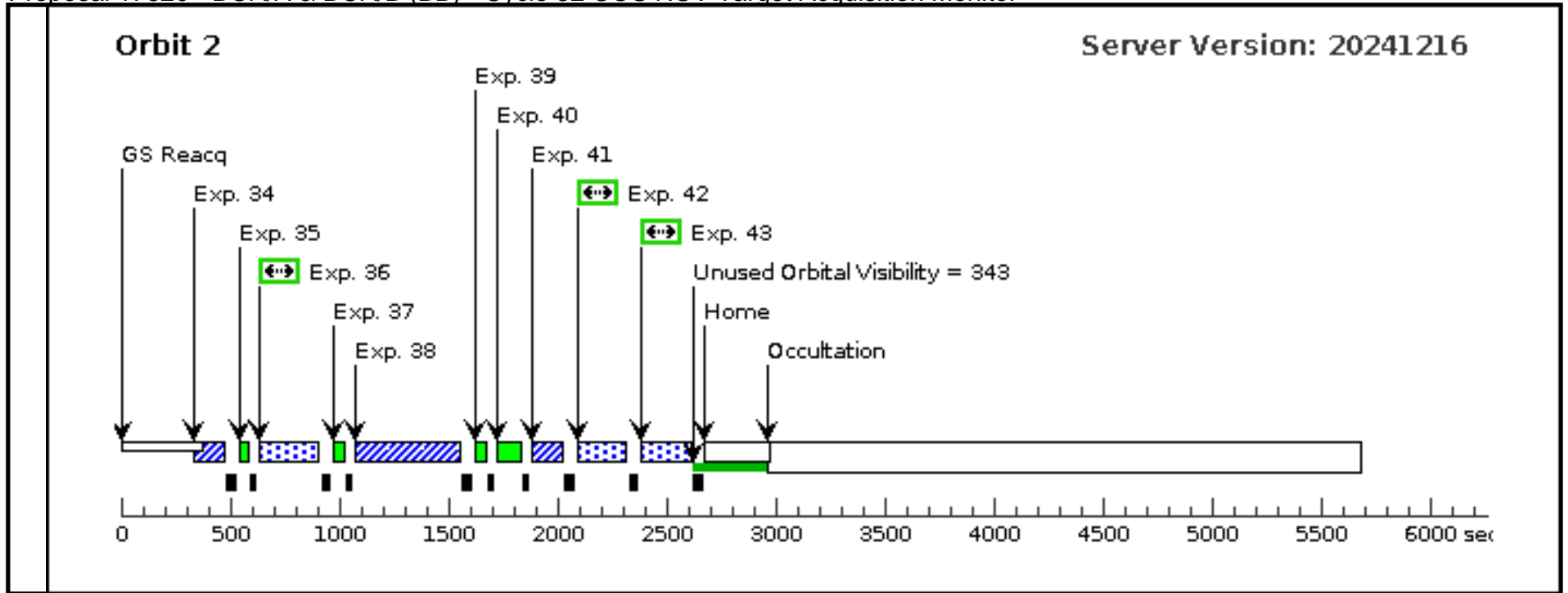
Proposal 17620 - BOA/A & BOA/B (BB) - Cycle 32 COS NUV Target Acquisition Monitor

28	AD-0.50 BO (3) HIP66578 A/MIRROR A IMAGE (COS.im.19 26460)	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG -.5,null	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>								
29	AD-0.75 BO (3) HIP66578 A/MIRROR A IMAGE (COS.im.19 26460)	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG -.75,null	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>								
30	AD-1.0 BO (3) HIP66578 A/MIRROR A IMAGE (COS.im.19 26460)	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG -1.0,null	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>								
31	AD-1.25 BO (3) HIP66578 A/MIRROR A IMAGE (COS.im.19 26460)	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG -1.25,null	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>								
32	AD-1.50 BO (3) HIP66578 A/MIRROR A IMAGE (COS.im.19 26460)	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=15 0	POS TARG -1.5,null	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	11 Secs (11 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture.</i>								
33	AD-1.75 BO (3) HIP66578 A/MIRROR A IMAGE (COS.im.19 26460)	COS/NUV, TIME-TAG, BOA	MIRRORA	BUFFER-TIME=30 0	POS TARG -1.75,null	Sequence 1-33 Non-Int in BOA/A & BOA/B (BB)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: Part of flux sweep to test target centering. 11 s exposure provides S/N~60 when target is near center of aperture. Exp time increased to 21 s since target falls outside of aperture.</i>								
34	ACQ/IMAG (3) HIP66578 E (BOA/MIRROR/P2/LOW) (COS.ta.192 6459)	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 34-43 Non-Int in BOA/A & BOA/B (BB)	18 Secs (18 Secs) [==>]	[2]
<i>Comments: Using the standard star HIP66578 to compare the centerings between the BOA/MIRRORA and BOA/MIRRORB ACQ/IMAGE centering options. The ETC gives 12 seconds to reach S/N=60 with this target in the BOA/MIRRORA mode. We observed this target in 13124, with 2961 counts in 12s (target +background in 50x50 box). We will need to follow this with a P2/LOW/WCA/A image.</i>								
35	WCA/MIRR WAVE (3) HIP66578 ORA/P2/LOW (no target)	COS/NUV, TIME-TAG, WCA	MIRRORA	BUFFER-TIME=27 0	QESIPARM USELAMP LINE2; QESIPARM CURRENT LOW	Sequence 34-43 Non-Int in BOA/A & BOA/B (BB)	16 Secs (16 Secs) [==>]	[2]
<i>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s. The BT for this must be &lt; 0.37*(2.35E6/4800) or &lt; 270</i>								
36	BOA/MIRR (3) HIP66578 ORB/Target (no lamp) (COS.im.19 26462)	COS/NUV, TIME-TAG, BOA	MIRRORB	BUFFER-TIME=10 00		Sequence 34-43 Non-Int in BOA/A & BOA/B (BB)	183 Secs (183 Secs) [==>]	[2]
<i>Comments: Followup BOA/MIRRORB calibration IMAGE with a wavecal to verify proper initial centering (The ETC gives 175 seconds to reach S/N=60 with this target in the BOA/MIRRORA mode.) The BT is ~ 0.67 *2.35E6/(1000) &lt; 1575. as we are only getting about 20 cps from the source, most of the counts are noise. This is a BOA image, so we need to add a WAVE image after this exposure. The WAVECAL=YES parameter does not trigger a separate lamp image</i>								

Proposal 17620 - BOA/A & BOA/B (BB) - Cycle 32 COS NUV Target Acquisition Monitor

37	WCA/MIRR ORB/P2/ME D (no target)	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORB	BUFFER-TIME=20 00	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	24 Secs (24 Secs) [==>]	[2]
<p><i>Comments: For P2/MED, we expect 300-460 cps, with a Brightest Pixel = 9 cts/s. So BT &lt; 0.67*(2.35E6/460) &lt; 3400.</i></p>									
38	ACQ/IMAG E (BOA/MI RRORB/P2/ MED) (COS.ta.192 6461)	(3) HIP66578	COS/NUV, ACQ/IMAGE, BOA	MIRRORB			Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	183 Secs (183 Secs) [==>]	[2]
<p><i>Comments: Compare the centerings between the BOA/MIRRORA and BOA/MIRRORB ACQ/IMAGE centering options. The ETC gives 175 seconds to reach S/N=60 with this target in the BOA/MIRRORB mode.</i></p>									
39	WCA/MIRR ORB/P2/ME D (no target)	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORB	BUFFER-TIME=20 00	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	24 Secs (24 Secs) [==>]	[2]
<p><i>Comments: For P2/MED, we expect 300-460 cps, with a Brightest Pixel = 9 cts/s. So BT &lt; 0.67*(2.35E6/460) &lt; 3400.</i></p>									
40	WCA/MIRR ORA/P2/LO W (no target )	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORA	BUFFER-TIME=27 0	QESIPARM USELA MP LINE2; QESIPARM CURR ENT LOW	Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	16 Secs (16 Secs) [==>]	[2]
<p><i>Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s. The BT for this must be &lt; 0.37*(2.35E6/4800) or &lt; 270</i></p>									
41	ACQ/IMAG E (BOA/MI RRORA/P2/ LOW) (COS.ta.192 6459)	(3) HIP66578	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	18 Secs (18 Secs) [==>]	[2]
<p><i>Comments: Using the standard star HIP66578 to compare the centerings between the BOA/MIRRORA and BOA/MIRRORB ACQ/IMAGE centering options. The ETC gives 12 seconds to reach S/N=60 with this target in the BOA/MIRRORA mode. We observed this target in 13124, with 2961 counts in 12s (target +background in 50x50 box). We will need to follow this with a P2/LOW/WCA/A image.</i></p>									
42	PSA/G225 M/2306 (COS.sp.192 6463)	(3) HIP66578	COS/NUV, TIME-TAG, PSA	G225M 2306 A	BUFFER-TIME=54 0; FLASH=S0200D03 5; FP-POS=3	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	95 Secs (95 Secs) [==>]	[2]
<p><i>Comments: COS.sp.1030027 gives s/n/re =10 in 70 seconds. BT=2/3 *1000 &lt; 666. We want to get a good lamp flash, so 35s should be ok. FPPOS=3. G225M/2306 is one of the 'approved' NUV cenwaves for TA. We request 95s to account for further TDS</i></p>									
43	PSA/G185 M/1913 (COS.sp.192 6464)	(3) HIP66578	COS/NUV, TIME-TAG, PSA	G185M 1913 A	BUFFER-TIME=30 0; FLASH=S0070D03 5; FP-POS=3	QESIPARM USELA MP LINE2; QESIPARM CURR ENT MEDIUM	Sequence 34-43 Non -Int in BOA/A & BO A/B (BB)	70 Secs (70 Secs) [==>]	[2]
<p><i>Comments: COS.sp.1030026 gives s/n/re =10.7 in ~40 seconds. BT=2/3 * 638 &lt; 400. We want to get a good lamp flash, so 35s should be ok. FPPOS=3. G185M/1913 is one of the 'approved' NUV cenwaves for TA. Due to concerns over grating TDS, I have doubled the exposure time to 70 seconds</i></p>									





Proposal 17620 - PtNe (PN) - Cycle 32 COS NUV Target Acquisition Monitor

Fri Jan 10 14:00:40 GMT 2025

Visit	Proposal 17620, PtNe (PN), scheduling									
	Diagnostic Status: No Diagnostics									
Exposures	Scientific Instruments: COS/NUV									
	Special Requirements: (none)									
	Comments: This visit performs the PtNe lamp "family portrait". P1 with MirrorA, P2 with MirrorA, P1 with MirrorB, P2 with MirrorB In cycle 30 and earlier this was part of the BOA/A BOA/B visit, but as a purely internal observation it makes sense to split this into a separate orbit for scheduling purposes.									
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	WCA/MIRR ORA/P1/LO W (no target )	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORA		QESIPARM USELA MP LINE1;  QESIPARM CURR ENT LOW	Sequence 1-4 Non-Int in PtNe (PN)	16 Secs (16 Secs)  [==>]	[1]
Comments: For P1/LOW/A, we expect 2620 counts/s. BP = 45 cp/s. This is derived from data in program 13124.										
2	WCA/MIRR ORA/P2/LO W (no target )	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORA		QESIPARM USELA MP LINE2;  QESIPARM CURR ENT LOW	Sequence 1-4 Non-Int in PtNe (PN)	26 Secs (26 Secs)  [==>]	[1]	
Comments: For P2/LOW/MIRRORA we get 2900 counts in 7s										
3	WCA/MIRR ORB/P1/LO W (no target )	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORB		QESIPARM USELA MP LINE1;  QESIPARM CURR ENT LOW	Sequence 1-4 Non-Int in PtNe (PN)	32 Secs (32 Secs)  [==>]	[1]	
Comments: For P1/LOW, we expect 82 cts/s, to get 1600 counts in the primary spot, we need 2400 counts. 2400./82 = 30 seconds										
4	WCA/MIRR ORB/P2/ME D (no target)	WAVE	COS/NUV, TIME-TAG, WCA	MIRRORB		QESIPARM USELA MP LINE2;  QESIPARM CURR ENT MEDIUM	Sequence 1-4 Non-Int in PtNe (PN)	26 Secs (26 Secs)  [==>]	[1]	
Comments: For P2/MED, we expect 300-460 cps, with a Brightest Pixel = 9 cts/s										

