



# 12793 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

Cycle: 19, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
<b>Dr. Gerard A. Kriss (PI) (Contact)</b>	<b>Space Telescope Science Institute</b>	<b>gak@stsci.edu</b>
Dr. David J. Sahnou (CoI)	Space Telescope Science Institute	sahnou@stsci.edu
Dr. Jason Mcphate (CoI)	University of California - Berkeley	mcphate@ssl.berkeley.edu
Dr. Steven V. Penton (CoI)	Space Telescope Science Institute	penton@stsci.edu
Dr. Steven Osterman (CoI)	University of Colorado at Boulder	steven.osterman@colorado.edu
Dr. Alan D. Welty (CoI)	Space Telescope Science Institute	welty@stsci.edu

## 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>
01	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:06:46.0	yes
02	DARK DEUTERIUM NONE	COS COS/FUV S/C	2	17-Aug-2012 21:07:10.0	yes
03	DARK DEUTERIUM NONE	COS COS/FUV S/C	2	17-Aug-2012 21:07:37.0	yes

Proposal 12793 (STScI Edit Number: 5, Created: Friday, August 17, 2012 8:10:20 PM EST) - Overview

<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>
04	DARK DEUTERIUM NONE	COS COS/FUV S/C	2	17-Aug-2012 21:08:07.0	yes
05	DARK DEUTERIUM NONE	COS COS/FUV S/C	2	17-Aug-2012 21:08:32.0	yes
06	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:08:50.0	yes
07	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:09:03.0	yes
08	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:09:16.0	yes
09	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:09:29.0	yes
10	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:09:43.0	yes
11	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:09:57.0	yes
12	DARK NONE WAVE	COS COS/FUV S/C	1	17-Aug-2012 21:10:11.0	yes

16 Total Orbits Used

## **ABSTRACT**

This is a one-time-only enabling program (FENA1) for establishing operating conditions at lifetime position 2. The results of this proposal will enable us to select the optimum high voltage at lifetime position 2 for maximizing scientific performance and detector life at the new position. Over a selected range of high voltage on the COS FUV XDL detector comprising six settings, we will produce gain maps, measure the walk correction, verify geometric distortion corrections, and characterize detector focus at low gain for the new selected location (+35 pixels) for science observations on the FUV detector. The lowest HV setting is chosen to place the peak of the modal gain distribution at about 4. The highest HV setting would be the current HVNom. Four intermediate settings will produce overlapping gain distributions in all pixels covering the full range from gain of 3 to a gain of 19. At each HV setting we will take deuterium lamp exposures to map the detector gain, and calibration lamp exposures to measure the walk correction, geometric distortion, and detector resolution.

## **OBSERVING DESCRIPTION**

Over a selected range of high voltage on the COS FUV XDL detector comprising six settings, we will produce gain maps, measure the walk correction, verify geometric distortion corrections, and characterize detector focus at low gain for the new selected location (+35 pixels) for science observations on the FUV detector. The lowest HV setting is chosen to place the peak of the modal gain distribution at about 4. Examining pre-flight calibration data, the required HV settings for segments A/B are 143/142. The highest HV setting would be 175/172. Four intermediate settings will be chosen to produce overlapping gain distributions in all pixels covering the full range from gain of 3 to gain of 19.

The strategy for this program will be to first do a visit in which we take cal lamp exposures through the WCA with grating G160M at the +35-pixel new lifetime position using each HV setting. By setting the aperture in place and using the same tilt and FP-POS for each exposure while changing the HV, we maximize stability by having no mechanism motions between cal lamp exposures. Using the emission lines we will obtain a first assessment of detector resolution and X and Y walk as a function of gain. This will also map the gain vs. HV relation down to low gains and low HV, which is crucial for planning observations at HV settings that produce a full sampling of the gain distribution from low to high. This visit uses the following sequence:

1. Move the WCA to a position to illuminate the new lifetime position. (Nominally XAPER=127. See below.)
2. Set HVA/HVB to 143/142.
3. Using G160M/1600/FP-POS=3, obtain a 220 s cal lamp exposure.
4. Repeat steps 2 and 3 at the following series of HV settings: 147/147, 152/153, 157/162, 169/168, 175/172.

We expect the selected high voltages to give the following modal gains on each segment:

HVA GainA HVB GainB

143 4 142 4

147 5 147 6

152 7 153 8

157 9 162 12

169 13 168 15

175 15 172 17

In the second visit, we will obtain deuterium lamp exposures through the FCA at the +35-pixel new lifetime position at a high voltage setting chosen to have a modal gain of 7. For this modal gain, the full gain distribution should span the range from about 3 to 12. Operating at this gain may be an important way to extend detector life, so evaluating the data from this visit to assess the potential science quality of such operations will be crucial for choosing our nominal operating voltage at the second lifetime position. This visit uses the following observing sequence:

1. Set HV to its new setting for each segment.
2. Move the FCA to a position to illuminate the new lifetime position. (Nominally XAPER=-68. See below.)
3. Take deuterium lamp exposures (980 s each) using G130M at all four FP-POS positions.
4. Take deuterium lamp exposures (980 s each) using G160M at all four FP-POS positions.

Grating G130M optimally exposes Segment B for the deuterium lamp exposures, and grating G160M optimally exposes Segment A. With overheads, this sequence will take 2 orbits to execute.

In a set of 3 additional visits (2 orbits apiece), we will obtain deuterium lamp exposures through the FCA at the +35-pixel new lifetime position at high voltage settings chosen to provide a full sampling of the gain distribution from low to high gains. Existing spectra at  $dY=+3.1''$  from program 12676 at HVA/HVB=169/168 will supplement these data. Visit 2 will nominally have provided a gain distribution centered at a modal gain of 7. These visits will have HVs chosen to sample the lower and higher ends of the gain distribution as uniformly as practical. We use the same observing sequence as described above for Visit 2, differing only in the HV setting. Each visit will take 2 orbits to execute.

Finally, again using the results of Visits 1-2 to choose a range of high voltage settings that sample the gain distribution well, we will obtain well exposed cal lamp spectra at all four FP-POS settings using grating G160M/1600. As described below, these will provide the dense sampling in X required to check the resolution across the detector as a function of gain and to calibrate the X-walk and Y-walk, and to verify the geometric distortion. Each visit here is one orbit at a fixed FP-POS, similar to visit 1, but using only 5 HV settings and 350 s cal lamp exposures.

To determine the XAPER values for positioning the aperture plate, we use the following relationship between the detector Y coordinate and XAPER:

Aperture mechanism motor steps are 13.21 microns per step (SER COS-SYS-034). Detector Y pixels are 24 microns (COS OP-01, COS-01-0001). Also remember that the sign of positive XAPER is the opposite of positive Y.

Therefore,  $dXAPER/dY = -24/13.21 = -1.816$ .

So, nominally, a  $dY=+35$  for Lifetime Position 2 is at

$$XAPER = -1.816 * 35 = -63.58 = -64.$$

However, based on the spectral locations determined empirically in the characterization program 12678, we are choosing to use  $XAPER = -68$ .

Since the WCA is offset from the PSA by 2.5 mm (SER-COS-OPT-020), to place a calibration lamp spectrum through the WCA on the detector at the location of the PSA requires an offset of the aperture plate of  $dXAPER = -2500/13.21 = +189.3$  from the PSA location. So the cal lamp exposures should use

$$XAPER = -68 + 189.3 = 121.3 = 121.$$

However, again using program 12678 and examining the locations of the WCA spectrum in the TAG FLASH exposures, empirically we find a scale of

$dXAPER/dY = -126/68.23 = -1.8467$ . In that program, the offsets of  $XAPER = +63$  placed the WCA at  $Y = 555.5$  on Segment A. To move it further down to  $Y = 521$  (the new lifetime position), implies we should use a total offset of

$$XAPER = 63 + (34.5 * 1.8467) = 126.7 = 127.$$

Notes on special commands used for this program:

In the Phase II proposal for this program, each visit must start with S/C Observations using the special command ELAPERSET along with QUESIPARM APERTURE FCA and QUESIPARM DET FUV preceding every XAPER command. This sets the value for the aperture location as the default location for the PSA or the FCA so that the subsequent XAPER command will move from the appropriate location.

Then each subsequent exposure contains a special command instruction ELNOAPMAIN, which keeps the instrument from returning to the default location after each exposure.

Changes made after Visits 1 & 2, prior to executing Visits 3-9:

1. Adjust aperture plate offsets to reflect:
  - a. Decision after FENA2, 12795, to move another delta  $Y=+6$  pixels, so that the new lifetime position avoids the Ly alpha gain sag holes better.
  - b. Move WCA spectrum placement with G160M to a position that is part way between the object locations using the PSA with gratings G160M and G130M at the new lifetime position.
2. Adjust high voltage settings to get a good sampling of the pulse height distributions from PHA=2 up to PHA=15 (when visits 1 & 2 are included).

Details for spectrum placement:

For FCA exposures on Visits 3—5, shift  $Y=+6$  to account for the adjustment in spectral location determined after Visit 1 of FENA2.

This implies  $XAPER=-1.816*6=-11$ , so use  $XAPER=-68-11=-79$

For WCA exposures on Visits 6—9, shift  $Y=+6$  to account for the new spectral location, plus add an additional  $Y=+4$  to place the cal lamp spectrum half way in between G160M and G130M.

This implies  $XAPER = -1.816 \times 10^{-18}$ , so use  $XAPER = +127 - 18 = +109$

Details for High Voltage settings:

Visit HVA Expected Gain HVB Expected Gain

3 142 3 143 3

4 147 5 153 5

5 162 10 159 10-11

6-9 143 3 142 3

147 4 147 5

152 6 153 7

157 7-8 158 9

163 9-10 162 11

For contingency visits 10, 11, and 12, we want to place the spectrum so that it brackets the new lifetime position. Visits 1 and 2 ended up at  $Y=510$  for the high-PHA spectra.

We want Visits 10 and 11 at the same place, so use  $XAPER=127$ .

We want Visit 12 on the top side of the new lifetime position at  $Y=545$ .

This is  $\Delta Y = +35$ , so  $XAPER = 127 - 1.816 \times 35 = 63$ .

High Voltage settings for the contingency visits: To calibrate X and Y walk, we want to sample the full range of PHAs, from low to high, plus tie in to the previous visits. The following selection accomplishes this:

Visit HVA Expected Gain HVB Expected Gain

10 143 2 142 2

147 3 144 3

152 5 153 6

157 7 162 10

169 10-11 168 13

175 13 172 14

11 147 3 144 4

157 7 153 6

167 10 163 10

172 11 169 13-14

175 12 172 14

178 13 175 15

### **CALIBRATION JUSTIFICATION**

Examining a range of high-voltage operating characteristics at the new lifetime position is necessary in order to select the best operating high voltage that will maximize the lifetime of the detector at the new position while delivering the best scientific performance.



Proposal 12793 - Visit 01 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:21 GMT 2012</p> <p><b>Proposal 12793, Visit 01, completed</b>  <b>Diagnostic Status: Warning</b>                  Scientific Instruments: S/C, COS/FUV, COS                  Special Requirements: GROUP 01,02 WITHIN 7D; PARALLEL  <i>Comments: Schedule V01 and V02 in the same SMS. Scheduling priority is V01, V02.                  Obtaining G160M cal lamp exposures at the new lifetime position. Without any mechanism motions, sweep through a series of 6 high voltage settings to evaluate the resolution as a function of gain and high voltage:                  HVA/HVB=143/142, 147/147, 152/153, 157/162, 169/168, 175/172.</i></p>
<b>Diagnostics</b>	<p>(Visit 01) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU                  (Exposure 3 (Sequence 1-4 Non-Int in Visit 01)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 01 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

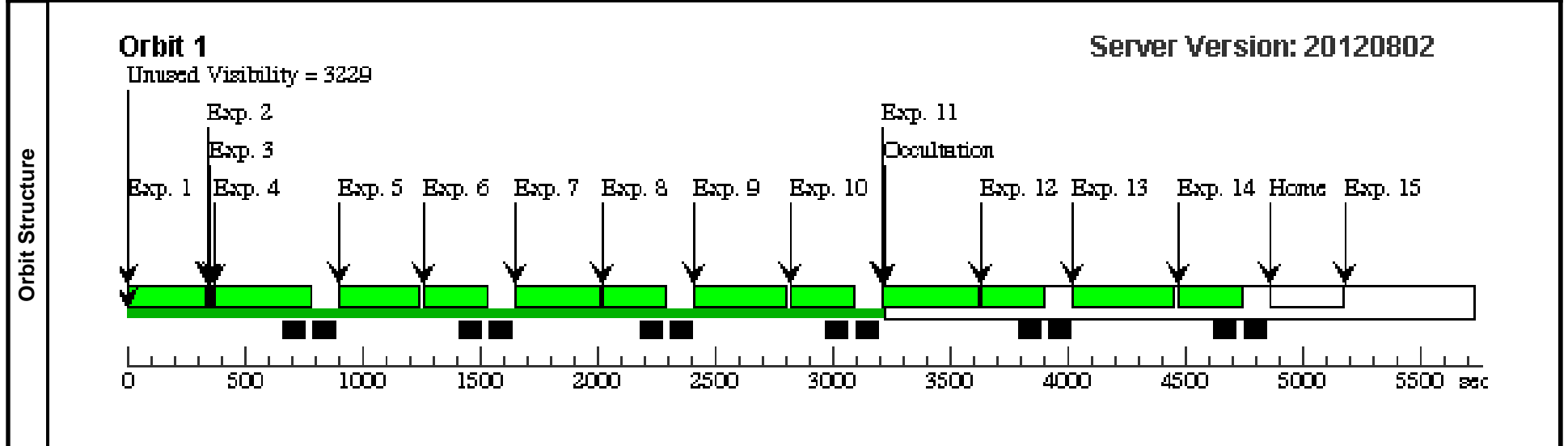
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 143; QESIPARM ENDC TSB 142	Sequence 1-4 Non-Int in Visit 01	346 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 143 and 142, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 01	10 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</p>									
	3	NONE	COS, ALIGN/APER		XAPER=127			Sequence 1-4 Non-Int in Visit 01	0.0 Secs [==>]	[1]
	<p>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Lifetime Position 2, we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127.</p>									
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN		Sequence 1-4 Non-Int in Visit 01	220 Secs [==>]	[1]	
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										
5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 147	Sequence 5-6 Non-Int in Visit 01	358 Secs [==>]	[1]		
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 147, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>										
6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN		Sequence 5-6 Non-Int in Visit 01	220 Secs [==>]	[1]	
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										

Proposal 12793 - Visit 01 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 01 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 152; QESIPARM ENDC TSB 153	376 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 152 and 153, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 7-8 Non-Int in Visit 01 220 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 01 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 162	403 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 162, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 9-10 Non-Int in Visit 01 220 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 01 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 169; QESIPARM ENDC TSB 168	424 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 169 and 168, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							

Proposal 12793 - Visit 01 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 11-12 Non -Int in Visit 01	220 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>								
13	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 175; QESIPARM ENDC TSB 172	Sequence 13-14 Non -Int in Visit 01	442 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNO) for segments A and B (ENDCTSA and ENDCTS B) to 175 and 172, respectively.                  The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values of 175 or below.                  2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>								
14	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 13-14 Non -Int in Visit 01	220 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>								
15	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE		1 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								



Proposal 12793 - Visit 02 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

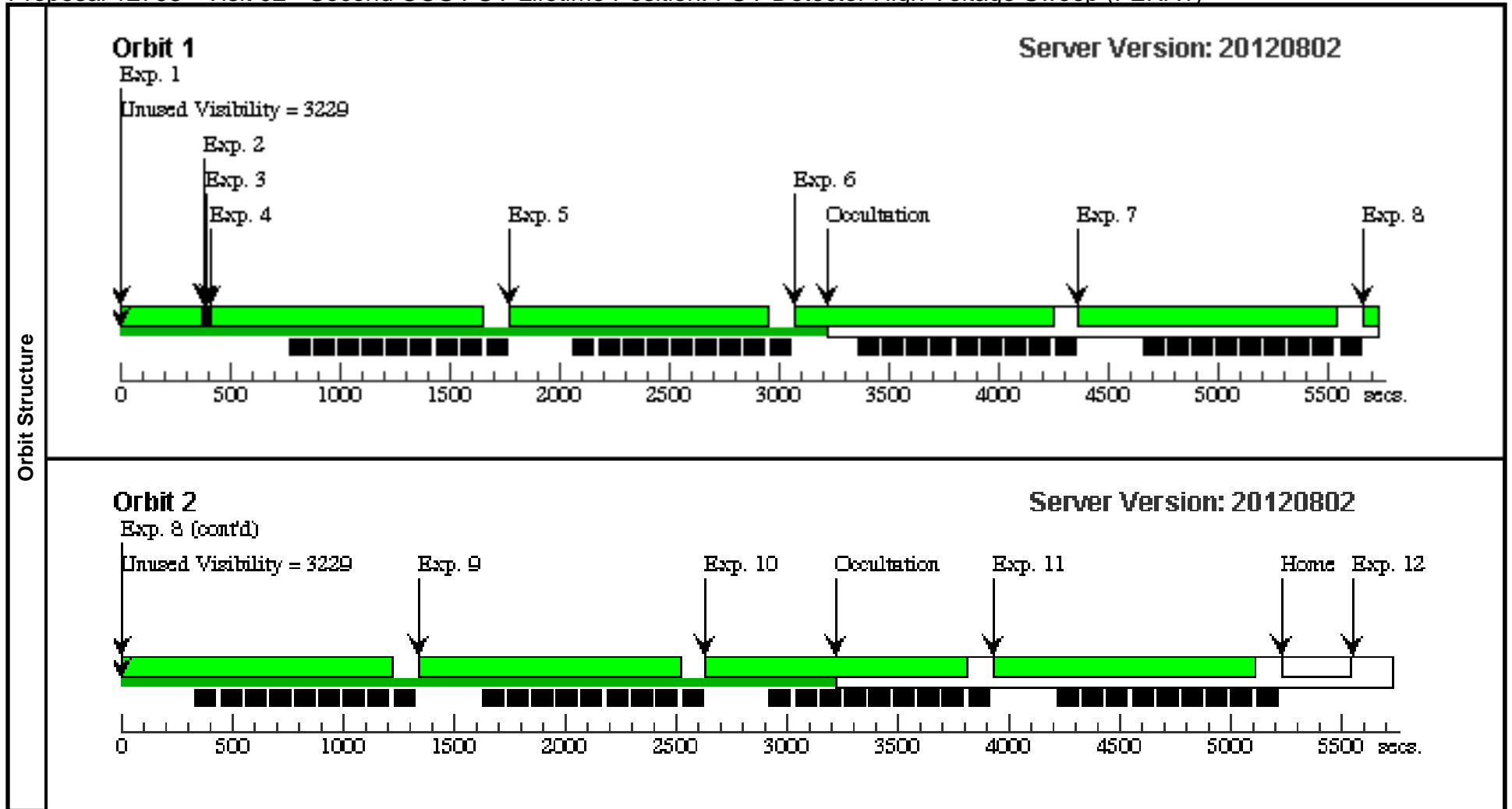
<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:24 GMT 2012</p> <p><b>Proposal 12793, Visit 02, completed</b>  <b>Diagnostic Status: Warning</b>                  Scientific Instruments: S/C, COS/FUV, COS                  Special Requirements: PARALLEL  <i>Comments: Schedule V01 and V02 in the same SMS. Scheduling priority is V01, V02.                  SAA-FREE scheduling only.                  Obtaining G130M and G160M deuterium lamp exposures at the new lifetime position.                  This visit for HV settings HVA=155, HVB=151, targeting a modal gain of 7 in both A and B.</i></p>
<b>Diagnostics</b>	<p>(Visit 02) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU                  (Exposure 3 (Sequence 1-4 Non-Int in Visit 02)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 02 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 155; QESIPARM ENDC TSB 151	Sequence 1-4 Non-Int in Visit 02	382 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 155 and 151, respectively.</i>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE FCA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 02	10 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the FCA aperture and override the nominal defaults.</i>									
3	NONE	COS, ALIGN/APER			XAPER=-68	Sequence 1-4 Non-Int in Visit 02	0.0 Secs [==>]	[1]		
<i>Comments: As given in the Observation Description, positioning the FCA at Lifetime Position 2 requires XAPER=-68.</i>										
4	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-Int in Visit 02	980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
5	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
6	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										

Proposal 12793 - Visit 02 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
8	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
10	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
12	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	1 Secs [==>]	[2]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p>							
<p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>							





Proposal 12793 - Visit 03 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

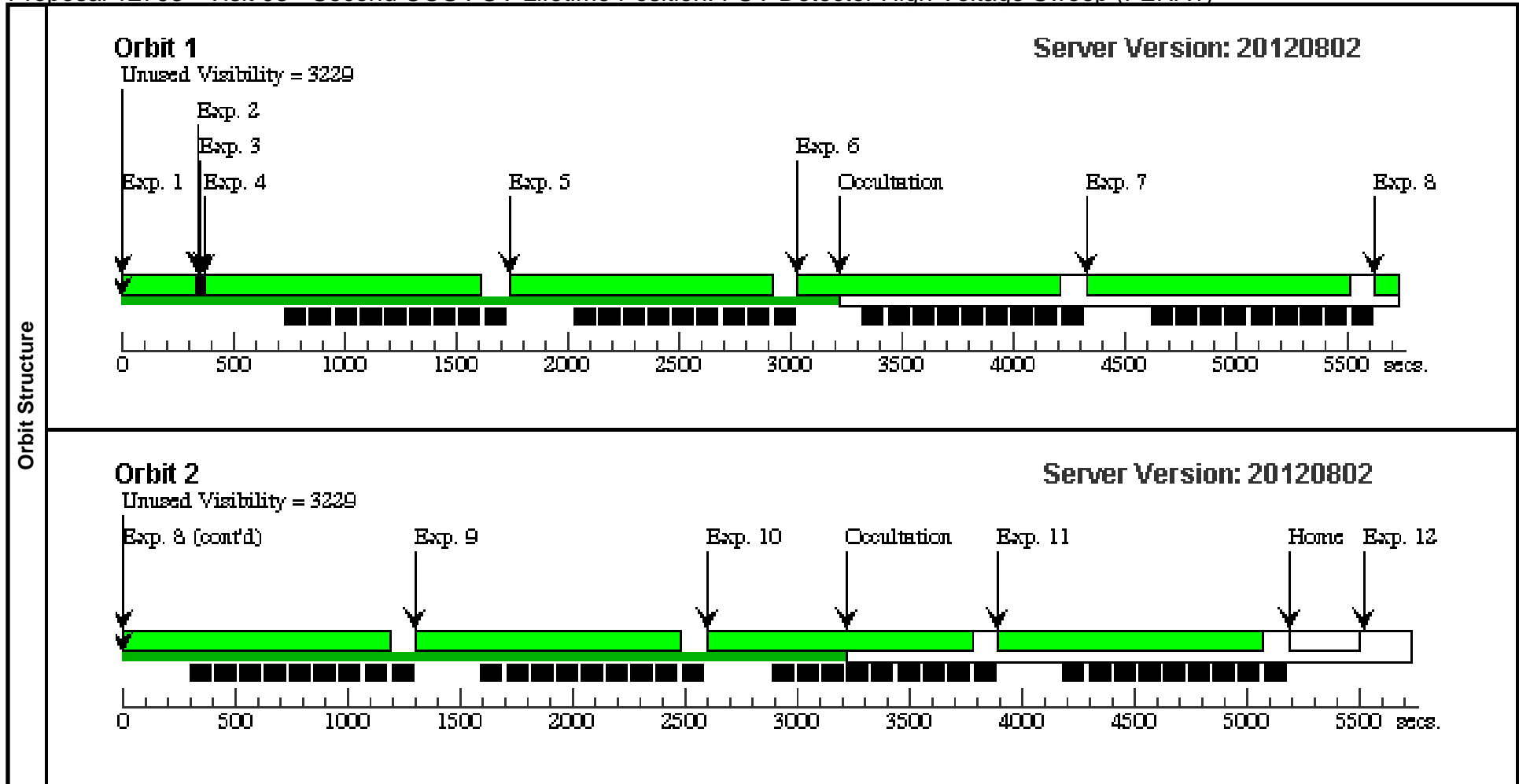
<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:26 GMT 2012</p> <p><b>Proposal 12793, Visit 03, completed</b>  <b>Diagnostic Status: Warning</b>          Scientific Instruments: S/C, COS/FUV, COS          Special Requirements: PARALLEL  <i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS.          Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09.          SAA-FREE scheduling only.          Obtaining G130M and G160M deuterium lamp exposures at the new lifetime position.          This visit is for HV settings HVA=142, HVB=142, based on the results of Visits 1 and 2.</i></p>
<b>Diagnostics</b>	<p>(Visit 03) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU          (Exposure 3 (Sequence 1-4 Non-Int in Visit 03)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 03 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 142; QESIPARM ENDC TSB 142	Sequence 1-4 Non-Int in Visit 03	346 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 142 and 142, respectively.</i>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE FCA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 03	10 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the FCA aperture and override the nominal defaults.</i>									
3	NONE	COS, ALIGN/APER			XAPER=-79		Sequence 1-4 Non-Int in Visit 03	0.0 Secs [==>]	[1]	
<i>Comments: As given in the Observation Description, positioning the FCA at Lifetime Position 2 requires XAPER=-68. Updated to XAPER=-79 after visits 1 &amp; 2.</i>										
4	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-Int in Visit 03	980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
5	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
6	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										

Proposal 12793 - Visit 03 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
8	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
10	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
12	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	1 Secs [==>]	[2]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p>							
<p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>							



Proposal 12793 - Visit 04 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

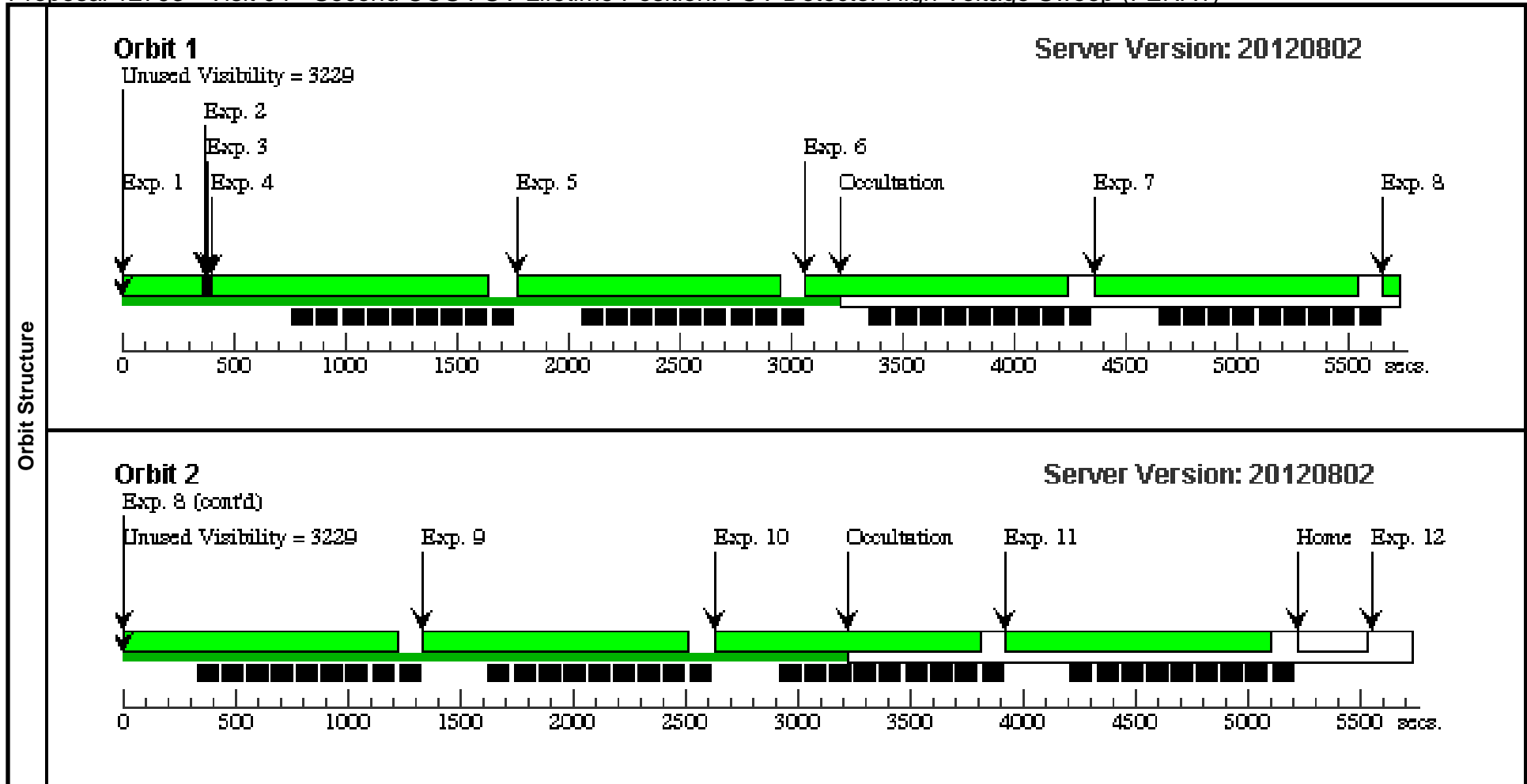
<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:29 GMT 2012</p> <p><b>Proposal 12793, Visit 04, completed</b>  <b>Diagnostic Status: Warning</b>          Scientific Instruments: S/C, COS/FUV, COS          Special Requirements: PARALLEL  <i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS.          Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09.          SAA-FREE scheduling only.          Obtaining G130M and G160M deuterium lamp exposures at the new lifetime position.          This visit is nominally for HV settings HVA=147, HVB=153, based on the results of Visits 1 and 2.</i></p>
<b>Diagnostics</b>	<p>(Visit 04) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU          (Exposure 3 (Sequence 1-4 Non-Int in Visit 04)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 04 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 153	Sequence 1-4 Non-Int in Visit 04	376 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 153, respectively.</i>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE FCA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 04	10 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the FCA aperture and override the nominal defaults.</i>									
3	NONE	COS, ALIGN/APER			XAPER=-79		Sequence 1-4 Non-Int in Visit 04	0.0 Secs [==>]	[1]	
<i>Comments: As given in the Observation Description, positioning the FCA at Lifetime Position 2 requires XAPER=-68. Updated to XAPER=-79 after visits 1 &amp; 2.</i>										
4	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-Int in Visit 04	980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
5	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
6	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										

Proposal 12793 - Visit 04 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
8	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
10	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
12	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	1 Secs [==>]	[2]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p>							
<p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>							





Proposal 12793 - Visit 05 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

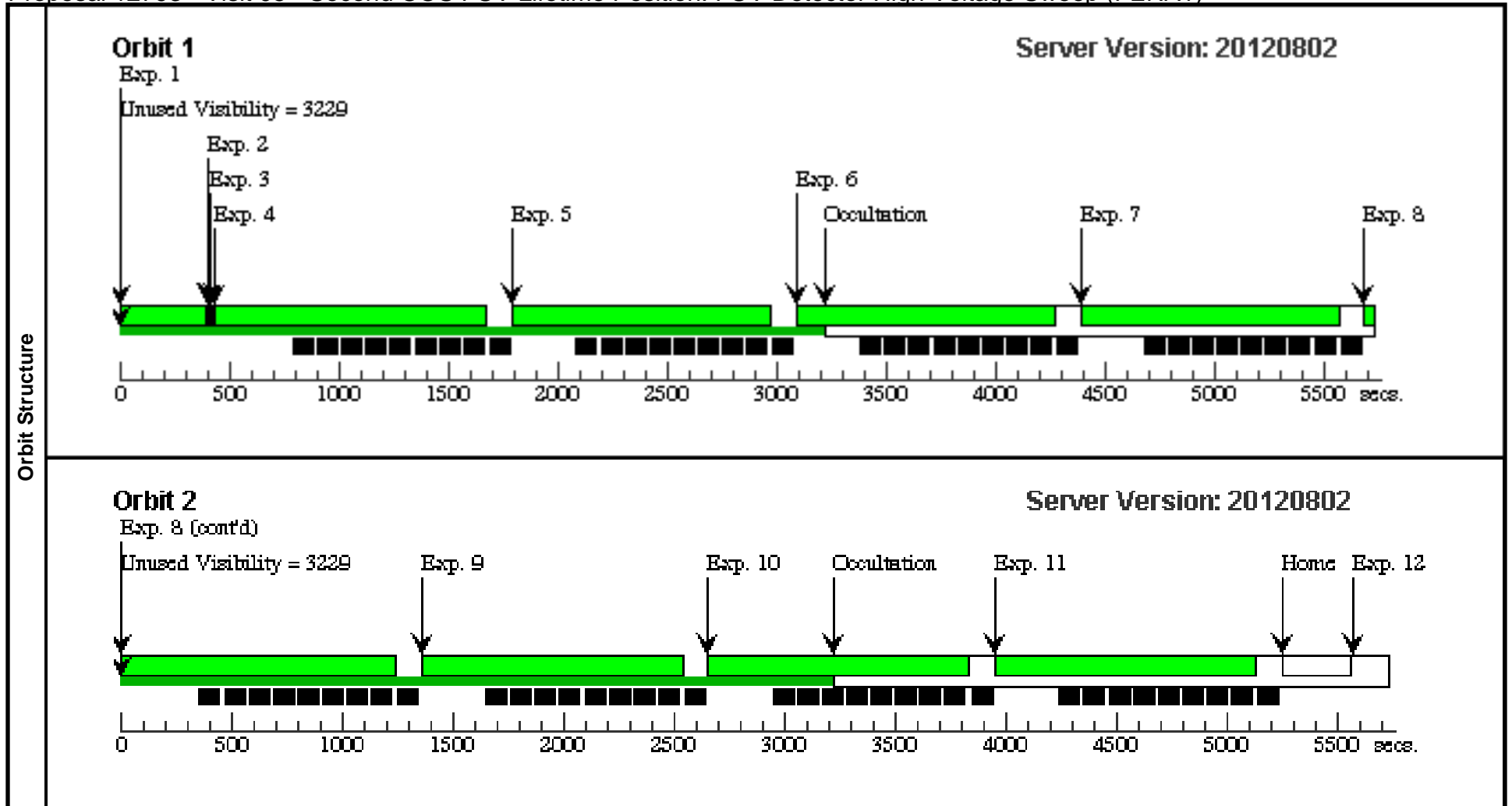
<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:31 GMT 2012</p> <p><b>Proposal 12793, Visit 05, completed</b>  <b>Diagnostic Status: Warning</b>          Scientific Instruments: S/C, COS/FUV, COS          Special Requirements: PARALLEL  <i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS.          Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09.          SAA-FREE scheduling only.          Obtaining G130M and G160M deuterium lamp exposures at the new lifetime position.          This visit is nominally for HV settings HVA=162, HVB=159, updated based on the results of Visits 1 and 2.</i></p>
<b>Diagnostics</b>	<p>(Visit 05) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU          (Exposure 3 (Sequence 1-4 Non-Int in Visit 05)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 05 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 162; QESIPARM ENDC TSB 159	Sequence 1-4 Non-Int in Visit 05	403 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 162 and 159, respectively.</i>									
	2	DARK	S/C, DATA, NONE				SPEC COM INSTR ELAPERSET; QESIPARM APERT URE FCA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 05	10 Secs [==>]	[1]
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the FCA aperture and override the nominal defaults.</i>									
3	NONE	COS, ALIGN/APER			XAPER=-79		Sequence 1-4 Non-Int in Visit 05	0.0 Secs [==>]	[1]	
<i>Comments: As given in the Observation Description, positioning the FCA at Lifetime Position 2 requires XAPER=-68. Updated to XAPER=-79 after visits 1 &amp; 2.</i>										
4	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-Int in Visit 05	980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
5	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										
6	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A		BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S		980 Secs [==>]	[1]	
<i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i>										

Proposal 12793 - Visit 05 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p><i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i></p>							
8	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=1	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[1]
<p><i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i></p>							
9	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=2	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p><i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i></p>							
10	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=3	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p><i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i></p>							
11	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	BUFFER-TIME=11 1; CURRENT=MEDI UM; FP-POS=4	SPEC COM INSTR ELNOAPMAIN; AFTER BY 1 S TO 4000 S	980 Secs [==>]	[2]
<p><i>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</i></p>							
12	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	1 Secs [==>]	[2]
<p><i>Comments: SQL required for qexposure to specify the si_used = "COS".</i></p>							
<p><i>New obset SR necessary to force this exposure to be the very last exposure after Home.</i></p>							



Proposal 12793 - Visit 06 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

Sat Aug 18 01:10:33 GMT 2012

<b>Visit</b>	<p><b>Proposal 12793, Visit 06, completed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: S/C, COS/FUV, COS</p> <p>Special Requirements: PARALLEL</p> <p><i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS. Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09. Obtaining G160M cal lamp exposures at the new lifetime position. Without any mechanism motions, sweep through a series of 5 high voltage settings to evaluate the resolution as a function of gain and high voltage: HVA/HVB=143/142, 147/147, 152/153, 157/158, 163/162. The chosen high voltage values have been updated based on the results of Visits 1-2. This visit uses FP-POS=1.</i></p>
<b>Diagnostics</b>	<p>(Visit 06) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 06) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 06) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 06) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 06) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU</p> <p>(Visit 06) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Exposure 3 (Sequence 1-4 Non-Int in Visit 06)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 06 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

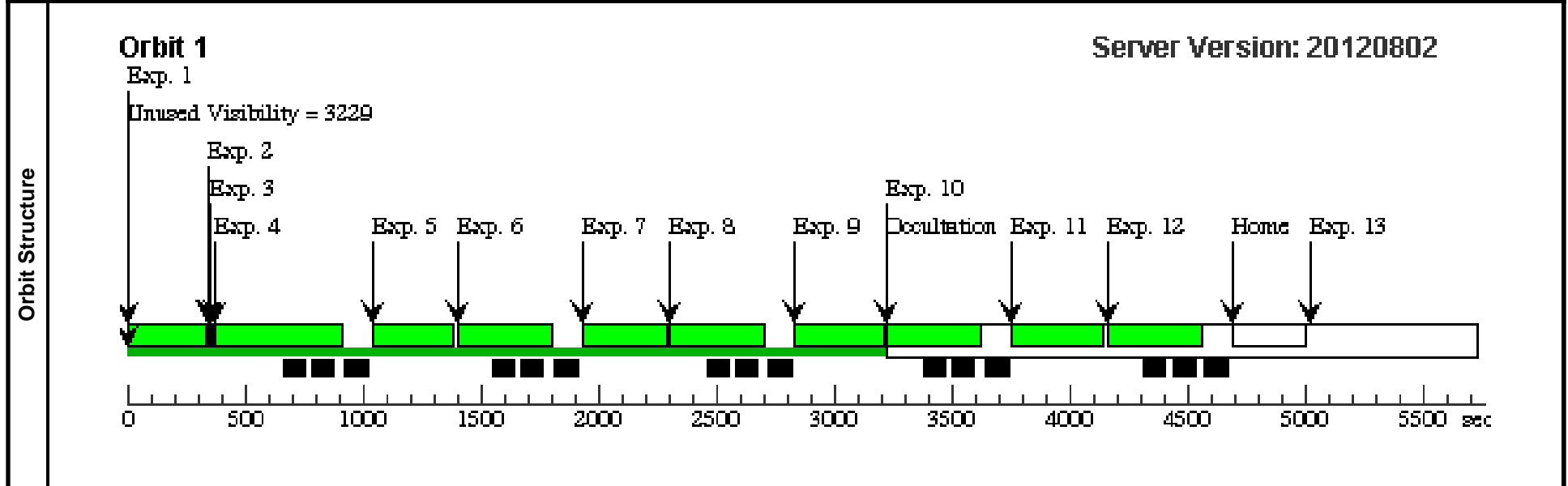
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 143; QESIPARM ENDC TSB 142	Sequence 1-4 Non-Int in Visit 06	346 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 143 and 142, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 06	10 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</p>									
	3	NONE	COS, ALIGN/APER		XAPER=109			Sequence 1-4 Non-Int in Visit 06	0.0 Secs [==>]	[1]
	<p>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Lifetime Position 2, we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127. 3/5/12: Update XAPER for increased delta Y of +6, plus +4 to place spectrum between G160M and G130M. XAPER=+109.</p>									
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=1	SPEC COM INSTR ELNOAPMAIN		Sequence 1-4 Non-Int in Visit 06	350 Secs [==>]	[1]	
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										
5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 147	Sequence 5-6 Non-Int in Visit 06	358 Secs [==>]	[1]		
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 147, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>										
6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=1	SPEC COM INSTR ELNOAPMAIN		Sequence 5-6 Non-Int in Visit 06	350 Secs [==>]	[1]	
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										

Proposal 12793 - Visit 06 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 06 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 152; QESIPARM ENDC TSB 153	376 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 152 and 153, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 7-8 Non-Int in Visit 06 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 06 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 158	391 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 158, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 9-10 Non-Int in Visit 06 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 06 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 163; QESIPARM ENDC TSB 162	406 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 163 and 162, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values of 175 or below. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							

Proposal 12793 - Visit 06 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=1	SPEC COM INSTR ELNOAPMAIN	Sequence 11-12 Non -Int in Visit 06	350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>								
13	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE		1 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								





Proposal 12793 - Visit 07 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

Sat Aug 18 01:10:35 GMT 2012

<b>Visit</b>	<p><b>Proposal 12793, Visit 07, completed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: S/C, COS/FUV, COS</p> <p>Special Requirements: PARALLEL</p> <p><i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS. Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09. Obtaining G160M cal lamp exposures at the new lifetime position. Without any mechanism motions, sweep through a series of 5 high voltage settings to evaluate the resolution as a function of gain and high voltage: HVA/HVB=143/142, 147/147, 152/153, 157/158, 163/162. The chosen high voltage values have been updated based on the results of Visits 1-2. This visit uses FP-POS=2.</i></p>
<b>Diagnostics</b>	<p>(Visit 07) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 07) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 07) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU</p> <p>(Visit 07) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 07) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 07) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Exposure 3 (Sequence 1-4 Non-Int in Visit 07)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 07 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

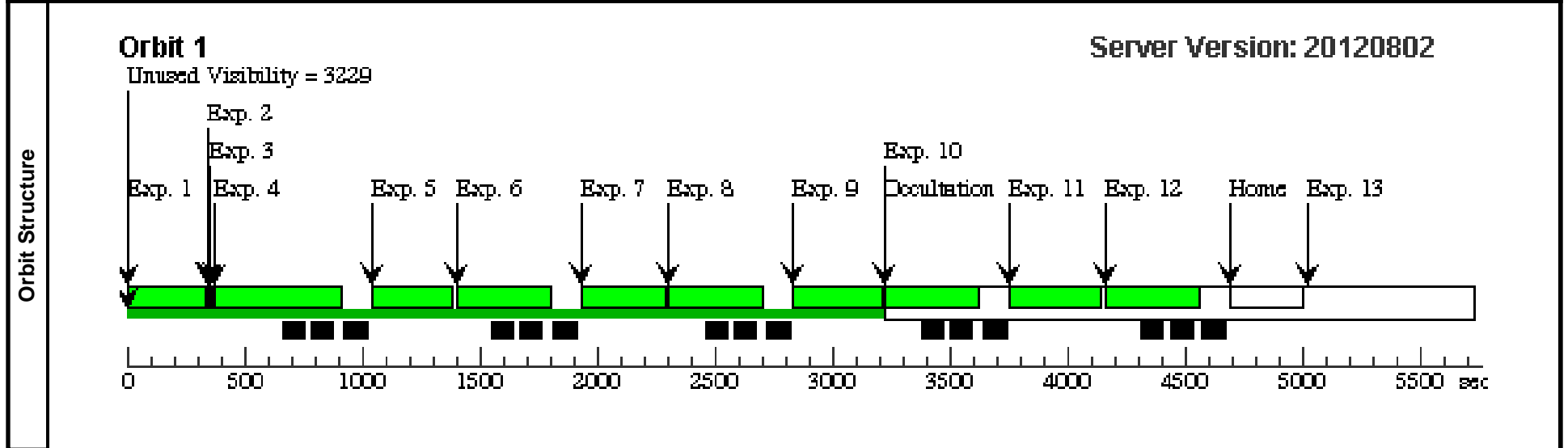
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 143; QESIPARM ENDC TSB 142	Sequence 1-4 Non-In- t in Visit 07	346 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 143 and 142, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA; QESIPARM DET F UV	Sequence 1-4 Non-In- t in Visit 07	10 Secs [==>]	[1]	
	<p>Comments: The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</p>									
	3	NONE	COS, ALIGN/APER		XAPER=109			Sequence 1-4 Non-In- t in Visit 07	0.0 Secs [==>]	[1]
	<p>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Lifetime Position 2, we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127. 3/5/12: Update XAPER for increased delta Y of +6, plus +4 to place spectrum between G160M and G130M. XAPER=+109.</p>									
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=2	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-In- t in Visit 07	350 Secs [==>]	[1]		
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										
5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 147	Sequence 5-6 Non-In- t in Visit 07	358 Secs [==>]	[1]		
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 147, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>										
6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=2	SPEC COM INSTR ELNOAPMAIN	Sequence 5-6 Non-In- t in Visit 07	350 Secs [==>]	[1]		
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										

Proposal 12793 - Visit 07 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 07 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 152; QESIPARM ENDC TSB 153	376 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 152 and 153, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=2	SPEC COM INSTR ELNOAPMAIN	Sequence 7-8 Non-Int in Visit 07 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 07 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 158	391 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 169 and 168, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=2	SPEC COM INSTR ELNOAPMAIN	Sequence 9-10 Non-Int in Visit 07 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 07 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 163; QESIPARM ENDC TSB 162	406 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 163 and 162, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values of 175 or below. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							

Proposal 12793 - Visit 07 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=2	SPEC COM INSTR ELNOAPMAIN	Sequence 11-12 Non -Int in Visit 07	350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>								
13	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE		1 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS". New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								



Proposal 12793 - Visit 08 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

Sat Aug 18 01:10:37 GMT 2012

<b>Visit</b>	<p><b>Proposal 12793, Visit 08, completed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: S/C, COS/FUV, COS</p> <p>Special Requirements: PARALLEL</p> <p><i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS. Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09. Obtaining G160M cal lamp exposures at the new lifetime position. Without any mechanism motions, sweep through a series of 5 high voltage settings to evaluate the resolution as a function of gain and high voltage: HVA/HVB=143/142, 147/147, 152/153, 157/158, 163/162. The chosen high voltage values have been updated based on the results of Visits 1-2. This visit uses FP-POS=3.</i></p>
<b>Diagnostics</b>	<p>(Visit 08) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 08) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 08) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 08) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 08) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 08) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU</p> <p>(Exposure 3 (Sequence 1-4 Non-Int in Visit 08)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 08 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

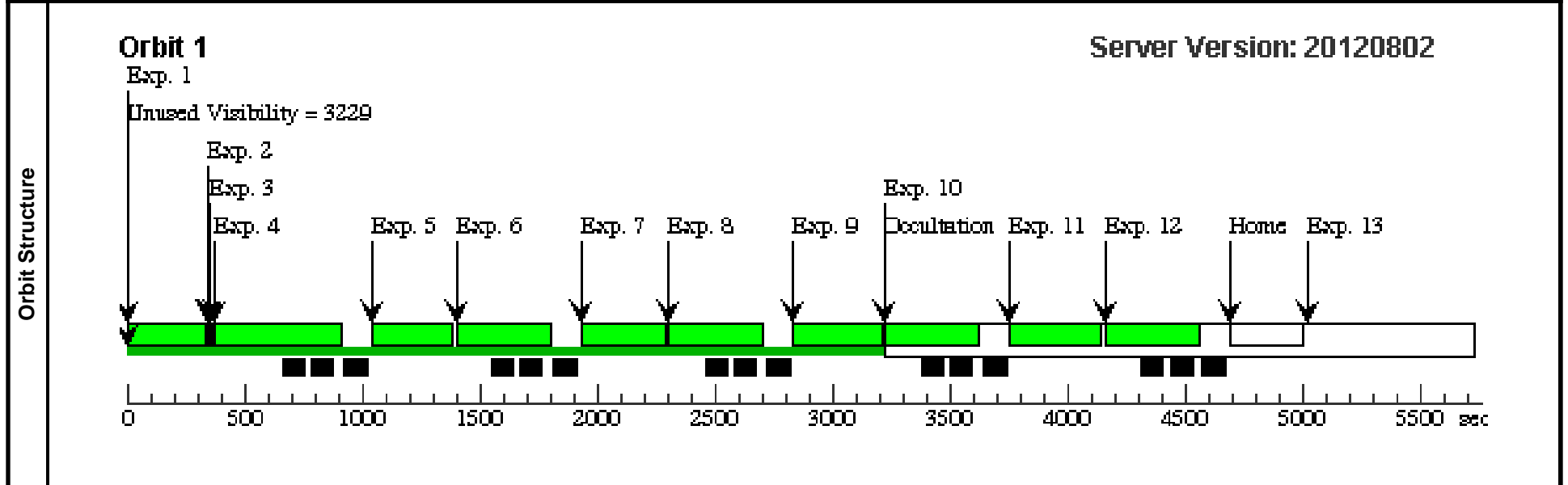
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 143; QESIPARM ENDC TSB 142	Sequence 1-4 Non-Int in Visit 08	346 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 143 and 142, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 08	10 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</p>									
	3	NONE	COS, ALIGN/APER		XAPER=109			Sequence 1-4 Non-Int in Visit 08	0.0 Secs [==>]	[1]
	<p>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Lifetime Position 2, we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127. 3/5/12: Update XAPER for increased delta Y of +6, plus +4 to place spectrum between G160M and G130M. XAPER=+109.</p>									
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-Int in Visit 08	350 Secs [==>]	[1]		
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										
5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 147	Sequence 5-6 Non-Int in Visit 08	358 Secs [==>]	[1]		
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 147, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>										
6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 5-6 Non-Int in Visit 08	350 Secs [==>]	[1]		
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										

Proposal 12793 - Visit 08 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 08 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 152; QESIPARM ENDC TSB 153	376 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 152 and 153, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 7-8 Non-Int in Visit 08 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 08 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 158	391 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 158, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 9-10 Non-Int in Visit 08 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 08 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 163; QESIPARM ENDC TSB 162	406 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 163 and 162, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values of 175 or below. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							

Proposal 12793 - Visit 08 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3	SPEC COM INSTR ELNOAPMAIN	Sequence 11-12 Non -Int in Visit 08	350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>								
13	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE		1 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								





Proposal 12793 - Visit 09 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

Sat Aug 18 01:10:39 GMT 2012

<b>Visit</b>	<p><b>Proposal 12793, Visit 09, completed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: S/C, COS/FUV, COS</p> <p>Special Requirements: PARALLEL</p> <p><i>Comments: Schedule V03 thru V09 in the same SMS, three weeks AFTER V01 SMS. Scheduling priority is V06, V03, V04, V05, V07, V08 &amp; V09. Obtaining G160M cal lamp exposures at the new lifetime position. Without any mechanism motions, sweep through a series of 5 high voltage settings to evaluate the resolution as a function of gain and high voltage: HVA/HVB=143/142, 147/147, 152/153, 157/158, 163/162. The chosen high voltage values have been updated based on the results of Visits 1-2. This visit uses FP-POS=4.</i></p>
<b>Diagnostics</b>	<p>(Visit 09) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU</p> <p>(Visit 09) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 09) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 09) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 09) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Visit 09) Warning (Orbit Planner): LAMP EXPOSURE EXCEEDS 300 SECONDS</p> <p>(Exposure 3 (Sequence 1-4 Non-Int in Visit 09)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 09 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

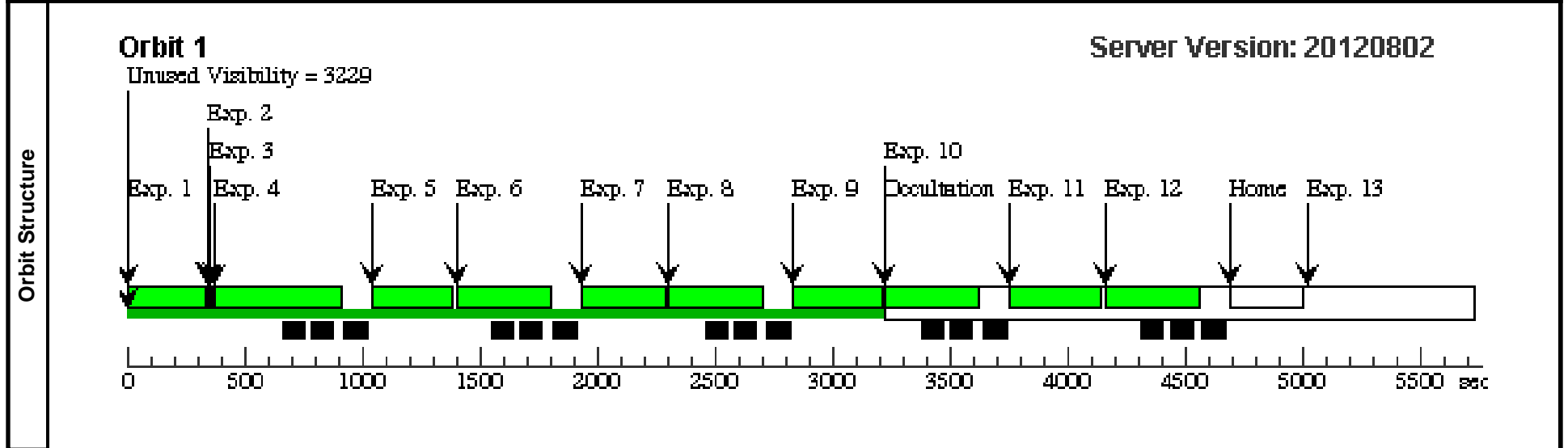
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 143; QESIPARM ENDC TSB 142	Sequence 1-4 Non-Int in Visit 09	346 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 143 and 142, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>									
	2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 09	10 Secs [==>]	[1]	
	<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</p>									
	3	NONE	COS, ALIGN/APER		XAPER=109			Sequence 1-4 Non-Int in Visit 09	0.0 Secs [==>]	[1]
	<p>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Lifetime Position 2, we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127. 3/5/12: Update XAPER for increased delta Y of +6, plus +4 to place spectrum between G160M and G130M. XAPER=+109.</p>									
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=4	SPEC COM INSTR ELNOAPMAIN	Sequence 1-4 Non-Int in Visit 09	350 Secs [==>]	[1]		
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										
5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 147	Sequence 5-6 Non-Int in Visit 09	358 Secs [==>]	[1]		
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 147, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>										
6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=4	SPEC COM INSTR ELNOAPMAIN	Sequence 5-6 Non-Int in Visit 09	350 Secs [==>]	[1]		
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>										

Proposal 12793 - Visit 09 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 09 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 152; QESIPARM ENDC TSB 153	376 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 152 and 153, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=4	SPEC COM INSTR ELNOAPMAIN	Sequence 7-8 Non-Int in Visit 09 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 09 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 158	391 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 158, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=4	SPEC COM INSTR ELNOAPMAIN	Sequence 9-10 Non-Int in Visit 09 350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 09 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 163; QESIPARM ENDC TSB 162	406 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HV NOM) for segments A and B (ENDCTSA and ENDCTS B) to 163 and 162, respectively. The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values of 175 or below. 2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							

Proposal 12793 - Visit 09 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=4	SPEC COM INSTR ELNOAPMAIN	Sequence 11-12 Non -Int in Visit 09	350 Secs [==>]	[1]
<p>Comments: Since we have set the aperture location to an off-nominal location, this science exposure must include the special command ELNOAPMAIN to prevent resetting the aperture location back to the nominal value after the exposure is completed.</p>								
13	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE		1 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS". New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								



Proposal 12793 - Visit 10 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:41 GMT 2012</p> <p><b>Proposal 12793, Visit 10, implementation</b>  <b>Diagnostic Status: Warning</b>                  Scientific Instruments: S/C, COS/FUV, COS                  Special Requirements: BEFORE 03-SEP-2012:00:00:00; PARALLEL  <i>Comments: This is a contingency visit, approved by the HST Mission Office on 7/31/12, to enable additional wavecal measurements over a range of high voltages extending to the highest available pulse heights, at Y location on segment A of Y=510. In combination with additional contingency visits 11 and 12, this will allow us to calibrate X and Y walk corrections over the full range of available pulse heights at Y positions that bracket the new lifetime position.</i></p>
<b>Diagnostics</b>	<p>(Visit 10) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU                  (Exposure 3 (Sequence 1-4 Non-Int in Visit 10)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 10 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

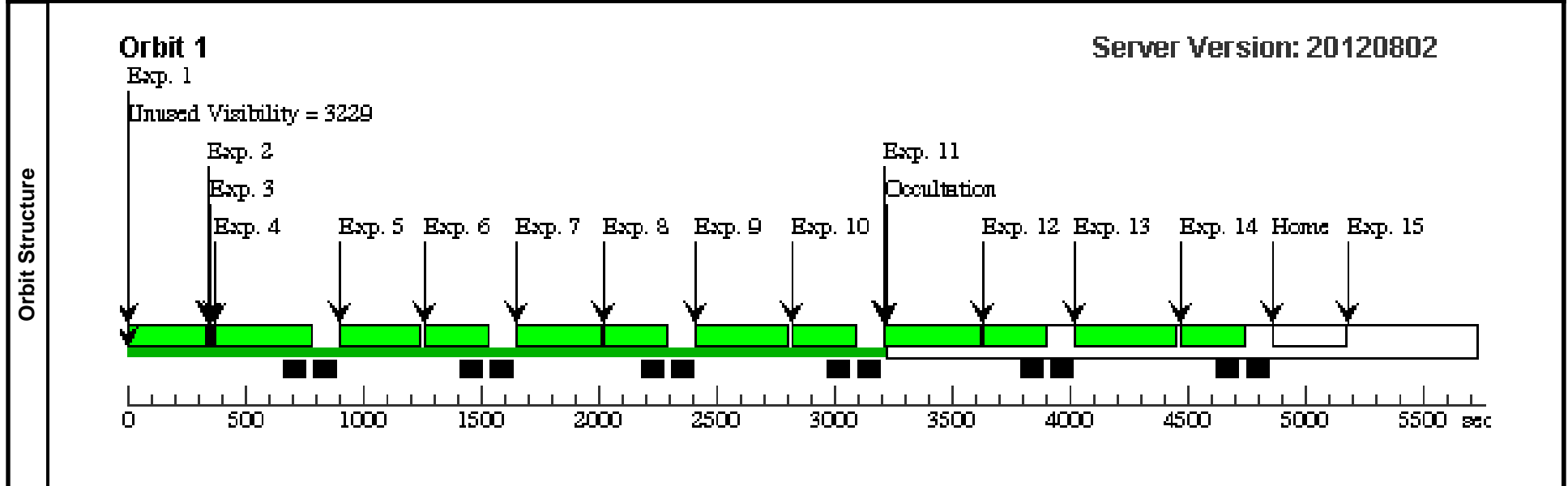
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 143; QESIPARM ENDC TSB 142	Sequence 1-4 Non-Int in Visit 10	346 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 143 and 142, respectively.</i>									
	2	DARK	S/C, DATA, NONE				SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA_O; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 10	10 Secs [==>]	[1]
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</i>									
<i>The XAPER locations are relative to the *original* aperture position, so need to set qesiparm APERTURE=PSA_O.</i>										
3	NONE	COS, ALIGN/APER			XAPER=127		Sequence 1-4 Non-Int in Visit 10	0.0 Secs [==>]	[1]	
<i>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Y=510 (just below Lifetime Position 2), we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127.</i>										
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A		FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 1-4 Non-Int in Visit 10	220 Secs [==>]	[1]	
Exposures	5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 144	Sequence 5-6 Non-Int in Visit 10	358 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 144, respectively.</i>									
	6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A		FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 5-6 Non-Int in Visit 10	220 Secs [==>]	[1]

Proposal 12793 - Visit 10 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 10 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 152; QESIPARM ENDC TSB 153	376 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 152 and 153, respectively.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 7-8 Non-Int in Visit 10	220 Secs [==>]	[1]
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 10 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 162	403 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 162, respectively.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 9-10 Non-Int in Visit 10	220 Secs [==>]	[1]
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 10 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 169; QESIPARM ENDC TSB 168	424 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 169 and 168, respectively.</p> <p>The exposure time allows for overhead not included in APT of 35 s for the high voltage to ramp down to its lowest setting, and then 442 s to ramp up to values less than 175.</p> <p>2/8/12: Removed this artificial addition (which is only for APTs benefit) to use the actual time needed.</p>							
12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 11-12 Non-Int in Visit 10	220 Secs [==>]	[1]

Proposal 12793 - Visit 10 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

13	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 175; QESIPARM ENDC TSB 172	Sequence 13-15 Non -Int in Visit 10	442 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 175 and 172, respectively.</p>								
14	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 13-15 Non -Int in Visit 10	220 Secs [==>]	[1]
15	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	Sequence 13-15 Non -Int in Visit 10	1 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								





Proposal 12793 - Visit 11 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:42 GMT 2012</p> <p><b>Proposal 12793, Visit 11, implementation</b>  <b>Diagnostic Status: Warning</b>                  Scientific Instruments: S/C, COS/FUV, COS                  Special Requirements: BEFORE 03-SEP-2012:00:00:00; PARALLEL  <i>Comments: This is the second contingency visit, approved by the HST Mission Office on 7/31/12, to enable additional wavecal measurements over a range of high voltages extending to the highest available pulse heights, at Y location on segment A of Y=510. In combination with contingency visits 10 and 12, this will allow us to calibrate X and Y walk corrections over the full range of available pulse heights at Y positions that bracket the new lifetime position.</i></p>
<b>Diagnostics</b>	<p>(Visit 11) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU                  (Exposure 3 (Sequence 1-4 Non-Int in Visit 11)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 11 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

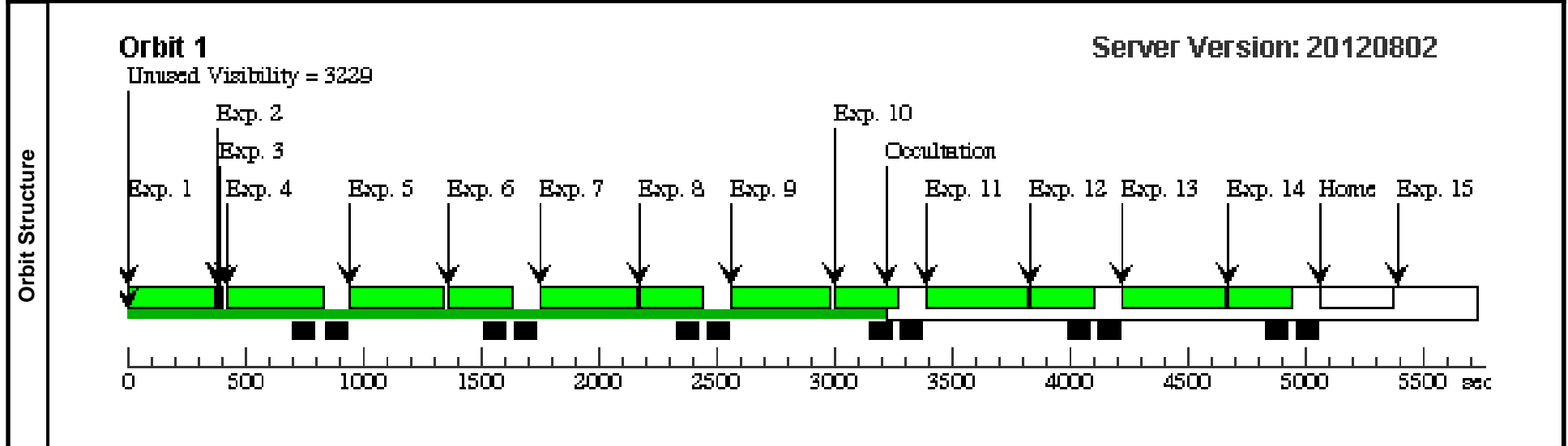
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 153	Sequence 1-4 Non-Int in Visit 11	388 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 153, respectively.</i>									
	2	DARK	S/C, DATA, NONE				SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA_O; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 11	10 Secs [==>]	[1]
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</i>									
<i>The XAPER locations are relative to the *original* aperture position, so need to set qesiparm APERTURE=PSA_O.</i>										
3	NONE	COS, ALIGN/APER			XAPER=127		Sequence 1-4 Non-Int in Visit 11	0.0 Secs [==>]	[1]	
<i>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Y=510 (just below Lifetime Position 2), we need to set the default PSA aperture location to 2.5 mm lower in Y. As described above this requires XAPER=127.</i>										
4	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A		FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 1-4 Non-Int in Visit 11	220 Secs [==>]	[1]	
5	DARK	S/C, DATA, NONE				SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 167; QESIPARM ENDC TSB 163	Sequence 5-6 Non-Int in Visit 11	418 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 167 and 163, respectively.</i>									
	6	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A		FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 5-6 Non-Int in Visit 11	220 Secs [==>]	[1]

Proposal 12793 - Visit 11 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 11 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 169; QESIPARM ENDC TSB 168	424 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 169 and 168, respectively.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 7-8 Non-Int in Visit 11	220 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 172 and 169, respectively.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 11 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 172; QESIPARM ENDC TSB 169	433 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 172 and 169, respectively.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 9-10 Non-Int in Visit 11	220 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 175 and 172, respectively.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 11 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 175; QESIPARM ENDC TSB 172	442 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 175 and 172, respectively.</p>							
12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 11-12 Non-Int in Visit 11	220 Secs [==>]	[1]

Proposal 12793 - Visit 11 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

13	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 178; QESIPARM ENDC TSB 175	Sequence 13-15 Non -Int in Visit 11	451 Secs [==>]	[!]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 178 and 175, respectively.</p>								
14	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 13-15 Non -Int in Visit 11	220 Secs [==>]	[!]
15	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	Sequence 13-15 Non -Int in Visit 11	1 Secs [==>]	[!]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>								



Proposal 12793 - Visit 12 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

<b>Visit</b>	<p style="text-align: right;">Sat Aug 18 01:10:43 GMT 2012</p> <p><b>Proposal 12793, Visit 12, implementation</b>  <b>Diagnostic Status: Warning</b>                  Scientific Instruments: S/C, COS/FUV, COS                  Special Requirements: BEFORE 03-SEP-2012:00:00:00; PARALLEL  <i>Comments: This is the third contingency visit, approved by the HST Mission Office on 7/31/12, to enable additional wavecal measurements over a range of high voltages extending to the highest available pulse heights, at Y location on segment A of Y=545. In combination with contingency visits 10 and 11, this will allow us to calibrate X and Y walk corrections over the full range of available pulse heights at Y positions that bracket the new lifetime position.</i></p>
<b>Diagnostics</b>	<p>(Visit 12) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU                  (Exposure 3 (Sequence 1-4 Non-Int in Visit 12)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.</p>

Proposal 12793 - Visit 12 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 147; QESIPARM ENDC TSB 144	Sequence 1-4 Non-Int in Visit 12	370 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 147 and 144, respectively.</i>									
	2	DARK	S/C, DATA, NONE				SPEC COM INSTR ELAPERSET; QESIPARM APERT URE PSA_O; QESIPARM DET F UV	Sequence 1-4 Non-Int in Visit 12	10 Secs [==>]	[1]
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here defines the ALIGN/APER command to apply to the PSA aperture and override the nominal defaults.</i>									
<i>The XAPER locations are relative to the *original* aperture position, so need to set qesiparm APERTURE=PSA_O.</i>										
3	NONE	COS, ALIGN/APER			XAPER=63		Sequence 1-4 Non-Int in Visit 12	0.0 Secs [==>]	[1]	
<i>Comments: To place a WAVE cal exposure using the calibration lamp through the WCA on the detector at Y=545 , we need to set XAPER=63 as described in Observation section above.</i>										
4	WAVE	COS/FUV, TIME-TAG, WCA		G160M 1600 A	FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 1-4 Non-Int in Visit 12	220 Secs [==>]	[1]	
Exposures	5	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 157; QESIPARM ENDC TSB 153	Sequence 5-6 Non-Int in Visit 12	388 Secs [==>]	[1]	
	<i>Comments: SQL required for qexposure to specify the si_used = "COS".</i>									
	<i>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 157 and 153, respectively.</i>									
6	WAVE	COS/FUV, TIME-TAG, WCA		G160M 1600 A	FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 5-6 Non-Int in Visit 12	220 Secs [==>]	[1]	

Proposal 12793 - Visit 12 - Second COS FUV Lifetime Position: FUV Detector High Voltage Sweep (FENA1)

7	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 7-8 Non-Int in Visit 12 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 167; QESIPARM ENDC TSB 163	418 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 167 and 163, respectively.</p>							
8	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 7-8 Non-Int in Visit 12	220 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 172 and 169, respectively.</p>							
9	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 9-10 Non-Int in Visit 12 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 172; QESIPARM ENDC TSB 169	433 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 172 and 169, respectively.</p>							
10	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 9-10 Non-Int in Visit 12	220 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 175 and 172, respectively.</p>							
11	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence 11-12 Non-Int in Visit 12 SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVNOM; QESIPARM ENDC TSA 175; QESIPARM ENDC TSB 172	442 Secs [==>]	[1]
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 175 and 172, respectively.</p>							
12	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=0 RIGINAL	Sequence 11-12 Non-Int in Visit 12	220 Secs [==>]	[1]

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13	DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 178; QESIPARM ENDC TSB 175	Sequence 13-15 Non -Int in Visit 12	451 Secs [==>]	[1]	
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>The special commanding here sets the the nominal high voltage for this visit (HVNOM) for segments A and B (ENDCTSA and ENDCTS B) to 178 and 175, respectively.</p>									
14	WAVE	COS/FUV, TIME-TAG, WCA	G160M 1600 A	FP-POS=3; LIFETIME-POS=O RIGINAL		Sequence 13-15 Non -Int in Visit 12	220 Secs [==>]	[1]	
15	DARK	S/C, DATA, NONE			NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE	Sequence 13-15 Non -Int in Visit 12	1 Secs [==>]	[1]	
<p>Comments: SQL required for qexposure to specify the si_used = "COS".</p> <p>New obset SR necessary to force this exposure to be the very last exposure after Home.</p>									

