



12795 - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectrum Placement (FENA2)

Cycle: 19, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

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|-------------------------------------|--------------------------------------|----------------------------|
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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 | (3) WD0308-565 DARK NONE | COS COS/FUV COS/NUV S/C | 3 | 28-Feb-2012 21:19:17.0 | yes |
| 02 | (2) WD0947+857 DARK NONE | COS COS/FUV COS/NUV S/C | 4 | 28-Feb-2012 21:20:08.0 | yes |

7 Total Orbits Used

ABSTRACT

This proposal will determine the exact spacecraft pointing offset and the aperture offsets needed for the 2nd COS FUV lifetime position. The intent is to shift COS FUV spectra up by 35 pixels on the detector to avoid the heavily gain sagged region around the current position.

OBSERVING DESCRIPTION

Visit 1 will take spectra with all three gratings at our best estimate for the new lifetime position (2.94" or +35 pixels) and at 3.78" (+45 pixels). This will verify how the spectra fall relative to the measured gain map on the detector and given an initial estimate of the offsets and plate scales needed for target acquisitions at the new lifetime position. Visit 2 will place a G130M 1291 spectrum at the new lifetime position and take repeated exposures while sweeping the PSA aperture across the target to verify the aperture throughput vs positional offset. G130M and G160M exposures will use 36 s lamp flashes to provide extra signal in the wavecal spectra while G140L exposures will use a flash of 21 s. However, in visit 2, all exposures with nonzero YAPER values (i.e., moving the aperture block in the dispersion direction), will set the lamp current to low and take two 8 s lamp flashes with 20 s separation between the start times. This is done because it has never been verified if a lamp light leak might open up with a large enough move in the dispersion direction. Offsets for visit 2 were updated based on visit 1 results to use +3.5" and -73 motor steps as the estimates for the new position.

ADDITIONAL COMMENTS

For visits 01 & 02, do not allow any FUV transitions out of HVNOM within each visit (except for between the last two exps). This is automatically enforced via exposure level AFTER BYs and SEQ NON-INTs to prevent exposures from separating enough to cause the transition but should be verified. It also forces SAA FREE scheduling only.

SQL is required in order to

1. Id S/C exposures as COS.
2. Bypass calibration for the G140L exposures of V01.
3. Bypass calibration for odd numbered exposures 31-41 and 45-55 of V02.

Note that the odd numbered exposures in this range are mech moves and don't get calibrated in any case. Exposures 43 and 57 should be calibrated, as should all science exposures up to and including expo 29.

Proposal 12795 - WD 0308-565 Spectral Location (01) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectru...

Wed Feb 29 02:20:20 GMT 2012

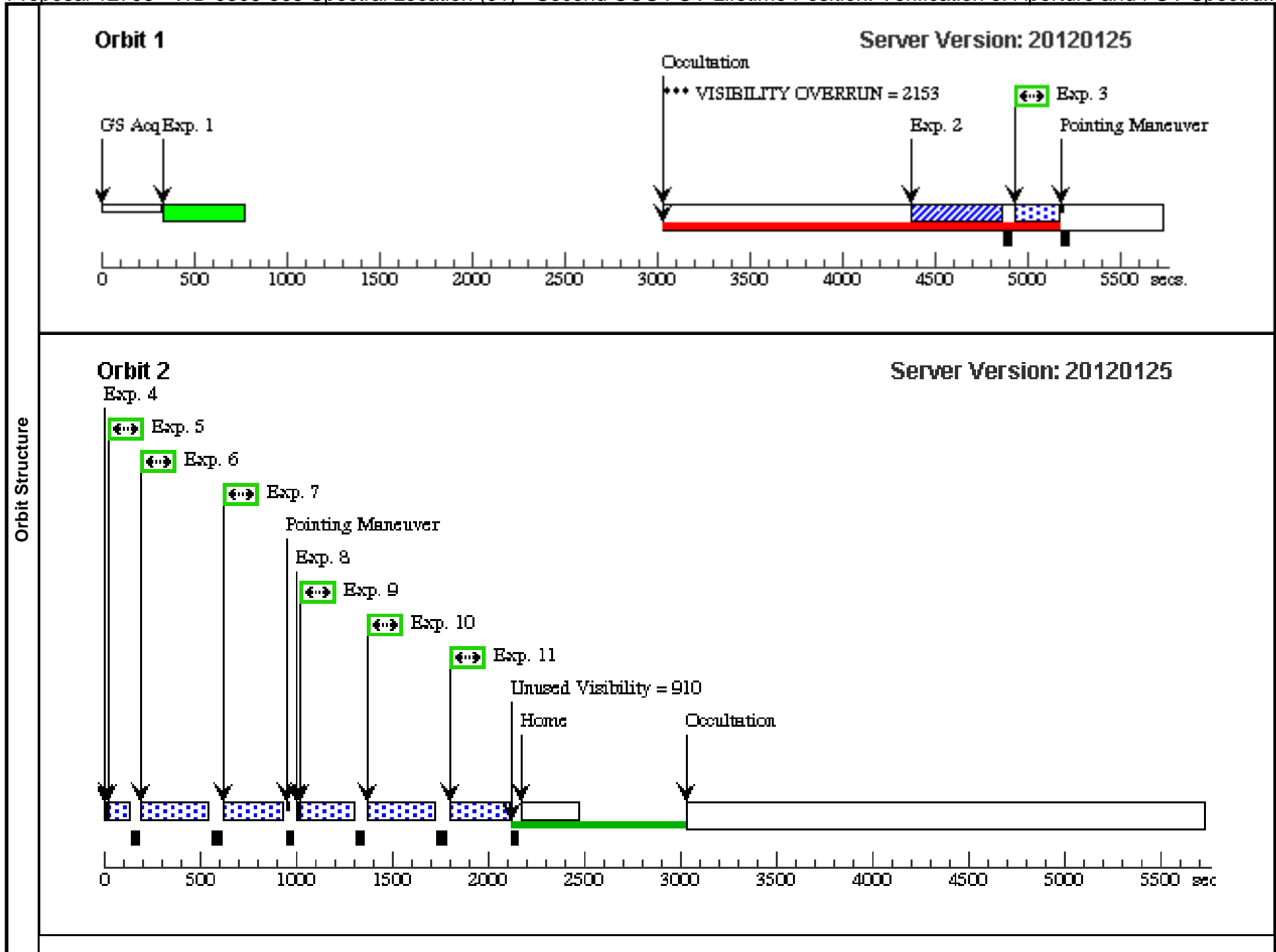
| | | | | | | | |
|--|--|--|---|---|--|----------------|-----------------------|
| Visit | <p>Proposal 12795, WD 0308-565 Spectral Location (01), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/NUV, S/C, COS/FUV, COS</p> <p>Special Requirements: SCHED 100%; BETWEEN 20-FEB-2012:00:00:00 AND 27-FEB-2012:00:00:00</p> <p><i>Comments: Change FUV HVB level to 167 to avoid divot and clod. Set HVA to 169.</i></p> <p><i>Acquire target with an NUV BOA ACQ/IMAGE.</i></p> <p><i>Then take a 54 s G130M 1291 exposure at the current position.</i></p> <p><i>Adopt plate scale of 11.9 pixels/arc-sec and block scale of -21 steps/arc-sec</i></p> <p><i>Next move the aperture block to XAPER = -62 or +2.94", and take</i></p> <p><i>a 54 s G130M 1291 + 163 s G160M 1600 + 40 s G140L 1280 exposures.</i></p> <p><i>Finally, move the aperture block to XAPER = -79 or +3.78" and repeat</i></p> <p><i>the above exposure sequence. All exposures to be done using ~3X normal</i></p> <p><i>flash times. Reset HVB level to standard.</i></p> <p><i>Disallow FUV transitions out of HVNOM within the visit (exp AFTERs and SEO NON-INTs should enforce this).</i></p> | | | | | | |
| | Diagnostics | <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): VISIBILITY OVERRUN</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Form): If the target coordinates are not known to 0.4" (or better) an ACQ/SEARCH should precede the ACQ/IMAGE.</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): VISIBILITY OVERRUN</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): GAP IN NON-INT SEQUENCE DUE TO ORBIT-NUMBER</p> <p>(WD 0308-565 Spectral Location (01)) Warning (Orbit Planner): VISIBILITY OVERRUN</p> | | | | | |
| Fixed Targets | | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
| | | (3) | WD0308-565 Alt Name1: GSC08495-00951 Alt Name2: 3UC068-006526 | RA: 03 09 47.9200 (47.4496667d) Dec: -56 23 49.41 (-56.39706d) Equinox: J2000 | Proper Motion RA: 150.6 mas/yr Proper Motion Dec: 64.3 mas/yr Epoch of Position: 2000 Radial Velocity: -68 km/sec | V=14.07+/-0.02 | Reference Frame: ICRS |
| <p><i>Comments: Position and proper motions from the Third U.S. Naval Observatory CCD Astrograph Catalog (UCAC3) Zacharias et al. 2009</i></p> | | | | | | | |

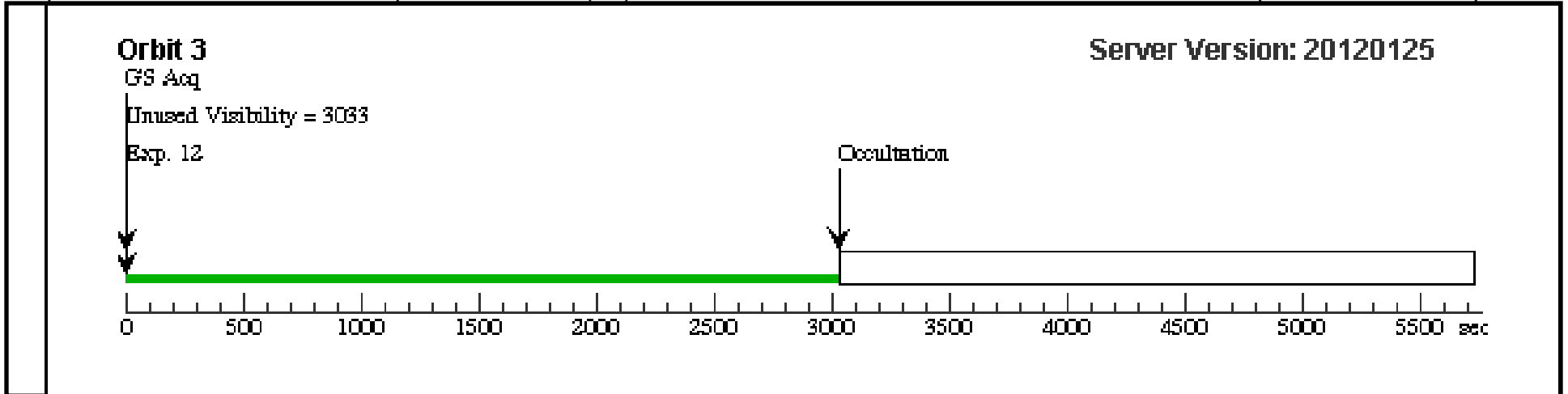
Proposal 12795 - WD 0308-565 Spectral Location (01) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectru...

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|---|---|----------------|-------------------------|---------------|--|---|---|-------------------------|-------|
| 1 | HVB 167; H VA 169 | DARK | S/C, DATA, NONE | | | SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; GS ACQ SCENARI O BASE1B3; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSB 167; QESIPARM ENDC TSA 169 | | 450 Secs [==>] | [1] |
| <p><i>Comments: SQL required for qexposure to specify the si_used = "COS"</i></p> <p><i>The overhead on this exposure can actually be hidden under the guide star exposure and the previous occultation, but this is not reflected by APT and so the visits do not appear to fit within the allocated orbits.</i></p> <p><i>The following exposure (the ACQ) needs to have an exposure-level AFTER of 1 to 900 seconds. This will prevent SPSS to separating these two exposures by too large a gap, which if large enough, would reset the HV back to the default value.</i></p> | | | | | | | | | |
| 2 | MIRRORA - BOA ACQ /IMAGE (COS.ta.348 879) | (3) WD0308-565 | COS/NUV, ACQ/IMAGE, BOA | MIRRORA | | AFTER BY 0 S TO 900 S | Sequence 2-11 Non-Int in WD 0308-565 Spectral Location (01) | 42.0 Secs [==>] | [1] |
| <p><i>Comments: SN=60 in 42 seconds, brightest pixel=11.95 c/p/s; global rate 925, COS.ta.348879</i></p> | | | | | | | | | |
| 3 | G130M OL DAPER PO STARG 0, 0 (COS.sp.348 613) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G130M 1291 A | BUFFER-TIME=18 6; FP-POS=3; FLASH=S0200D03 6 | | Sequence 2-11 Non-Int in WD 0308-565 Spectral Location (01) | 54 Secs [==>] | [1] |
| <p><i>Comments: Observation at standard position to verify location and provide WCA location</i></p> | | | | | | | | | |
| 4 | move aperture to +2.94 arcsec (XD) (0) | NONE | COS, ALIGN/APER | | XAPER=-62; YAPER=0 | | Sequence 2-11 Non-Int in WD 0308-565 Spectral Location (01) | 0.0 Secs [==>] | [2] |
| <p><i>Comments: Assume 21 motor steps/"</i></p> | | | | | | | | | |
| 5 | G130M NE WAPER PO STARG 0, 2 .94 (COS.sp.348 613) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G130M 1291 A | BUFFER-TIME=18 6; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,2.94; SPEC COM INSTR ELNOAPMAIN | Sequence 2-11 Non-Int in WD 0308-565 Spectral Location (01) | 54 Secs [==>] | [2] |
| <p><i>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer</i></p> | | | | | | | | | |
| 6 | G160M NE WAPER PO STARG 0, 2 .94 (COS.sp.348 614) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G160M 1600 A | BUFFER-TIME=37 7; FP-POS=3; FLASH=S0120D03 6 | POS TARG 0,2.94; SPEC COM INSTR ELNOAPMAIN | Sequence 2-11 Non-Int in WD 0308-565 Spectral Location (01) | 163 Secs [==>] | [2] |
| <p><i>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer</i></p> | | | | | | | | | |

Proposal 12795 - WD 0308-565 Spectral Location (01) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectru...

| | | | | | | | | | |
|---|--|----------------|------------------------|-----------------|--|--|---|-------------------|-----|
| 7 | G140L NE WAPER PO STARG 0, 2 .94 (COS.sp.348 615) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G140L 1280 A | BUFFER-TIME=26 3; FP-POS=3; FLASH=S0200D02 1 | POS TARG 0,2.94; SPEC COM INSTR ELNOAPMAIN | Sequence 2-11 Non-I nt in WD 0308-565 S pectral Location (01) | 40 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer. SQL required to bypass calibration.</p> | | | | | | | | | |
| 8 | move apertu re to +3.78 a rcsec (XD) (0) | NONE | COS, ALIGN/APER | | XAPER=-79; YAPER=0 | | Sequence 2-11 Non-I nt in WD 0308-565 S pectral Location (01) | 0.0 Secs [==>] | [2] |
| 9 | G130M NE WAPER PO STARG 0, 3 .78 (COS.sp.348 613) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G130M 1291 A | BUFFER-TIME=18 6; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3.78; SPEC COM INSTR ELNOAPMAIN | Sequence 2-11 Non-I nt in WD 0308-565 S pectral Location (01) | 54 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer</p> | | | | | | | | | |
| 10 | G160M NE WAPER PO STARG 0, 3 .78 (COS.sp.348 614) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G160M 1600 A | BUFFER-TIME=37 7; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3.78; SPEC COM INSTR ELNOAPMAIN | Sequence 2-11 Non-I nt in WD 0308-565 S pectral Location (01) | 163 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer</p> | | | | | | | | | |
| 11 | G140L NE WAPER PO STARG 0, 3 .78 (COS.sp.348 615) | (3) WD0308-565 | COS/FUV, TIME-TAG, PSA | G140L 1280 A | BUFFER-TIME=26 3; FP-POS=3; FLASH=S0200D02 1 | POS TARG 0,3.78; SPEC COM INSTR ELNOAPMAIN | Sequence 2-11 Non-I nt in WD 0308-565 S pectral Location (01) | 40 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer. SQL required to bypass calibration.</p> | | | | | | | | | |
| 12 | Restore HV | DARK | S/C, DATA, NONE | | | NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE | | 1 Secs [==>] | [3] |
| <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 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|--|-----|------------|---|---|--------|-----------------------|
| | (2) | WD0947+857 | RA: 09 57 54.4230 (149.4767625d) Dec: +85 29 40.91 (85.49470d) Equinox: J2000 | Proper Motion RA: -0.01747 sec of time/yr Proper Motion Dec: -0.0253 arcsec/yr Epoch of Position: 1997.19 | V=15.9 | Reference Frame: ICRS |
| <p><i>Comments: HST FASTEX standard PM, coords from GSC2 From UCAC3 get coords 09 57 54.308 +85 29 40.84 pm -23.4, -9.8 mas/yr - double entry!</i></p> | | | | | | |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

| # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|---|---|----------------|-------------------------|-----------------|--|---|---|-------------------------|-------|
| 1 | HVB 167; H VA 169 | DARK | S/C, DATA, NONE | | | SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSB 167; QESIPARM ENDC TSA 169 | | 450 Secs [==>] | [1] |
| <p><i>Comments: SQL required for qexposure to specify the si_used = "COS"</i></p> <p><i>The overhead on this exposure can actually be hidden under the guide star exposure and the previous occultation, but this is not reflected by APT and so the visits do not appear to fit within the allocated orbits.</i></p> <p><i>The following exposure (the ACQ) needs to have an exposure-level AFTER of 1 to 900 seconds. This will prevent SPSS to separating these two exposures by too large a gap, which if large enough, would reset the HV back to the default value.</i></p> | | | | | | | | | |
| 2 | MIRRORA - BOA ACQ /IMAGE (COS.ta.268 017) | (2) WD0947+857 | COS/NUV, ACQ/IMAGE, BOA | MIRRORA | | AFTER BY 0 S TO 900 S | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 85.0 Secs [==>] | [1] |
| <p><i>Comments: SN=60 in 85 seconds, brightest pixel=5.9 cts/s (COS.A217972)</i></p> | | | | | | | | | |
| 3 | G130M exp o to reset aperture to nominal PSA (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=20 FP-POS=3 | | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 25 Secs [==>] | [2] |
| 4 | aperture XD XAPER=-102 (0) | NONE | COS, ALIGN/APER | | XAPER=-102; YAPER=0 | | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 5 | G130M NE WAPER PO STARG 0, 3.5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=174; FP-POS=3; FLASH=S0200D036 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p><i>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer</i> <i>Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</i></p> | | | | | | | | | |
| 6 | aperture XD XAPER=-96 (0) | NONE | COS, ALIGN/APER | | XAPER=-96; YAPER=0 | | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 7 | G130M NE WAPER PO STARG 0, 3.5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=174; FP-POS=3; FLASH=S0200D036 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p><i>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer</i> <i>Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</i></p> | | | | | | | | | |
| 8 | aperture XD XAPER=-91 (0) | NONE | COS, ALIGN/APER | | XAPER=-91; YAPER=0 | | Sequence 2-27 Non-Int in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

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|---|---|----------------|------------------------|-----------------|--|---|--|--------------------|-----|
| 9 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 10 | aperture XD XAPER=-87 (0) | NONE | COS, ALIGN/APER | | XAPER=-87; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 11 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 12 | aperture XD XAPER=-83 (0) | NONE | COS, ALIGN/APER | | XAPER=-83; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 13 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 14 | aperture XD XAPER=-79 (0) | NONE | COS, ALIGN/APER | | XAPER=-79; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 15 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 16 | aperture XD XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 17 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 18 | aperture XD XAPER=-67 (0) | NONE | COS, ALIGN/APER | | XAPER=-67; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

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|---|---|----------------|------------------------|-----------------|--|---|--|--------------------|-----|
| 19 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 20 | aperture XD XAPER=-63 (0) | NONE | COS, ALIGN/APER | | XAPER=-63; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 21 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 22 | aperture XD XAPER=-59 (0) | NONE | COS, ALIGN/APER | | XAPER=-59; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 23 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 24 | aperture XD XAPER=-55 (0) | NONE | COS, ALIGN/APER | | XAPER=-55; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 25 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 26 | aperture XD XAPER=-50 (0) | NONE | COS, ALIGN/APER | | XAPER=-50; YAPER=0 | | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 0.0 Secs [==>] | [2] |
| 27 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 2-27 Non-I nt in WD 0947+857 Aperture Sweeps (02) | 50.0 Secs [==>] | [2] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 28 | aperture XD XAPER=-44 (0) | NONE | COS, ALIGN/APER | | XAPER=-44; YAPER=0 | | | 0.0 Secs [==>] | [2] |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

| | | | | | | | | | |
|---|---|----------------|------------------------|-----------------|--|--|--|--------------------|-----|
| 29 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 30 | aperture D YAPER=+2 9 XAPER=- 73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=29 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 31 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 32 | aperture D YAPER=+2 3 XAPER=- 73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=23 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 33 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 34 | aperture D YAPER=+1 8 XAPER=- 73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=18 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 35 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 36 | aperture D YAPER=+1 4 XAPER=- 73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=14 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

| | | | | | | | | | |
|---|---|----------------|------------------------|-----------------|--|--|--|--------------------|-----|
| 37 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 38 | aperture D YAPER=+1 0 XAPER=- 73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=10 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 39 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 40 | aperture D YAPER=+6 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=6 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 41 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 42 | aperture XD YAPER=+0 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=0 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 43 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 44 | aperture D YAPER=-6 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=-6 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

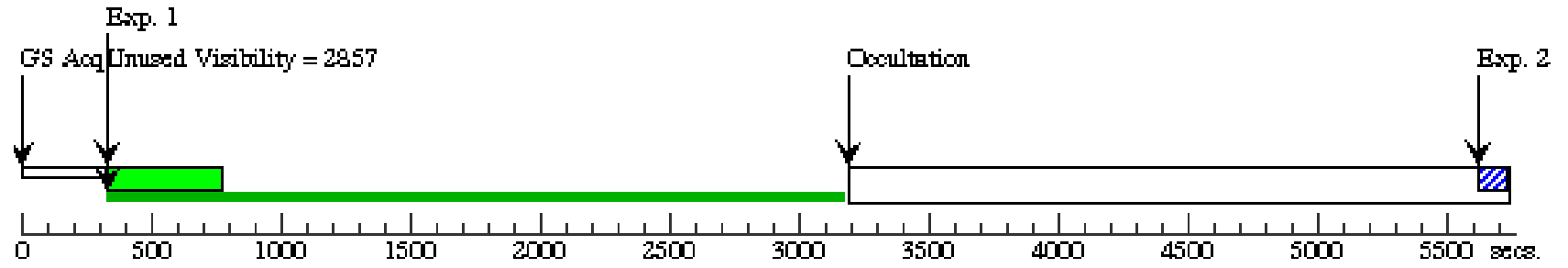
| | | | | | | | | | |
|---|---|----------------|------------------------|-----------------|--|--|--|--------------------|-----|
| 45 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 46 | aperture D YAPER=-10 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=-10 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 47 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 48 | aperture D YAPER=-14 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=-14 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 49 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 50 | aperture D YAPER=-18 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=-18 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 51 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3,5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 52 | aperture D YAPER=-23 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=-23 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |

Proposal 12795 - WD 0947+857 Aperture Sweeps (02) - Second COS FUV Lifetime Position: Verification of Aperture and FUV Spectr...

| | | | | | | | | | |
|---|---|----------------|------------------------|-----------------|--|--|--|--------------------|-----|
| 53 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 54 | aperture D YAPER=-29 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=-29 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 55 | G130M NE WAPER PO STARG 0, 3 .5 (COS.sp.267 614) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G130M 1309 A | BUFFER-TIME=17 4; FP-POS=3; CURRENT=LOW; FLASH=S0020D00 8 | POS TARG 0,3.5; SPEC COM INSTR ELNOAPMAIN; QESIPARM USELA MP LINE2 | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Set BUFFER-TIME > EXPO-TIME to only dump used part of buffer Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position SQL required to bypass calibration.</p> | | | | | | | | | |
| 56 | YAPER=0 XAPER=-73 (0) | NONE | COS, ALIGN/APER | | XAPER=-73; YAPER=0 | | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 0.0 Secs [==>] | [3] |
| 57 | G160M PO STARG 0, 3 .5 (COS.sp.348 642) | (2) WD0947+857 | COS/FUV, TIME-TAG, PSA | G160M 1600 A | BUFFER-TIME=17 4; FP-POS=3; FLASH=S0200D03 6 | POS TARG null,3.5; SPEC COM INSTR ELNOAPMAIN | Sequence 29-57 Non -Int in WD 0947+85 7 Aperture Sweeps (02) | 50.0 Secs [==>] | [3] |
| <p>Comments: Special requirement ELNOAPMAIN needed to ensure aperture does not move to default position</p> | | | | | | | | | |
| 58 | Restore HV B | DARK | S/C, DATA, NONE | | | NEW OBSET; QASISTATES COS FUV HVLOW HVL OW; QASISTATES COS SI OBSERVE OBSE RVE | | 1 Secs [==>] | [4] |
| <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> | | | | | | | | | |

Orbit 1

Server Version: 20120125



Orbit Structure

