



16430 - Verification of Target Placement for COS at LP5

Cycle: 28, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

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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	(1) WD0947+857	COS/FUV COS/NUV	2	22-Oct-2020 06:00:29.0	yes
51	(1) WD0947+857	COS/FUV COS/NUV	2	22-Oct-2020 06:00:38.0	yes

4 Total Orbits Used

ABSTRACT

The placement of the 5th COS FUV lifetime position (LP5) aperture is predefined by the FCA light leak on the COS/FUV detector. The data from this program will be used to make minor adjustments to the Science Instrument Aperture File (SIAF) in order to center the target in the fixed LP5 aperture.

OBSERVING DESCRIPTION

This program will place a G130M/1291/FP-POS=3 spectrum of WD0947+857 at the new lifetime position (LP5; approximately +5.4" above LP1 or 10.4" above LP4) and take a series of exposures while moving the target across the PSA aperture in both the dispersion and cross-dispersion direction. This data will be used to (1) verify that the spectrum falls at the desired location on the detector; (2) measure the throughput as a function of target position; and (3) refine the SIAF values for LP5.

We adopt a pattern of POS TARG offsets in arcsec relative to the target center of:

-1.38 -1.10 -0.86 -0.67 -0.48 -0.29 -0.14 0.00 +0.14 +0.29 +0.48 +0.67 +0.86 +1.10 +1.38

Assuming 21 steps/arcsec, this is equivalent to aperture shifts of:

-29 -23 -18 -14 -10 -6 -3 0 +3 +6 +10 +14 +18 +23 +29

The dispersion and cross-dispersion scans are each in their own Non-Interruptible Sequence in order to complete the scan as quickly as possible.

This program is similar to Program 14875 which performed the same function for LP4, with a few differences. In this program we are scanning the aperture with the target using POS TARG offsets, while the LP4 program scanned the target with the aperture using APERX/YPOS offsets. We cannot use the same method as the LP4 program because of the light leak that occurs when the wavecal lamp is turned on and the aperture block is commanded to LAPXSTP < ~12. We also use G130M/1291 instead of G130M/1309 in order to use both segments. FUVB of 1309 is no longer supported due to COS2025 rules. We have also changed the target from WD0308-565 to WD0947+857 for better schedulability in late October.

The science exposures in this program use the Optional Parameter LIFETIME-POS=LP5 in order to use the best-guess target pointing, aperture position, focus, and detector high voltage values for LP5. Offsets will be made relative to the nominal target pointing position.

The SIAF to be used includes the following LP5 positions:

AP	V2	V3
LFBOA5	236.5414	-233.6966
LFPSA5	236.5414	-233.6966
LAPTFBOA5	227.1672	-243.0708
LAPTFPSA5	245.9156	-224.3224

The FSW patchable constant table pcmech_ApMXDispPosition should use the following LP5 positions:

```
{ 13, 126 }, /* PSA_LP5 */  
{ -266, -153 }, /* BOA_LP5 */  
{ -266, -153 }, /* FCA_LP5 */  
{ 13, 126 }, /* WCA_LP5 */
```

The FSW patchable constant table pcmech_OSMTbl should use the following focus position for G130M/1291:

cenwave	LP1	LP2	LP3	LP4	LP5	LP6	LP7	LP8
1291	-170	-50	12	52	180	-170	-170	-170

The HV values for G130M/1291 should be 167/175 for Segments A/B.

Analysis of the data from this program will provide the values needed to update the HST pointing in the SIAF. These values are needed before executing the LP5 calibration programs. The pointing will be located to within 0.05 arcseconds in the dispersion and cross-dispersion directions.

In order to meet the goal of moving to LP5 in October 2021, we would like this program to execute by late October 2020.

----SPECIAL REQUESTS:-----

1. Please turn off calibration for the COS/FUV exposures.
2. Please disassociate all exposures. SQL is used to meet the above requests.

In case 1 qexposure.control_id is modified. In case 2 qeassociation records are deleted. Please see G. Chapman/M. Reinhart.

Proposal 16430 - Visit 01 - WD0947+857 (01) - Verification of Target Placement for COS at LP5

Thu Oct 22 10:00:39 GMT 2020

Visit	<p>Proposal 16430, Visit 01 - WD0947+857 (01), completed</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%; BETWEEN 19-OCT-2020:00:00:00 AND 01-NOV-2020:00:00:00</p> <p><i>Comments: We adopt a pattern of POSTARG offsets in arcsec relative to the target center of:</i> -1.38 -1.10 -0.86 -0.67 -0.48 -0.29 -0.14 0.00 +0.14 +0.29 +0.48 +0.67 +0.86 +1.10 +1.38</p> <p><i>Assuming 21 steps/arcsec, this is equivalent to aperture shifts of:</i> -29 -23 -18 -14 -10 -6 -3 0 +3 +6 +10 +14 +18 +23 +29</p> <p><i>The dispersion and cross-dispersion scans are each in their own Non-Interruptible Sequence in order to complete the scan as quickly as possible and minimize drift during each scan.</i></p>																	
	Diagnostics	(Visit 01 - WD0947+857 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE																
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Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>WD0947+857</td> <td>RA: 09 57 54.3600 (149.4765000d) Dec: +85 29 40.84 (85.49468d) Equinox: J2000</td> <td>Proper Motion RA: -0.0175 sec of time/yr Proper Motion Dec: -0.0253 arcsec/yr Epoch of Position: 2000</td> <td>V=15.72</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	WD0947+857	RA: 09 57 54.3600 (149.4765000d) Dec: +85 29 40.84 (85.49468d) Equinox: J2000	Proper Motion RA: -0.0175 sec of time/yr Proper Motion Dec: -0.0253 arcsec/yr Epoch of Position: 2000	V=15.72	Reference Frame: ICRS	<p><i>Comments:</i> Category=EXT-STAR Description=[DA] Extended=NO</p>				
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous												
(1)	WD0947+857	RA: 09 57 54.3600 (149.4765000d) Dec: +85 29 40.84 (85.49468d) Equinox: J2000	Proper Motion RA: -0.0175 sec of time/yr Proper Motion Dec: -0.0253 arcsec/yr Epoch of Position: 2000	V=15.72	Reference Frame: ICRS													

Proposal 16430 - Visit 01 - WD0947+857 (01) - Verification of Target Placement for COS at LP5

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	ACQ/IMAG E - BOA Mirror A (COS.ta.1467062)	(1) WD0947+857	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]	
	<i>Comments: S/N ~ 30 is reached in 21 seconds using BOA MIRROR A ACQ/IMAGE</i>									
	2	G130M/129 1 exposure at nominal aperture position (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
	3	G130M/129 1 exposure at (0, -1.38) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-1.38	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
	4	G130M/129 1 exposure at (0, -1.1) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-1.10	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
5	G130M/129 1 exposure at (0, -0.86) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.86	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										
6	G130M/129 1 exposure at (0, -0.67) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.67	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										
7	G130M/129 1 exposure at (0, -0.48) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.48	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										
8	G130M/129 1 exposure at (0, -0.29) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.29	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										

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9	G130M/129 1 exposure at (0, -0.14) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.14	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
10	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
11	G130M/129 1 exposure at (0, 0.14) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.14	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
12	G130M/129 1 exposure at (0, 0.29) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.29	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
13	G130M/129 1 exposure at (0, 0.48) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.48	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
14	G130M/129 1 exposure at (0, 0.67) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.67	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
15	G130M/129 1 exposure at (0, 0.86) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.86	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
16	G130M/129 1 exposure at (0, 1.1) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,1.1	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

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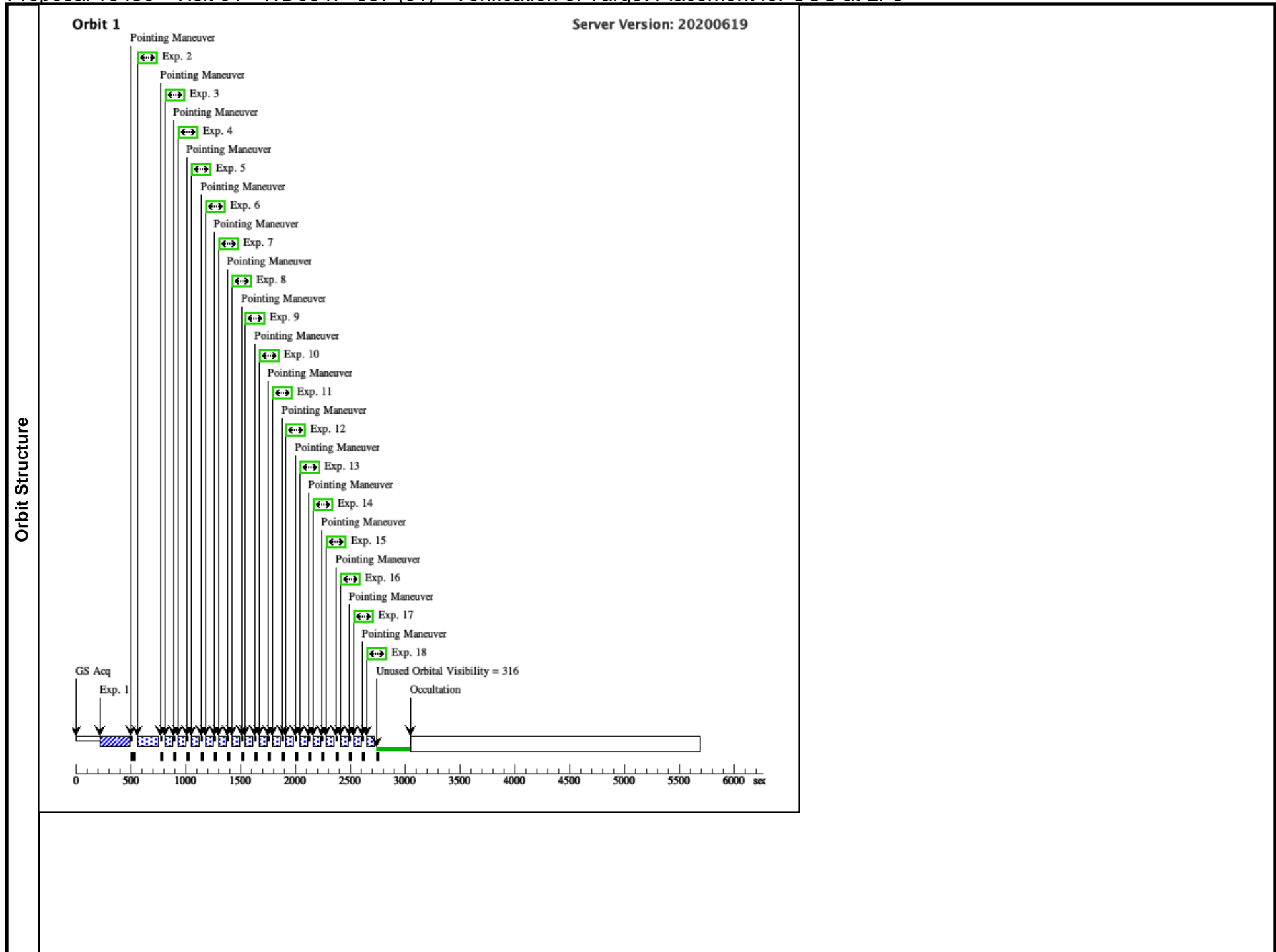
17	G130M/129 1 exposure at (0, 1.38) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,1.38	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
18	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 1-18 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
19	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
20	G130M/129 1 exposure at (-1.38, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -1.38,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
21	G130M/129 1 exposure at (-1.1, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -1.10,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
22	G130M/129 1 exposure at (-0.86, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.86,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
23	G130M/129 1 exposure at (-0.67, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.67,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
24	G130M/129 1 exposure at (-0.48, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.48,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

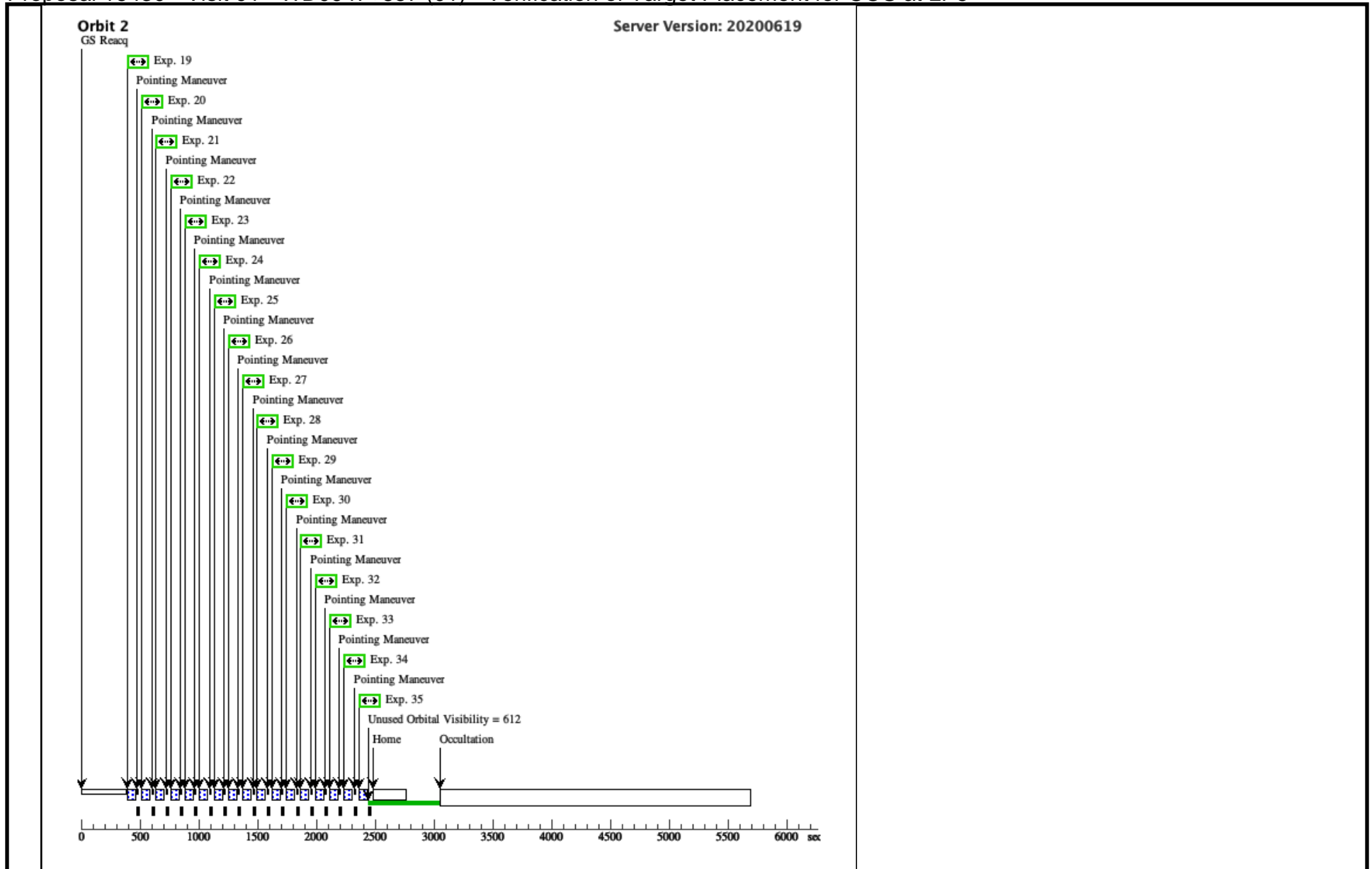
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25	G130M/129 1 exposure at (-0.29, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.29,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
26	G130M/129 1 exposure at (-0.14, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.14,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
27	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
28	G130M/129 1 exposure at (0.14, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.14,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
29	G130M/129 1 exposure at (0.29, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.29,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
30	G130M/129 1 exposure at (0.48, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.48,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
31	G130M/129 1 exposure at (0.67, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.67,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
32	G130M/129 1 exposure at (0.86, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.86,0	Sequence 19-35 Non-Int in Visit 01 - WD 0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

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33	G130M/129 1 exposure at (1.1, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 1.1,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
34	G130M/129 1 exposure at (1.38, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 1.38,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
35	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 19-35 Non-Int in Visit 01 - WD0947+857 (01)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									





Proposal 16430 - Visit 51 - WD0947+857 (51) - Verification of Target Placement for COS at LP5

Thu Oct 22 10:00:40 GMT 2020

Visit	<p>Proposal 16430, Visit 51 - WD0947+857 (51)</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/FUV, COS/NUV</p> <p>Special Requirements: SCHED 100%</p> <p><i>Comments: We adopt a pattern of POSTARG offsets in arcsec relative to the target center of:</i> -1.38 -1.10 -0.86 -0.67 -0.48 -0.29 -0.14 0.00 +0.14 +0.29 +0.48 +0.67 +0.86 +1.10 +1.38</p> <p><i>Assuming 21 steps/arcsec, this is equivalent to aperture shifts of:</i> -29 -23 -18 -14 -10 -6 -3 0 +3 +6 +10 +14 +18 +23 +29</p> <p><i>The dispersion and cross-dispersion scans are each in their own Non-Interruptible Sequence in order to complete the scan as quickly as possible and minimize drift during each scan.</i></p>					
	<p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 51 - WD0947+857 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p>					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	WD0947+857	RA: 09 57 54.3600 (149.4765000d) Dec: +85 29 40.84 (85.49468d) Equinox: J2000	Proper Motion RA: -0.0175 sec of time/yr Proper Motion Dec: -0.0253 arcsec/yr Epoch of Position: 2000	V=15.72	Reference Frame: ICRS
<p><i>Comments:</i> Category=EXT-STAR Description=[DA] Extended=NO</p>						

Proposal 16430 - Visit 51 - WD0947+857 (51) - Verification of Target Placement for COS at LP5

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	ACQ/IMAG E - BOA Mirror A (COS.ta.1467062)	(1) WD0947+857	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]	
	<i>Comments: S/N ~ 30 is reached in 21 seconds using BOA MIRROR A ACQ/IMAGE</i>									
	2	G130M/129 1 exposure at nominal aperture position (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
	3	G130M/129 1 exposure at (0, -1.38) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-1.38	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
	4	G130M/129 1 exposure at (0, -1.1) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-1.10	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
5	G130M/129 1 exposure at (0, -0.86) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.86	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										
6	G130M/129 1 exposure at (0, -0.67) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.67	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										
7	G130M/129 1 exposure at (0, -0.48) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.48	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										
8	G130M/129 1 exposure at (0, -0.29) (COS.sp.1466977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.29	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>										

Proposal 16430 - Visit 51 - WD0947+857 (51) - Verification of Target Placement for COS at LP5

9	G130M/129 1 exposure at (0, -0.14) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,-0.14	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
10	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
11	G130M/129 1 exposure at (0, 0.14) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.14	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
12	G130M/129 1 exposure at (0, 0.29) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.29	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
13	G130M/129 1 exposure at (0, 0.48) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.48	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
14	G130M/129 1 exposure at (0, 0.67) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.67	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
15	G130M/129 1 exposure at (0, 0.86) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0.86	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
16	G130M/129 1 exposure at (0, 1.1) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,1.1	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

Proposal 16430 - Visit 51 - WD0947+857 (51) - Verification of Target Placement for COS at LP5

17	G130M/129 1 exposure at (0, 1.38) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,1.38	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
18	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 1-18 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[1]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
19	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
20	G130M/129 1 exposure at (-1.38, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -1.38,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
21	G130M/129 1 exposure at (-1.1, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -1.10,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
22	G130M/129 1 exposure at (-0.86, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.86,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
23	G130M/129 1 exposure at (-0.67, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.67,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
24	G130M/129 1 exposure at (-0.48, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.48,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

Proposal 16430 - Visit 51 - WD0947+857 (51) - Verification of Target Placement for COS at LP5

25	G130M/129 1 exposure at (-0.29, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.29,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
26	G130M/129 1 exposure at (-0.14, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG -0.14,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
27	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
28	G130M/129 1 exposure at (0.14, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.14,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
29	G130M/129 1 exposure at (0.29, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.29,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
30	G130M/129 1 exposure at (0.48, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.48,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
31	G130M/129 1 exposure at (0.67, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.67,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
32	G130M/129 1 exposure at (0.86, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0.86,0	Sequence 19-35 Non-Int in Visit 51 - WD 0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

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33	G130M/129 1 exposure at (1.1, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 1.1,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
34	G130M/129 1 exposure at (1.38, 0) (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 1.38,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									
35	G130M/129 1 exposure at nominal aperture position (COS.sp.146 6977)	(1) WD0947+857	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=20 0; FP-POS=3; LIFETIME-POS=L P5	POS TARG 0,0	Sequence 19-35 Non-Int in Visit 51 - WD0947+857 (51)	21 Secs (21 Secs) [==>]	[2]
<i>Comments: S/N of 6 per resel in ~21 seconds.</i>									

Orbit Structure

