



16849 - Verification of Target Placement for COS at LP6

Cycle: 29, Proposal Category: CAL/COS

(Calibration)

(Availability Mode: RESTRICTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Alec S. Hirschauer (PI) (Contact)	Space Telescope Science Institute	ahirschauer@stsci.edu
Dr. Marc Rafelski (CoI) (Contact)	Space Telescope Science Institute	mrafelski@stsci.edu
Dr. Bethan Lesley James (CoI) (Contact)	Space Telescope Science Institute - ESA - JWST	bjames@stsci.edu
Elaine M Frazer (CoI) (Contact)	Space Telescope Science Institute	efrazer@stsci.edu
Kate Rowlands (CoI) (Contact)	Space Telescope Science Institute	krowlands@stsci.edu
Dr. William J. Fischer (CoI)	Space Telescope Science Institute	wfischer@stsci.edu
Dr. Travis C Fischer (CoI) (ESA Member)	Space Telescope Science Institute - ESA	tfischer@stsci.edu
Rachel Plesha (CoI)	Space Telescope Science Institute	rplesha@stsci.edu
Dr. Sergio B. Dieterich (CoI)	Space Telescope Science Institute	sdieterich@stsci.edu
Dr. Julia Christine Roman-Duval (CoI)	Space Telescope Science Institute	duval@stsci.edu
Dr. David J. Sahnou (CoI)	Space Telescope Science Institute	sahnou@stsci.edu
Nick Indriolo (CoI)	Space Telescope Science Institute	nindriolo@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	(1) WD1337+705	COS/FUV COS/NUV	2	19-Oct-2021 14:02:22.0	yes

2 Total Orbits Used

ABSTRACT

This proposal will determine the exact spacecraft pointing offset and the aperture offsets needed for the 6th COS FUV lifetime position (LP6). 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 LP6 aperture, as well as allow for a check of the target acquisition centering algorithms.

OBSERVING DESCRIPTION

This program will place a G160M/1600 spectrum at FP-POS = 3 of WD1337+705 at the new lifetime position (LP6; approximately +6.5" above LP1 or 1.1" above LP5) 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; (3) refine the V2/V3 SIAF values for LP6; and (4) check ACQ centering algorithms for NUMPOS = 3 and 5.

We adopt a pattern of POS TARG offsets in arcsec relative to the target center value estimated from the initial SIAF of:

-1.30 -1.10 -0.86 -0.65 -0.48 -0.29 -0.14 0.00 +0.14 +0.29 +0.48 +0.65 +0.86 +1.10 +1.30

The +/-1.30 and +/-0.65 arcsec POS TARG offset positions will be used as a check for the ACQ centering algorithm, for both NUMPOS = 3 (with STEP_SIZE = 1.30) and NUMPOS = 5 (with STEP_SIZE = 0.65).

The dispersion and cross-dispersion scans are each in their own Non-Interruptible Sequence in order to ensure that all the steps of each scan are completed back-to-back. This also ensures that, if there is the need for a re-acquisition due to an interrupt, the zeropoint will stay the same.

This program is similar to Program 16430 which performed the same function for LP5, but differs in that we are using G160M/1600 rather than G130M/1291, since G160M is moving to LP6, while G130M is not. This change has necessitated observation of a brighter target star (WD1337+705 rather than WD0847+957), which provides sufficiently-high counts for the lower-throughput grating, but without violating count rate limitations. Finally, the four POS TARG offset positions described above were changed slightly from that defined in Program 16430 in order to obtain a free test of the ACQ centering algorithm.

The science exposures in this program use the Optional Parameter LIFETIME-POS=LP6 in order to use the best-guess target pointing, aperture position, focus, and detector high voltage values for LP6. Offsets will be made relative to the nominal target pointing position.

The SIAF to be used includes the following LP6 positions:

AP	V2	V3
-----	-----	-----
LFBOA6	230.9137	-239.2749
LFPSA6	237.3192	-232.9188
LAPTFBOA6	227.9450	-242.2930
LAPTFPSA6	240.2879	-229.9007

The FSW patchable constant table pcmech_ApMXDispPosition should use the following LP6 positions:

```
{-11, 126 }, /* PSA_LP6 */  
{ -98, -153 }, /* BOA_LP6 */  
{ -98, -153 }, /* FCA_LP6 */  
{ 22, 126 }, /* WCA_LP6 */
```

From the FSW patchable constant table pcmech_OSMTbl, we should use a focus position of 78 for G160M/1600.

The HV values for G160M/1600 should be 167/169 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 LP6 calibration programs. The pointing will be located to within 0.05 arcseconds in the dispersion and cross-dispersion directions.

We would like this program to execute as soon as feasibly possible

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

Please turn off calibration for the COS/FUV exposures. These data should not be used for scientific purposes due to non-finalized pointing and focus values.

Proposal 16849 (STScI Edit Number: 0, Created: Tuesday, October 19, 2021 at 1:02:24 PM Eastern Standard Time) - Overview

Please disassociate all exposures. All data that is not calibrated must be disassociated to make it into the archive.

SQL is used to meet the above requests.

In case 1 qexposure.control_id is modified. In case 2 qeassociation records are deleted. Contact G. Chapman/M. Reinhard for further information about this process.

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

Tue Oct 19 18:02:24 GMT 2021

Visit	Proposal 16849, Visit 01 - WD1337+705 (01) Diagnostic Status: Warning Scientific Instruments: COS/FUV, COS/NUV Special Requirements: SCHED 100% <i>Comments: We adopt a pattern of POSTARG offsets in arcsec relative to the target center of: -1.30 -1.10 -0.86 -0.65 -0.48 -0.29 -0.14 0.00 +0.14 +0.29 +0.48 +0.65 +0.86 +1.10 +1.30</i> <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>																																								
	Diagnosics (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT (Visit 01 - WD1337+705 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT																																								
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>WD1337+705</td> <td>RA: 13 38 50.4781 (204.7103254d)</td> <td>Proper Motion RA: -402.093 mas/yr</td> <td>V=12.6+/-0.01</td> <td>Reference Frame: ICRS</td> </tr> <tr> <td></td> <td>Alt Name1: LAWD-52</td> <td>Dec: +70 17 7.64 (70.28546d)</td> <td>Proper Motion Dec: -24.608 mas/yr</td> <td>U = 11.807; B = 12.54 +/- 0.01; R = 13.01 +/- 0.05; G = 12.7910 +/- 0.0004; I = 12.979; J = 13.24 8 +/- 0.024; H = 13.357 +/- 0.02 7; K = 13.451 +/- 0.035</td> <td></td> </tr> <tr> <td></td> <td></td> <td>Equinox: J2000</td> <td>Parallax: 0.0377083"</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Epoch of Position: 2000</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Redshift: 0.000087</td> <td></td> <td></td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	WD1337+705	RA: 13 38 50.4781 (204.7103254d)	Proper Motion RA: -402.093 mas/yr	V=12.6+/-0.01	Reference Frame: ICRS		Alt Name1: LAWD-52	Dec: +70 17 7.64 (70.28546d)	Proper Motion Dec: -24.608 mas/yr	U = 11.807; B = 12.54 +/- 0.01; R = 13.01 +/- 0.05; G = 12.7910 +/- 0.0004; I = 12.979; J = 13.24 8 +/- 0.024; H = 13.357 +/- 0.02 7; K = 13.451 +/- 0.035				Equinox: J2000	Parallax: 0.0377083"						Epoch of Position: 2000						Redshift: 0.000087		
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																																			
(1)	WD1337+705	RA: 13 38 50.4781 (204.7103254d)	Proper Motion RA: -402.093 mas/yr	V=12.6+/-0.01	Reference Frame: ICRS																																				
	Alt Name1: LAWD-52	Dec: +70 17 7.64 (70.28546d)	Proper Motion Dec: -24.608 mas/yr	U = 11.807; B = 12.54 +/- 0.01; R = 13.01 +/- 0.05; G = 12.7910 +/- 0.0004; I = 12.979; J = 13.24 8 +/- 0.024; H = 13.357 +/- 0.02 7; K = 13.451 +/- 0.035																																					
		Equinox: J2000	Parallax: 0.0377083"																																						
			Epoch of Position: 2000																																						
			Redshift: 0.000087																																						
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Values then updated to those found at SIMBAD from ICRS/GAIA2 (http://simbad.u-strasbg.fr/simbad/sim-basic?Ident=WD1337%2B705&submit=SIMBAD+search) Category=STAR Description=[DA] Extended=NO</i>																																									

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

#	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.153 6596)	(1) WD1337+705	COS/NUV, ACQ/IMAGE, BOA	MIRRORA		Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	3 Secs (3 Secs) [==>]	[1]	
	<i>Comments: S/N = 30 is reached in 2.86 seconds using BOA MIRROR A ACQ/IMAGE</i>									
	2	G160M/1600 exposure at nominal aperture position (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A		BUFFER-TIME=95; POS TARG 0,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: t_exp = 21.0 gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</i>									
	3	G160M/1600 exposure at (0, -1.3) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A		BUFFER-TIME=95; POS TARG 0,-1.3 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
	<i>Comments: t_exp = 21.0 gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</i>									
4	G160M/1600 exposure at (0, -1.1) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A		BUFFER-TIME=95; POS TARG 0,-1.10 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: t_exp = 21.0 gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</i>										
5	G160M/1600 exposure at (0, -0.86) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A		BUFFER-TIME=95; POS TARG 0,-0.86 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: t_exp = 21.0 gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</i>										
6	G160M/1600 exposure at (0, -0.65) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A		BUFFER-TIME=95; POS TARG 0,-0.65 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]	
<i>Comments: t_exp = 21.0 gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</i>										

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

7	G160M/1600 exposure at (0, -0.48) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,-0.48 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
8	G160M/1600 exposure at (0, -0.29) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,-0.29 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
9	G160M/1600 exposure at (0, -0.14) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,-0.14 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
10	G160M/1600 nominal aperture position (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
11	G160M/1600 exposure at (0, 0.14) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0.14 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
12	G160M/1600 exposure at (0, 0.29) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0.29 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

13	G160M/1600 exposure at (0, 0.48) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0.48 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
14	G160M/1600 exposure at (0, 0.65) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0.65 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
15	G160M/1600 exposure at (0, 0.86) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0.86 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
16	G160M/1600 exposure at (0, 1.1) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,1.1 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
17	G160M/1600 exposure at (0, 1.3) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,1.3 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
18	G160M/1600 nominal aperture position (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 1-18 Non-Int in Visit 01 - WD1337+705 (01)	21 Secs (21 Secs) [==>]	[1]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

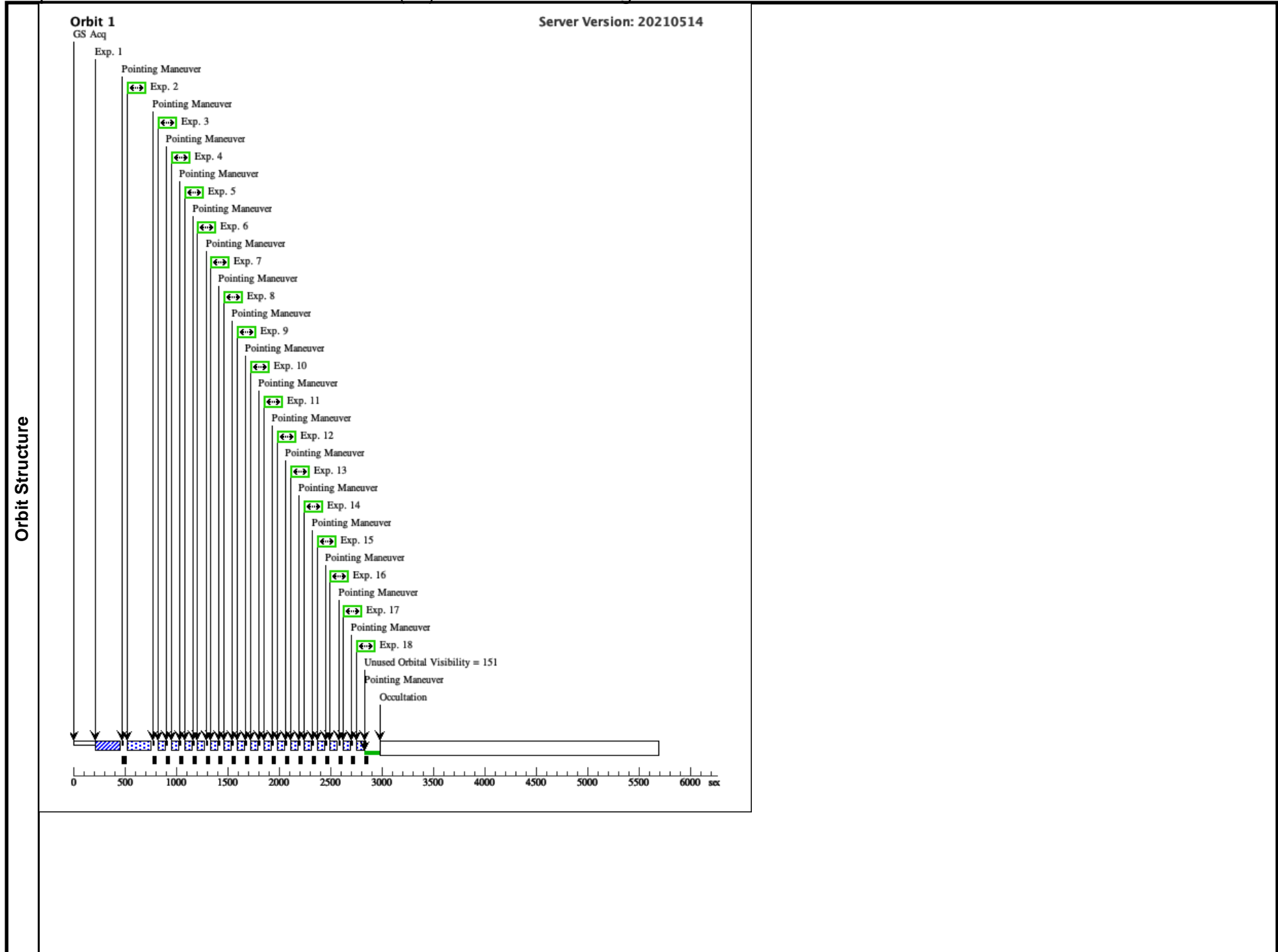
19	ACQ/IMAG E - BOA Mirror A (COS.ta.153 6596)	(1) WD1337+705	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	3 Secs (3 Secs) [==>]	[2]
<p>Comments: S/N = 30 is reached in 2.86 seconds using BOA MIRROR A ACQ/IMAGE</p>									
20	G160M/1600 exposure at nominal aperture position (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A			Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>									
21	G160M/1600 exposure at (-1.3, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A			Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>									
22	G160M/1600 exposure at (-1.1, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A			Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>									
23	G160M/1600 exposure at (-0.86, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A			Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>									
24	G160M/1600 exposure at (-0.65, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A			Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a S/N = 5.48 per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>									

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

25	G160M/1600 exposure at (-0.48, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG -0.48,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
26	G160M/1600 exposure at (-0.29, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG -0.29,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
27	G160M/1600 exposure at (-0.14, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG -0.14,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
28	G160M/1600 nominal aperture position (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
29	G160M/1600 exposure at (0.14, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0.14,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
30	G160M/1600 exposure at (0.29, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0.29,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								

Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

31	G160M/1600 exposure at (0.48, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0.48,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
32	G160M/1600 exposure at (0.65, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0.65,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
33	G160M/1600 exposure at (0.86, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0.86,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
34	G160M/1600 exposure at (1.1, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 1.1,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
35	G160M/1600 exposure at (1.3, 0) (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 1.3,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								
36	G160M/1600 nominal aperture position (COS.sp.153 6713)	(1) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=95; POS TARG 0,0 FP-POS=3; LIFETIME-POS=L P6; WAVECAL=NO; FLASH=NO	Sequence 19-36 Non-Int in Visit 01 - WD 1337+705 (01)	21 Secs (21 Secs) [==>]	[2]
<p>Comments: $t_{exp} = 21.0$ gives a $S/N = 5.48$ per resel using G160M/1600 at 1666 A (any longer and we exceed the orbital visibility allowance)</p>								



Proposal 16849 - Visit 01 - WD1337+705 (01) - Verification of Target Placement for COS at LP6

