18211 - LP11 Detector Plate Scale and Aperture Block Position

Cycle: 33, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

Name	*Institution*
Dr. David J. Sahnow (PI) (Contact)	**Space Telescope Science Institute**
Dr. Christian Johnson (CoI) (Contact)	Space Telescope Science Institute
Jo Taylor (CoI) (Contact)	Space Telescope Science Institute
Dr. Svea S Hernandez (CoI) (ESA Member) (Contact)	Space Telescope Science Institute - ESA - JWST

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(2) WD1337+705 NONE	COS COS/FUV COS/NUV	1	23-Dec-2025 11:00:19.0	yes
51	(2) WD1337+705 NONE	COS COS/FUV COS/NUV	1	23-Dec-2025 11:00:22.0	yes
02	(2) WD1337+705 NONE	COS COS/FUV COS/NUV	1	23-Dec-2025 11:00:26.0	yes
52	(2) WD1337+705 NONE	COS COS/FUV COS/NUV	1	23-Dec-2025 11:00:29.0	yes

4 Total Orbits Used

ABSTRACT

This program will determine the approximate offset position of spectra below LP4 on the detector for two positions of the aperture block. This information will be used to obtain the plate scale in the region where LP11 will be placed.

OBSERVING DESCRIPTION

This program will measure the detector plate scale below LP4 on the detector by scanning a target across the aperture at two locations. One will be at the expected LP11 aperture block location of +270, and the other will be between LP4 and LP11. A final orbit will be used to take spectra with each grating in order to determine where the spectra will fall at LP11.

Visits 01 and 02 will take G160M data at two cross-dispersion locations. Each will use a single orbit to step a target across the fixed aperture. The POSTARG positions, relative to the expected offset location of the target, are -1.30, -0.95, -0.65, -0.48, -0.29, 0.00, +0.29, +0.48, +0.65, +0.95, +1.30. These positions are similar to those used during the 'Verification of Target Placement' programs done as part of previous LP Enablings (e.g. PID 17884 for LP7 and LP10), but in order to use only a single orbit at each aperture position, the exposure times are shorter, and fewer steps are used. In addition, the centered point is not repeated. The Lifetime Position is specified as LP4 in all exposures, since that is the closest active LP to LP11. The aperture block for LP11 is expected to be located at +270, or +36 steps from LP4. With a nominal scale of 21 steps per arcsecond, this corresponds to an offset of approximately -1.7 arcseconds, which will be used in visit 01. Visit 02 uses an offset of +18 steps and -0.85 arcseconds.

All of the exposures in each visit are in a Non-Interruptable Sequence in order to ensure that all the steps of each scan are completed back-to-back.

The default LP4 HV values will be used to avoid spending any time making adjustments.

Wavecals are turned off for all observations in this program (WAVECAL=NO, FLASH=NO). This is required since the exposure times are shorter than the wavecal times.

The primary target is the standard star WD1337+705 which was also used in Program 17884.

We would like this program to execute as soon as feasible.

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

(1) Please turn off calibration for all the COS/FUV exposures. These data should not be used for scientific purposes.
(2) 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. For request (1) qexposure.control_id is modified. For request (2) qeassociation records are deleted. Contact the HST SOC SE team for further information about this process.

Visit

Proposal 18211, X and Y Scan at Position 1 (01), completed Tue Dec 23 16:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS, COS/FUV, COS/NUV

Special Requirements: SCHED 90%

Comments: This visit does an X and Y scan of the target across the PSA with the aperture block at +270, which is the expected location of LP11. See the Observing Description for details of the steps.

Y1 is the estimated distance from LP4 to LP11. The LP4 PSA aperture block position is +234 and LP11 PSA aperture block position is +270, for a separation of 36 steps. With the nominal scale of -21 steps per arcsecond, this corresponds to approximately -1.7". Therefore, Y1 = (0.0,-1.7), with the negative sign required since it is a move down on the detector.

Diagnostics

(X and Y Scan at Position 1 (01)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(X and Y Scan at Position 1 (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

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Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	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 = 13.248 +/- 0.024; H = 13.357 +/- 0.027; K = 13.451 +/- 0.035	
		Equinox: J2000	Parallax: 0.0377083"		
			Epoch of Position: 2000		
			Redshift: 0.000087		

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

Exposures

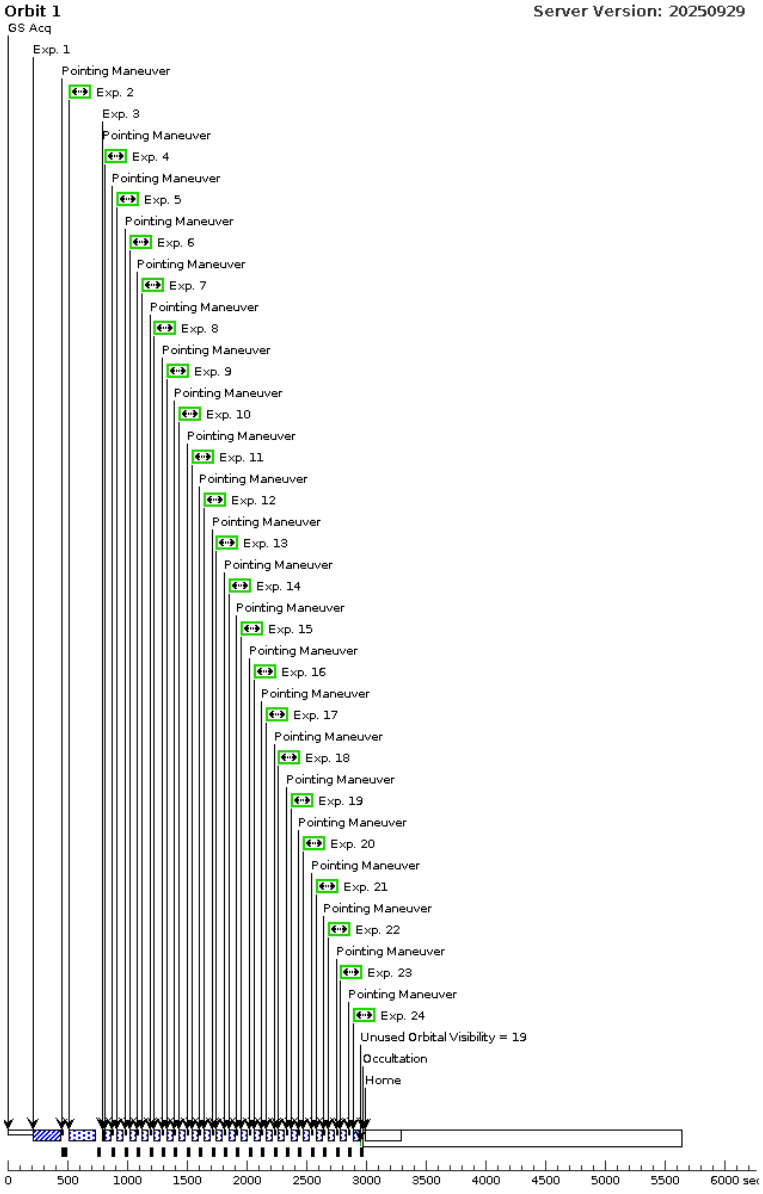
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAGE - BOA Mirror A (COS.ta.2221695)	(2) WD1337+705	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	3 Secs (3 Secs) *[==>]*	***[1]***
	Comments: S/N = 30 is reached in 2.86 seconds using BOA MIRROR A ACQ/IMAGE								
2	Initial exposure at (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,0	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	Comments: Exposure time set to 6 seconds(reduced from 21 in 17884) in order to fit a reasonable number of offset steps in a single orbit. *ETC shows S/N of 2.3 per resel, but with total count rate of 11,704/1986 for Segment A/B. In 6 seconds, this is ~70,000/12,000 counts for A/B.*								
3	Adjust Aperture Block Position	NONE	COS, ALIGN/APER		XAPER=36		Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	0 Secs (0 Secs) *[==>]*	***[1]***
	Comments: Move the PSA to the LP11 position. *LP4 PSA aperture block position is +234.* *LP11 PSA aperture block position is +270.* *Therefore, XAPER = 270 - 234 = 36.*								
4	Exposure at Y1 + (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
5	Exposure at Y1 + (0, -1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-3.0	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
6	Exposure at Y1 + (0, -0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.65	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
7	Exposure at Y1 + (0, -0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.35	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***

	8	Exposure at Y1 + (0, -0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.18	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	9	Exposure at Y1 + (0, -0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.99	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	10	Exposure at Y1 + (0, +0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.41	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	11	Exposure at Y1 + (0, +0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.22	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	12	Exposure at Y1 + (0, +0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.05	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	13	Exposure at Y1 + (0, +0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.75	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	14	Exposure at Y1 + (0, +1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.40	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***

15	Exposure at Y1 + (-1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -1.30,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***
16	Exposure at Y1 + (-0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.95,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***
17	Exposure at Y1 + (-0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.65,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***
18	Exposure at Y1 + (-0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.48,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***
19	Exposure at Y1 + (-0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.29,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***
20	Exposure at Y1 + (+0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.29,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***
21	Exposure at Y1 + (+0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.48,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*		***[1]***

	22	Exposure at Y1 + (+0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.65,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	23	Exposure at Y1 + (+0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.95,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***
	24	Exposure at Y1 + (+1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 1.30,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (01)	6 Secs (6 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 18211, X and Y Scan at Position 1 (51) Tue Dec 23 16:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS, COS/FUV, COS/NUV

Special Requirements: SCHED 90%

Comments: This visit does an X and Y scan of the target across the PSA with the aperture block at +270, which is the expected location of LP11. See the Observing Description for details of the steps.

Y1 is the estimated distance from LP4 to LP11. The LP4 PSA aperture block position is +234 and LP11 PSA aperture block position is +270, for a separation of 36 steps. With the nominal scale of -21 steps per arcsecond, this corresponds to approximately -1.7". Therefore, Y1 = (0.0,-1.7), with the negative sign required since it is a move down on the detector.

HOPR repeat of visit 01.

Diagnostics

(X and Y Scan at Position 1 (51)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(X and Y Scan at Position 1 (51)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

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Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	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 = 13.248 +/- 0.024; H = 13.357 +/- 0.027; K = 13.451 +/- 0.035	
		Equinox: J2000	Parallax: 0.0377083"		
			Epoch of Position: 2000		
			Redshift: 0.000087		

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

Exposures

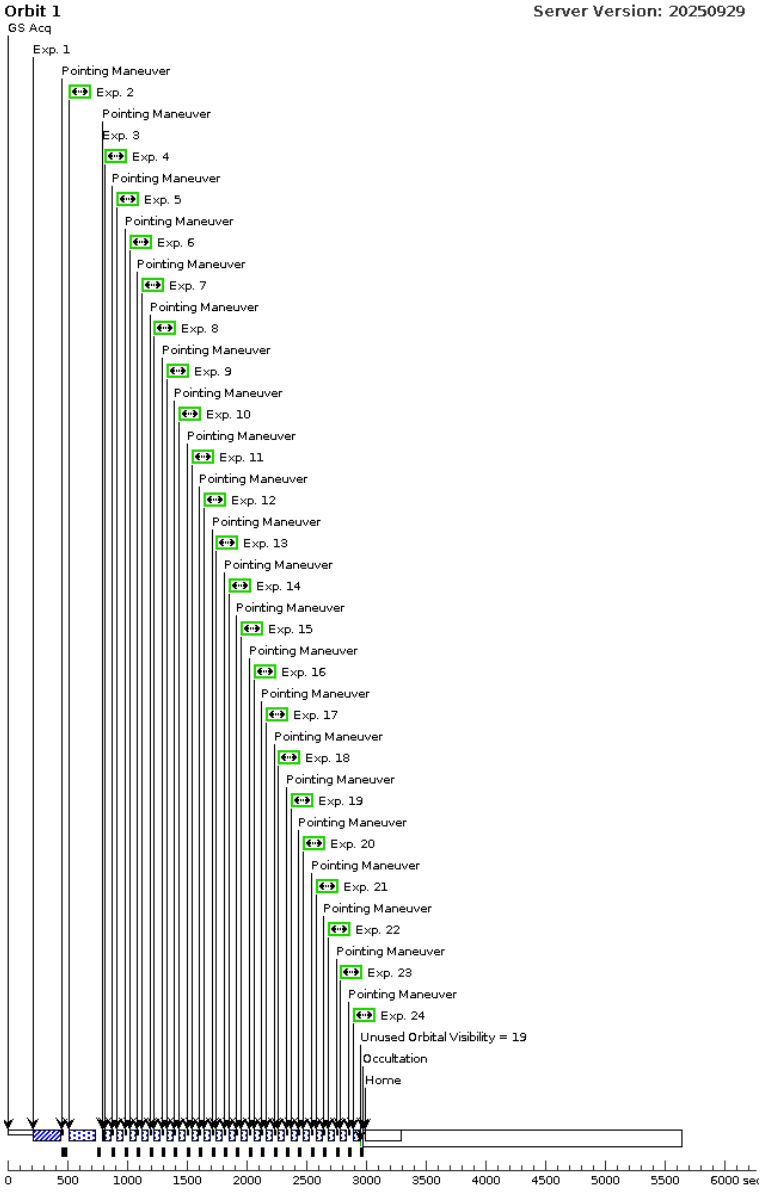
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAGE - BOA Mirror A (COS.ta.2221695)	(2) WD1337+705	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	3 Secs (3 Secs) *[==>]*	***[1]***
	Comments: S/N = 30 is reached in 2.86 seconds using BOA MIRROR A ACQ/IMAGE								
2	Initial exposure at (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,0	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	Comments: Exposure time set to 6 seconds(reduced from 21 in 17884) in order to fit a reasonable number of offset steps in a single orbit. *ETC shows S/N of 2.3 per resel, but with total count rate of 11,704/1986 for Segment A/B. In 6 seconds, this is ~70,000/12,000 counts for A/B.*								
3	Adjust Aperture Block Position	NONE	COS, ALIGN/APER		XAPER=36		Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	0 Secs (0 Secs) *[==>]*	***[1]***
	Comments: Move the PSA to the LP11 position. *LP4 PSA aperture block position is +234.* *LP11 PSA aperture block position is +270.* *Therefore, XAPER = 270 - 234 = 36.*								
4	Exposure at Y1 + (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
5	Exposure at Y1 + (0, -1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-3.0	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
6	Exposure at Y1 + (0, -0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.65	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
7	Exposure at Y1 + (0, -0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.35	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***

	8	Exposure at Y1 + (0, -0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.18	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	9	Exposure at Y1 + (0, -0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.99	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	10	Exposure at Y1 + (0, +0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.41	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	11	Exposure at Y1 + (0, +0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.22	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	12	Exposure at Y1 + (0, +0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.05	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	13	Exposure at Y1 + (0, +0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.75	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	14	Exposure at Y1 + (0, +1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.40	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***

15	Exposure at Y1 + (-1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -1.30,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***
16	Exposure at Y1 + (-0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.95,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***
17	Exposure at Y1 + (-0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.65,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***
18	Exposure at Y1 + (-0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.48,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***
19	Exposure at Y1 + (-0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.29,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***
20	Exposure at Y1 + (+0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.29,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***
21	Exposure at Y1 + (+0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.48,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*		***[1]***

	22	Exposure at Y1 + (+0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.65,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	23	Exposure at Y1 + (+0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.95,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***
	24	Exposure at Y1 + (+1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 1.30,-1.70	Sequence 1-24 Non-Int in X and Y Scan at Position 1 (51)	6 Secs (6 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 18211, X and Y Scan at Position 2 (02), completed Tue Dec 23 16:00:30 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS, COS/FUV, COS/NUV

Special Requirements: SCHED 90%

Comments: This visit does an X and Y scan of the target across the PSA with the aperture block at +252, which is half way between LP4 and the expected location of LP11. See the Observing Description for details of the steps.

Y2 is the estimated distance from LP4 to the aperture block location. The LP4 PSA aperture block position is +234 and LP11 PSA aperture block position is +270, for a separation of 36 steps; thus the halfway point is 18 steps. With the nominal scale of -21 steps per arcsecond, this corresponds to approximately -0.85". Therefore, Y2 = (0.0,-0.85), with the negative sign required since it is a move down on the detector.

Diagnostics

(X and Y Scan at Position 2 (02)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(X and Y Scan at Position 2 (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

(X and Y Scan at Position 2 (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

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(X and Y Scan at Position 2 (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	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 = 13.248 +/- 0.024; H = 13.357 +/- 0.027; K = 13.451 +/- 0.035	
		Equinox: J2000	Parallax: 0.0377083"		
			Epoch of Position: 2000		
			Redshift: 0.000087		

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

Exposures

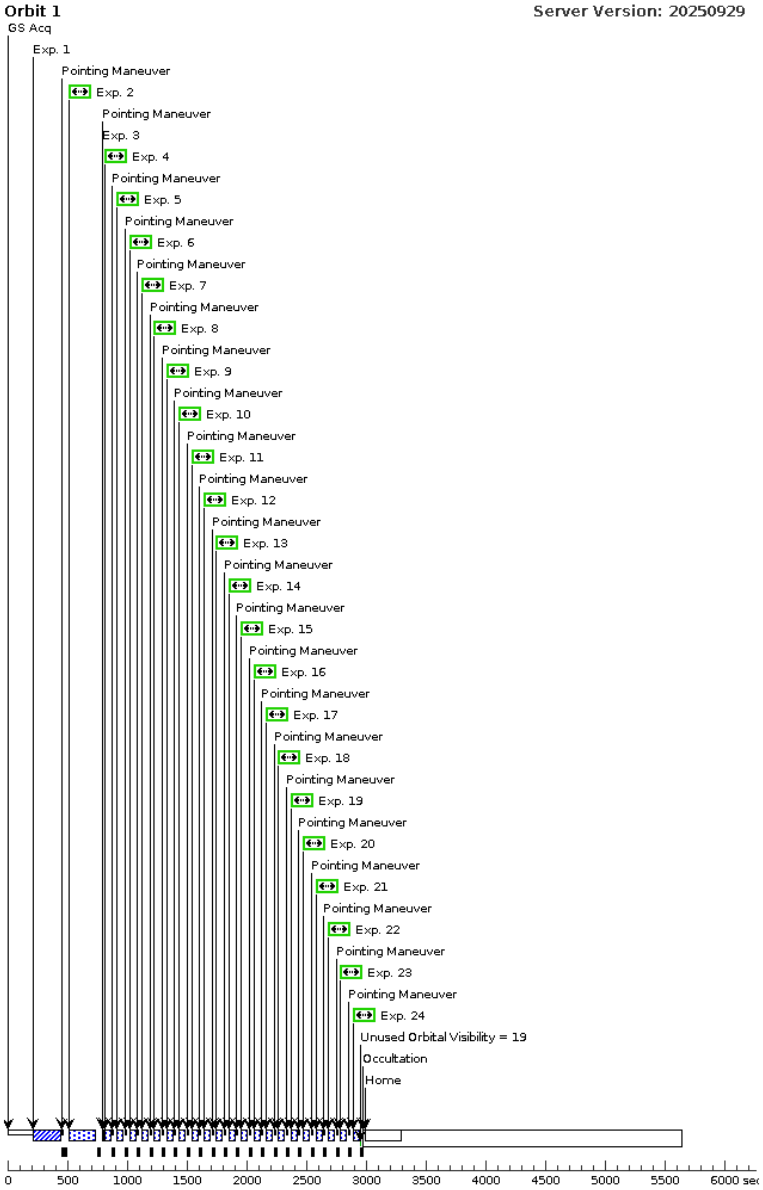
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAGE - BOA Mirror A (COS.ta.2221695)	(2) WD1337+705	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	3 Secs (3 Secs) *[==>]*	***[1]***
	Comments: S/N = 30 is reached in 2.86 seconds using BOA MIRROR A ACQ/IMAGE								
2	Initial exposure at (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,0	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***
	Comments: Exposure time set to 6 seconds(reduced from 21 in 17884) in order to fit a reasonable number of offset steps in a single orbit. *ETC shows S/N of 2.3 per resel, but with total count rate of 11,704/1986 for Segment A/B. In 6 seconds, this is ~70,000/12,000 counts for A/B.*								
3	Adjust Aperture Block Position	NONE	COS, ALIGN/APER		XAPER=18		Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	0 Secs (0 Secs) *[==>]*	***[1]***
	Comments: Move the PSA half way to the LP11 position. *LP4 PSA aperture block position is +234.* *LP11 PSA aperture block position is +270.* *Therefore, XAPER = (270 - 234) / 2 = 18.*								
4	Exposure at Y2 + (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***
5	Exposure at Y2 + (0, -1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.15	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***
6	Exposure at Y2 + (0, -0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.80	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***
7	Exposure at Y2 + (0, -0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.50	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***

	8	Exposure at Y2 + (0, -0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.33	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*
	9	Exposure at Y2 + (0, -0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.14	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*
	10	Exposure at Y2 + (0, +0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.56	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*
	11	Exposure at Y2 + (0, +0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.37	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*
	12	Exposure at Y2 + (0, +0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.20	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*
	13	Exposure at Y2 + (0, +0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,+0.10	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*
	14	Exposure at Y2 + (0, +1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,+0.45	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) [==>]	*[1]*

15	Exposure at Y2 + (-1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -1.30,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***
16	Exposure at Y2 + (-0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.95,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***
17	Exposure at Y2 + (-0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.65,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***
18	Exposure at Y2 + (-0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.48,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***
19	Exposure at Y2 + (-0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.29,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***
20	Exposure at Y2 + (+0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.29,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***
21	Exposure at Y2 + (+0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.48,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*		***[1]***

	22	Exposure at Y2 + (+0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.65,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***
	23	Exposure at Y2 + (+0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.95,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***
	24	Exposure at Y2 + (+1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 1.30,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (02)	6 Secs (6 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 18211, X and Y Scan at Position 2 (52) Tue Dec 23 16:00:31 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: COS, COS/FUV, COS/NUV

Special Requirements: SCHED 90%

Comments: This visit does an X and Y scan of the target across the PSA with the aperture block at +252, which is half way between LP4 and the expected location of LP11. See the Observing Description for details of the steps.

Y2 is the estimated distance from LP4 to the aperture block location. The LP4 PSA aperture block position is +234 and LP11 PSA aperture block position is +270, for a separation of 36 steps; thus the halfway point is 18 steps. With the nominal scale of -21 steps per arcsecond, this corresponds to approximately -0.85". Therefore, Y2 = (0.0,-0.85), with the negative sign required since it is a move down on the detector.

HOPR repeat of visit 02.

Diagnostics

(X and Y Scan at Position 2 (52)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.

(X and Y Scan at Position 2 (52)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

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Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	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 = 13.248 +/- 0.024; H = 13.357 +/- 0.027; K = 13.451 +/- 0.035	
		Equinox: J2000	Parallax: 0.0377083"		
			Epoch of Position: 2000		
			Redshift: 0.000087		

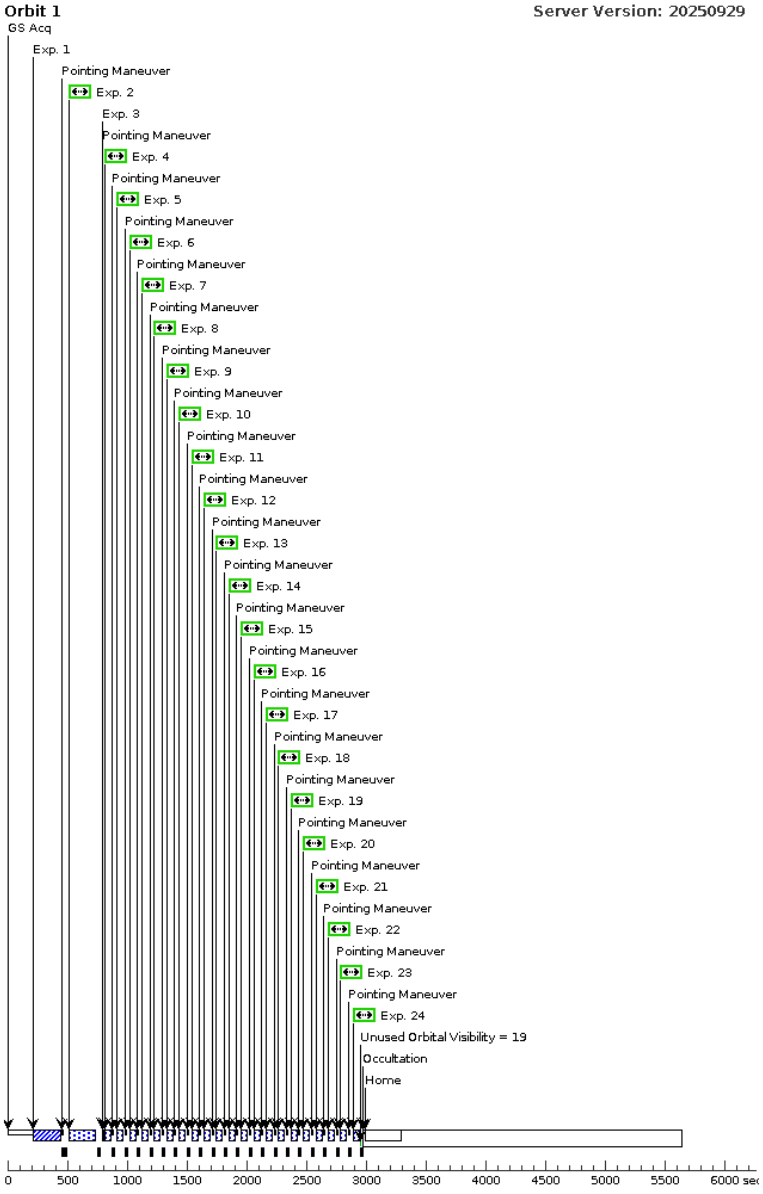
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Values then updated to those found at SIMBAD from ICRS/GAIA2 (http://simbad.u-strasbg.fr/simbad/sim-basic?Ident=WD1337%2B705&submit=SIMBAD+search)
Category=STAR
Description=[DA]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMAGE - BOA Mirror A (COS.ta.2221695)	(2) WD1337+705	COS/NUV, ACQ/IMAGE, BOA	MIRRORA			Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	3 Secs (3 Secs) *[==>]*	***[1]***
	Comments: S/N = 30 is reached in 2.86 seconds using BOA MIRROR A ACQ/IMAGE								
2	Initial exposure at (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,0	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	Comments: Exposure time set to 6 seconds(reduced from 21 in 17884) in order to fit a reasonable number of offset steps in a single orbit. *ETC shows S/N of 2.3 per resel, but with total count rate of 11,704/1986 for Segment A/B. In 6 seconds, this is ~70,000/12,000 counts for A/B.*								
3	Adjust Aperture Block Position	NONE	COS, ALIGN/APER		XAPER=18		Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	0 Secs (0 Secs) *[==>]*	***[1]***
	Comments: Move the PSA half way to the LP11 position. *LP4 PSA aperture block position is +234.* *LP11 PSA aperture block position is +270.* *Therefore, XAPER = (270 - 234) / 2 = 18.*								
4	Exposure at Y2 + (0,0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
5	Exposure at Y2 + (0, -1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-2.15	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
6	Exposure at Y2 + (0, -0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.80	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
7	Exposure at Y2 + (0, -0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.50	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***

	8	Exposure at Y2 + (0, -0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.33	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	9	Exposure at Y2 + (0, -0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-1.14	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	10	Exposure at Y2 + (0, +0.29) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.56	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	11	Exposure at Y2 + (0, +0.48) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.37	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	12	Exposure at Y2 + (0, +0.65) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,-0.20	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	13	Exposure at Y2 + (0, +0.95) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,+0.10	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	14	Exposure at Y2 + (0, +1.30) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0,+0.45	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***

15	Exposure at Y2 + (-1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -1.30,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***
16	Exposure at Y2 + (-0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.95,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***
17	Exposure at Y2 + (-0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.65,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***
18	Exposure at Y2 + (-0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.48,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***
19	Exposure at Y2 + (-0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG -0.29,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***
20	Exposure at Y2 + (+0.29, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.29,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***
21	Exposure at Y2 + (+0.48, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.48,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*		***[1]***

	22	Exposure at Y2 + (+0.65, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.65,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	23	Exposure at Y2 + (+0.95, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 0.95,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***
	24	Exposure at Y2 + (+1.30, 0) (COS.sp.2225259)	(2) WD1337+705	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=125; FP-POS=3; LIFETIME-POS=LP4; WAVECAL=NO; FLASH=NO	POS TARG 1.30,-0.85	Sequence 1-24 Non-Int in X and Y Scan at Position 2 (52)	6 Secs (6 Secs) *[==>]*	***[1]***

Orbit Structure