16643 - Mapping the escape of ionizing photons across the full ionizing continuum using high-resolution Lyman alpha and C IV observations.

Cycle: 29, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) J223831	COS/FUV COS/NUV	3	24-Jan-2023 15:00:16.0	yes
02	(1) J223831	COS/FUV COS/NUV	3	24-Jan-2023 15:00:16.0	yes
03	(1) J223831	COS/FUV COS/NUV	3	24-Jan-2023 15:00:17.0	yes
Z3	(1) J223831	COS/FUV COS/NUV	3	24-Jan-2023 15:00:18.0	yes
04	(1) J223831	COS/FUV COS/NUV	2	24-Jan-2023 15:00:19.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
Z4	(1) J223831	COS/FUV COS/NUV	2	24-Jan-2023 15:00:19.0	yes
05	(2) J150934	COS/FUV COS/NUV	3	24-Jan-2023 15:00:20.0	yes
06	(3) J133126	COS/FUV COS/NUV	2	24-Jan-2023 15:00:21.0	yes
07	(3) J133126	COS/FUV COS/NUV	2	24-Jan-2023 15:00:21.0	yes
08	(4) J094718	COS/FUV COS/NUV	3	24-Jan-2023 15:00:22.0	yes
09	(4) J094718	COS/FUV COS/NUV	3	24-Jan-2023 15:00:23.0	yes
10	(4) J094718	COS/FUV COS/NUV	3	24-Jan-2023 15:00:24.0	yes
Z0	(4) J094718	COS/FUV COS/NUV	3	24-Jan-2023 15:00:24.0	yes
Z8	(4) J094718	COS/FUV	1	24-Jan-2023 15:00:25.0	yes
14	(4) J094718	COS/FUV COS/NUV	1	24-Jan-2023 15:00:25.0	yes
12	(5) J082555	COS/FUV COS/NUV	3	24-Jan-2023 15:00:26.0	yes
13	(5) J082555	COS/FUV COS/NUV	3	24-Jan-2023 15:00:26.0	yes

43 Total Orbits Used

ABSTRACT

Ly-alpha (LyA) is the strongest feature in the rest-frame far-UV emission-line spectra of galaxies and our most reliable indicator of leaking ionizing photons. However, the intergalactic medium is increasingly neutral at higher redshifts, attenuating both ionizing and LyA emission from galaxies

within the epoch of reionization (EoR). Additionally, LyA provides a limited tracer of the escaping ionizing radiation as it probes the low-ionization gas properties (close to the H-ionizing edge at 912 A, 13.6 eV), while the ionizing continuum peaks at significantly higher energies (500 A or 24.6 eV). Higher-energy photons significantly contribute to reionizing the neutral hydrogen as they can each ionize 2 H atoms, nevertheless, their escape-fraction is dramatically underestimated by the standard measurement of the ionizing photon escape at 900 A.

To map the escape of ionizing photons across the full ionizing continuum for the first time, we propose to combine archival and new HST/COS G130M+G160M observations of the LyA and C IV emission profiles of 10 nearby extreme UV emission-line galaxies. LyA and C IV probe different ionization stages (low and high, respectively) of the gas, and thus different energies of ionizing photons. Therefore, these high-resolution observations will enable us to determine the column densities of the low and high ionization gas, estimate the fraction of both low- and high-energy photons escaping EoR systems, and provide reliable diagnostics from emission line features observable in the early universe, which is critical for interpreting FUV emission-line features in forthcoming spectra of high-z galaxies with JWST.

OBSERVING DESCRIPTION

Goal:

We will obtain NUV target aquisition images and high-resolution, high signal-to-noise (6-7) HST/COS spectral observations of the Lyman-alpha and C IV emission profiles of 5 nearby extreme UV emission-line galaxies. We will combine these observations to 5 galaxies having archival COS high-resolution observations of LyA and C IV emision profiles to have a sample of 10 reionization-era analogues. This sample wiill enable us to connect the properties of low- and high-ionization gas derived from resonant Ly-alpha and C IV in the same galaxies for the first time, and thus constrain the dominant properties that control the escape of high-ionization photons in local reionization-era analogs. The latter is critical for interpreting FUV emission-line features in forthcoming spectra of high-z galaxies with JWST.

Targets:

Our targets were selected from previous HST/COS and SDSS observations. We selected galaxies having high-ionization zones using an emission-line based diagnostic based on the [Ar IV] 4711,4740 and [Ar III] 7135 high-ionization lines which probe the intermediate to very high ionization zones, and the C III] equivalent width to select targets with similar properties as high-redshift ones. Our final proposed sample is composed of 10 metal-poor reionization-era analogs with extreme ionization fields. Additionally, our galaxies are low redshift, compact, and FUV bright such that we will capture the majority of the FUV light in the COS 2.5" aperture.

Target Acquisition:

All five targets in our sample already have HST/COS low-resolution observations, providing very accurate coordinates. The excellent input coordinates of our sample allow us to utilize the ACQ/IMAGE mode for target acquisition with the PSA aperture and MirrorA for the COS/NUV configuration. We used the reported GALEX FUV magnitudes, converted to surface brighteness, to compute the exposure time needed for each galaxy for the target acquisition image. We added "Visit Orientation Requirements" for all targets based either on previous G140L observations (J222821, J133126, J094718, J082555) or G130M observations (J150924)

Science Exposures:

We used the COS ETC to determine the time needed to achieve S/N>6-7 per 100 km/s element in G130M and G160M. The ETC reported no warnings for violations of the local and/or global bright object limits. ETCs were based upon the continuum flux at 1500 AA (as measured from archival G140L observations). Our observing strategy complies fully with the COS2025 restrictions: all G130M observations will be performed with cenwave 1291 and use only the FP-POS 3 and 4. We note that J082555 already has G160M observations from the proposal HST-GO-15881. Nevertheless, we are using a different cenwave in our proposal (1611 versus 1533 previously) to observe the O III line doublet at 1666AA.

Visit

Proposal 16643, J223831-visit1 (01), completed Tue Jan 24 20:00:27 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(J223831-visit1 (01)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G130M-v1 (01.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-v2 (01.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-v3 (01.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

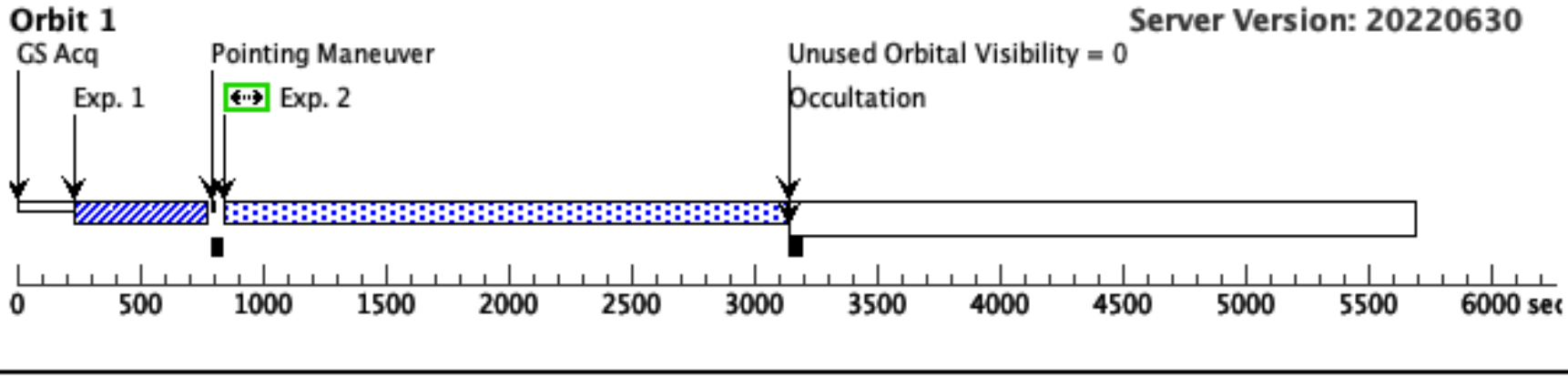
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J223831	RA: 22 38 31.1110 (339.6296292d) Dec: +14 00 28.29 (14.00786d) Equinox: J2000	Redshift: 0.021	V=18.97 GALEX FUV = 18.86, SDSS r-band = 18.91	Reference Frame: ICRS

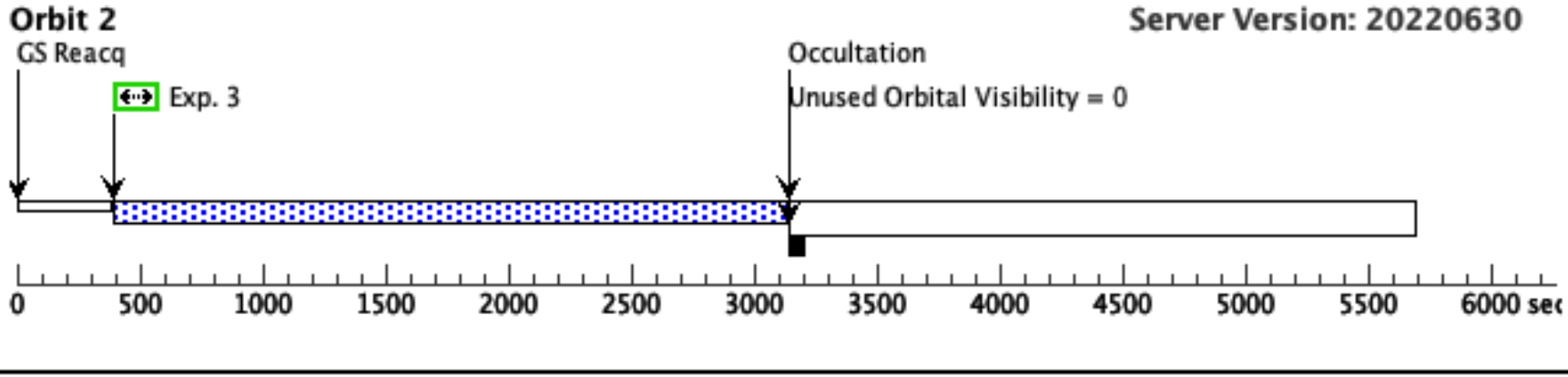
Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

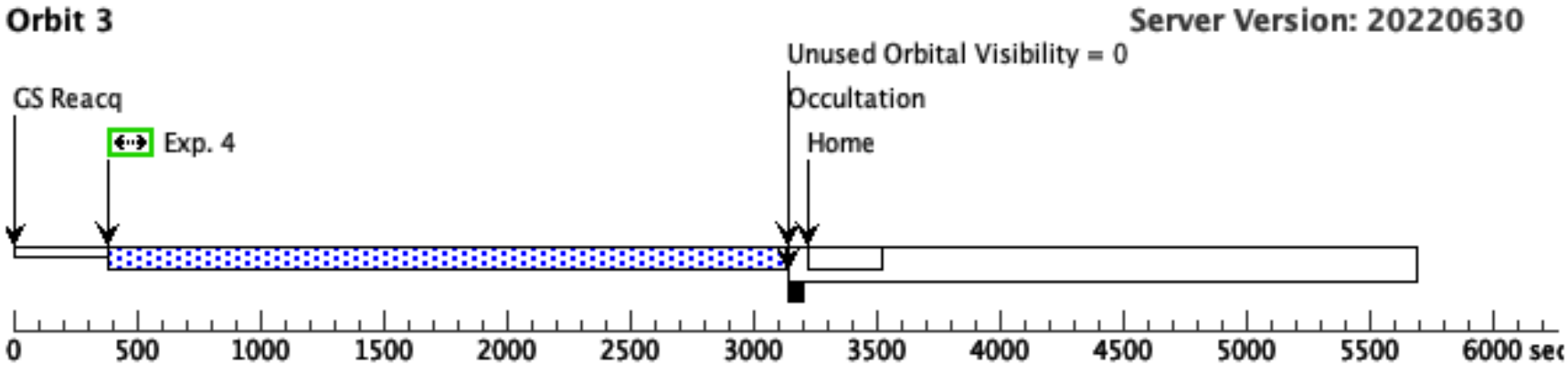
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMG (1525555)	(1) J223831	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				162 Secs (162 Secs) *[==>]*	***[1]***
2	G130M-v1 (1523110)	(1) J223831	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; FLASH=YES; BUFFER-TIME=5510; SEGMENT=BOTH			2500 Secs (2119 Secs) *[==>2119.0 Secs]*	***[1]***
3	G130M-v2 (1523110)	(1) J223831	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; FLASH=YES; BUFFER-TIME=5510; SEGMENT=BOTH			2500 Secs (2693 Secs) *[==>2693.0 Secs]*	***[2]***
4	G130M-v3 (1523110)	(1) J223831	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; FLASH=YES; BUFFER-TIME=5510; SEGMENT=BOTH			2500 Secs (2693 Secs) *[==>2693.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 16643, J223831-visit2 (02), completed Tue Jan 24 20:00:27 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 01

Diagnostics

(J223831-visit2 (02)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-v1 (02.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v2 (02.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-v4 (02.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

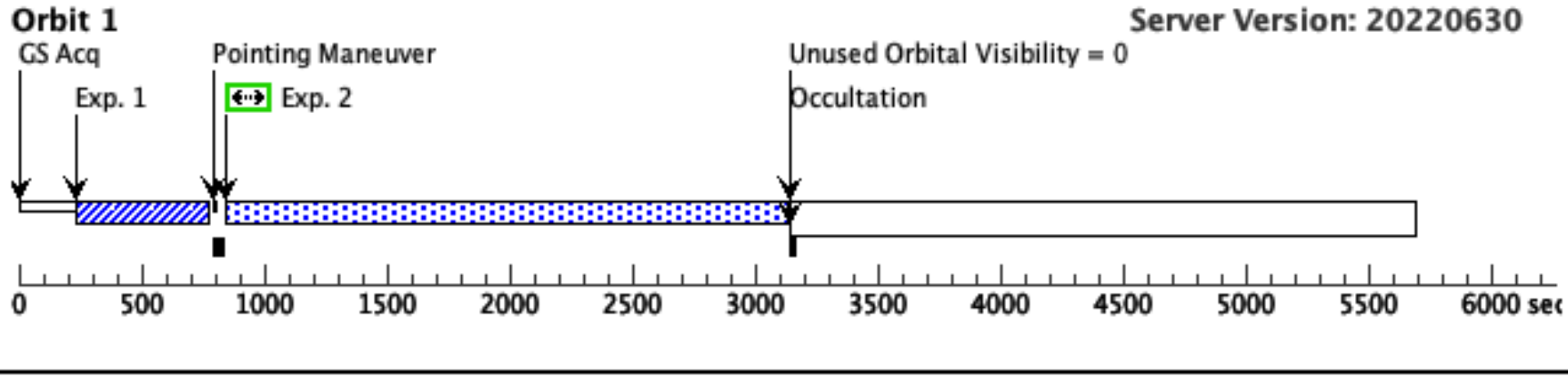
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J223831	RA: 22 38 31.1110 (339.6296292d) Dec: +14 00 28.29 (14.00786d) Equinox: J2000	Redshift: 0.021	V=18.97 GALEX FUV = 18.86, SDSS r-band = 18.91	Reference Frame: ICRS

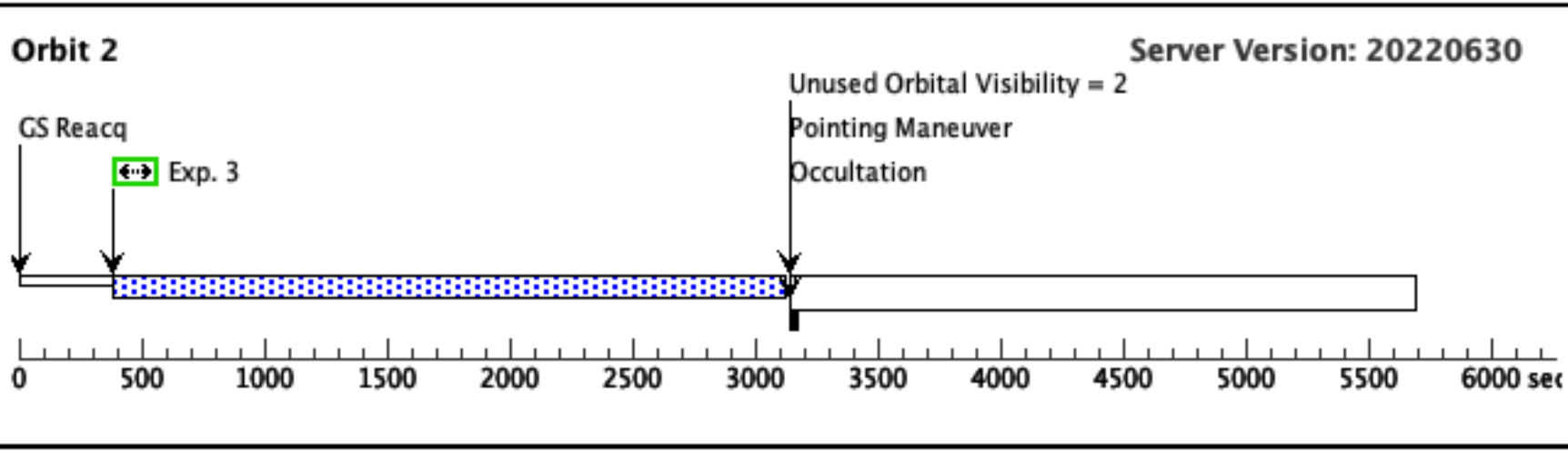
Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

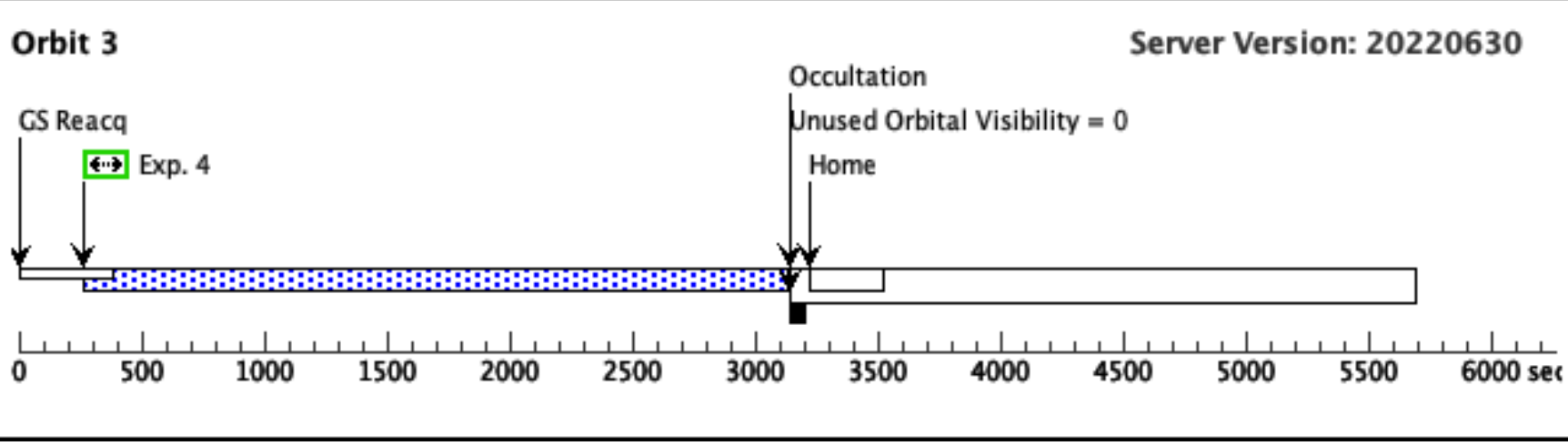
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMG (1525555)	(1) J223831	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				162 Secs (162 Secs) *[==>]*	***[1]***
2	G160M-v1 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=3; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2070 Secs) *[==>2070.0 Secs]*	***[1]***
3	G160M-v2 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=4; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	***[2]***
4	G130M-v4 (1523110)	(1) J223831	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; FLASH=YES; BUFFER-TIME=5510; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 16643, J223831-visit3 (03), failed Tue Jan 24 20:00:27 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 01

Diagnostics

(J223831-visit3 (03)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-v3 (03.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v4 (03.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v5 (03.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

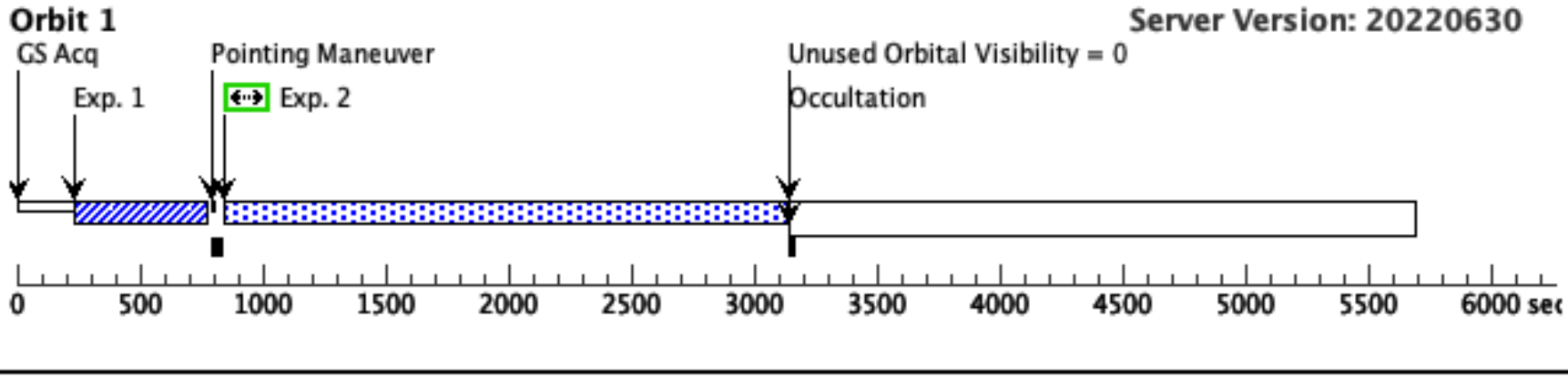
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J223831	RA: 22 38 31.1110 (339.6296292d) Dec: +14 00 28.29 (14.00786d) Equinox: J2000	Redshift: 0.021	V=18.97 GALEX FUV = 18.86, SDSS r-band = 18.91	Reference Frame: ICRS

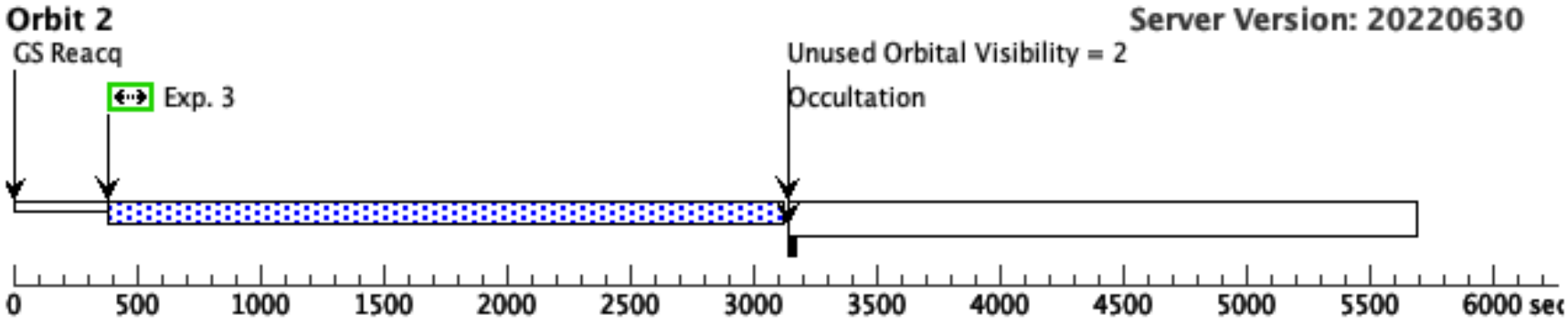
Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

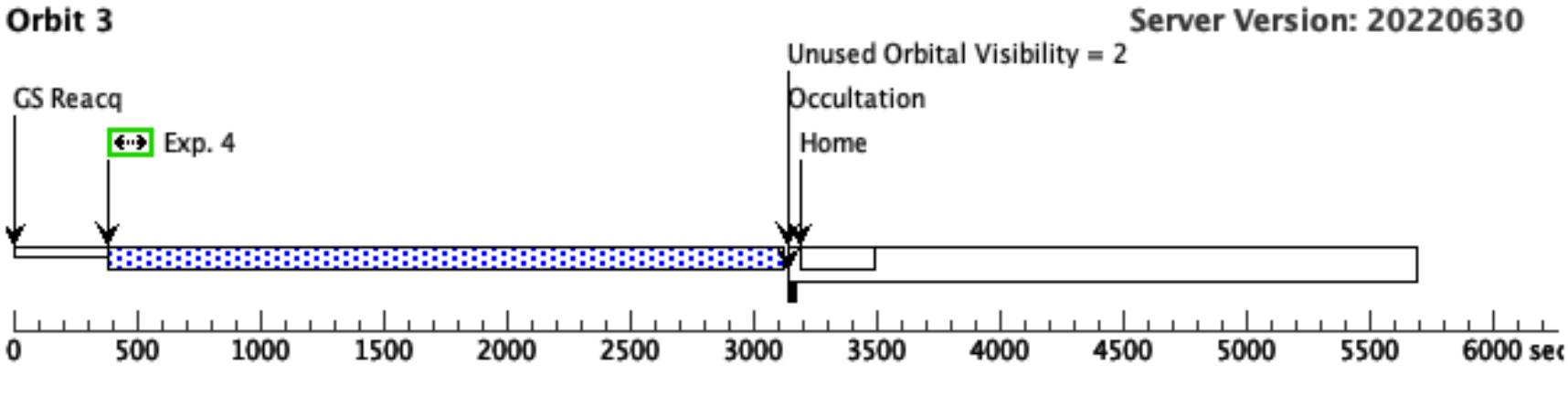
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMG (1525555)	(1) J223831	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				162 Secs (162 Secs) *[==>]*	 ***[1]***
2	G160M-v3 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=1; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2070 Secs) *[==>2070.0 Secs]*	 ***[1]***
3	G160M-v4 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=2; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	 ***[2]***
4	G160M-v5 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=3; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	 ***[3]***

Orbit Structure







Visit

Proposal 16643, J223831-visit3 (Z3) Tue Jan 24 20:00:27 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 01

Comments: HOPR for failed 03

Diagnostics

(J223831-visit3 (Z3)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-v3 (Z3.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v4 (Z3.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v5 (Z3.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

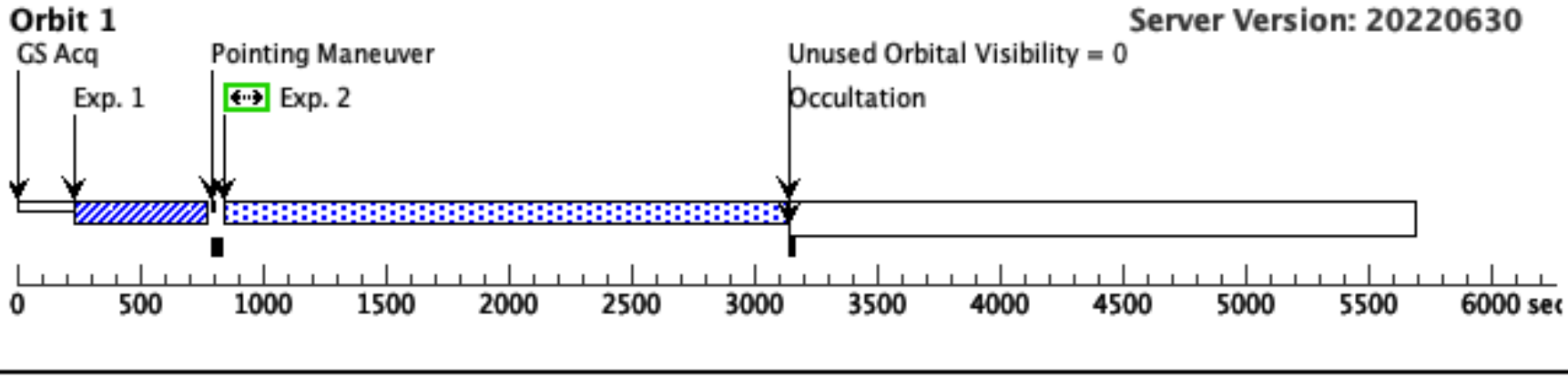
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J223831	RA: 22 38 31.1110 (339.6296292d) Dec: +14 00 28.29 (14.00786d) Equinox: J2000	Redshift: 0.021	V=18.97 GALEX FUV = 18.86, SDSS r-band = 18.91	Reference Frame: ICRS

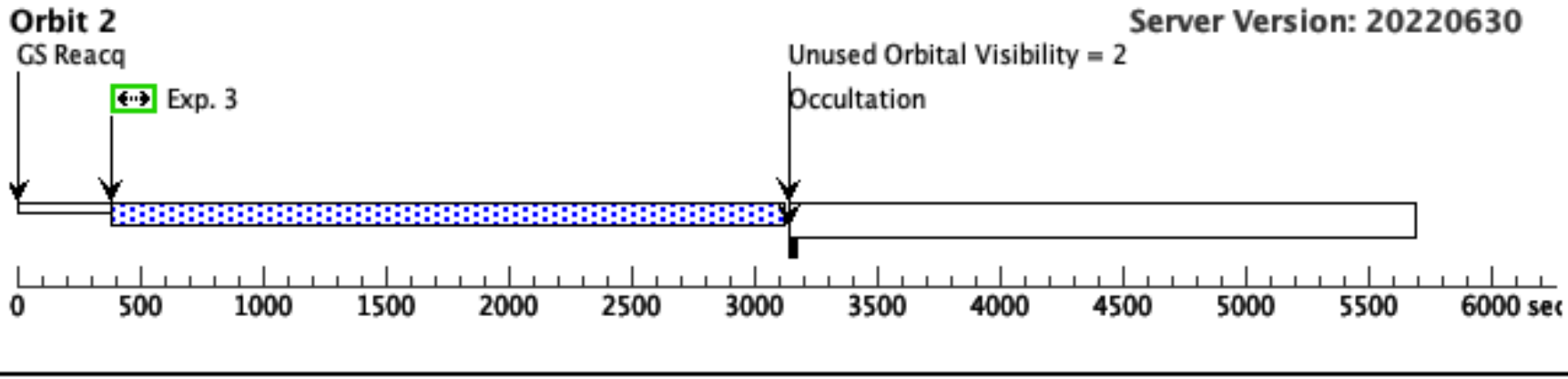
Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

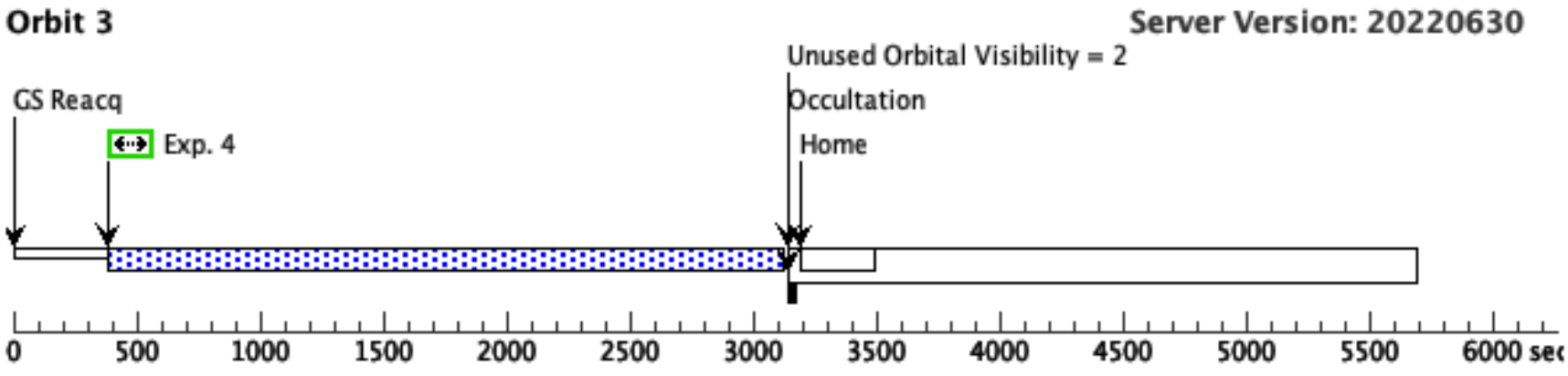
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMG (1525555)	(1) J223831	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				162 Secs (162 Secs) *[==>]*	***[1]***
2	G160M-v3 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=1; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2070 Secs) *[==>2070.0 Secs]*	***[1]***
3	G160M-v4 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=2; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	***[2]***
4	G160M-v5 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=3; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	***[3]***

Orbit Structure







Visit

Proposal 16643, J223831-visit4 (04), failed Tue Jan 24 20:00:27 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 01

Diagnostics

(J223831-visit4 (04)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-v6 (04.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v7 (04.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

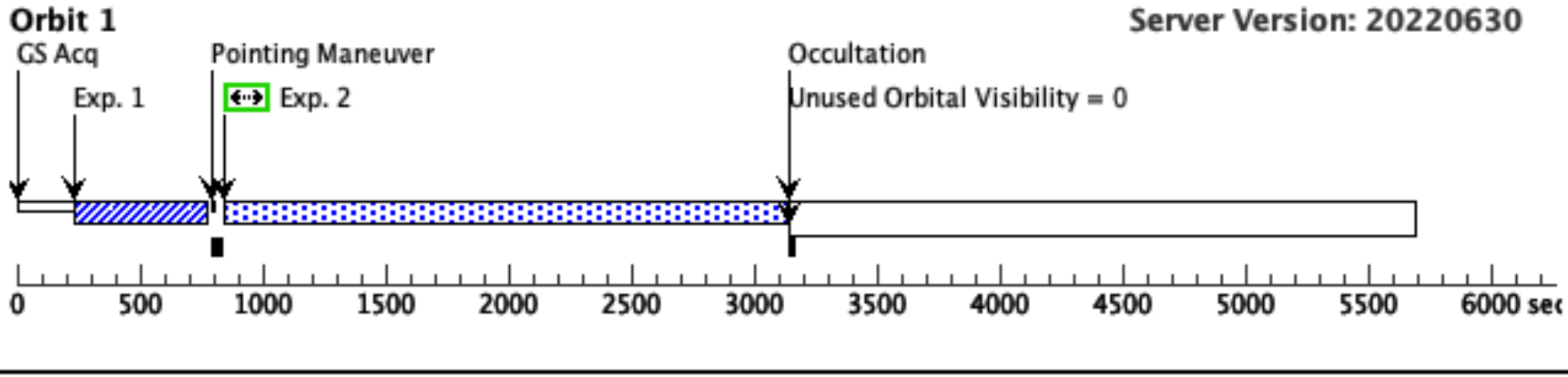
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J223831	RA: 22 38 31.1110 (339.6296292d) Dec: +14 00 28.29 (14.00786d) Equinox: J2000	Redshift: 0.021	V=18.97 GALEX FUV = 18.86, SDSS r-band = 18.91	Reference Frame: ICRS

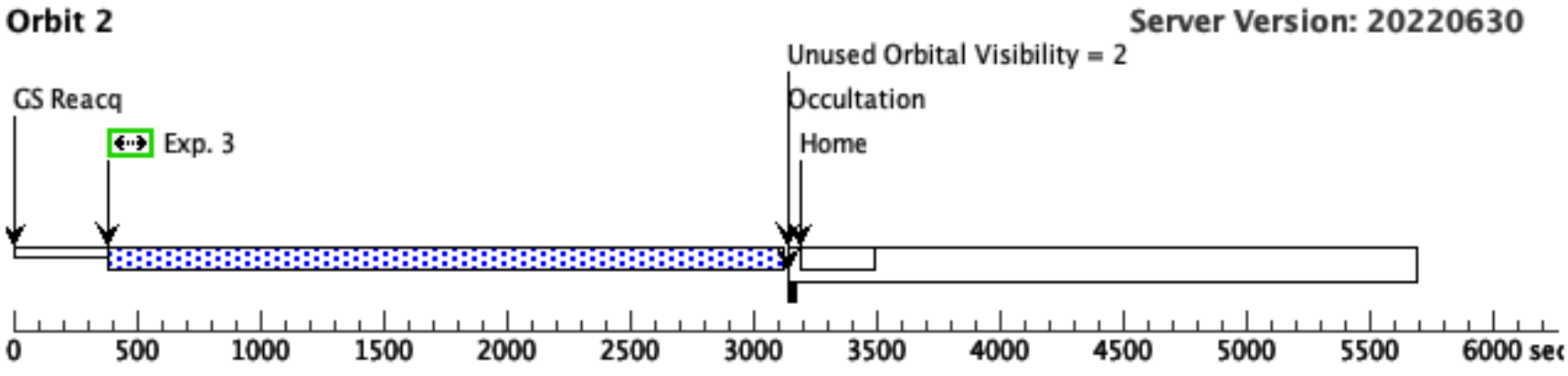
Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMG (1525555)	(1) J223831	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				162 Secs (162 Secs) *[==>]*	***[1]***
2	G160M-v6 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=1; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2070 Secs) *[==>2070.0 Secs]*	***[1]***
3	G160M-v7 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=2; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 16643, J223831-visit4 (Z4) Tue Jan 24 20:00:27 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 01

Comments: HOPR for failed 04

Diagnostics

(J223831-visit4 (Z4)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-v6 (Z4.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-v7 (Z4.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

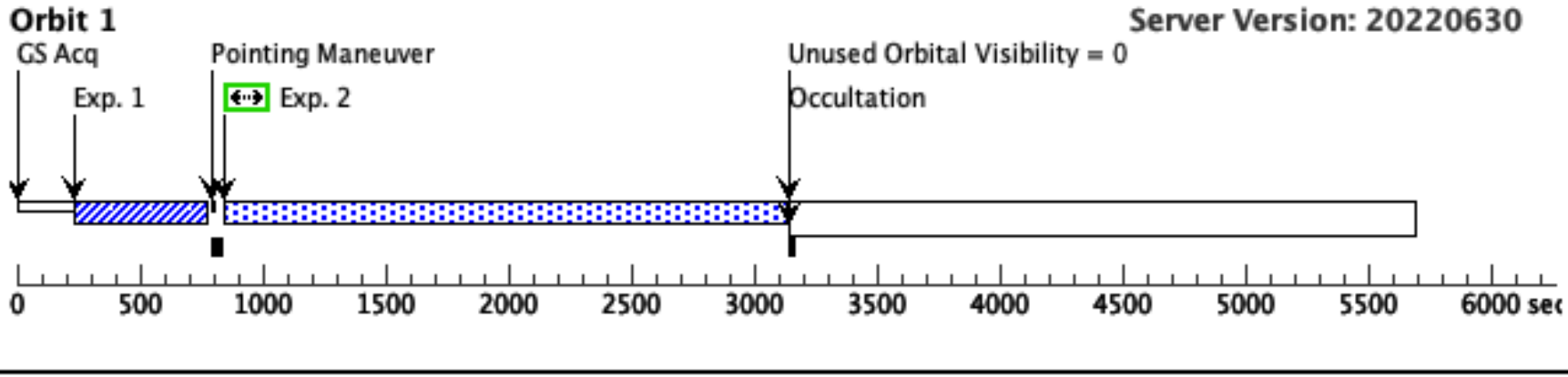
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	J223831	RA: 22 38 31.1110 (339.6296292d) Dec: +14 00 28.29 (14.00786d) Equinox: J2000	Redshift: 0.021	V=18.97 GALEX FUV = 18.86, SDSS r-band = 18.91	Reference Frame: ICRS

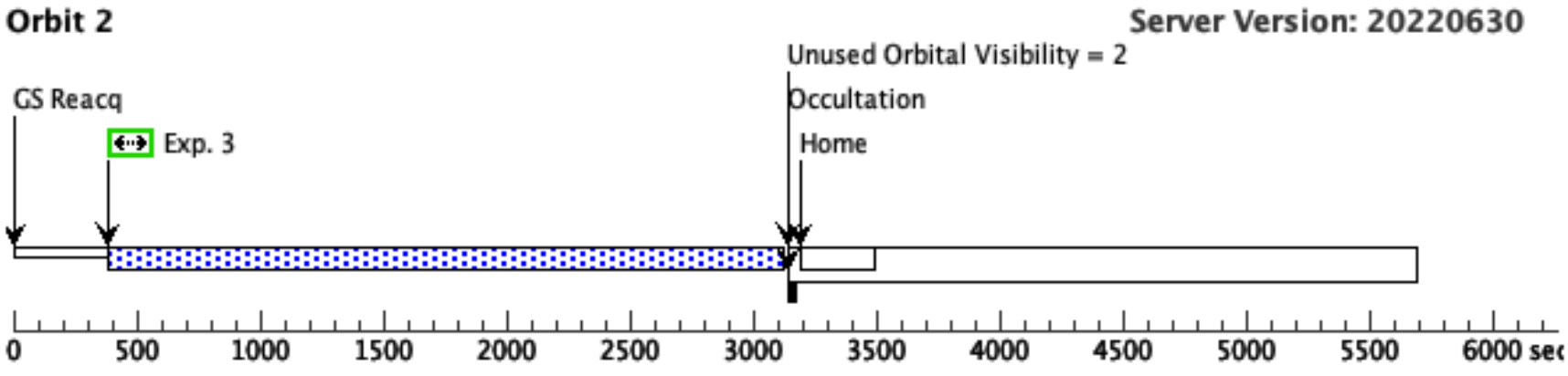
Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ/IMG (1525555)	(1) J223831	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				162 Secs (162 Secs) *[==>]*	***[1]***
2	G160M-v6 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=1; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2070 Secs) *[==>2070.0 Secs]*	***[1]***
3	G160M-v7 (1523121)	(1) J223831	COS/FUV, TIME-TAG, PSA	G160M 1611 A	FP-POS=2; BUFFER-TIME=20000; SEGMENT=BOTH			2500 Secs (2691 Secs) *[==>2691.0 Secs]*	***[2]***

Orbit Structure





Visit	**Proposal 16643, J150934-visit1 (05), completed** Tue Jan 24 20:00:28 GMT 2023 **Diagnostic Status: Error** Scientific Instruments: COS/FUV, COS/NUV Special Requirements: ORIENT 200D TO 210 D
Diagnostics	(G160M-1 (05.002)) Error (Form): Illegal selection: G160M. (G160M-1 (05.002)) Error (Form): Illegal selection: PSA. (G160M-1 (05.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-1 (05.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-1 (05.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-1 (05.002)) Error (Form): YES is not a valid selection (G160M-1 (05.002)) Error (Form): YES is not a valid selection (G160M-2 (05.003)) Error (Form): Illegal selection: G160M. (G160M-2 (05.003)) Error (Form): Illegal selection: PSA. (G160M-2 (05.003)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-2 (05.003)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-2 (05.003)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-2 (05.003)) Error (Form): YES is not a valid selection (G160M-2 (05.003)) Error (Form): YES is not a valid selection (G160M-3 (05.004)) Error (Form): Illegal selection: G160M. (G160M-3 (05.004)) Error (Form): Illegal selection: PSA. (G160M-3 (05.004)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-3 (05.004)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-3 (05.004)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-3 (05.004)) Error (Form): YES is not a valid selection (G160M-3 (05.004)) Error (Form): YES is not a valid selection (G160M-3.5 (05.005)) Error (Form): Illegal selection: G160M. (G160M-3.5 (05.005)) Error (Form): Illegal selection: PSA. (G160M-3.5 (05.005)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-3.5 (05.005)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-3.5 (05.005)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M. FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6). (G160M-3.5 (05.005)) Error (Form): YES is not a valid selection (G160M-3.5 (05.005)) Error (Form): YES is not a valid selection (G160M-1 (05.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (G160M-2 (05.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (G160M-3 (05.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details. (G160M-3.5 (05.005)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

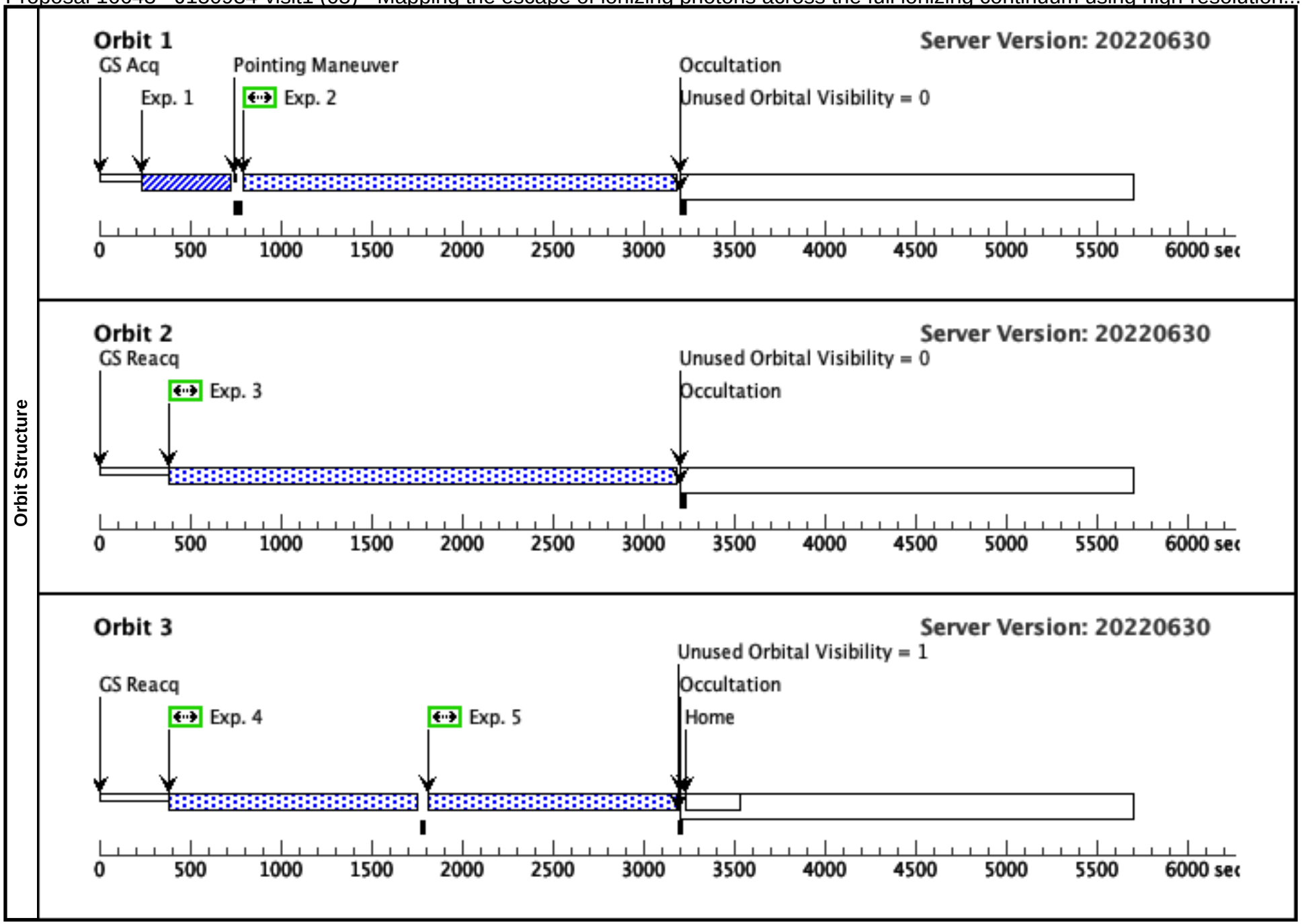
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	J150934	RA: 15 09 34.1700 (227.3923750d) Dec: +37 31 46.11 (37.52947d) Equinox: J2000	Redshift: 0.033	V=18.12 GALEX FUV = 18.68, SDSS r-band = 18.09	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525557)	(2) J150934	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				137 Secs (137 Secs) *[==>]*	***[1]***
2	G160M-1 (1523140)	(2) J150934	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=14800; FLASH=YES; FP-POS=1; SEGMENT=BOTH			2500 Secs (2168 Secs) *[==>2168.0 Secs]*	***[1]***
3	G160M-2 (1523140)	(2) J150934	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=14800; FLASH=YES; FP-POS=2; SEGMENT=BOTH			2500 Secs (2744 Secs) *[==>2744.0 Secs]*	***[2]***
4	G160M-3 (1523140)	(2) J150934	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=14800; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (1319 Secs) *[==>1319.0 Secs]*	***[3]***
5	G160M-3.5 (1523140)	(2) J150934	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=14800; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (1319 Secs) *[==>1319.0 Secs]*	***[3]***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Pointing Maneuver
Exp. 2
Occultation
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Orbit 2
Server Version: 20220630
GS Reacq
Exp. 3
Unused Orbital Visibility = 0
Occultation
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Orbit 3
Server Version: 20220630
Unused Orbital Visibility = 1
GS Reacq
Exp. 4
Exp. 5
Occultation
Home
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Visit

Proposal 16643, J133126-visit1 (06), completed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(G160M-1 (06.002)) Error (Form): Illegal selection: G160M.

(G160M-1 (06.002)) Error (Form): Illegal selection: PSA.

(G160M-1 (06.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (06.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (06.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (06.002)) Error (Form): YES is not a valid selection

(G160M-1 (06.002)) Error (Form): YES is not a valid selection

(J133126-visit1 (06)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-1 (06.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-1 (06.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-1.5 (06.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

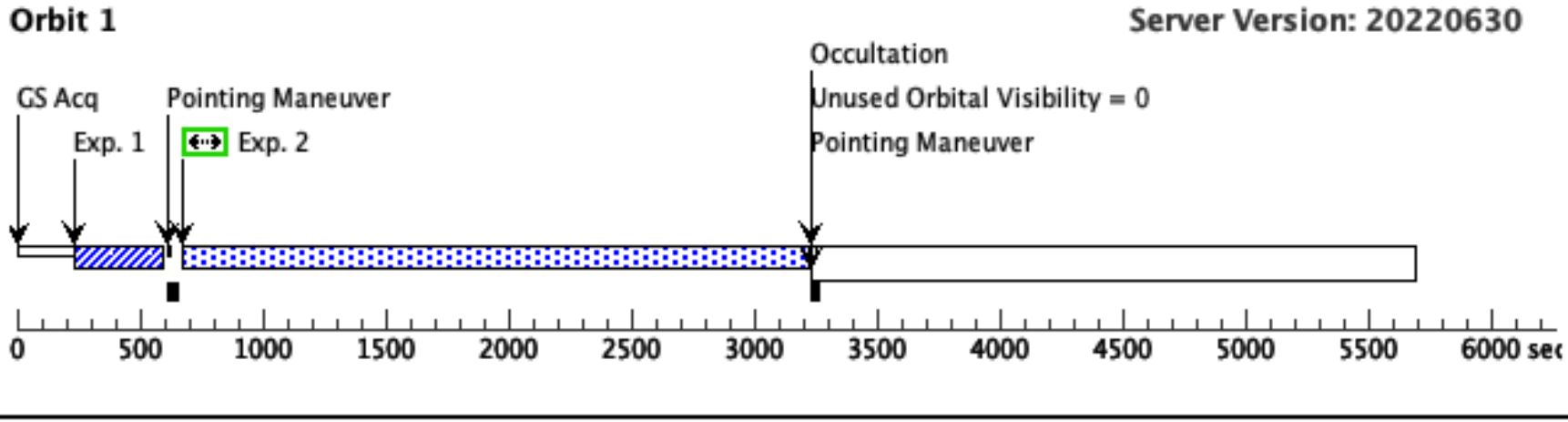
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J133126	RA: 13 31 26.8799 (202.8619996d) Dec: +41 51 48.24 (41.86340d) Equinox: J2000		V=17.29 GALEX FUV = 18.04, SDSS r-band = 17.18	Reference Frame: ICRS

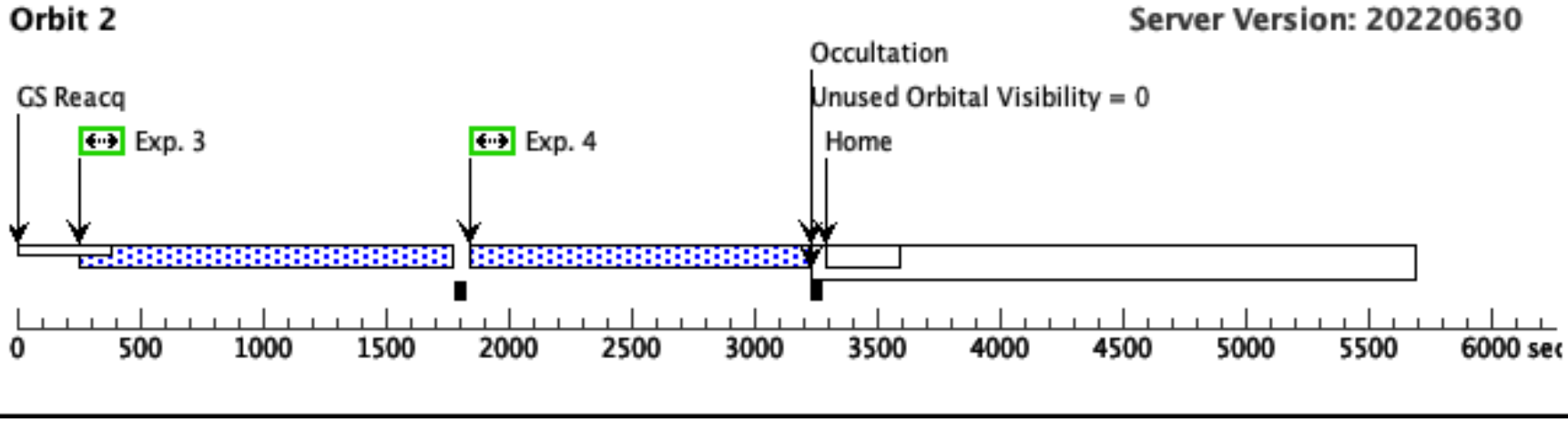
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525559)	(3) J133126	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				75 Secs (75 Secs) *[==>]*	*[1]*
2	G160M-1 (1523142)	(3) J133126	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=13938; FLASH=YES; FP-POS=2; SEGMENT=BOTH			2500 Secs (2330 Secs) *[==>2330.0 Secs]*	*[1]*
3	G130M-1 (1523163)	(3) J133126	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=4760; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (1328 Secs) *[==>1328.0 Secs]*	*[2]*
4	G130M-1.5 (1523163)	(3) J133126	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=4760; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (1328 Secs) *[==>1328.0 Secs]*	*[2]*

Orbit Structure





Visit

Proposal 16643, J133126-visit2 (07), completed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 06

Diagnostics

(G160M-2 (07.002)) Error (Form): Illegal selection: G160M.

(G160M-2 (07.002)) Error (Form): Illegal selection: PSA.

(G160M-2 (07.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (07.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (07.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (07.002)) Error (Form): YES is not a valid selection

(G160M-2 (07.002)) Error (Form): YES is not a valid selection

(G160M-3 (07.003)) Error (Form): Illegal selection: G160M.

(G160M-3 (07.003)) Error (Form): Illegal selection: PSA.

(G160M-3 (07.003)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (07.003)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (07.003)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (07.003)) Error (Form): YES is not a valid selection

(G160M-3 (07.003)) Error (Form): YES is not a valid selection

(G160M-3.5 (07.004)) Error (Form): Illegal selection: G160M.

(G160M-3.5 (07.004)) Error (Form): Illegal selection: PSA.

(G160M-3.5 (07.004)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3.5 (07.004)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3.5 (07.004)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3.5 (07.004)) Error (Form): YES is not a valid selection

(G160M-3.5 (07.004)) Error (Form): YES is not a valid selection

(J133126-visit2 (07)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(J133126-visit2 (07)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS

(G160M-2 (07.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-3 (07.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-3.5 (07.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

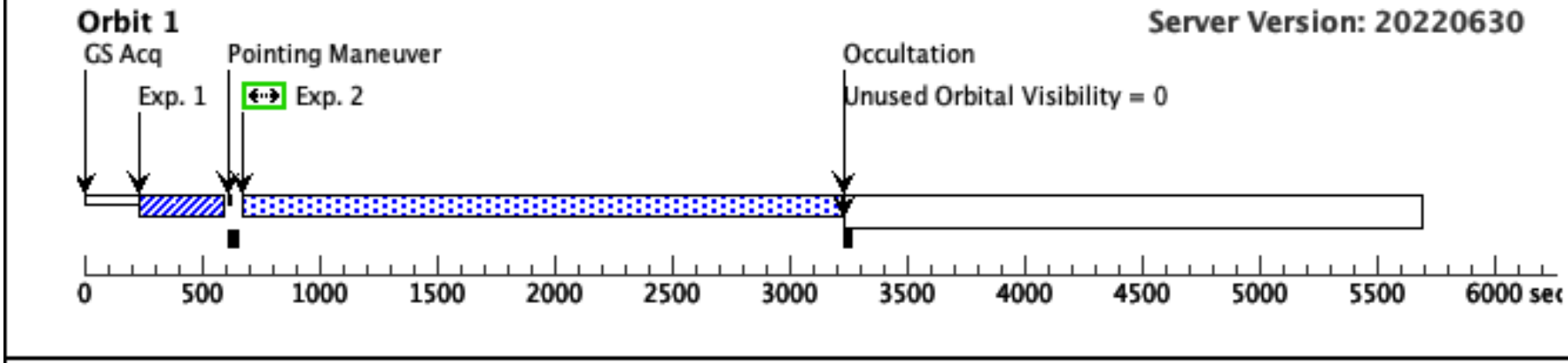
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	J133126	RA: 13 31 26.8799 (202.8619996d)		V=17.29	Reference Frame: ICRS
		Dec: +41 51 48.24 (41.86340d)		GALEX FUV = 18.04,	
		Equinox: J2000		SDSS r-band = 17.18	

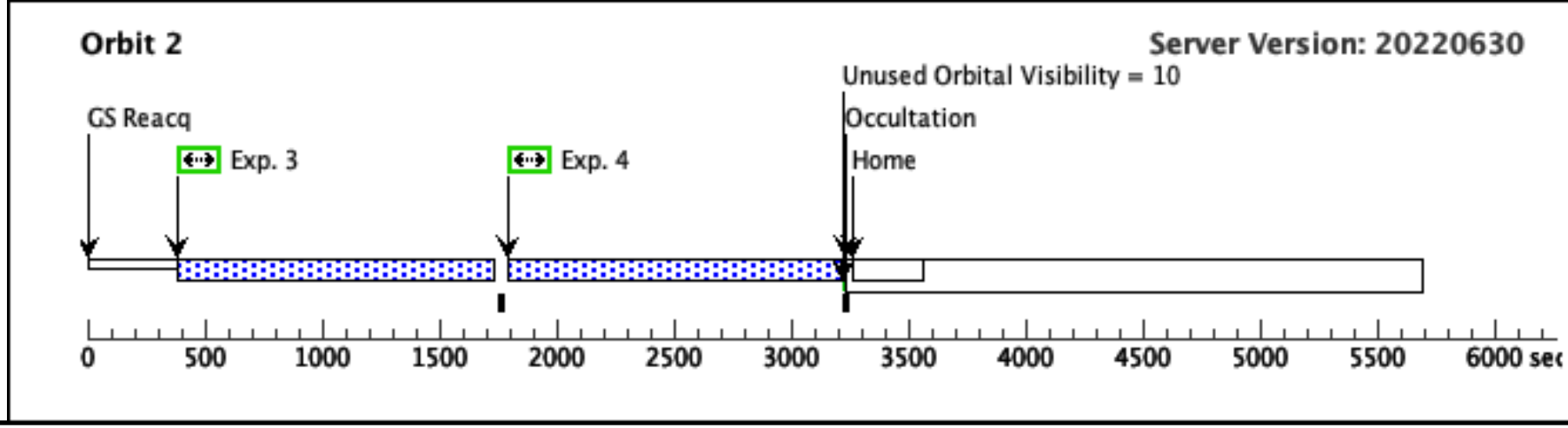
Comments:
Category=GALAXY
Description=[DWARF COMPACT, STARBURST]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525559)	(3) J133126	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				75 Secs (75 Secs) *[==>]*	***[1]***
2	G160M-2 (1523142)	(3) J133126	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=13938; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (2330 Secs) *[==>2330.0 Secs]*	***[1]***
3	G160M-3 (1523142)	(3) J133126	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=13938; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (1300 Secs) *[==>1300.0 Secs]*	***[2]***
4	G160M-3.5 (1523142)	(3) J133126	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=13938; FLASH=YES; FP-POS=1; SEGMENT=BOTH			2500 Secs (1300 Secs) *[==>1300.0 Secs]*	***[2]***

Orbit Structure





Visit

Proposal 16643, J094718-visit1 (08), failed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(G160M-1 (08.002)) Error (Form): Illegal selection: G160M.

(G160M-1 (08.002)) Error (Form): Illegal selection: PSA.

(G160M-1 (08.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (08.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (08.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (08.002)) Error (Form): YES is not a valid selection

(G160M-1 (08.002)) Error (Form): YES is not a valid selection

(G160M-2 (08.003)) Error (Form): Illegal selection: G160M.

(G160M-2 (08.003)) Error (Form): Illegal selection: PSA.

(G160M-2 (08.003)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (08.003)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (08.003)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (08.003)) Error (Form): YES is not a valid selection

(G160M-2 (08.003)) Error (Form): YES is not a valid selection

(G160M-3 (08.004)) Error (Form): Illegal selection: G160M.

(G160M-3 (08.004)) Error (Form): Illegal selection: PSA.

(G160M-3 (08.004)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (08.004)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (08.004)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (08.004)) Error (Form): YES is not a valid selection

(G160M-3 (08.004)) Error (Form): YES is not a valid selection

(J094718-visit1 (08)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-1 (08.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-2 (08.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-3 (08.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

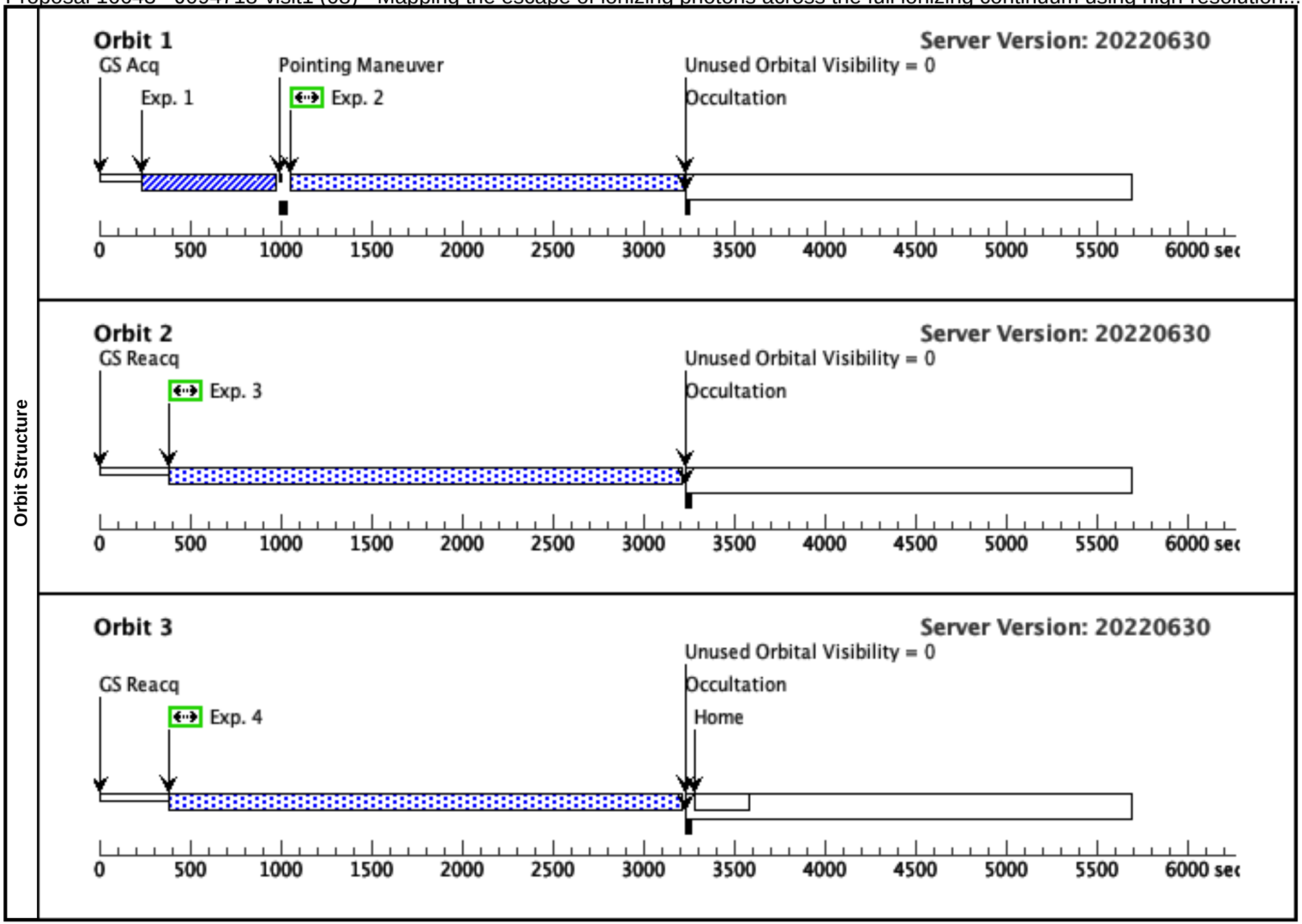
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J094718	RA: 09 47 18.2410 (146.8260042d) Dec: +41 38 16.44 (41.63790d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 19.37, SDSS r-band = 17.38	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525560)	(4) J094718	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				264 Secs (264 Secs) *[==>]*	*[1]*
2	G160M-1 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=1; SEGMENT=BOTH			2500 Secs (1952 Secs) *[==>1952.0 Secs]*	*[1]*
3	G160M-2 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=2; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	*[2]*
4	G160M-3 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	*[3]*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GS Acq
Exp. 1
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Occultation
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Orbit 2
Server Version: 20220630
GS Reacq
Exp. 3
Unused Orbital Visibility = 0
Occultation
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 3
Server Version: 20220630
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 4
Home
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec

Visit

Proposal 16643, J094718-visit2 (09), completed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 08

Diagnostics

(G160M-4 (09.002)) Error (Form): Illegal selection: G160M.

(G160M-4 (09.002)) Error (Form): Illegal selection: PSA.

(G160M-4 (09.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-4 (09.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-4 (09.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-4 (09.002)) Error (Form): YES is not a valid selection

(G160M-4 (09.002)) Error (Form): YES is not a valid selection

(G160M-5 (09.003)) Error (Form): Illegal selection: G160M.

(G160M-5 (09.003)) Error (Form): Illegal selection: PSA.

(G160M-5 (09.003)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-5 (09.003)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-5 (09.003)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-5 (09.003)) Error (Form): YES is not a valid selection

(G160M-5 (09.003)) Error (Form): YES is not a valid selection

(G160M-5.5 (09.004)) Error (Form): Illegal selection: G160M.

(G160M-5.5 (09.004)) Error (Form): Illegal selection: PSA.

(G160M-5.5 (09.004)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-5.5 (09.004)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-5.5 (09.004)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-5.5 (09.004)) Error (Form): YES is not a valid selection

(G160M-5.5 (09.004)) Error (Form): YES is not a valid selection

(J094718-visit2 (09)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-4 (09.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-5 (09.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-5.5 (09.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-0.5 (09.005)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

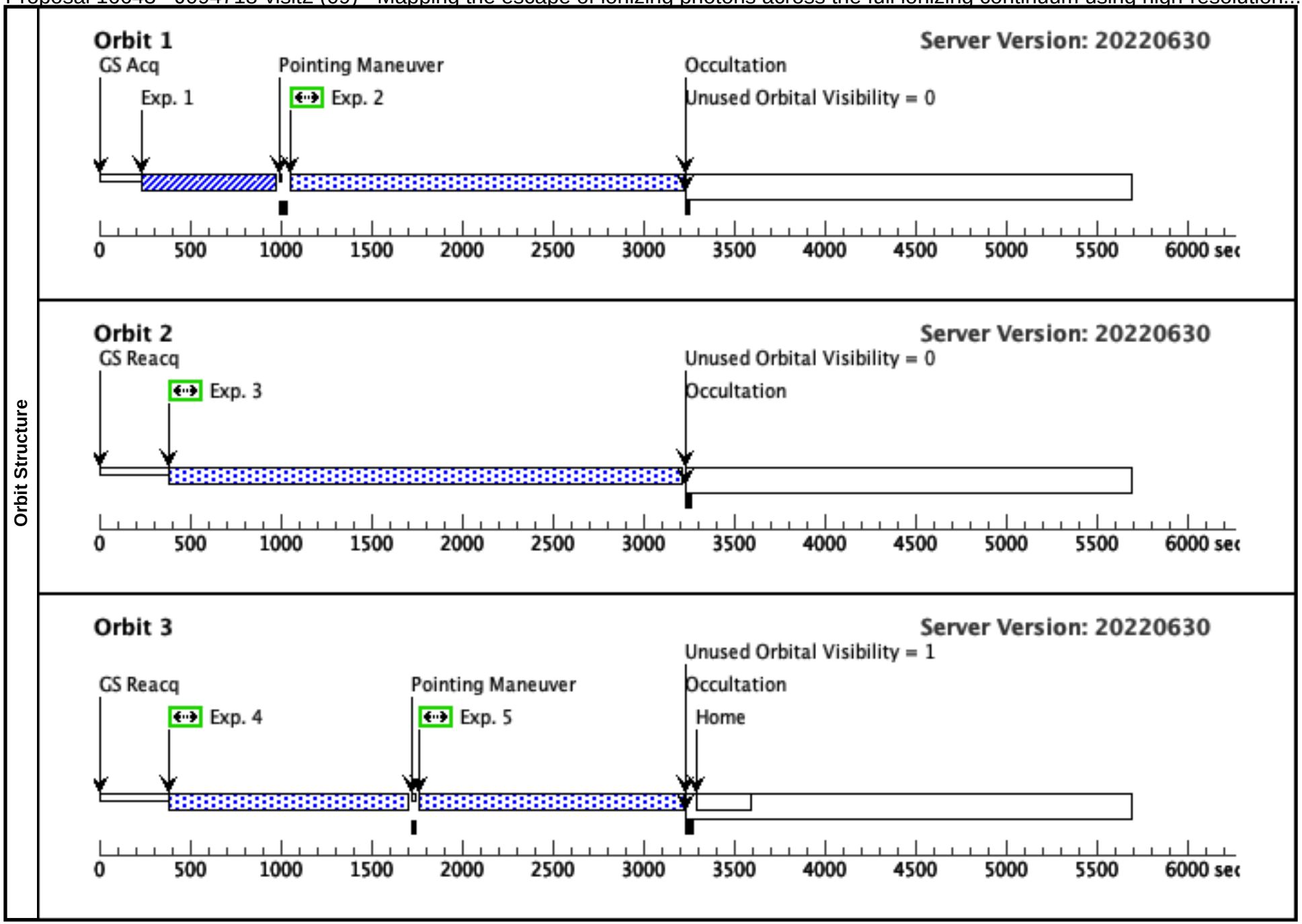
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J094718	RA: 09 47 18.2410 (146.8260042d) Dec: +41 38 16.44 (41.63790d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 19.37, SDSS r-band = 17.38	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525560)	(4) J094718	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				264 Secs (264 Secs) *[==>]*	*[1]*
2	G160M-4 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=2; SEGMENT=BOTH			2500 Secs (1952 Secs) *[==>1952.0 Secs]*	*[1]*
3	G160M-5 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	*[2]*
4	G160M-5.5 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=4; SEGMENT=BOTH			1300 Secs (1270 Secs) *[==>1270.0 Secs]*	*[3]*
5	G130M-0.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=3; SEGMENT=BOTH			1300 Secs (1270 Secs) *[==>1270.0 Secs]*	*[3]*


Orbit Structure
Orbit 1
Server Version: 20220630
GS Acq
Exp. 1
Pointing Maneuver
Exp. 2
Occultation
Unused Orbital Visibility = 0
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 2
Server Version: 20220630
GS Reacq
Exp. 3
Unused Orbital Visibility = 0
Occultation
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 3
Server Version: 20220630
Unused Orbital Visibility = 1
GS Reacq
Exp. 4
Pointing Maneuver
Exp. 5
Occultation
Home
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec

Visit

Proposal 16643, J094718-visit3 (10), failed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 08

Diagnostics

(J094718-visit3 (10)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G130M-1.5 (10.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-2.5 (10.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-3.5 (10.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

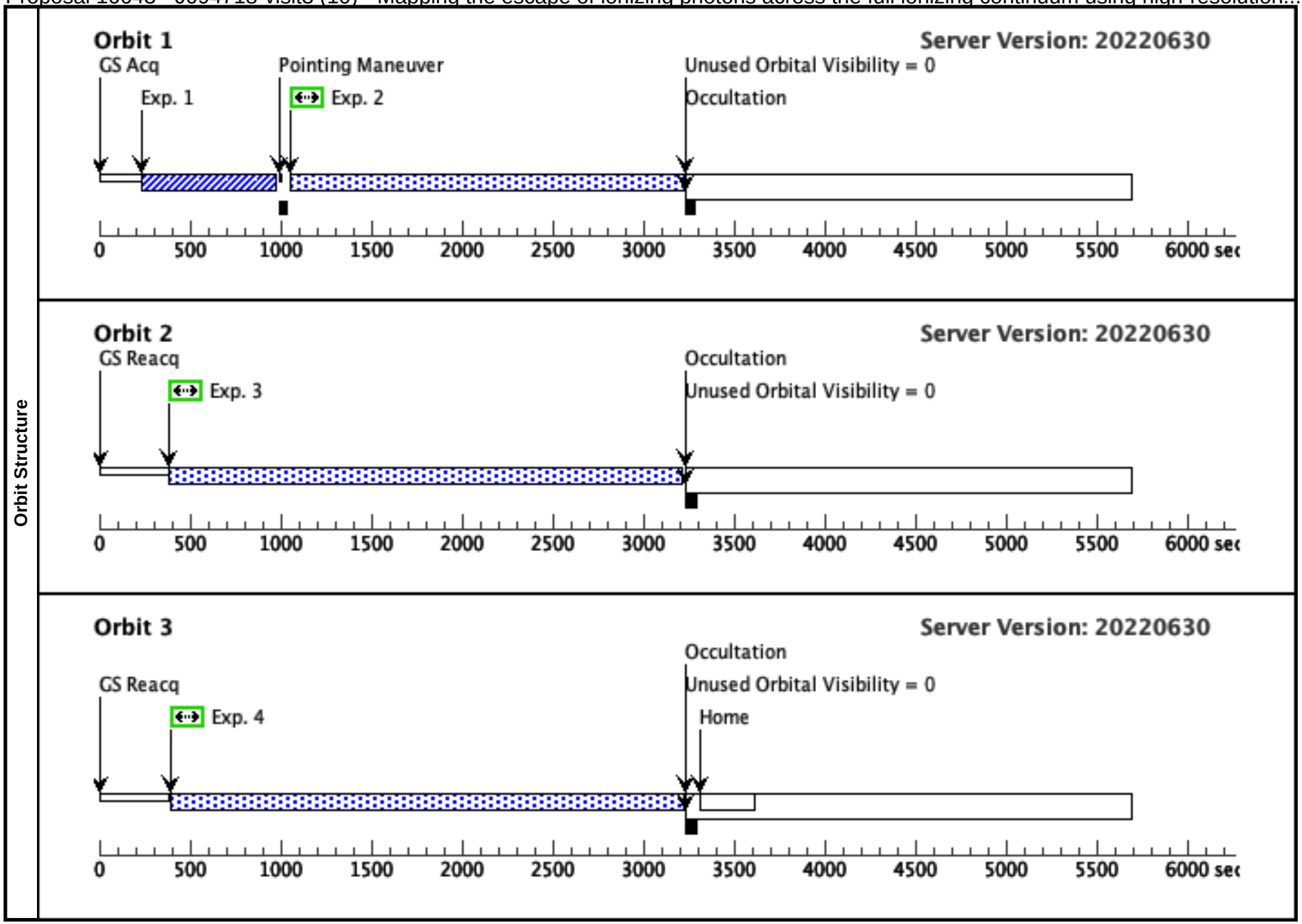
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J094718	RA: 09 47 18.2410 (146.8260042d) Dec: +41 38 16.44 (41.63790d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 19.37, SDSS r-band = 17.38	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525560)	(4) J094718	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				264 Secs (264 Secs) *[==>]*	***[1]***
2	G130M-1.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (2004 Secs) *[==>2004.0 Secs]*	***[1]***
3	G130M-2.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	***[2]***
4	G130M-3.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	***[3]***


Orbit Structure
Orbit 1
Server Version: 20220630
GS Acq
Exp. 1
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 2
Server Version: 20220630
GS Reacq
Exp. 3
Occultation
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec
Orbit 3
Server Version: 20220630
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16643, J094718-visit3 (Z0), scheduling Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 08

Comments: This is a duplicate of failed visit 10. This HOPR is to repeat 3 orbits from failed visit 10

Diagnostics

(J094718-visit3 (Z0)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G130M-1.5 (Z0.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-2.5 (Z0.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-3.5 (Z0.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

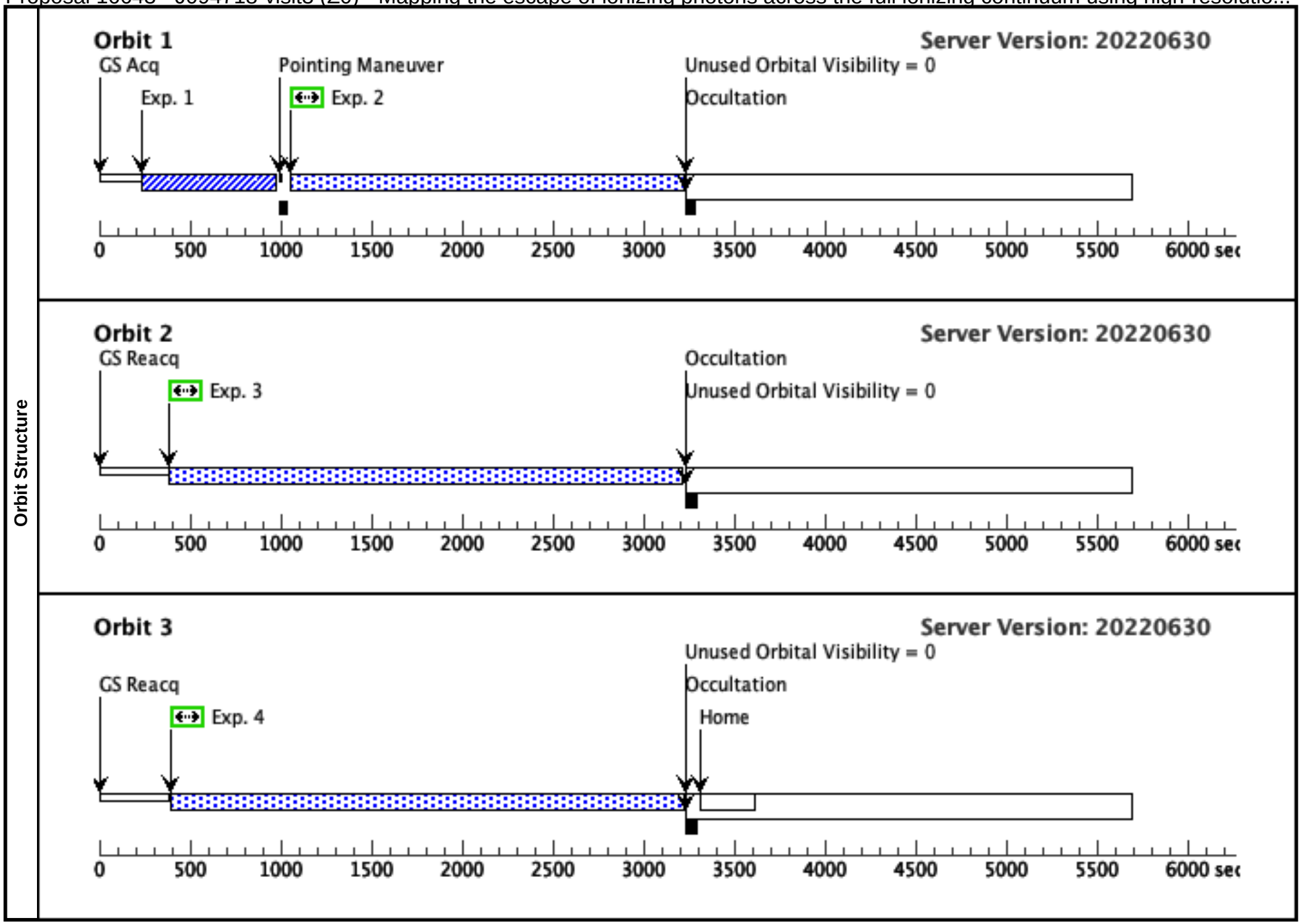
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J094718	RA: 09 47 18.2410 (146.8260042d) Dec: +41 38 16.44 (41.63790d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 19.37, SDSS r-band = 17.38	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525560)	(4) J094718	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				264 Secs (264 Secs) *[==>]*	***[1]***
2	G130M-1.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=3; SEGMENT=BOTH			2500 Secs (2004 Secs) *[==>2004.0 Secs]*	***[1]***
3	G130M-2.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	***[2]***
4	G130M-3.5 (1523176)	(4) J094718	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5400; FLASH=YES; FP-POS=4; SEGMENT=BOTH			2500 Secs (2782 Secs) *[==>2782.0 Secs]*	***[3]***


Orbit Structure
Orbit 1
Server Version: 20220630
GS Acq
Exp. 1
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Occultation
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 2
Server Version: 20220630
GS Reacq
Exp. 3
Occultation
Unused Orbital Visibility = 0
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 3
Server Version: 20220630
Unused Orbital Visibility = 0
GS Reacq
Exp. 4
Occultation
Home
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec

Visit

Proposal 16643, J094718-visit3 (Z8), scheduling Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: SAME ORIENT AS 08

Comments: This HOPR grants the repeat of the second orbit for failed visit 08. This visit should only total 1 orbit.

Diagnostics

(J094718-visit3 (Z8)) Warning (Form): A target acquisition should probably be performed before doing spectroscopy or coronography with STIS or COS.

(J094718-visit3 (Z8)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-2 (Z8.001)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

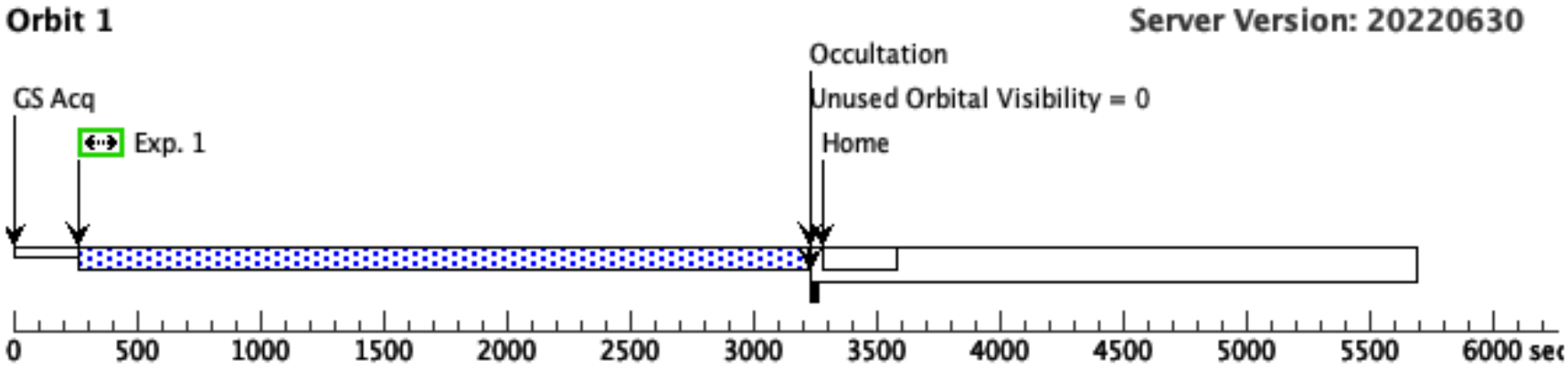
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J094718	RA: 09 47 18.2410 (146.8260042d) Dec: +41 38 16.44 (41.63790d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 19.37, SDSS r-band = 17.38	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G160M-2 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FP-POS=2; SEGMENT=BOTH			2500 Secs (2779 Secs) *[==>2779.0 Secs]*	*[1]*

Orbit Structure



Visit

Proposal 16643, J094718-visit4 (14), completed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 08

Diagnostics

(G160M-6.5 (14.002)) Error (Form): Illegal selection: G160M.

(G160M-6.5 (14.002)) Error (Form): Illegal selection: PSA.

(G160M-6.5 (14.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-6.5 (14.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-6.5 (14.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-6.5 (14.002)) Error (Form): YES is not a valid selection

(G160M-6.5 (14.002)) Error (Form): YES is not a valid selection

(J094718-visit4 (14)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-6.5 (14.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

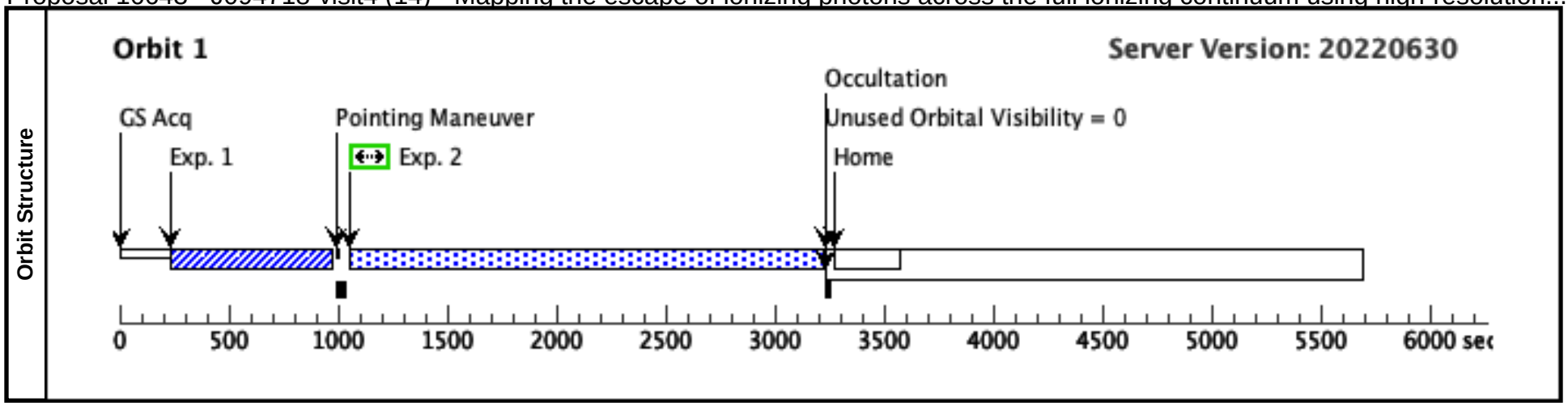
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	J094718	RA: 09 47 18.2410 (146.8260042d) Dec: +41 38 16.44 (41.63790d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 19.37, SDSS r-band = 17.38	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525560)	(4) J094718	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				264 Secs (264 Secs) *[==>]*	*[1]*
2	G160M-6.5 (1523474)	(4) J094718	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=19641; FLASH=YES; FP-POS=1; SEGMENT=BOTH			2500 Secs (1952 Secs) *[==>1952.0 Secs]*	*[1]*


Orbit Structure
Orbit 1
Server Version: 20220630
Occultation
GS Acq
Pointing Maneuver
Unused Orbital Visibility = 0
Exp. 1
Exp. 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16643, J082555-visit1 (12), completed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: (none)

Diagnostics

(G160M-1 (12.002)) Error (Form): Illegal selection: G160M.

(G160M-1 (12.002)) Error (Form): Illegal selection: PSA.

(G160M-1 (12.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (12.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (12.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (12.002)) Error (Form): YES is not a valid selection

(G160M-1 (12.002)) Error (Form): YES is not a valid selection

(G160M-2 (12.003)) Error (Form): Illegal selection: G160M.

(G160M-2 (12.003)) Error (Form): Illegal selection: PSA.

(G160M-2 (12.003)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (12.003)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (12.003)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-2 (12.003)) Error (Form): YES is not a valid selection

(G160M-2 (12.003)) Error (Form): YES is not a valid selection

(G160M-3 (12.004)) Error (Form): Illegal selection: G160M.

(G160M-3 (12.004)) Error (Form): Illegal selection: PSA.

(G160M-3 (12.004)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (12.004)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (12.004)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-3 (12.004)) Error (Form): YES is not a valid selection

(G160M-3 (12.004)) Error (Form): YES is not a valid selection

(J082555-visit1 (12)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-1 (12.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-2 (12.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G160M-3 (12.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

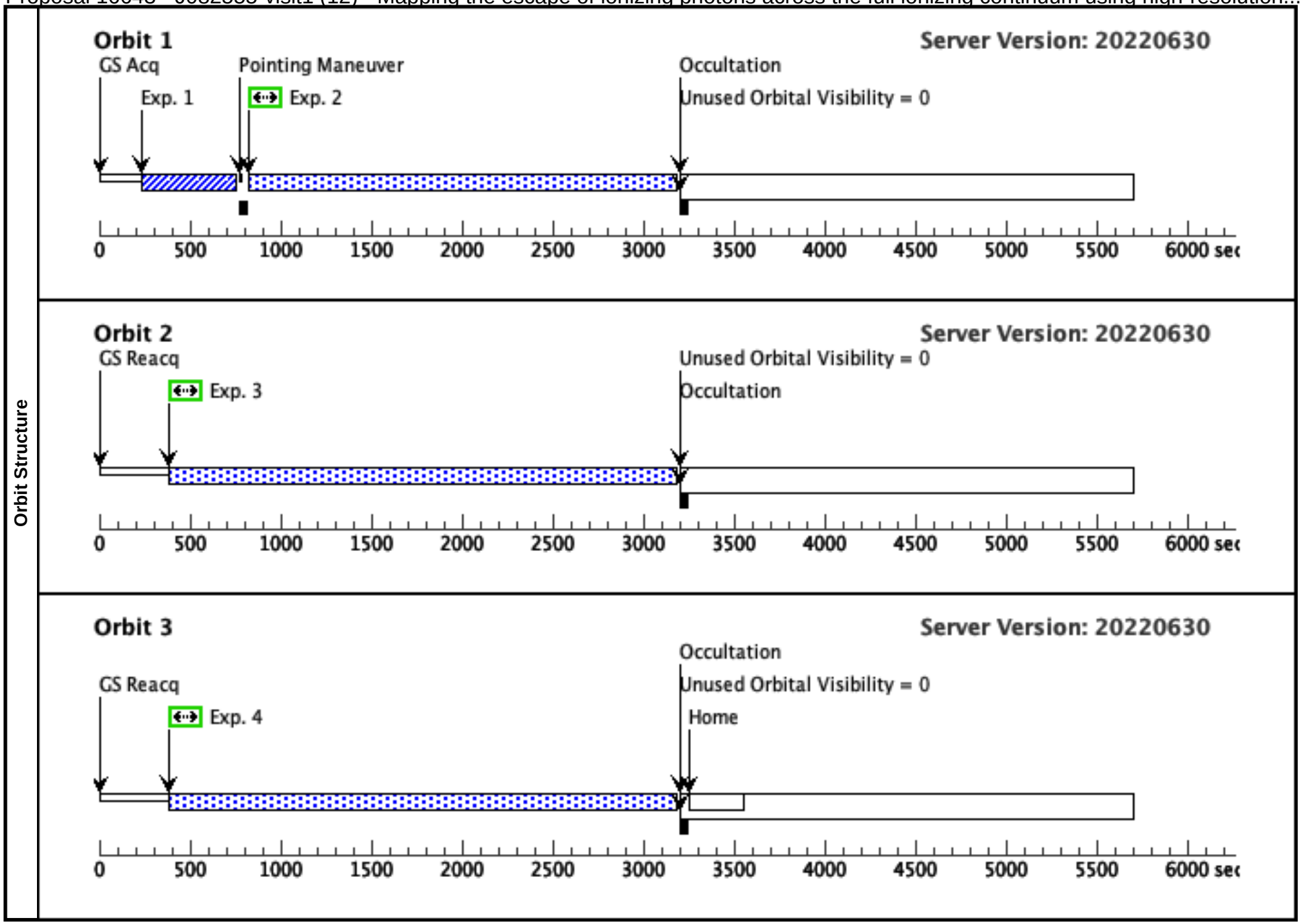
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	J082555	RA: 08 25 55.5207 (126.4813362d) Dec: +35 32 31.96 (35.54221d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 18.80, SDSS r-band = 17.70	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT, STAR FORMING REGION]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525561)	(5) J082555	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				152 Secs (152 Secs) *[==>]*	***[1]***
2	G160M-1 (1523449)	(5) J082555	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=9200; FLASH=YES; SEGMENT=BOTH; FP-POS=1			2400 Secs (2141 Secs) *[==>2141.0 Secs]*	***[1]***
3	G160M-2 (1523449)	(5) J082555	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=9200; FLASH=YES; SEGMENT=BOTH; FP-POS=2			2400 Secs (2744 Secs) *[==>2744.0 Secs]*	***[2]***
4	G160M-3 (1523449)	(5) J082555	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=9200; FLASH=YES; SEGMENT=BOTH; FP-POS=3			2400 Secs (2744 Secs) *[==>2744.0 Secs]*	***[3]***


Orbit Structure
Orbit 1
Server Version: 20220630
GS Acq
Exp. 1
Pointing Maneuver
Exp. 2
Occultation
Unused Orbital Visibility = 0
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 2
Server Version: 20220630
GS Reacq
Exp. 3
Unused Orbital Visibility = 0
Occultation
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec
Orbit 3
Server Version: 20220630
Occultation
GS Reacq
Unused Orbital Visibility = 0
Exp. 4
Home
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec

Visit

Proposal 16643, J082555-visit2 (13), completed Tue Jan 24 20:00:28 GMT 2023

Diagnostic Status: Error

Scientific Instruments: COS/FUV, COS/NUV

Special Requirements: SAME ORIENT AS 12

Diagnostics

(G160M-1 (13.002)) Error (Form): Illegal selection: G160M.

(G160M-1 (13.002)) Error (Form): Illegal selection: PSA.

(G160M-1 (13.002)) Error (Form): This attribute cannot have this value due to other choices: Aperture=PSA.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (13.002)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=FLASH=YES.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (13.002)) Error (Form): This attribute cannot have this value due to other choices: Spectral_Element=G160M.
FLASH=NO is the only permitted value for G160M PSA exposures (implied LIFETIME-POS LP6).

(G160M-1 (13.002)) Error (Form): YES is not a valid selection

(G160M-1 (13.002)) Error (Form): YES is not a valid selection

(J082555-visit2 (13)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions when observing at a given COS cenwave. See the COS Instrument Handbook for exceptions that may apply to observations with G130M/1291 or G160M.

(G160M-1 (13.002)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-1 (13.003)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

(G130M-2 (13.004)) Warning (Form): COS FUV PSA science exposures with extended targets have special calibration limitations. See "Errors and Warnings" for more details.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	J082555	RA: 08 25 55.5207 (126.4813362d) Dec: +35 32 31.96 (35.54221d) Equinox: J2000	Redshift: 0.005	V=17.57 GALEX FUV = 18.80, SDSS r-band = 17.70	Reference Frame: ICRS

Comments:
Category=GALAXY
Description=[DWARF COMPACT, STAR FORMING REGION]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ-IMG (1525561)	(5) J082555	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				152 Secs (152 Secs) *[==>]*	***[1]***
2	G160M-1 (1523449)	(5) J082555	COS/FUV, TIME-TAG, PSA	G160M 1611 A	BUFFER-TIME=9200; FLASH=YES; SEGMENT=BOTH; FP-POS=4			2400 Secs (2141 Secs) *[==>2141.0 Secs]*	***[1]***
3	G130M-1 (1523452)	(5) J082555	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5131; FLASH=YES; SEGMENT=BOTH; FP-POS=3			2400 Secs (2742 Secs) *[==>2742.0 Secs]*	***[2]***
4	G130M-2 (1523452)	(5) J082555	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=5131; FLASH=YES; SEGMENT=BOTH; FP-POS=4			2400 Secs (2744 Secs) *[==>2744.0 Secs]*	***[3]***

Orbit Structure