16702 - Cross-calibration of HST, Euclid and Roman grism/prism through WFC3-IR faint spectrophotometric white dwarf standards near the North and South Ecliptic Poles

Cycle: 29, Proposal Category: GO

(Availability Mode: SUPPORTED)

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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) WDJ040027.30-502542.04	WFC3/IR	3	14-Sep-2022 12:03:46.0	yes
02	(2) WDJ181144.96+654916.42	WFC3/IR	2	14-Sep-2022 12:03:49.0	yes
04	(4) WDJ174911.78+643533.54	WFC3/IR	1	14-Sep-2022 12:03:50.0	yes
06	(5) WDJ041345.06-473726.29	WFC3/IR	1	14-Sep-2022 12:03:52.0	yes
05	(6) WDJ042211.36-474142.02	WFC3/IR	1	14-Sep-2022 12:03:53.0	yes
07	(7) GD153	WFC3/IR	1	14-Sep-2022 12:03:55.0	yes
09	(3) WDJ175318.65+644502.15	WFC3/IR	1	14-Sep-2022 12:03:56.0	yes
59	(3) WDJ175318.65+644502.15	WFC3/IR	1	14-Sep-2022 12:03:57.0	yes
10	(3) WDJ175318.65+644502.15	WFC3/IR	1	14-Sep-2022 12:03:58.0	yes

12 Total Orbits Used

ABSTRACT

One of the most exciting results in modern cosmology has been the discovery of the accelerated expansion of the Universe. It could be due to an unknown energy component (i.e., dark energy) or the modification of general relativity. In order to illuminate the unknown nature of the observed cosmic acceleration, ESA's Euclid and NASA's Roman Space Telescopes will be launched in 2022 and ~2026 respectively. They will complement each other in probing cosmic acceleration with high precision and accuracy, and need tight requirements on spectrophotometry to unprecedented accuracy. Accurate absolute spectrophotometry is vital to determine the fraction of baryonic matter turned into stars, for galaxy and supernovae surveys, and to enable legacy science. Extreme care must be taken to control systematic errors and biases. We propose to establish six hot White Dwarfs as stable, spectrophotometric IR standards for use by Euclid and Roman. The targets are suitable for spectrophotometry with the WFC3-IR grisms, and chosen to lie near both ecliptic poles within the Euclid and Roman CVZ. This allows for year-round accessibility. The stars lie within two planned, frequently repeated, Euclid deep fields, and in a likely location to be observed by Roman for calibration purposes. Although not formally an HST calibration proposal, our 11-orbit program will be vital in tying Euclid/Roman deep field spectra of faint galaxies to well-calibrated HST standards. It will also cross-calibrate the spectrophometry to broad-band IR colors of these faint high ecliptic-latitude sources. This proposed program is of critical importance to the successful calibration of both Euclid and Roman.

OBSERVING DESCRIPTION

WFC3/IR grism observations with G102 and G141 will cover the 0.8 - 1.7 micronm range with resolutions R = 200 and 150, respectively (Bohlin & Deustua 2019). Table 1 lists the six targets, Pan-STARRS r-band magnitude, the grism exposure times for S/N = 120 per resolution element, and the associated number of orbits. Grism exposure times were computed using the WFC3 Grism ETC with the default background values and aperture, using the CALSPEC standard WD1327-083 stiswfc 002.fits as the spectral template, normalized to the r-band AB magnitude of each target, and a desired S/N = 100 at 1.0 micron for G102 and 1.3 micron for G141. The resulting exposures times range from 151s to 2556s in G102, and from 135s to 2586s in G141 and are listed in the table

Filter exposure time calculations were made using the IR imaging ETC with default background values and apertures, using the CALSPEC standard WD1327-083 stiswfc 002.fits as the template, normalized to the targets r-band magnitude, for S/N = 100. Exposure times are less than 70s in F160W, less than 17s in F110W and less than 38s in F098M. Imaging exposures will be acquired using a 3 point dither pattern to mitigate detector effects.
The orbit number per target includes the on-target grism exposures as well as direct imaging in filters F098M, F110W and F160W. Acquisition overheads, filter wheel changes and readout time are included in the orbit estimates, for total of 11 orbits.
The roll angles will be chosen such that no spectra contamination occurs from neigh- boring sources.
GD153 observations will be scheduled in time between the northern and southern star visits to guarantee a contemporaneous reference star that is on the CALSPEC calibration system..

Visit

Proposal 16702, J040027 (01), completed Wed Sep 14 16:03:58 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: ORIENT 22D TO 41 D; ORIENT 135D TO 186 D; ORIENT 215D TO 270 D; ORIENT 315D TO 2 D; ORIENT 55D TO 95 D

Comments: objects in field
BEST ORIENTS at 345 degrees
Others that are also quite good are at 71 degrees or 159 degrees
OK Orients are between 315 and 2 degrees , and 55 and 95, and 135 to 186
less preferred is 22 to 41

Fixed Targets

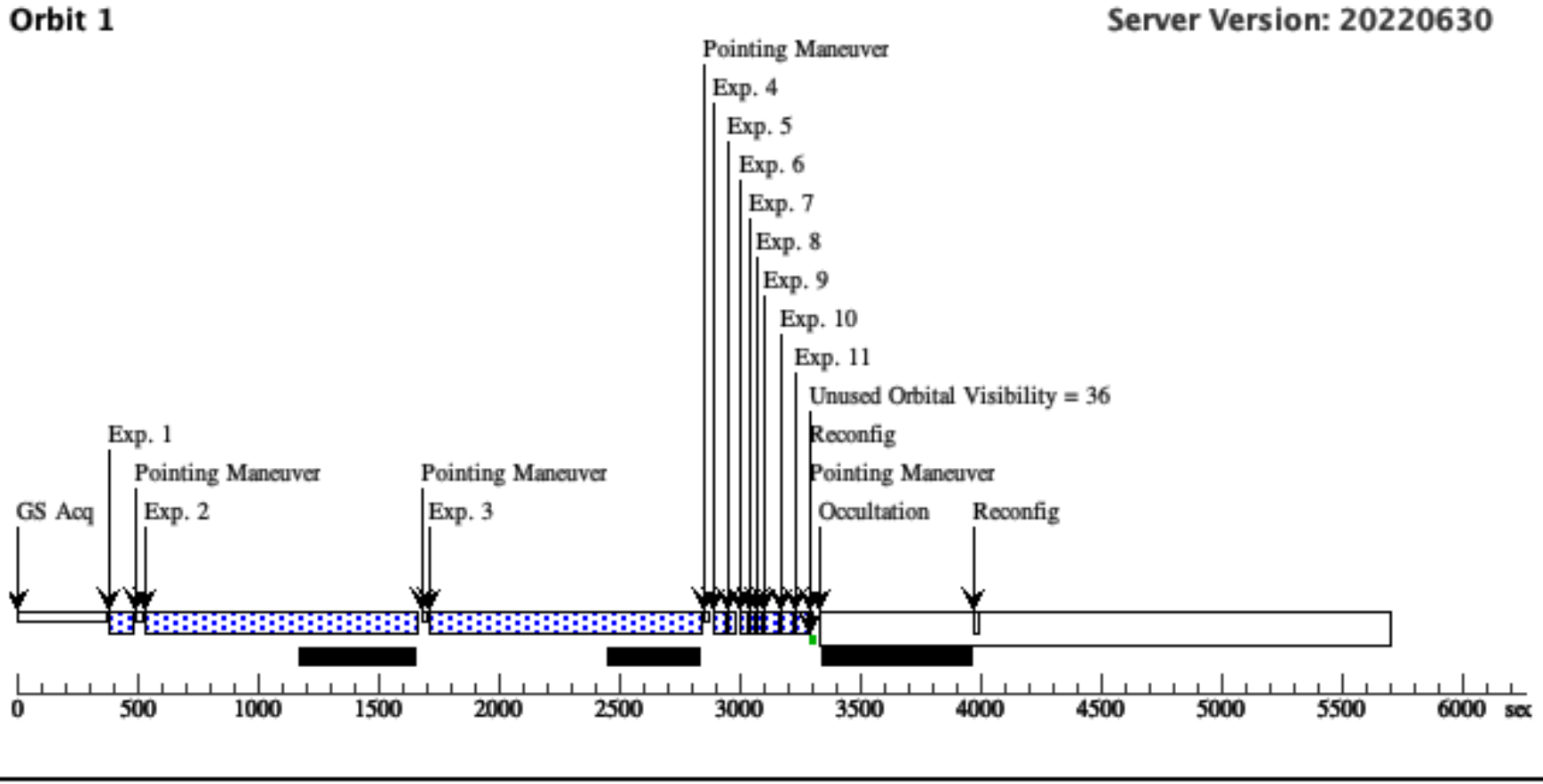
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	WDJ040027.30-502542.04	RA: 04 00 27.3000 (60.1137500d) Dec: -50 25 42.04 (-50.42834d) Equinox: J2000	Proper Motion RA: 15.778 mas/yr Proper Motion Dec: 20.87 mas/yr Epoch of Position: 2000	V=(?) 17.927Rpmag	Reference Frame: ICRS

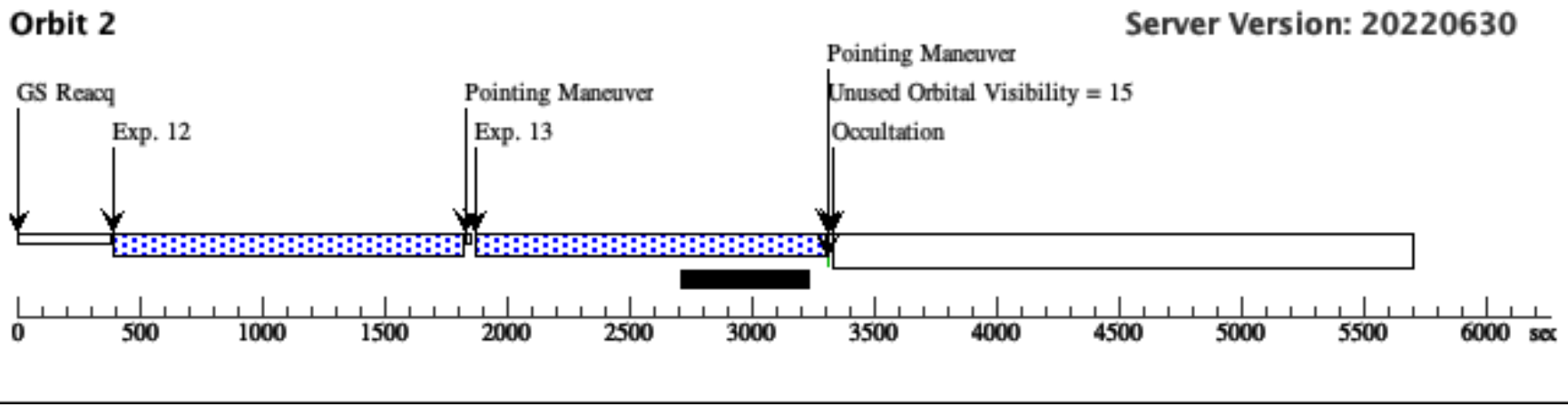
Comments:
Category=STAR
Description=[WDO]
Extended=NO

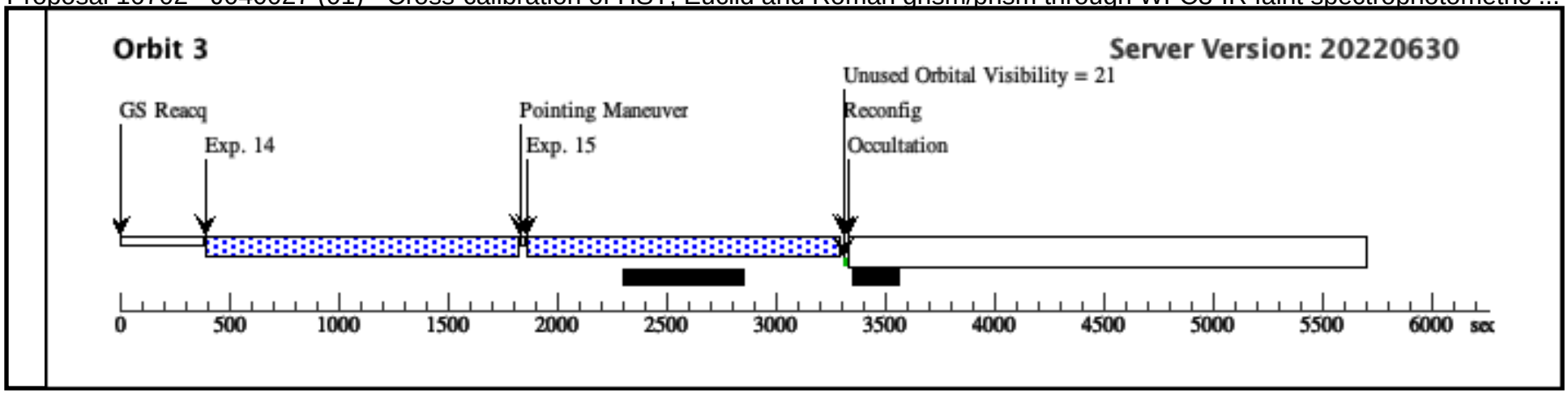
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	f098-full	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	F098M	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 0,null		72.943085 Secs (72.943 Secs) *[==>]*	***[1]***
2	g141	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=12; SAMP-SEQ=SPARS100	POS TARG 0,-30		1102.935844 Secs (1102.936 Secs) *[==>]*	***[1]***
3	g102	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=12; SAMP-SEQ=SPARS100	POS TARG 0,-20		1102.935844 Secs (1102.936 Secs) *[==>]*	***[1]***
4	f098	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=9; SAMP-SEQ=SPARS5			24.225083 Secs (24.225 Secs) *[==>]*	***[1]***
5	f098	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=9; SAMP-SEQ=SPARS5			24.225083 Secs (24.225 Secs) *[==>]*	***[1]***
6	f110	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID			12.795405 Secs (12.795 Secs) *[==>]*	***[1]***
7	f110	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID			12.795405 Secs (12.795 Secs) *[==>]*	***[1]***
8	f110	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID			12.795405 Secs (12.795 Secs) *[==>]*	***[1]***
9	f160	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5			41.754125 Secs (41.754 Secs) *[==>]*	***[1]***
10	f160	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5			41.754125 Secs (41.754 Secs) *[==>]*	***[1]***
11	f160-sub512	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5			41.754125 Secs (41.754 Secs) *[==>]*	***[1]***
12	g141	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=SPARS100	POS TARG 0,-10		1402.936813 Secs (1402.937 Secs) *[==>]*	***[2]***
13	g141	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=SPARS100	POS TARG 0,10		1402.936813 Secs (1402.937 Secs) *[==>]*	***[2]***
14	g102	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=15; SAMP-SEQ=SPARS100	POS TARG 0,20		1402.936813 Secs (1402.937 Secs) *[==>]*	***[3]***
15	g102	(1) WDJ040027.30-502542.04	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=15; SAMP-SEQ=SPARS100	POS TARG 0,30		1402.936813 Secs (1402.937 Secs) *[==>]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20220630
Unused Orbital Visibility = 21
GS Reacq
Exp. 14
Pointing Maneuver
Exp. 15
Reconfig
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16702, J181144 (02), completed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Comments: All orients acceptable

Fixed Targets

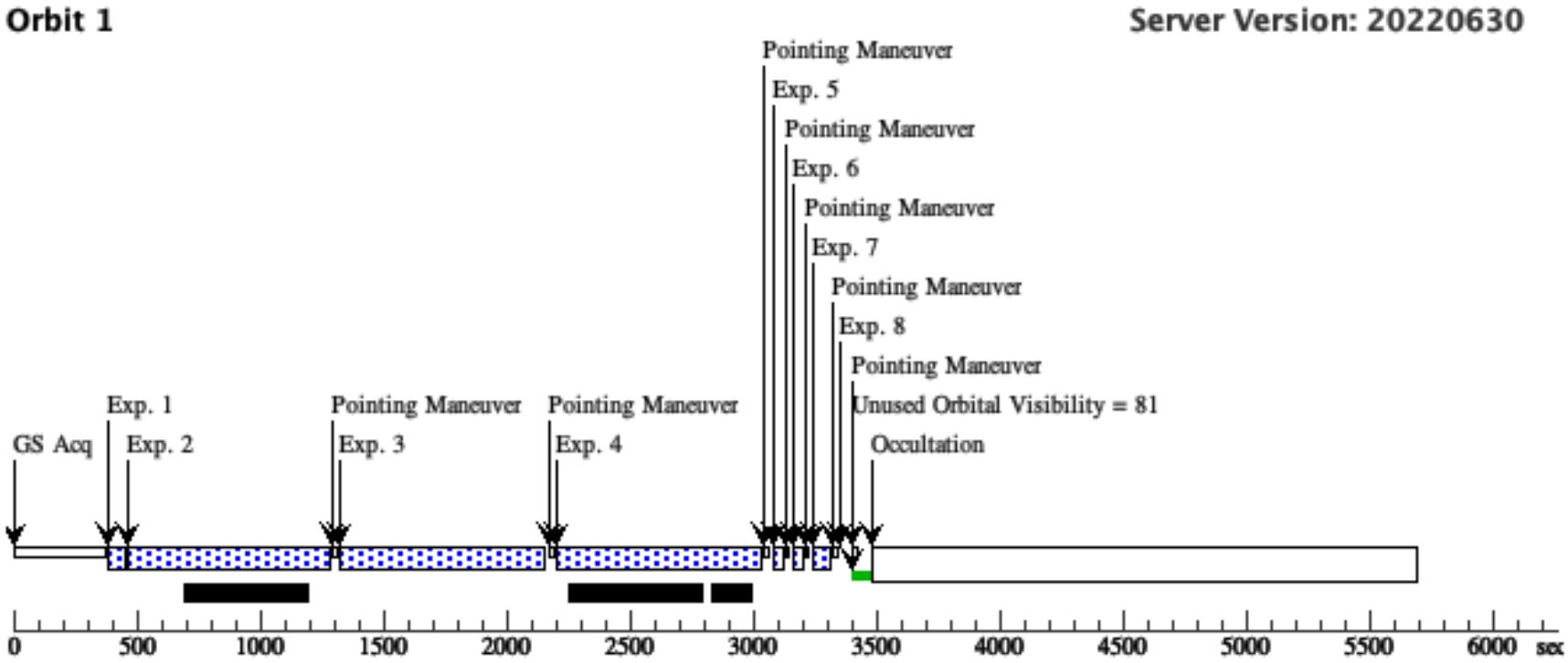
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	WDJ181144.96+654916.42	RA: 18 11 44.9600 (272.9373333d) Dec: +65 49 16.42 (65.82123d) Equinox: J2000	Proper Motion RA: -3.997 mas/yr Proper Motion Dec: -57.103 mas/yr Epoch of Position: 2000	V=(?) 17.655Rpmag	Reference Frame: ICRS

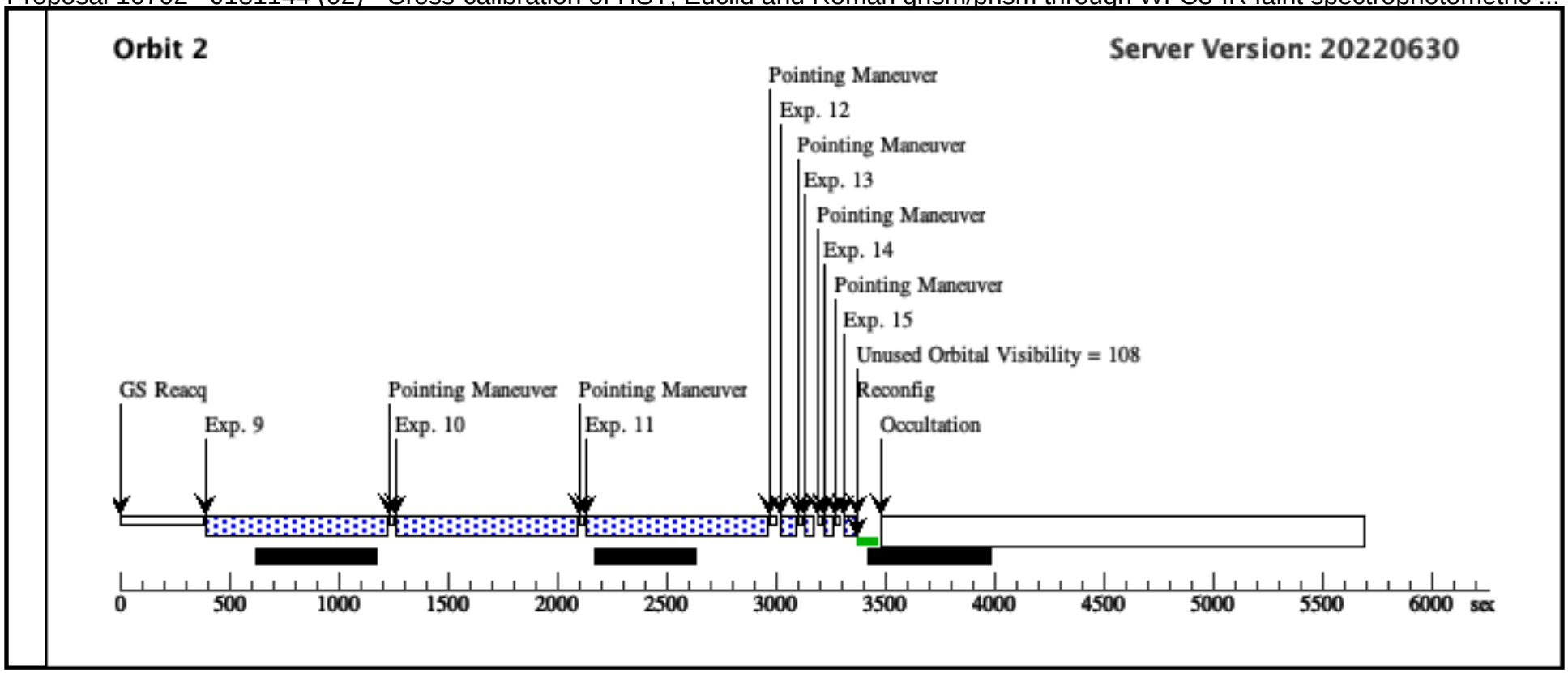
Comments:
Category=STAR
Description=[WDO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	f098-grism	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	F098M	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 0,-10		43.984365 Secs (43.984 Secs)	
								[==>]	***[1]***
2	g141	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=14; SAMP-SEQ=STEP100	POS TARG 0,-10		799.232938 Secs (799.233 Secs)	
								[==>]	***[1]***
3	g141	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=14; SAMP-SEQ=STEP100	POS TARG 0,-20		799.232938 Secs (799.233 Secs)	
								[==>]	***[1]***
4	g102	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=14; SAMP-SEQ=STEP100	POS TARG 0,-30		799.232938 Secs (799.233 Secs)	
								[==>]	***[1]***
5	f110w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 5,0		12.795405 Secs (12.795 Secs)	
								[==>]	***[1]***
6	f160w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 0,5		12.795405 Secs (12.795 Secs)	
								[==>]	***[1]***
7	f160w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 5,5		41.754125 Secs (41.754 Secs)	
								[==>]	***[1]***
8	f110w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 5,-5		12.795405 Secs (12.795 Secs)	
								[==>]	***[1]***
9	g102	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=14; SAMP-SEQ=STEP100	POS TARG 0,10		799.232938 Secs (799.233 Secs)	
								[==>]	***[2]***
10	g102	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=14; SAMP-SEQ=STEP100	POS TARG 0,20		799.232938 Secs (799.233 Secs)	
								[==>]	***[2]***
11	g141	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=14; SAMP-SEQ=STEP100	POS TARG 0,30		799.232938 Secs (799.233 Secs)	
								[==>]	***[2]***
12	f160w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG -10,-10		41.754125 Secs (41.754 Secs)	
								[==>]	***[2]***
13	f110w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -10,7		12.795405 Secs (12.795 Secs)	
								[==>]	***[2]***
14	f110w	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 7,7		12.795405 Secs (12.795 Secs)	
								[==>]	***[2]***
15	f098m	(2) WDJ181144.96+654916.42	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=9; SAMP-SEQ=SPARS5	POS TARG 7,-10		24.225083 Secs (24.225 Secs)	
								[==>]	***[2]***

Orbit Structure

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Pointing Maneuver
Exp. 12
Pointing Maneuver
Exp. 13
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Exp. 14
Pointing Maneuver
Exp. 15
Unused Orbital Visibility = 108
GS Reacq
Exp. 9
Pointing Maneuver
Exp. 10
Pointing Maneuver
Exp. 11
Reconfig
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16702, J174911 (04), completed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: ORIENT 95D TO 164 D; ORIENT 213D TO 230 D; ORIENT 304D TO 350 D

Comments: Large galaxy and faint galaxies close to target
Best Orient 128
Second best orient is 334
95 to 164 OK
304 to 350 OK
least preferred is 213 to 230

Fixed Targets

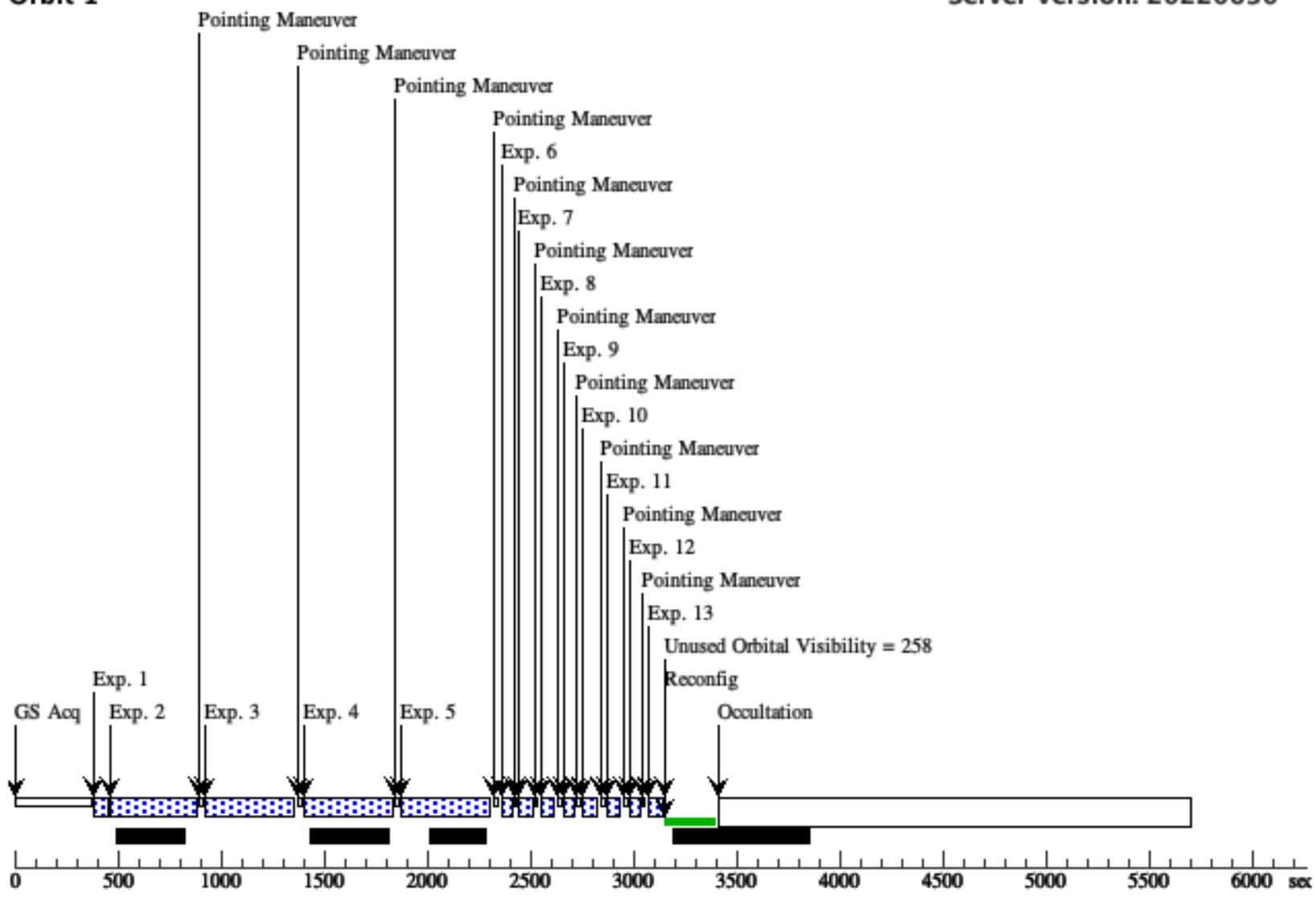
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	WDJ174911.78+643533.54	RA: 17 49 11.7800 (267.2990833d) Dec: +64 35 33.54 (64.59265d) Equinox: J2000	Proper Motion RA: 27.16 mas/yr Proper Motion Dec: -19.497 mas/yr Epoch of Position: 2000	V=(?) 16.936Rpmag	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, GRISM1024	F098M	NSAMP=13; SAMP-SEQ=RAPID	POS TARG 0,-10		38.119783 Secs (38.12 Secs) *[==>]*	*[1]*
2		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=9; SAMP-SEQ=SPARS50	POS TARG 0,-10		402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
3		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=9; SAMP-SEQ=SPARS50	POS TARG 0,0		402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
4		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=9; SAMP-SEQ=SPARS50	POS TARG 0,10		402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
5		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=9; SAMP-SEQ=SPARS50	POS TARG 0,20		402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
6		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=8; SAMP-SEQ=SPARS5	POS TARG 0,0		21.303576 Secs (21.304 Secs) *[==>]*	*[1]*
7		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 0,5		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
8		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=14; SAMP-SEQ=SPARS5	POS TARG 5,0		38.832618 Secs (38.833 Secs) *[==>]*	*[1]*
9		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=8; SAMP-SEQ=SPARS5	POS TARG -5,-5		21.303576 Secs (21.304 Secs) *[==>]*	*[1]*
10		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG -5,5		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
11		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=14; SAMP-SEQ=SPARS5	POS TARG 5,-5		38.832618 Secs (38.833 Secs) *[==>]*	*[1]*
12		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=8; SAMP-SEQ=SPARS5	POS TARG 5,5		21.303576 Secs (21.304 Secs) *[==>]*	*[1]*
13		(4) WDJ174911.78+643533.54	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 10,0		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16702, J041345 (06), completed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Comments: All orients good

Fixed Targets

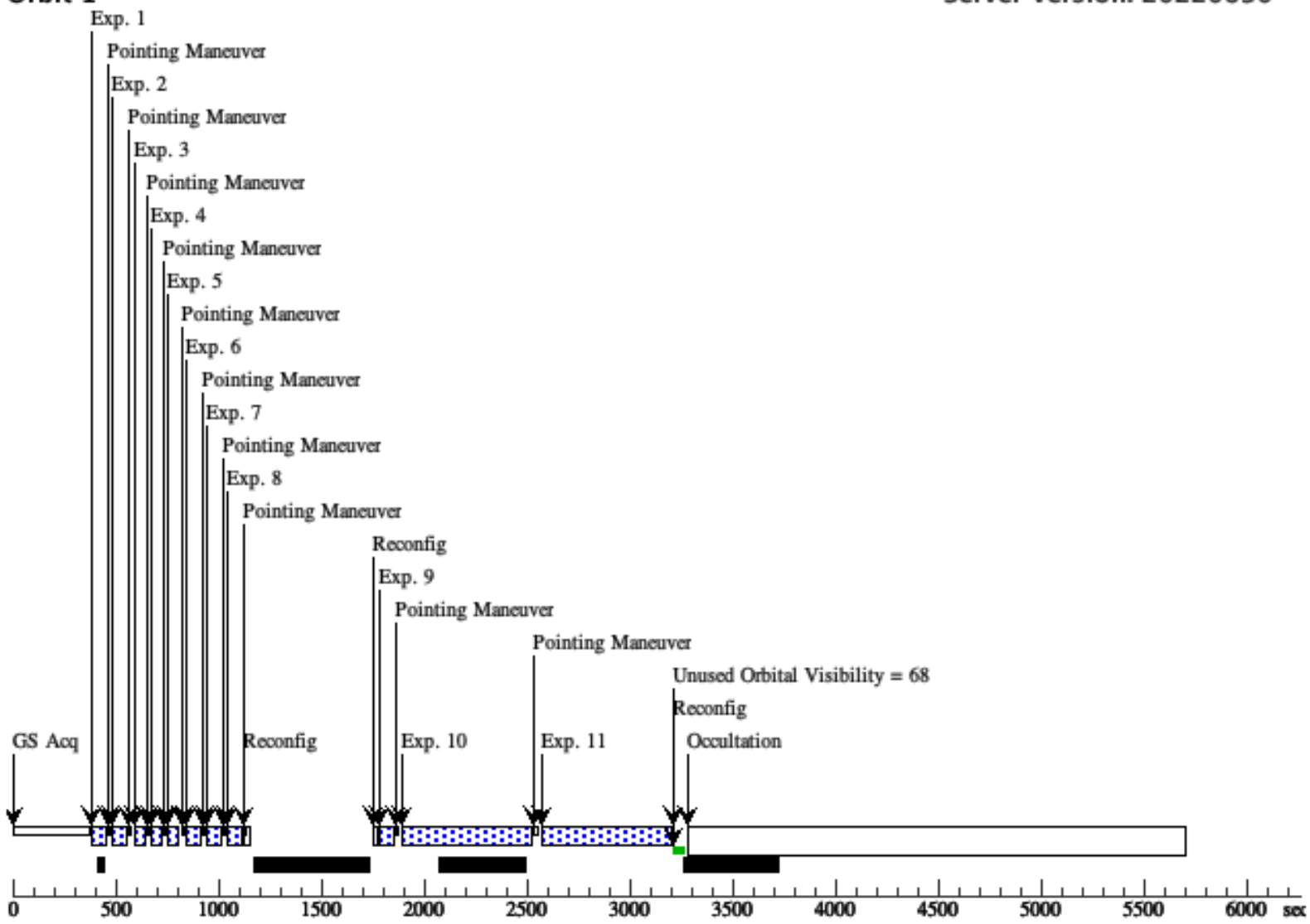
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	WDJ041345.06-473726.29	RA: 04 13 45.0600 (63.4377500d) Dec: -47 37 26.29 (-47.62397d) Equinox: J2000	Proper Motion RA: 44.266 mas/yr Proper Motion Dec: 42.224 mas/yr Epoch of Position: 2000	V=(?) 16.647Rpmag	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 1,-1		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
2		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 1,-2		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
3		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=9; SAMP-SEQ=SPARS5	POS TARG 0,0		24.225083 Secs (24.225 Secs) *[==>]*	*[1]*
4		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=9; SAMP-SEQ=SPARS5	POS TARG 0,1		24.225083 Secs (24.225 Secs) *[==>]*	*[1]*
5		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=9; SAMP-SEQ=SPARS5	POS TARG 0,2		24.225083 Secs (24.225 Secs) *[==>]*	*[1]*
6		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 1,2		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
7		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 1,1		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
8		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG 1,0		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
9		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, GRISM1024	F098M	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 1,-3		43.984365 Secs (43.984 Secs) *[==>]*	*[1]*
10		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=13; SAMP-SEQ=SPARS50			602.937703 Secs (602.938 Secs) *[==>]*	*[1]*
11		(5) WDJ041345.06-473726.29	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=13; SAMP-SEQ=SPARS50	POS TARG 0,20		602.937703 Secs (602.938 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16702, J04221 (05), completed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: ORIENT 18D TO 354 D

Comments: best orient is 315
range is between 354 and 18
avoid between 18 and 354 - there are two stars

Fixed Targets

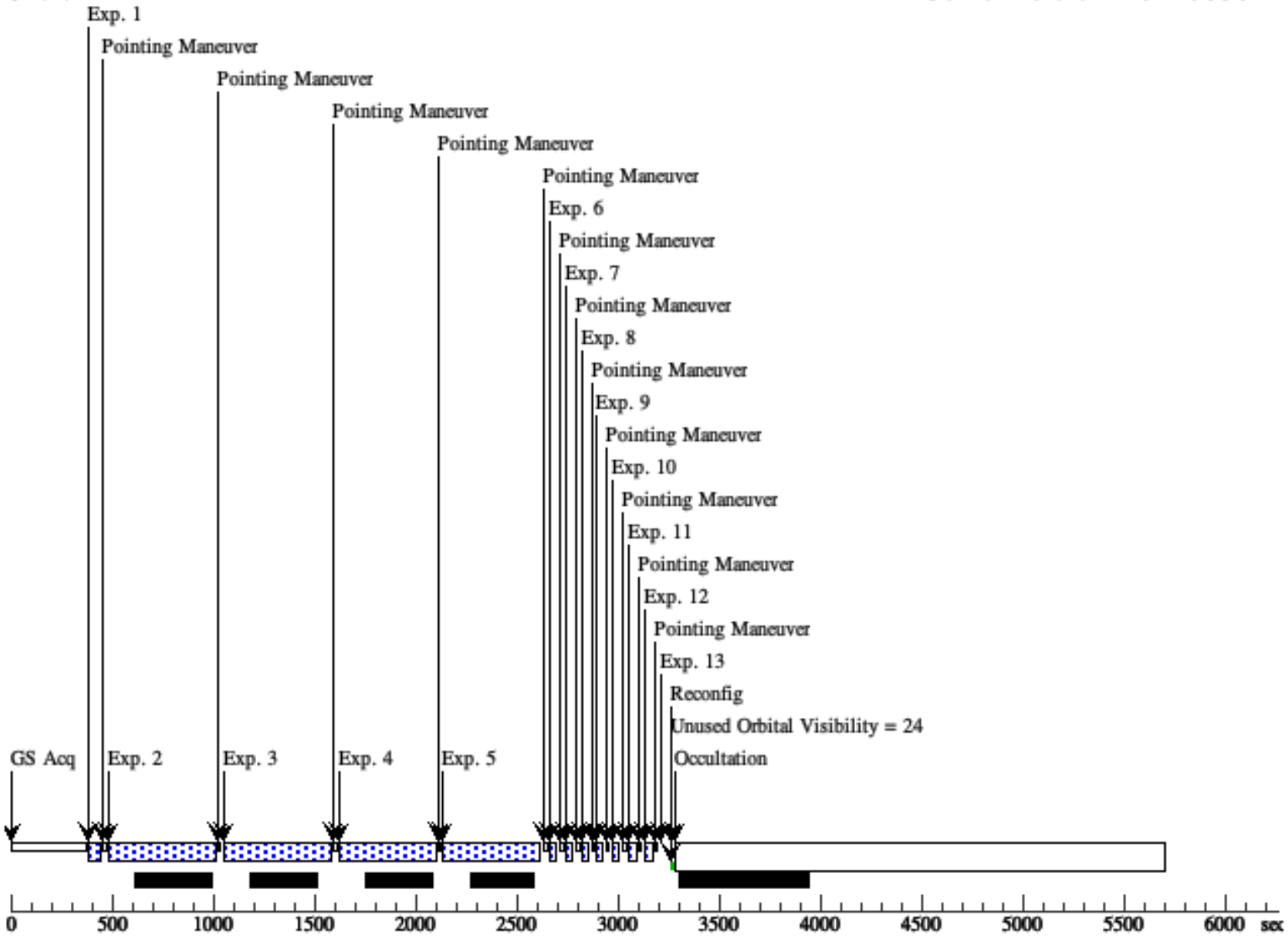
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	WDJ042211.36-474142.02	RA: 04 22 11.3600 (65.5473333d) Dec: -47 41 42.02 (-47.69501d) Equinox: J2000	Proper Motion RA: -63.645 mas/yr Proper Motion Dec: 7.982 mas/yr Epoch of Position: 2000	V=(?) 15.425Rpmag	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, GRISM1024	F098M	NSAMP=10; SAMP-SEQ=RAPID	POS TARG 0,0		29.32291 Secs (29.323 Secs)	
								[==>]	***[1]***
2		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=STEP50	POS TARG 0,-10		499.234285 Secs (499.234 Secs)	
								[==>]	***[1]***
3		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=15; SAMP-SEQ=STEP50	POS TARG 0,-5		499.234285 Secs (499.234 Secs)	
								[==>]	***[1]***
4		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=14; SAMP-SEQ=STEP50	POS TARG 0,5		449.233834 Secs (449.234 Secs)	
								[==>]	***[1]***
5		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=14; SAMP-SEQ=STEP50	POS TARG 0,10		449.233834 Secs (449.234 Secs)	
								[==>]	***[1]***
6		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=10; SAMP-SEQ=RAPID	POS TARG 5,-5		8.53027 Secs (8.53 Secs)	
								[==>]	***[1]***
7		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=10; SAMP-SEQ=RAPID	POS TARG 5,5		8.53027 Secs (8.53 Secs)	
								[==>]	***[1]***
8		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=10; SAMP-SEQ=RAPID	POS TARG 10,-5		8.53027 Secs (8.53 Secs)	
								[==>]	***[1]***
9		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=10; SAMP-SEQ=RAPID	POS TARG 10,-2		8.53027 Secs (8.53 Secs)	
								[==>]	***[1]***
10		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=10; SAMP-SEQ=RAPID	POS TARG 10,5		8.53027 Secs (8.53 Secs)	
								[==>]	***[1]***
11		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=13; SAMP-SEQ=RAPID	POS TARG 15,-5		11.089351 Secs (11.089 Secs)	
								[==>]	***[1]***
12		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=13; SAMP-SEQ=RAPID	POS TARG 15,3		11.089351 Secs (11.089 Secs)	
								[==>]	***[1]***
13		(6) WDJ042211.36-474142.02	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=13; SAMP-SEQ=RAPID	POS TARG 15,10		11.089351 Secs (11.089 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16702, GD153 (07), completed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Comments: HST primary standard

Fixed Targets

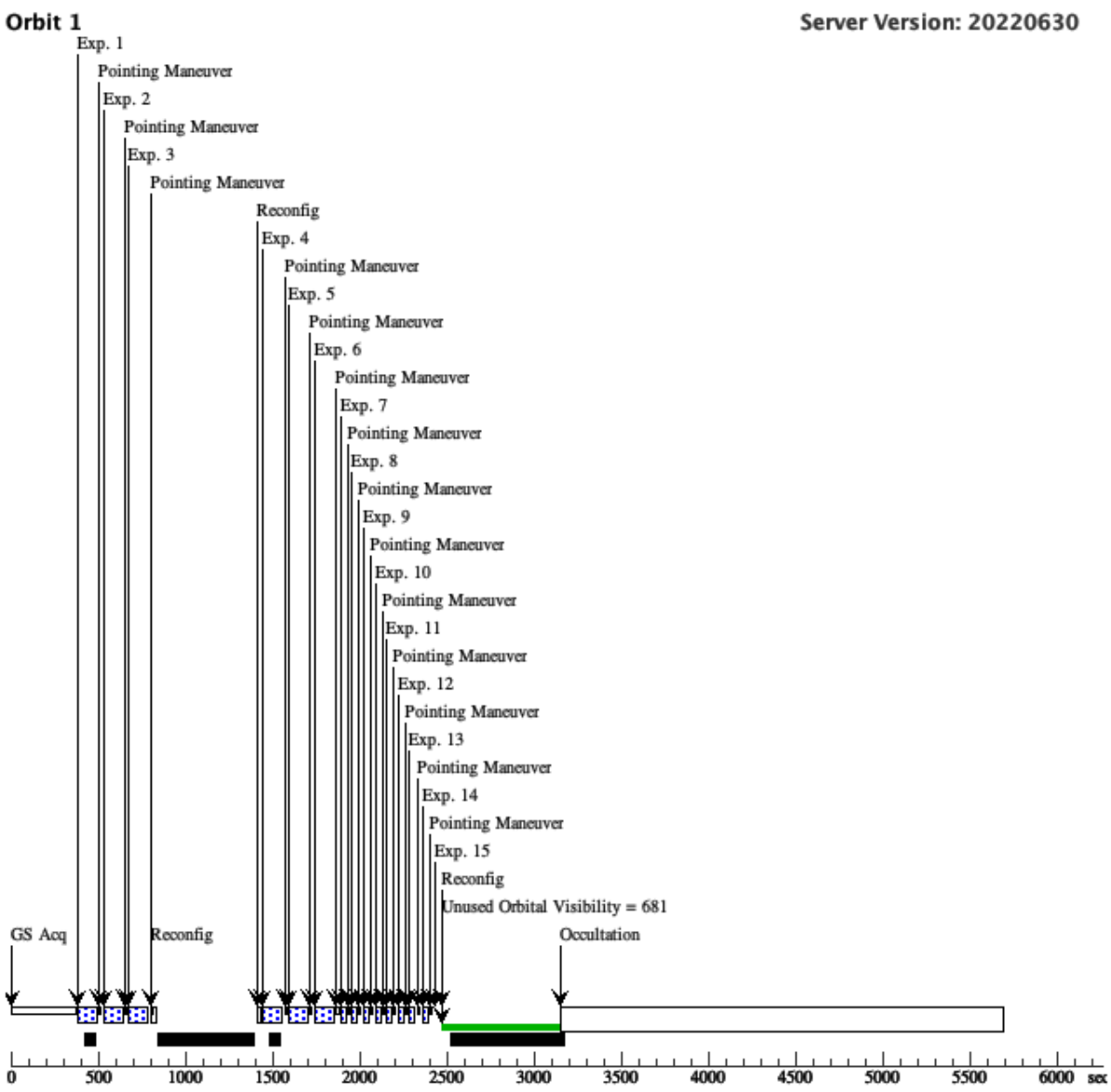
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	GD153	RA: 12 57 2.3220 (194.2596750d) Dec: +22 01 52.63 (22.03129d) Equinox: J2000		V=13.23	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	g141	(7) GD153	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=9; SAMP-SEQ=SPARS10	POS TARG 0,-6		82.939995 Secs (82.94 Secs)	
								[==>]	***[1]***
2	g141	(7) GD153	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=9; SAMP-SEQ=SPARS10	POS TARG 0,-4		82.939995 Secs (82.94 Secs)	
								[==>]	***[1]***
3	g141	(7) GD153	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=9; SAMP-SEQ=SPARS10	POS TARG 0,-2		82.939995 Secs (82.94 Secs)	
								[==>]	***[1]***
4	g102	(7) GD153	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=9; SAMP-SEQ=SPARS10	POS TARG 0,2		82.939995 Secs (82.94 Secs)	
								[==>]	***[1]***
5	g102	(7) GD153	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=9; SAMP-SEQ=SPARS10	POS TARG 0,4		82.939995 Secs (82.94 Secs)	
								[==>]	***[1]***
6	g102	(7) GD153	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=9; SAMP-SEQ=SPARS10	POS TARG 0,6		82.939995 Secs (82.94 Secs)	
								[==>]	***[1]***
7	f098	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB128	F098M	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 1,1		1.690575 Secs (1.691 Secs)	
								[==>]	***[1]***
8	f098	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB128	F098M	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 2,2		1.690575 Secs (1.691 Secs)	
								[==>]	***[1]***
9	f098	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB128	F098M	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -2,2		1.690575 Secs (1.691 Secs)	
								[==>]	***[1]***
10	f110	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB128	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 2,2		1.690575 Secs (1.691 Secs)	
								[==>]	***[1]***
11	f110	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB128	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -2,-1		1.690575 Secs (1.691 Secs)	
								[==>]	***[1]***
12	f110	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB128	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 2,-1		1.690575 Secs (1.691 Secs)	
								[==>]	***[1]***
13	f160	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 4,-4		4.167225 Secs (4.167 Secs)	
								[==>]	***[1]***
14	f160	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 4,4		4.167225 Secs (4.167 Secs)	
								[==>]	***[1]***
15	f160	(7) GD153	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -4,4		4.167225 Secs (4.167 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16702, J175318 First Orbit (09), failed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: ORIENT 65D TO 100 D; ORIENT 117D TO 134 D; ORIENT 146D TO 168 D; ORIENT 175D TO 200 D; ORIENT 256D TO 280 D; ORIENT 297D TO 311 D; ORIENT 334D TO 15 D

Comments: Our 2 preferred orient ranges are 297 to 311 degrees and 334 degrees to 15 degrees

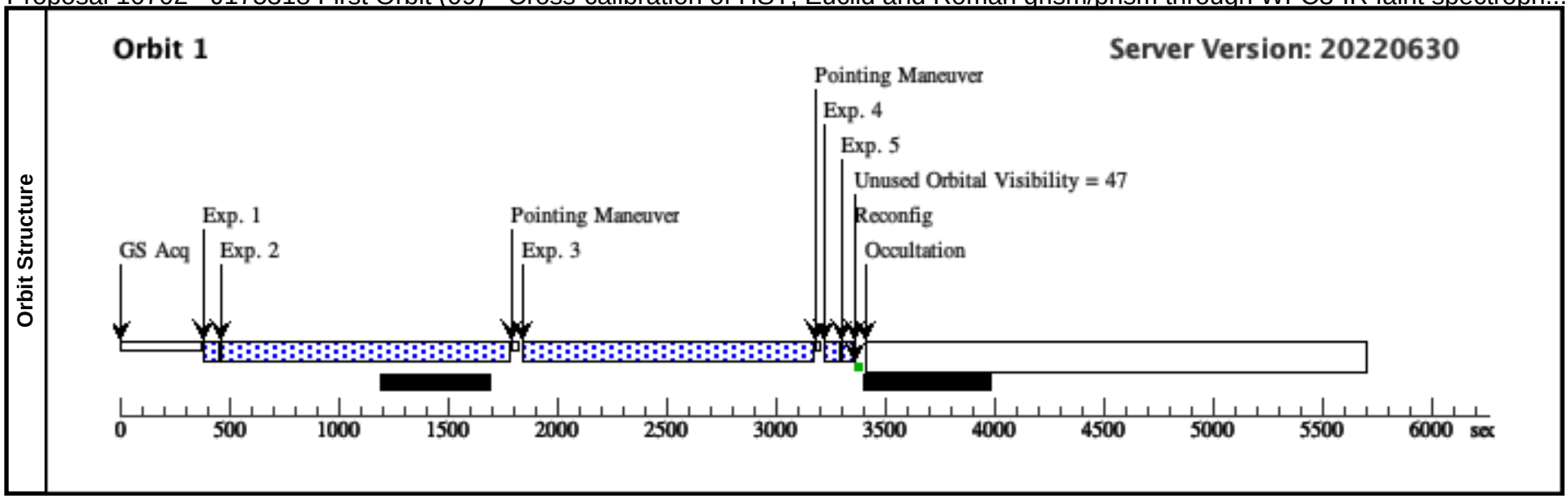
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	WDJ175318.65+644502.15	RA: 17 53 18.6500 (268.3277083d) Dec: +64 45 2.15 (64.75060d) Equinox: J2000	Proper Motion RA: -3.204 mas/yr Proper Motion Dec: 9.906 mas/yr Epoch of Position: 2000	V=(?) 17.3966Rpmg	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	F098M	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 0,-25		43.984365 Secs (43.984 Secs) *[==>]*	***[1]***
2		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=14; SAMP-SEQ=SPARS100	POS TARG 0,-25		1302.93649 Secs (1302.936 Secs) *[==>]*	***[1]***
3		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=14; SAMP-SEQ=SPARS100	POS TARG 0,5		1302.93649 Secs (1302.936 Secs) *[==>]*	***[1]***
4		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG -2,-10		41.754125 Secs (41.754 Secs) *[==>]*	***[1]***
5		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F098M	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG -2,-10		41.754125 Secs (41.754 Secs) *[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20220630
Pointing Maneuver
Exp. 4
Exp. 5
Unused Orbital Visibility = 47
Reconfig
Occultation
Exp. 1
Pointing Maneuver
GS Acq
Exp. 2
Exp. 3
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 16702, J175318 First Orbit (59), implementation Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: ORIENT 303D TO 306 D; BEFORE 31-MAR-2023:00:00:00

Fixed Targets

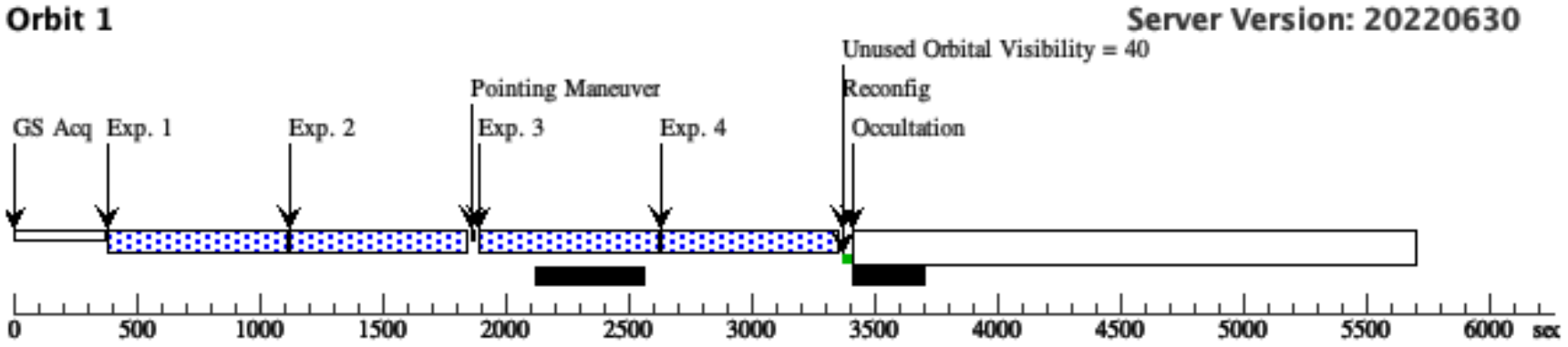
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	WDJ175318.65+644502.15	RA: 17 53 18.6500 (268.3277083d) Dec: +64 45 2.15 (64.75060d) Equinox: J2000	Proper Motion RA: -3.204 mas/yr Proper Motion Dec: 9.906 mas/yr Epoch of Position: 2000	V=(?) 17.3966Rpmg	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=8; SAMP-SEQ=SPARS100	POS TARG 0,0		702.934552 Secs (702.935 Secs) *[==>]*	*[1]*
2		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=8; SAMP-SEQ=SPARS100	POS TARG 0,0		702.934552 Secs (702.935 Secs) *[==>]*	*[1]*
3		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=8; SAMP-SEQ=SPARS100	POS TARG 0,5		702.934552 Secs (702.935 Secs) *[==>]*	*[1]*
4		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=8; SAMP-SEQ=SPARS100	POS TARG 0,5		702.934552 Secs (702.935 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16702, J17538, Second Orbit (10), completed Wed Sep 14 16:03:59 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 09; AFTER 09

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	WDJ175318.65+644502.15	RA: 17 53 18.6500 (268.3277083d) Dec: +64 45 2.15 (64.75060d) Equinox: J2000	Proper Motion RA: -3.204 mas/yr Proper Motion Dec: 9.906 mas/yr Epoch of Position: 2000	V=(?) 17.3966Rpmg	Reference Frame: ICRS

Comments:
Category=STAR
Description=[WDO]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	F160W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG 0,15		43.984365 Secs (43.984 Secs) *[==>]*	*[1]*
2		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G141	NSAMP=13; SAMP-SEQ=SPARS100	POS TARG 0,15		1202.936167 Secs (1202.936 Secs) *[==>]*	*[1]*
3		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, GRISM1024	G102	NSAMP=12; SAMP-SEQ=SPARS100	POS TARG 0,25		1102.935844 Secs (1102.936 Secs) *[==>]*	*[1]*
4		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG -2,-20		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
5		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F160W	NSAMP=15; SAMP-SEQ=SPARS5	POS TARG -10,-20		41.754125 Secs (41.754 Secs) *[==>]*	*[1]*
6		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -10,-2		12.795405 Secs (12.795 Secs) *[==>]*	*[1]*
7		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -20,-5		12.795405 Secs (12.795 Secs) *[==>]*	*[1]*
8		(3) WDJ175318.65+644502.15	WFC3/IR, MULTIACCUM, IRSUB512	F110W	NSAMP=15; SAMP-SEQ=RAPID	POS TARG -20,-15		12.795405 Secs (12.795 Secs) *[==>]*	*[1]*

Orbit Structure