



16735 - Characterizing Cold Discoveries in the Sun's Backyard

Cycle: 29, Proposal Category: GO

(JWST Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) W0142+4146	WFC3/IR	1	18-Aug-2021 14:02:37.0	yes
02	(2) W0246-4626	WFC3/IR	1	18-Aug-2021 14:02:38.0	yes
03	(3) W0247+2740	WFC3/IR	1	18-Aug-2021 14:02:38.0	yes
04	(4) W0319+5221	WFC3/IR	1	18-Aug-2021 14:02:39.0	yes
05	(5) W0919-5743	WFC3/IR	1	18-Aug-2021 14:02:40.0	yes
06	(6) W0947+3846	WFC3/IR	1	18-Aug-2021 14:02:40.0	yes
07	(7) W1042+3321	WFC3/IR	1	18-Aug-2021 14:02:41.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
08	(8) W1501+5549	WFC3/IR	1	18-Aug-2021 14:02:41.0	yes
09	(9) W1857-5822	WFC3/IR	1	18-Aug-2021 14:02:42.0	yes
10	(10) W1943-2122	WFC3/IR	1	18-Aug-2021 14:02:42.0	yes
11	(11) W2054+5821	WFC3/IR	1	18-Aug-2021 14:02:43.0	yes
12	(12) W2322-7907	WFC3/IR	1	18-Aug-2021 14:02:44.0	yes

12 Total Orbits Used

ABSTRACT

Characterizing the population of the coldest known free-floating substellar members of the solar neighborhood is now possible, giving us the opportunity to gain key insights into the efficiency of star formation at the lowest masses as well as the chemistry of high-pressure, low temperature atmospheres akin to cold, extrasolar giant planets. As individuals, each of these objects represents a unique probe into the complex chemistry present in the coldest photospheres produced in the Universe. We propose to obtain critical near-infrared F125W photometry of 12 newly discovered high proper motion, cold brown dwarfs in the solar neighborhood. The purpose of these observations is threefold: 1) to constrain each target's physical properties, 2) produce preliminary distance estimates, and 3) to provide the photometry and astrometry necessary to prepare for future spectroscopic observations. These observations will provide the vital reconnaissance needed for spectroscopic follow-up observations with HST or JWST.

OBSERVING DESCRIPTION

Cold brown dwarf candidates for this program were chosen by requiring a non-detections from either the UHS or VHS surveys, a non-detection at W1 from the CatWISE 2020 catalog (Marocco et al. 2020), and a total proper motion >400 mas/yr. Restricting to large proper motions ensures that an object is nearby - only 4 of the currently known Y dwarfs have total proper motions below this threshold. A non-detection at W1 ensures very red WISE W1 W2 colors, and a UHS/VHS non-detection assures a very red F125W-W2 color. These targets are listed in Table 1. We will use the WFC3 F125W filter to characterize each member of this sample by estimating their effective temperatures and spectral types, and providing preliminary distance estimates.

Our observations are straightforward and have been proven successful by prior HST Y dwarf follow-up programs (e.g., Schneider et al. 2015, Bardalez-Gagliuffi et al. 2020). All observations will be carried out in MULTIACUUM mode using four dither positions.

Reduced-gyro operations should have little impact on our program, which only requires single orbit visits that are not time-sensitive.

Proposal 16735 - W0142+4146 (01) - Characterizing Cold Discoveries in the Sun's Backyard

Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W0142+4146 (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W0142+4146.</i>		

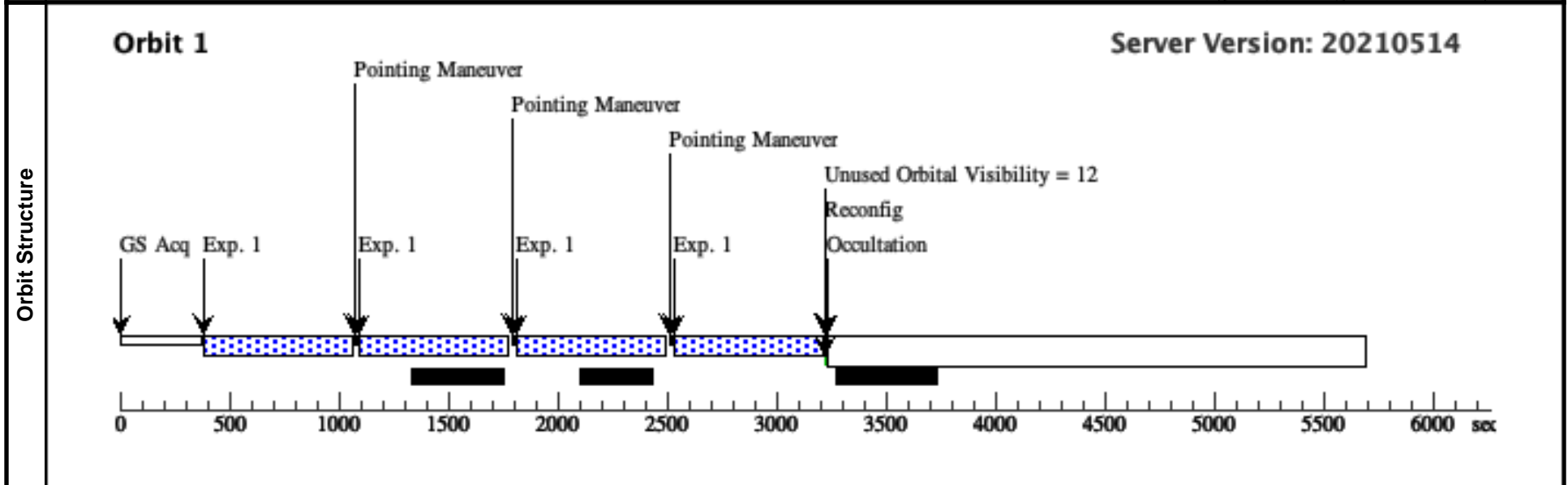
Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	W0142+4146	RA: 01 42 17.6676 (25.5736150d) Dec: +41 46 53.65 (41.78157d) Equinox: J2000	Proper Motion RA: 517.4 mas/yr Proper Motion Dec: -804.6 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.421	Reference Frame: ICRS

Comments: Category=STAR Description=[BROWN DWARF, T]

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(1) W0142+4146	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0142+4146 (01) (1)	652.938154 Secs (2611.753 Secs)	[1]

*[==>(Pattern 1)]
[==>(Pattern 2)]
[==>(Pattern 3)]
[==>(Pattern 4)]*



Proposal 16735 - W0246-4626 (02) - Characterizing Cold Discoveries in the Sun's Backyard

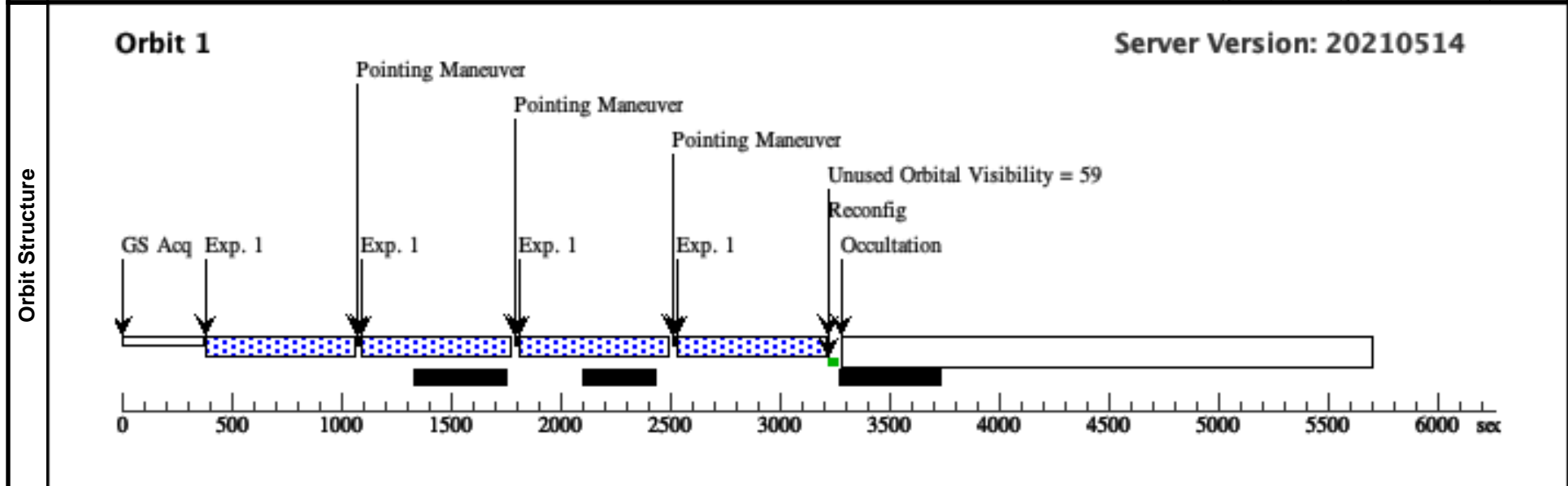
Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W0246-4626 (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W0246-4626.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	W0246-4626	RA: 02 46 15.0361 (41.5626504d) Dec: -46 26 48.59 (-46.44683d) Equinox: J2000	Proper Motion RA: 314.9 mas/yr Proper Motion Dec: 295.2 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.590	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(2) W0246-4626	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0246-4626 (02) (1)	652.938154 Secs (2611.753 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	



Proposal 16735 - W0247+2740 (03) - Characterizing Cold Discoveries in the Sun's Backyard

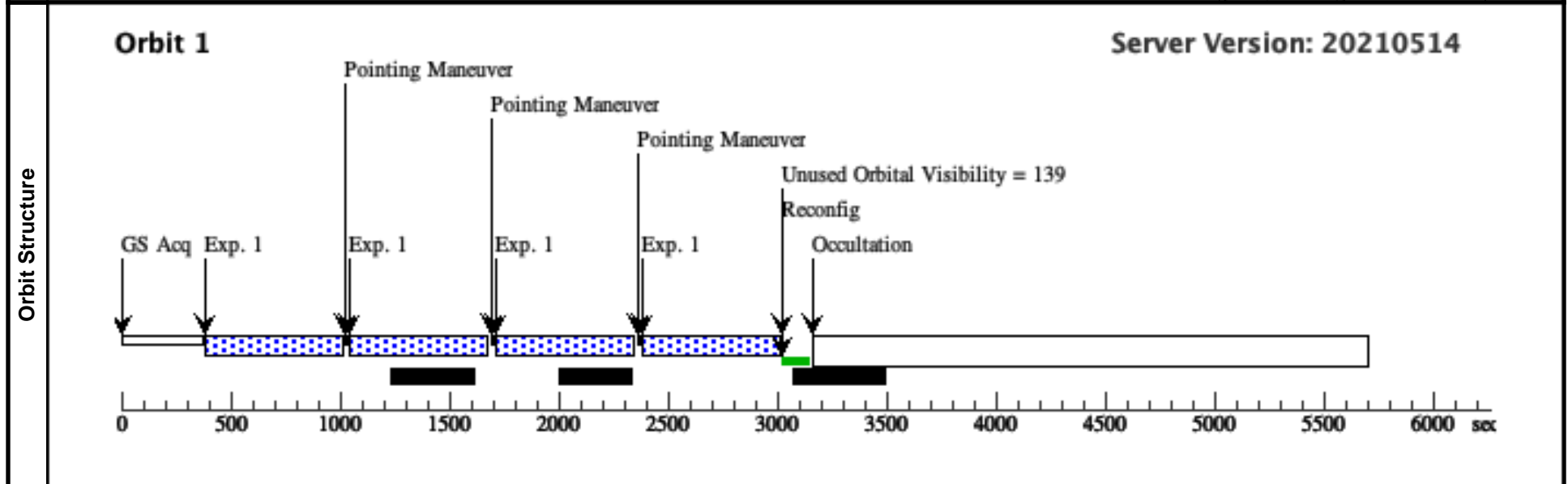
Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W0247+2740 (03), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W0247+2740.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(3)	W0247+2740	RA: 02 47 8.3611 (41.7848379d) Dec: +27 40 58.60 (27.68294d) Equinox: J2000	Proper Motion RA: -1170.2 mas/yr Proper Motion Dec: -353.9 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.210	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(3) W0247+2740	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=13; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0247+2740 (03) (1)	602.937703 Secs (2411.751 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	



Proposal 16735 - W0319+5221 (04) - Characterizing Cold Discoveries in the Sun's Backyard

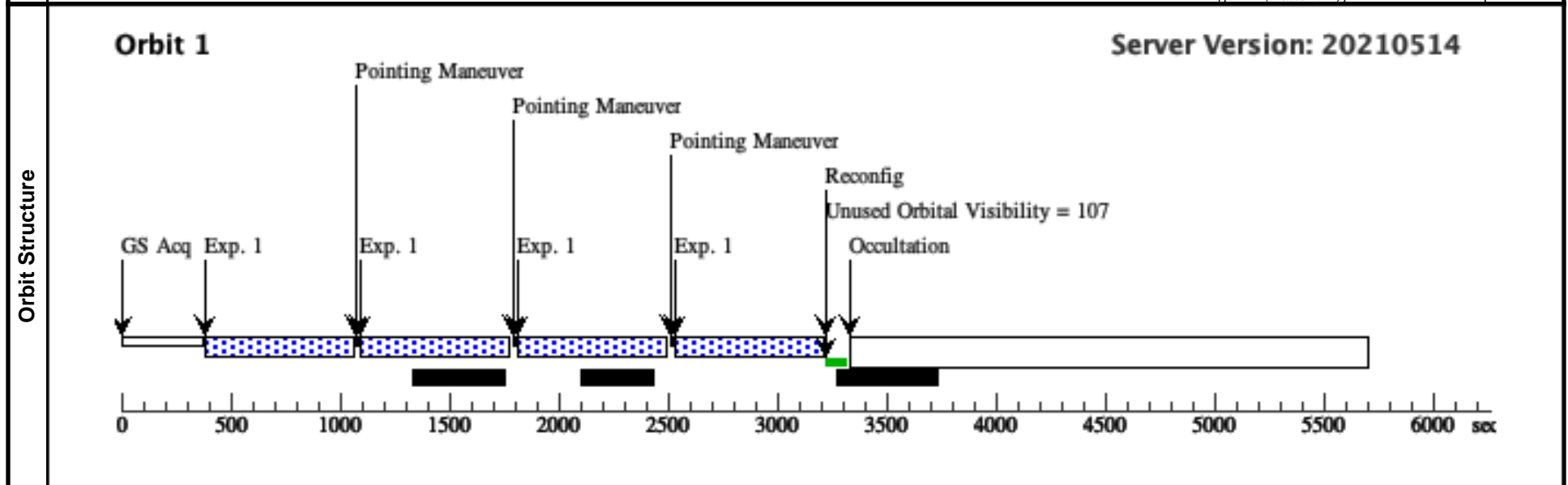
Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W0319+5221 (04), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W0319+5221.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(4)	W0319+5221	RA: 03 19 17.5636 (49.8231817d) Dec: +52 21 9.22 (52.35256d) Equinox: J2000	Proper Motion RA: 436.3 mas/yr Proper Motion Dec: -418.9 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.333	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(4) W0319+5221	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0319+5221 (04) (1)	652.938154 Secs (2611.753 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	



Proposal 16735 - W0919-5743 (05) - Characterizing Cold Discoveries in the Sun's Backyard

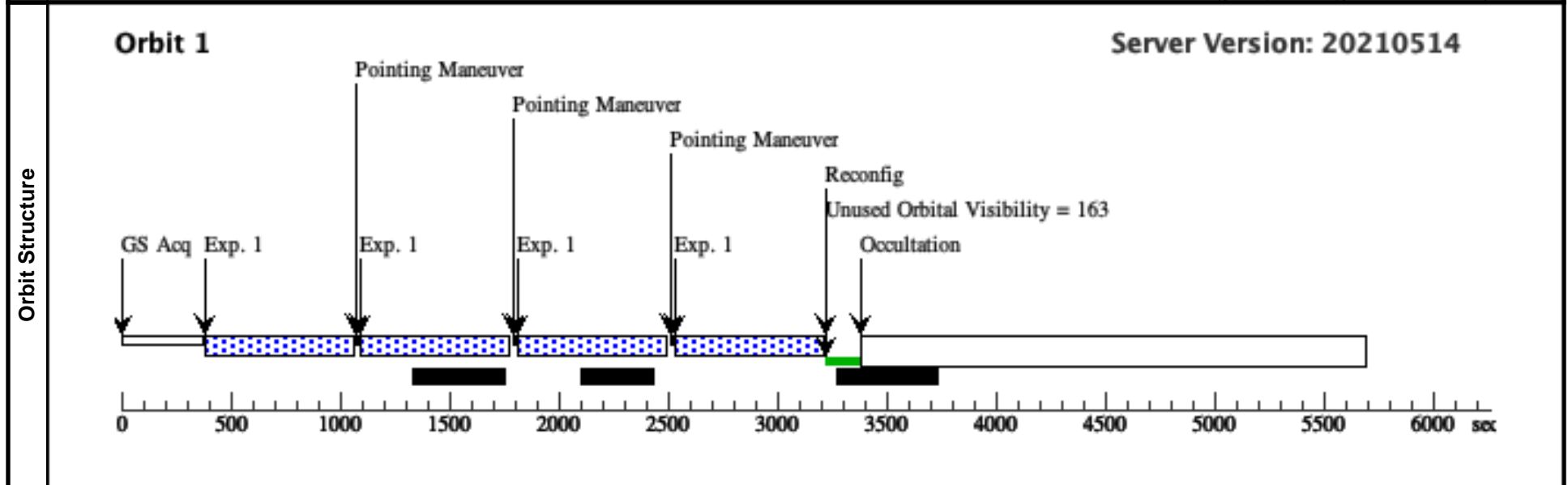
Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W0919-5743 (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W0919-5743.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	W0919-5743	RA: 09 19 13.7952 (139.8074800d) Dec: -57 43 11.35 (-57.71982d) Equinox: J2000	Proper Motion RA: -473.2 mas/yr Proper Motion Dec: 384.0 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.295	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(5) W0919-5743	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0919-5743 (05) (1)	652.938154 Secs (2611.753 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	



Proposal 16735 - W0947+3846 (06) - Characterizing Cold Discoveries in the Sun's Backyard

Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W0947+3846 (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W0947+3846.</i>																													
	Patterns	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Pattern</th> <th>Secondary Pattern</th> <th>Exposures</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td> Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3 </td> <td> Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false </td> <td>(1)</td> </tr> </tbody> </table>	#	Primary Pattern	Secondary Pattern	Exposures	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)																				
#	Primary Pattern	Secondary Pattern	Exposures																											
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)																											
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(6)</td> <td>W0947+3846</td> <td> RA: 09 47 42.8207 (146.9284196d) Dec: +38 46 18.97 (38.77194d) Equinox: J2000 </td> <td> Proper Motion RA: -269.7 mas/yr Proper Motion Dec: -306.0 mas/yr Epoch of Position: 2015.4 </td> <td> V=(?) W2=16.201 </td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(6)	W0947+3846	RA: 09 47 42.8207 (146.9284196d) Dec: +38 46 18.97 (38.77194d) Equinox: J2000	Proper Motion RA: -269.7 mas/yr Proper Motion Dec: -306.0 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.201	Reference Frame: ICRS																	
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																									
(6)	W0947+3846	RA: 09 47 42.8207 (146.9284196d) Dec: +38 46 18.97 (38.77194d) Equinox: J2000	Proper Motion RA: -269.7 mas/yr Proper Motion Dec: -306.0 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.201	Reference Frame: ICRS																									
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time (Total)/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F125W-01</td> <td>(6) W0947+3846</td> <td>WFC3/IR, MULTIACCUM, IR</td> <td>F125W</td> <td>NSAMP=13; SAMP-SEQ=SPAR S50</td> <td></td> <td>Pattern 1, Exps 1-1 in W0947+3846 (06) (1)</td> <td>602.937703 Secs (2411.751 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]</td> <td>[1]</td> </tr> </tbody> </table>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	F125W-01	(6) W0947+3846	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=13; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0947+3846 (06) (1)	602.937703 Secs (2411.751 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]									
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																					
1	F125W-01	(6) W0947+3846	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=13; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W0947+3846 (06) (1)	602.937703 Secs (2411.751 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]																					
Orbit Structure	<div style="display: flex; justify-content: space-between;"> Orbit 1 Server Version: 20210514 </div> <p>The diagram illustrates the timeline for Orbit 1, starting at 0 seconds and ending at approximately 5700 seconds. Key events include:</p> <ul style="list-style-type: none"> GS Acq: Ground Station Acquisition at approximately 100 seconds. Exp. 1: Four exposure periods, each lasting about 100 seconds, occurring at approximately 400, 1000, 1700, and 2400 seconds. Pointing Maneuver: Three pointing maneuvers, each lasting about 100 seconds, occurring at approximately 1000, 1700, and 2400 seconds. Reconfig: A reconfiguration period lasting about 100 seconds, occurring at approximately 3000 seconds. Occultation: An occultation period lasting about 100 seconds, occurring at approximately 3100 seconds. Unused Orbital Visibility = 174: A period of 174 seconds of unused orbital visibility, occurring at approximately 3100 to 3274 seconds. <p>The x-axis is labeled 'sec' and ranges from 0 to 6000 with major ticks every 500 seconds.</p>																													

Proposal 16735 - W1042+3321 (07) - Characterizing Cold Discoveries in the Sun's Backyard

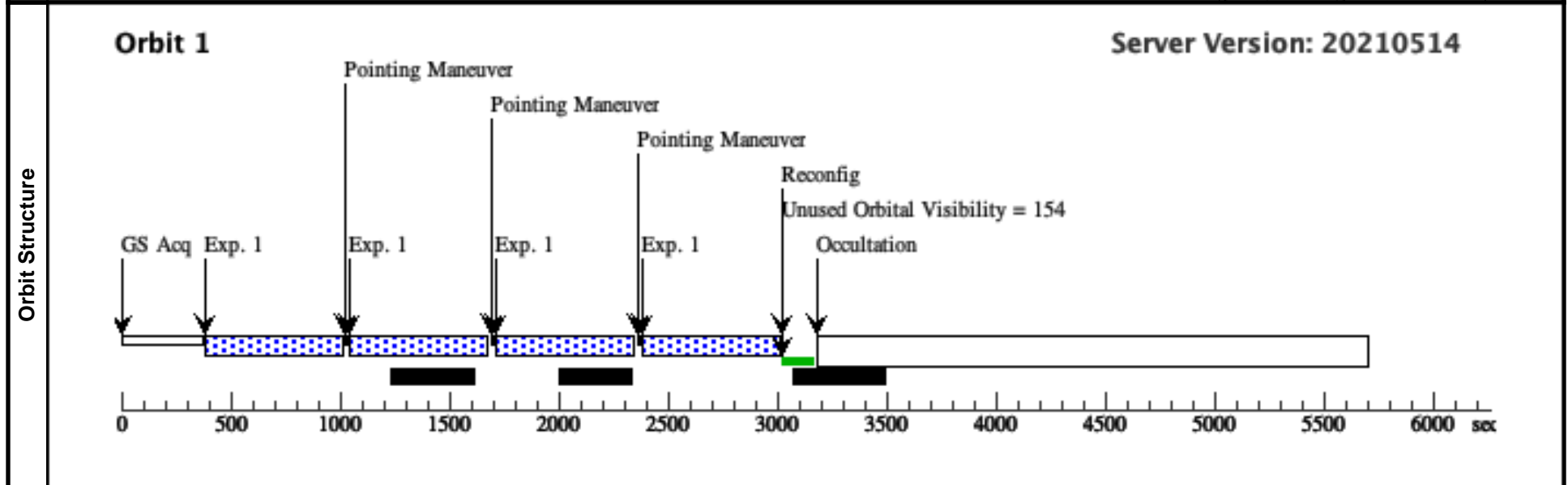
Wed Aug 18 18:02:44 GMT 2021

Visit	Proposal 16735, W1042+3321 (07), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W1042+3321.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(7)	W1042+3321	RA: 10 42 22.0945 (160.5920604d) Dec: +33 21 27.28 (33.35758d) Equinox: J2000	Proper Motion RA: -558.0 mas/yr Proper Motion Dec: -87.3 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.085	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(7) W1042+3321	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=13; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W1042+3321 (07) (1)	602.937703 Secs (2411.751 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]



Proposal 16735 - W1501+5549 (08) - Characterizing Cold Discoveries in the Sun's Backyard

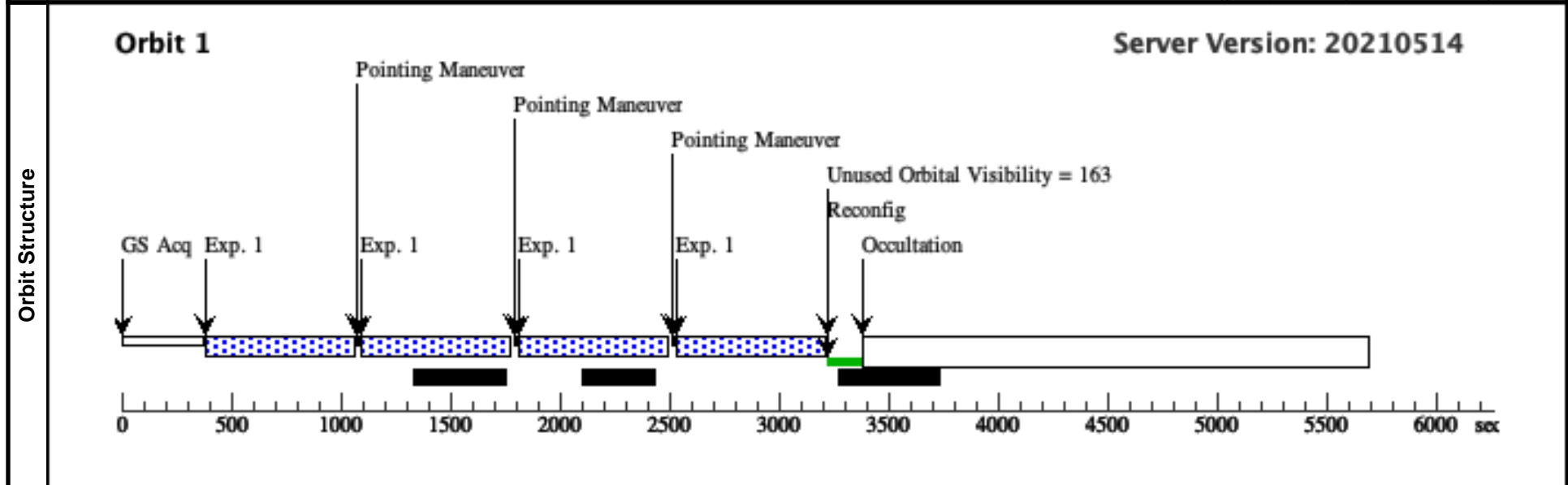
Wed Aug 18 18:02:45 GMT 2021

Visit	Proposal 16735, W1501+5549 (08), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W1501+5549.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(8)	W1501+5549	RA: 15 01 22.7000 (225.3445833d) Dec: +55 49 27.00 (55.82417d) Equinox: J2000	Proper Motion RA: -617.8 mas/yr Proper Motion Dec: 376.3 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.059	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(8) W1501+5549	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W1501+5549 (08) (1)	652.938154 Secs (2611.753 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]



Proposal 16735 - W1857-5822 (09) - Characterizing Cold Discoveries in the Sun's Backyard

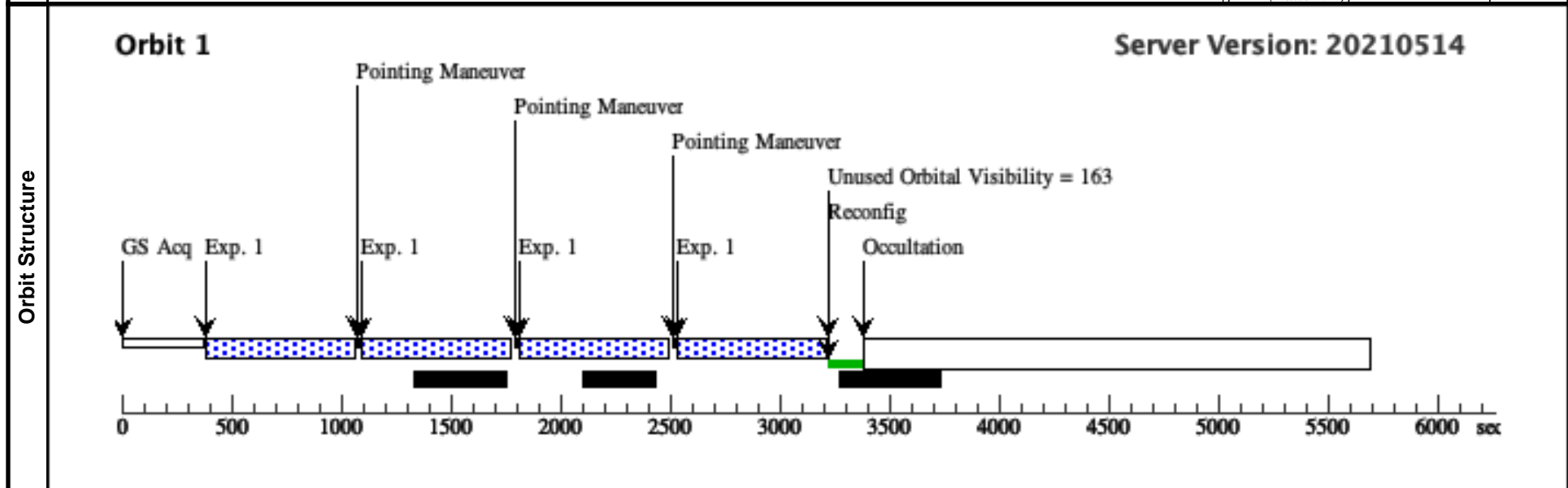
Wed Aug 18 18:02:45 GMT 2021

Visit	Proposal 16735, W1857-5822 (09), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W1857-5822.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(9)	W1857-5822	RA: 18 57 48.9366 (284.4539025d) Dec: -58 22 57.80 (-58.38272d) Equinox: J2000	Proper Motion RA: 364.3 mas/yr Proper Motion Dec: -1210.0 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.629	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(9) W1857-5822	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W1857-5822 (09) (1)	652.938154 Secs (2611.753 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	



Proposal 16735 - W1943-2122 (10) - Characterizing Cold Discoveries in the Sun's Backyard

Wed Aug 18 18:02:45 GMT 2021

Visit	Proposal 16735, W1943-2122 (10), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W1943-2122.</i>																													
	Patterns	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Pattern</th> <th>Secondary Pattern</th> <th>Exposures</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td> Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3 </td> <td> Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false </td> <td>(1)</td> </tr> </tbody> </table>	#	Primary Pattern	Secondary Pattern	Exposures	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)																				
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1	F125W-01	(10) W1943-2122	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=13; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W1943-2122 (10) (1)	602.937703 Secs (2411.751 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]																					
Orbit Structure	<div style="display: flex; justify-content: space-between;"> Orbit 1 Server Version: 20210514 </div> <p>The diagram illustrates the orbit structure over a 6000-second period. Key events are marked with arrows: GS Acq at ~40s, Exp. 1 at ~40s, ~1000s, ~1700s, and ~2400s. Pointing Maneuvers occur between these exposures. A Reconfig event is at ~3100s, followed by an Occultation period. A shaded region from ~3100s to ~3230s is labeled 'Unused Orbital Visibility = 131'. The x-axis is labeled 'sec' and ranges from 0 to 6000.</p>																													

Proposal 16735 - W2054+5821 (11) - Characterizing Cold Discoveries in the Sun's Backyard

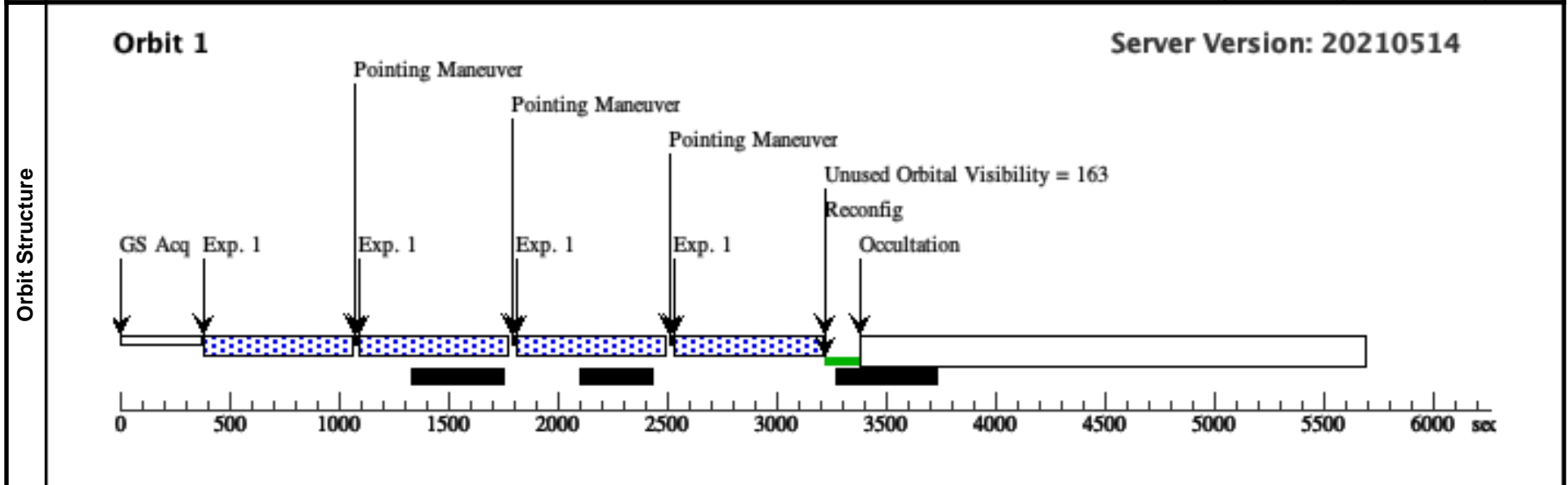
Wed Aug 18 18:02:45 GMT 2021

Visit	Proposal 16735, W2054+5821 (11), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W2054+5821.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(11)	W2054+5821	RA: 20 54 35.4048 (313.6475200d) Dec: +58 21 43.67 (58.36213d) Equinox: J2000	Proper Motion RA: 282.0 mas/yr Proper Motion Dec: 1020.0 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.837	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(11) W2054+5821	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W2054+5821 (11) (1)	652.938154 Secs (2611.753 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	



Proposal 16735 - W2322-7907 (12) - Characterizing Cold Discoveries in the Sun's Backyard

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Visit	Proposal 16735, W2322-7907 (12), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: F125W observation of W2322-7907.</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.3 Line Spacing=1.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(12)	W2322-7907	RA: 23 22 18.6735 (350.5778062d) Dec: -79 07 54.92 (-79.13192d) Equinox: J2000	Proper Motion RA: 385.1 mas/yr Proper Motion Dec: -244.7 mas/yr Epoch of Position: 2015.4	V=(?) W2=16.744	Reference Frame: ICRS
	<i>Comments: Category=STAR Description=[BROWN DWARF, T]</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W-01	(12) W2322-7907	WFC3/IR, MULTIACCUM, IR	F125W	NSAMP=15; SAMP-SEQ=SPAR S50		Pattern 1, Exps 1-1 in W2322-7907 (12) (1)	702.938605 Secs (2811.754 Secs)	[1]
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	

