



16018 - Centaurs and Activity Beyond the Water Sublimation Zone

Cycle: 26, Proposal Category: SNAP

(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>
03	(3) 2016GR206	WFC3/UVIS	1	04-Oct-2019 13:00:48.0	yes
08	(8) 2013QQ95	WFC3/UVIS	1	04-Oct-2019 13:00:48.0	yes
13	(13) 2012DD86	WFC3/UVIS	1	04-Oct-2019 13:00:49.0	yes
15	(15) 2013PH44	WFC3/UVIS	1	04-Oct-2019 13:00:49.0	yes
17	(17) 2011QF99	WFC3/UVIS	1	04-Oct-2019 13:00:49.0	yes
22	(22) 2014MX69	WFC3/UVIS	1	04-Oct-2019 13:00:50.0	yes
23	(23) 2015BD518	WFC3/UVIS	1	04-Oct-2019 13:00:50.0	yes
27	(27) 2007NC7	WFC3/UVIS	1	04-Oct-2019 13:00:50.0	yes
28	(28) 2007TK422	WFC3/UVIS	1	04-Oct-2019 13:00:51.0	yes
31	(31) 2000EE173	WFC3/UVIS	1	04-Oct-2019 13:00:51.0	yes
36	(36) 2003FX128	WFC3/UVIS	1	04-Oct-2019 13:00:51.0	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>
48	(48) 2013KZ18	WFC3/UVIS	1	04-Oct-2019 13:00:52.0	yes
53	(53) 2011OD16	WFC3/UVIS	1	04-Oct-2019 13:00:52.0	yes
54	(54) 2003QZ91	WFC3/UVIS	1	04-Oct-2019 13:00:52.0	yes
56	(56) 2013HX156	WFC3/UVIS	1	04-Oct-2019 13:00:53.0	yes
64	(64) 2000OO67	WFC3/UVIS	1	04-Oct-2019 13:00:53.0	yes
68	(68) 2010TY53	WFC3/UVIS	1	04-Oct-2019 13:00:53.0	yes
69	(69) 2007RW10	WFC3/UVIS	1	04-Oct-2019 13:00:54.0	yes

18 Total Orbits Used

ABSTRACT

Centaurs are icy objects in dynamical transition between the Kuiper belt, where they originate, and the Jupiter family comets. Water ice in inward drifting Centaurs should begin to sublimate measurably when their perihelion reaches the orbit of Jupiter (5 AU). Instead, a fraction of Centaurs become active (have a cometary appearance) even with perihelia at Saturn (10 AU). Of the many suggestions made for the origin of this distant activity, the current favorite and the one with the largest impact on cometary science is the crystallization of amorphous water ice. Amorphous ice is an excellent carrier of supervolatiles (e.g. CO, N₂) which are released upon the exothermic transition to crystalline ice. If Centaur ice is amorphous, then so must be Kuiper belt ice, setting strong constraints on the internal temperature vs. time history of the Kuiper belt objects. If the crystallization hypothesis is correct, we should never find an active Centaur with a perihelion substantially beyond the so-called crystallization line at about 12 AU (because temperatures there are too low to trigger crystallization). We propose a simple search for distant activity in Centaurs with perihelia 15 to 20 AU, in which crystallization cannot occur, in order to challenge the crystallization hypothesis. The search is made possible by the tight and stable point spread function and sensitivity to near-nucleus coma of HST.

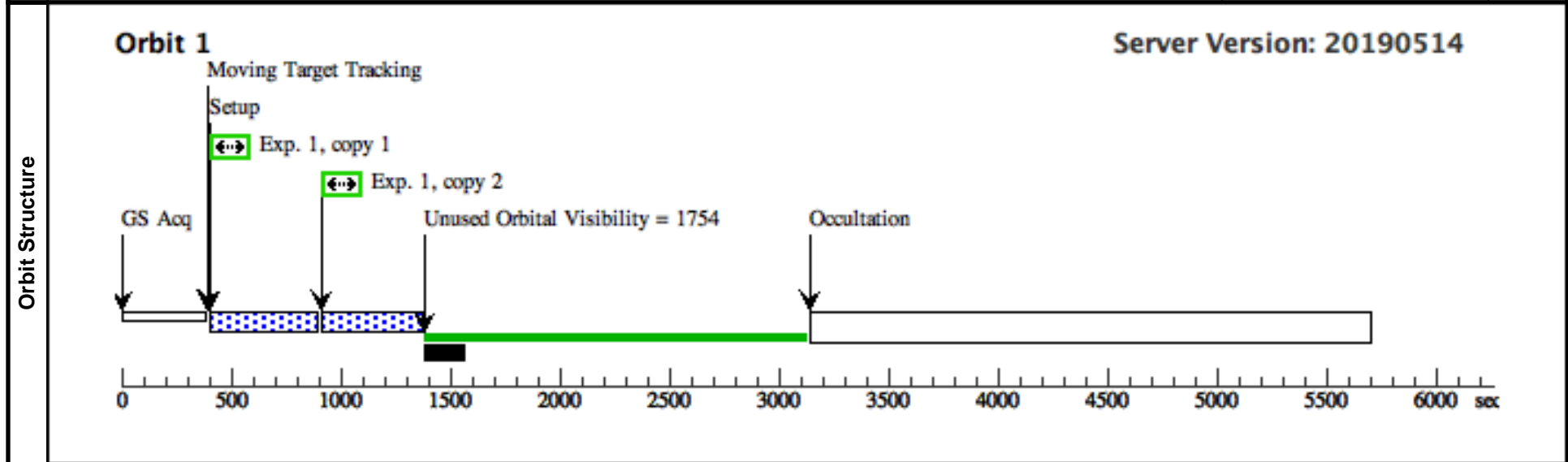
OBSERVING DESCRIPTION

For each object we require a minimum of two integrations, without saturating the central body, in order to probe the smallest angles, while providing some protection from cosmic rays. The brightest Centaurs in our sample have $V=18$ for which saturation is not a concern in integrations $< 250s$. Therefore, our minimum need is for back-to-back 300s integrations. If the SNAP visit allows more time, we would simply accumulate more integrations in order to beat down the noise and obtain fainter limits to the coma.

Visit	Proposal 16018, Visit 03					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(3)	2016GR206	TYPE=COMET,Q=18.615111381434 41,E=0.08313157896855479,I=14.230 00633506787,O=93.31829239708945, W=71.219240228674,T=08-JUL- 2013:18:04:37,TimeScale=TDB,EQ UINOX=J2000,EPOCH=28-AUG- 2014:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

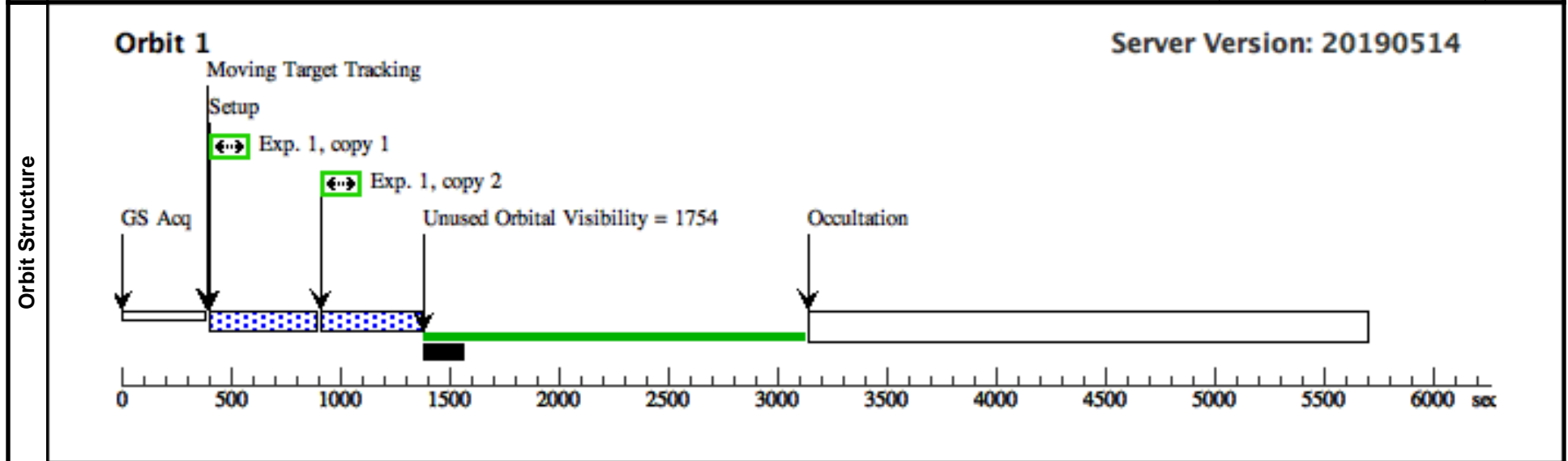
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) 2016GR206		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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									[=>(Copy 2)]	[1]



Visit	Proposal 16018, Visit 08					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(8)	2013QQ95	TYPE=COMET,Q=15.133516503889 24,E=0.7730356270793047,I=25.7064 829629728,O=139.2130314237758,W =289.1776232602158,T=28-DEC- 2034:10:59:22,TimeScale=TDB,EQ UINOX=J2000,EPOCH=26-JUN- 2012:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(8) 2013QQ95		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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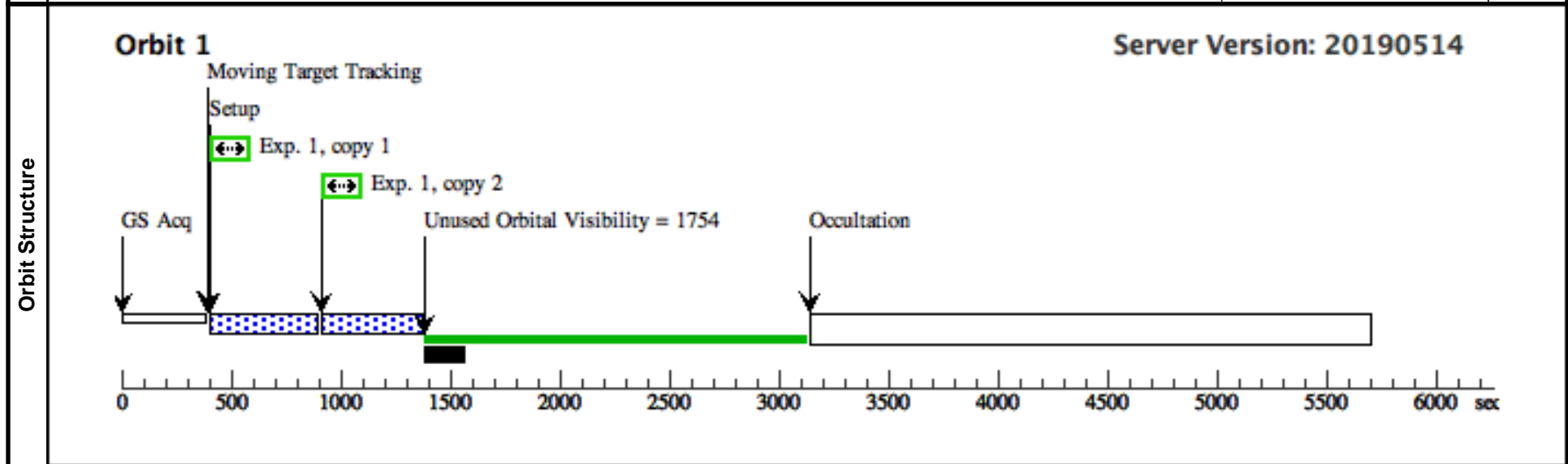
Proposal 16018 - Visit 13 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:54 GMT 2019

Visit	Proposal 16018, Visit 13					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(13)	2012DD86	TYPE=COMET,Q=15.362591758570 68,E=0.3405090599387115,I=12.5091 5307058303,O=174.6253651055579, W=356.6519756349689,T=22-FEB- 2014:17:26:55,TimeScale=TDB,EQ UINOX=J2000,EPOCH=17-SEP- 2013:00:00:00,EpochTimeScale=TDB				EARTH
	<i>Comments: Description=Centaur Extended=NO</i>						

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(13) 2012DD86	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)	
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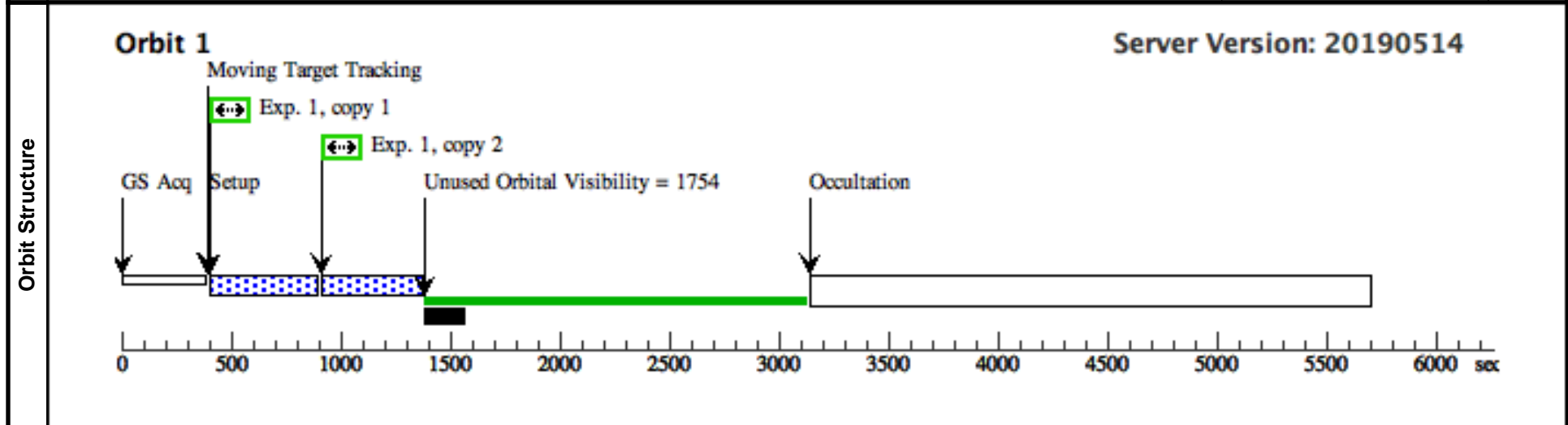
Proposal 16018 - Visit 15 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:54 GMT 2019

Visit	Proposal 16018, Visit 15					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(15)	2013PH44	TYPE=COMET,Q=15.531224994367 12,E=0.2079205725351524,I=33.5443 9607611945,O=160.8824726227055, W=178.6689263995658,T=27-APR- 2015:17:40:56,TimeScale=TDB,EQ UINOX=J2000,EPOCH=17-MAR- 2014:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(15) 2013PH44		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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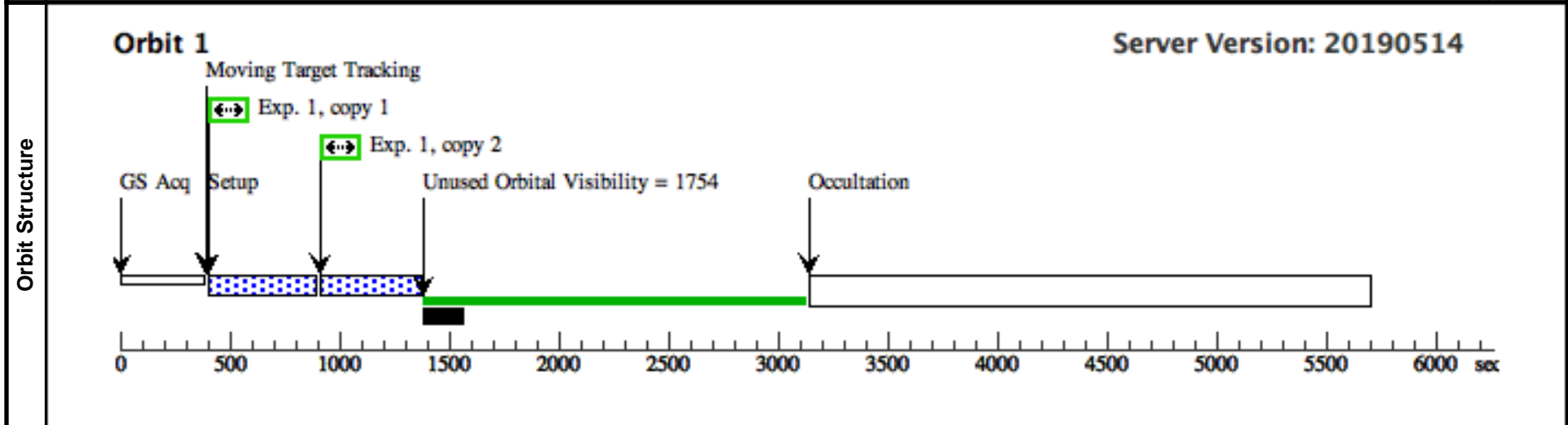
Proposal 16018 - Visit 17 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:54 GMT 2019

Visit	Proposal 16018, Visit 17					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(17)	2011QF99	TYPE=COMET,Q=15.819556524433 12,E=0.1750056760999277,I=10.7932 1138109776,O=222.5125313045305, W=286.1325719300933,T=05-JAN- 2035:18:20:33,TTimeScale=TDB,EQ UINOX=J2000,EPOCH=18-MAY- 2011:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(17) 2011QF99		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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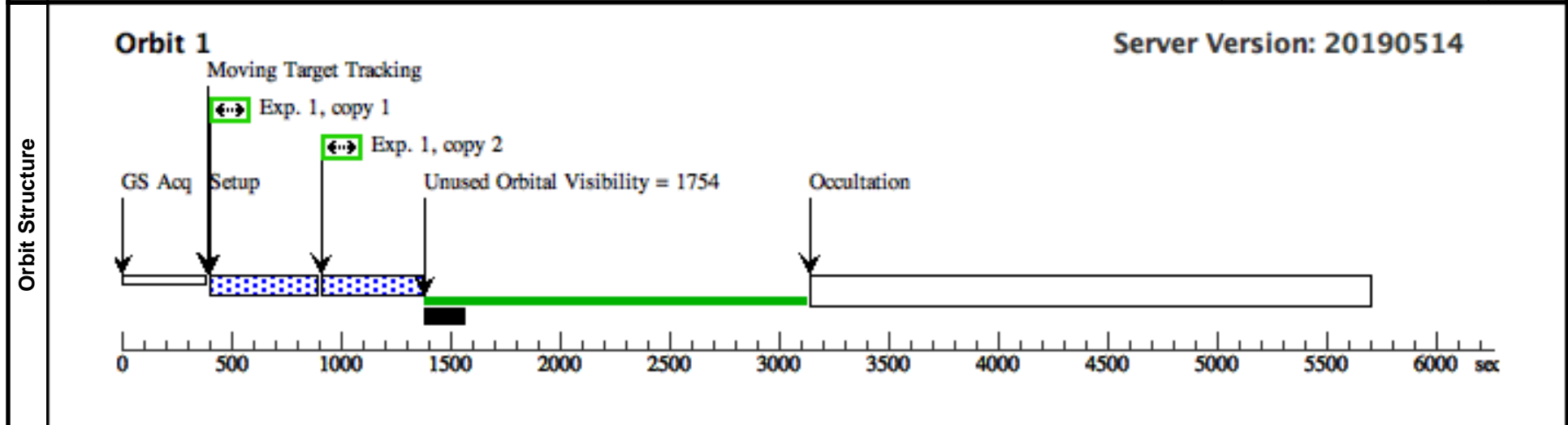
Proposal 16018 - Visit 22 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:54 GMT 2019

Visit	Proposal 16018, Visit 22					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(22)	2014MX69	TYPE=COMET,Q=23.325053729927 05,E=0.2712580319103376,I=10.8571 0213974148,O=178.4575292085738, W=68.56098606274898,T=27-OCT- 1987:22:23:21,TTTimeScale=TDB,EQ UINOX=J2000,EPOCH=05-OCT- 2013:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(22) 2014MX69		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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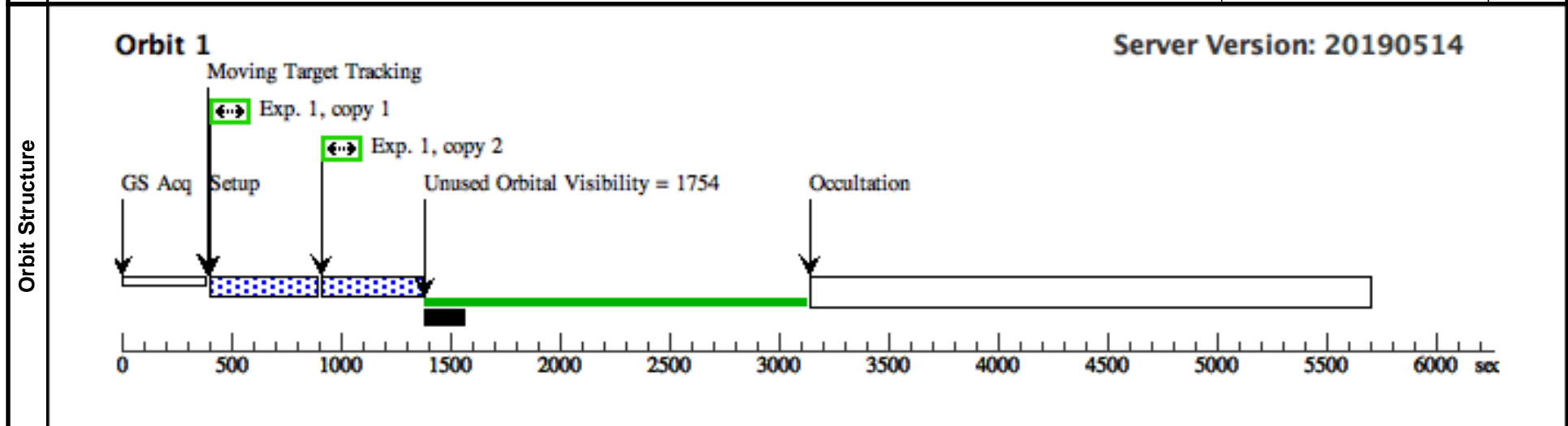
Proposal 16018 - Visit 23 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:54 GMT 2019

Visit	Proposal 16018, Visit 23					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(23)	2015BD518	TYPE=COMET,Q=16.283683704107 57,E=0.3058269361576193,I=17.1630 1808449725,O=344.0792396080564, W=168.2174584763606,T=04-NOV- 2017:02:17:57,TimeScale=TDB,EQ UINOX=J2000,EPOCH=22-OCT- 2014:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(23) 2015BD518		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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									[==>(Copy 2)]	[1]



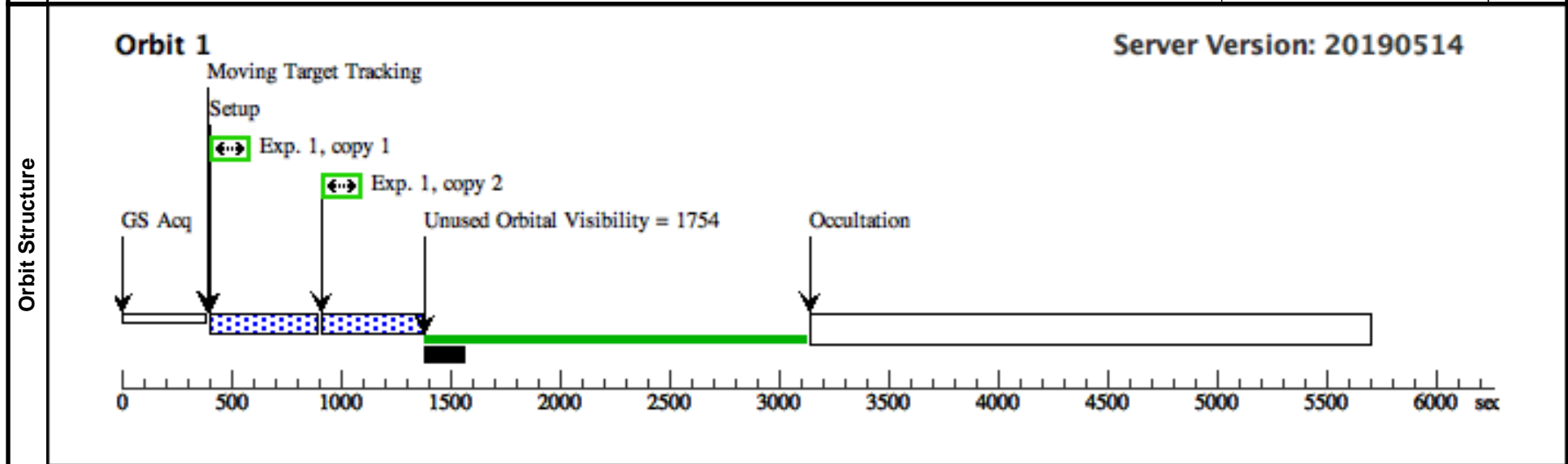
Proposal 16018 - Visit 27 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:55 GMT 2019

Visit	Proposal 16018, Visit 27					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(27)	2007NC7	TYPE=COMET,Q=16.931948521856 83,E=0.5030924173404018,I=6.31074 9674960265,O=324.1631907395151, W=286.9477536899629,T=03-SEP- 1996:19:38:15,TTTimeScale=TDB,EQ UINOX=J2000,EPOCH=26-NOV- 2012:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

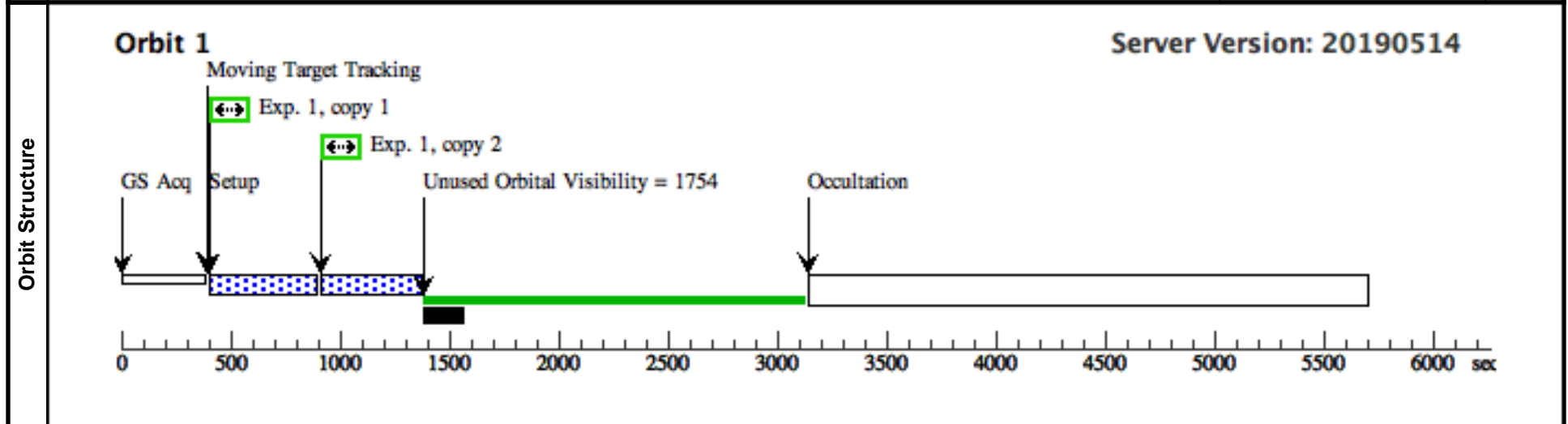
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(27) 2007NC7		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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Visit	Proposal 16018, Visit 28					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(28)	2007TK422	TYPE=COMET,Q=17.048426497136 72,E=0.1943529490023175,I=3.06750 531318372,O=65.33167768617611,W =200.7171323437726,T=12-NOV- 1986:13:12:11,TimeScale=TDB,EQ UINOX=J2000,EPOCH=09-JUN- 2008:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

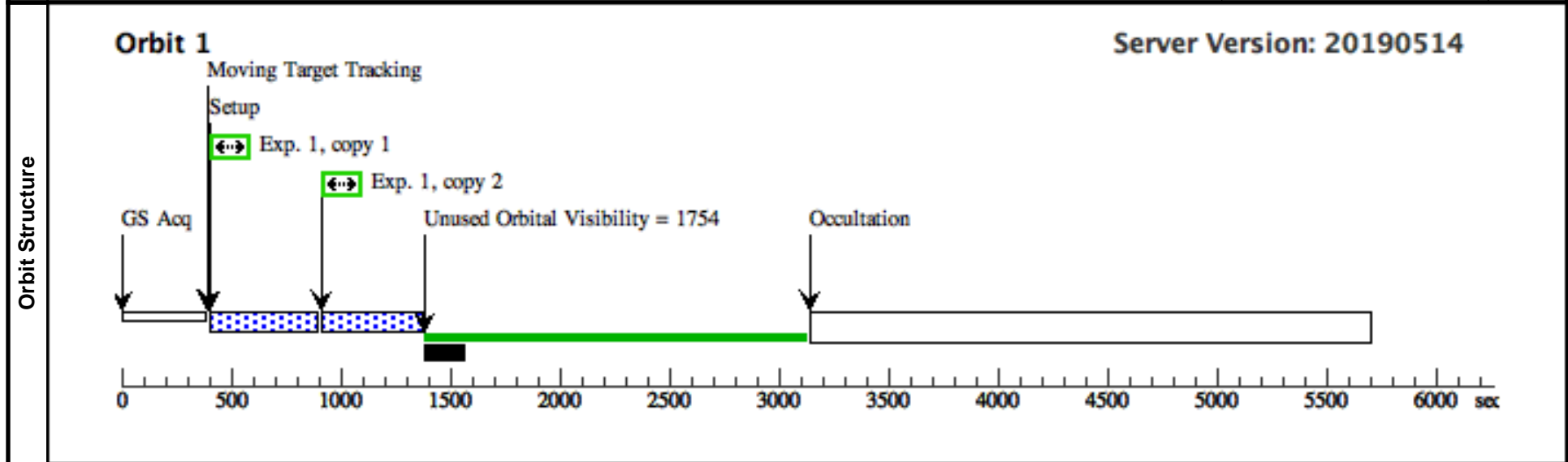
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(28) 2007TK422		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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Visit	Proposal 16018, Visit 31					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(31)	2000EE173	TYPE=COMET,Q=22.606058725675 67,E=0.5449535930860313,I=5.94100 805618478,O=293.9965918469233,W =235.1085707519787,T=24-FEB- 2007:21:23:58,TimeScale=TDB,EQ UINOX=J2000,EPOCH=04-NOV- 2001:00:00:00,EpochTimeScale=TDB				EARTH
	<i>Comments: Description=Centaur Extended=NO</i>						

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(31) 2000EE173	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)	
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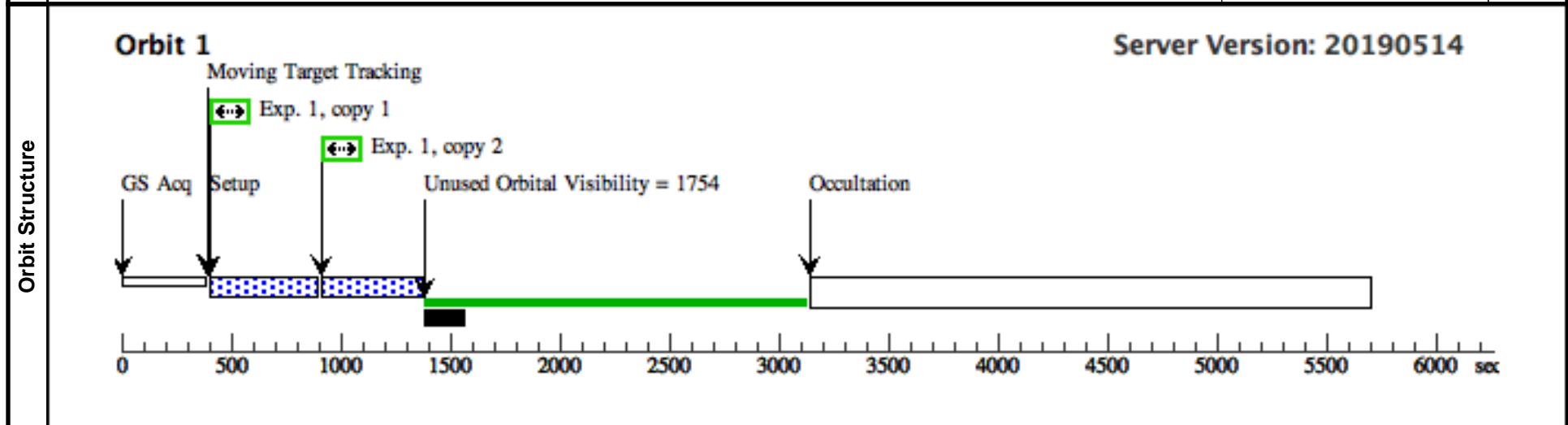
Proposal 16018 - Visit 36 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:55 GMT 2019

Visit	Proposal 16018, Visit 36					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(36)	2003FX128	TYPE=COMET,Q=17.762712290595 01,E=0.824342911605961,I=22.29214 57930276,O=171.9548244497604,W= 319.5967845648002,T=31-JUL- 1989:01:43:02,TimeScale=TDB,EQ UINOX=J2000,EPOCH=20-JUN- 2013:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Ceto Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(36) 2003FX128		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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									[==>(Copy 2)]	[1]



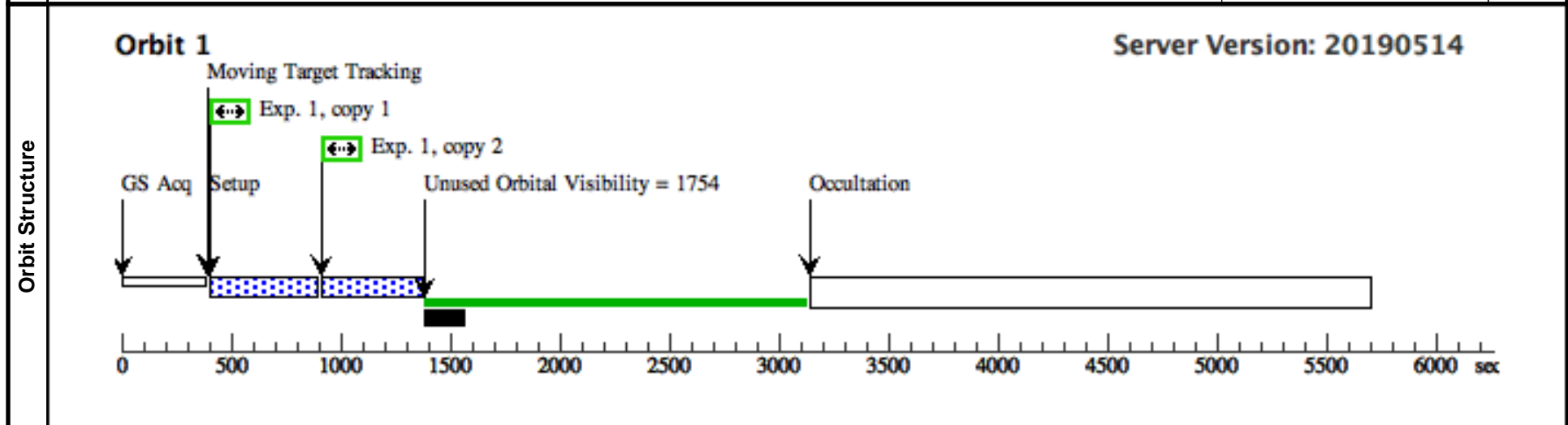
Proposal 16018 - Visit 48 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:55 GMT 2019

Visit	Proposal 16018, Visit 48					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(48)	2013KZ18	TYPE=COMET,Q=18.819916858162 17,E=0.4467797304486364,I=35.6216 7842651182,O=315.5669602248961, W=27.32356166486748,T=04-DEC- 2015:23:24:07,TimeScale=TDB,EQ UINOX=J2000,EPOCH=08-APR- 2014:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

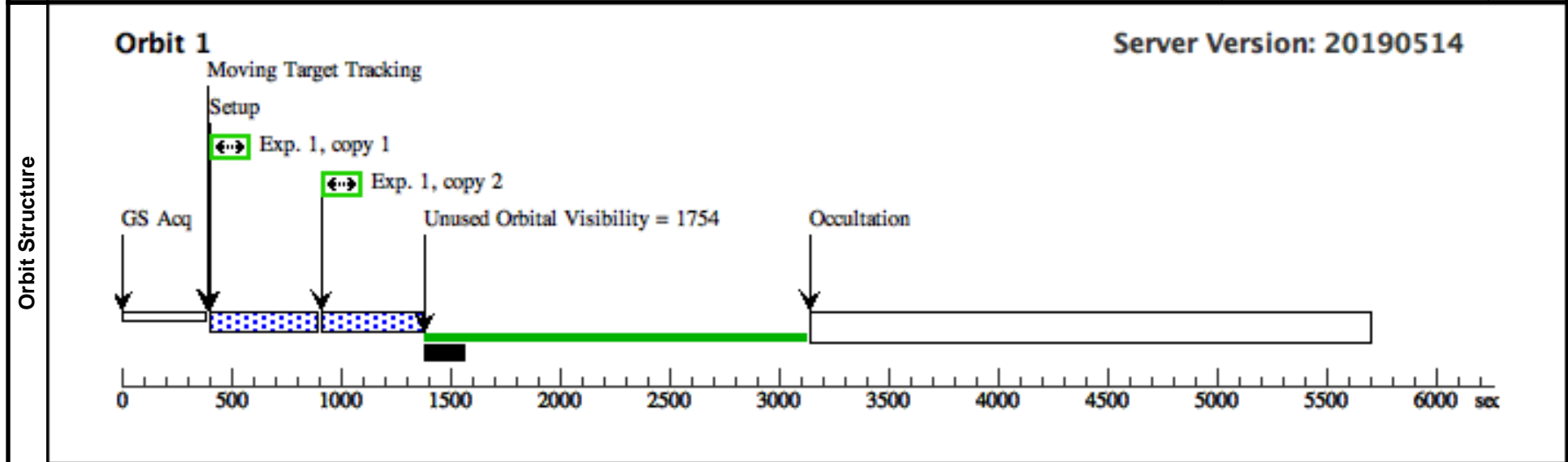
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(48) 2013KZ18		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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Visit	Proposal 16018, Visit 53					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(53)	2011OD16	TYPE=COMET,Q=19.496968519096 01,E=0.180183513827793,I=6.301645 931150268,O=166.0911605548549,W =202.2509320001475,T=20-APR- 2023:00:43:01,TTTimeScale=TDB,EQ UINOX=J2000,EPOCH=11-DEC- 2013:00:00:00,EpochTimeScale=TDB				EARTH
	<i>Comments: Description=Centaur Extended=NO</i>						

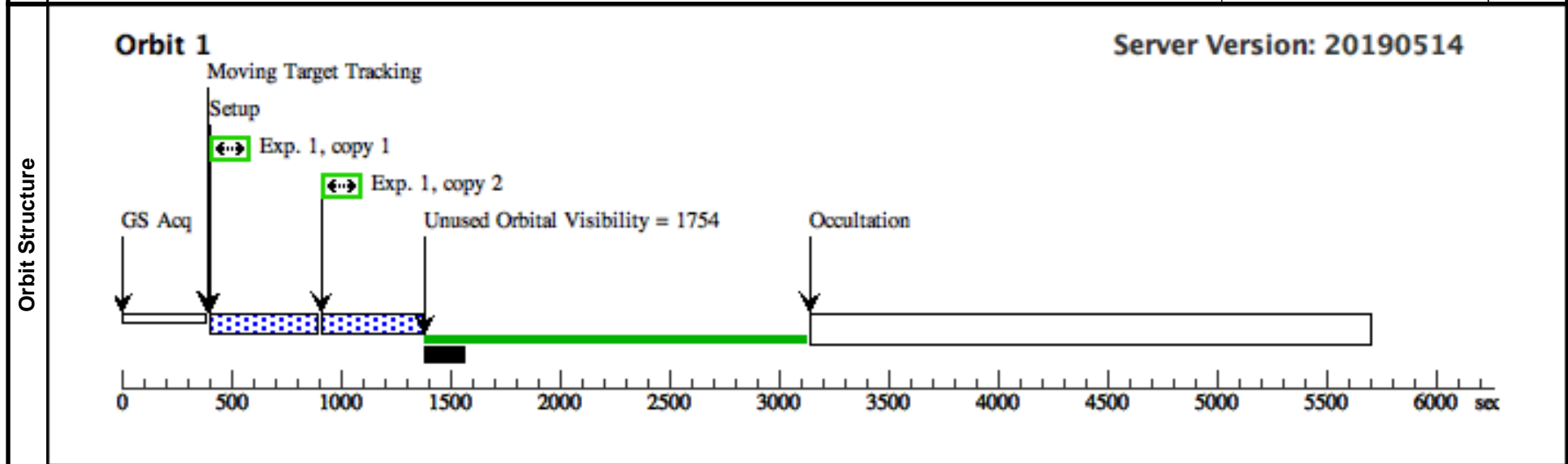
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(53) 2011OD16	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)	
									[=>(Copy 1)] [=>(Copy 2)]	[1]



Visit	Proposal 16018, Visit 54					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(54)	2003QZ91	TYPE=COMET,Q=21.700984675439 31,E=0.4760548928648665,I=34.8677 3952441214,O=130.8485774173401, W=137.0851031839675,T=18-JUN- 1991:08:42:22,TimeScale=TDB,EQ UINOX=J2000,EPOCH=18-OCT- 2004:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

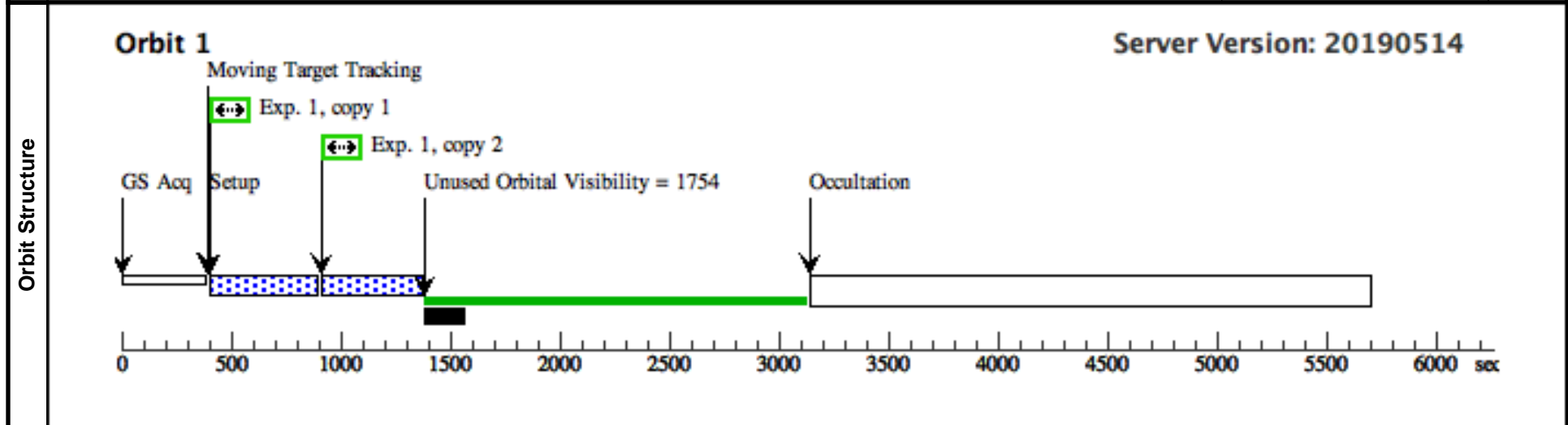
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(54) 2003QZ91		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
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									[=>(Copy 2)]	[1]



Visit	Proposal 16018, Visit 56					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(56)	2013HX156	TYPE=COMET,Q=19.555981597609 67,E=0.1976837762894714,I=14.9087 1349812181,O=137.1589817453522, W=260.2036457559018,T=04-JUL- 2071:12:58:54,TimeScale=TDB,EQ UINOX=J2000,EPOCH=19-OCT- 2012:00:00:00,EpochTimeScale=TDB				
<i>Comments: Description=Centaur Extended=NO</i>							

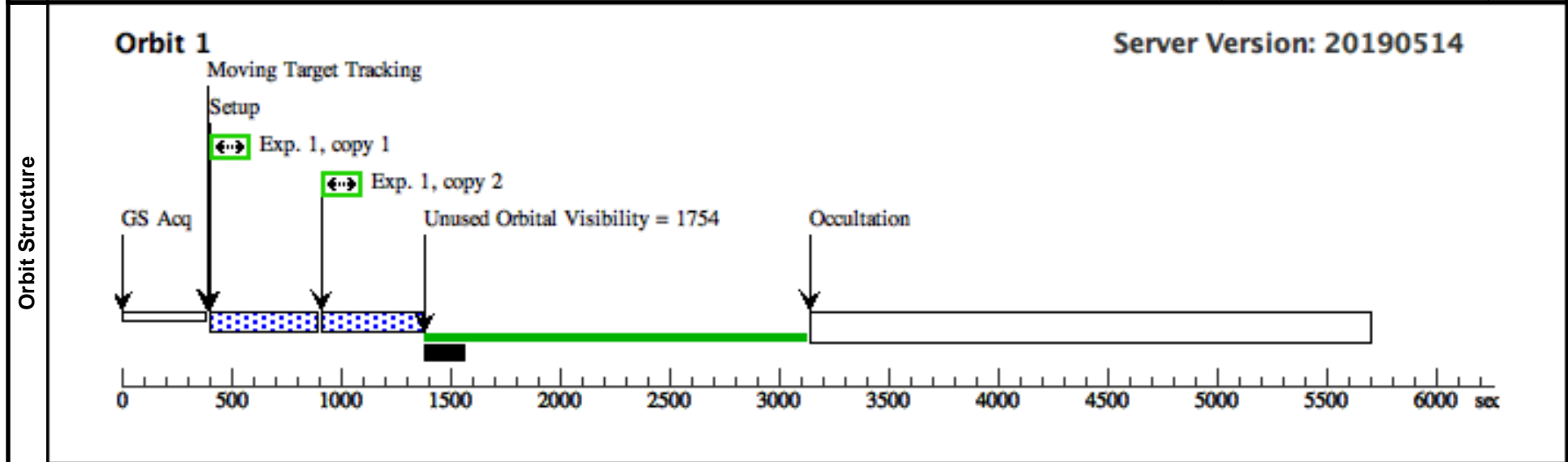
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(56) 2013HX156		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
									[=>(Copy 1)]	
									[=>(Copy 2)]	[1]



Visit	Proposal 16018, Visit 64					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(64)	2000OO67	TYPE=COMET,Q=20.762438506611 84,E=0.963206953637004,I=20.08626 581432092,O=142.354317070773,W= 212.5365825271795,T=29-APR- 2005:21:17:05,TimeScale=TDB,EQ UINOX=J2000,EPOCH=27-FEB- 2002:00:00:00,EpochTimeScale=TDB				EARTH
	<i>Comments: Description=Centaur Extended=NO</i>						

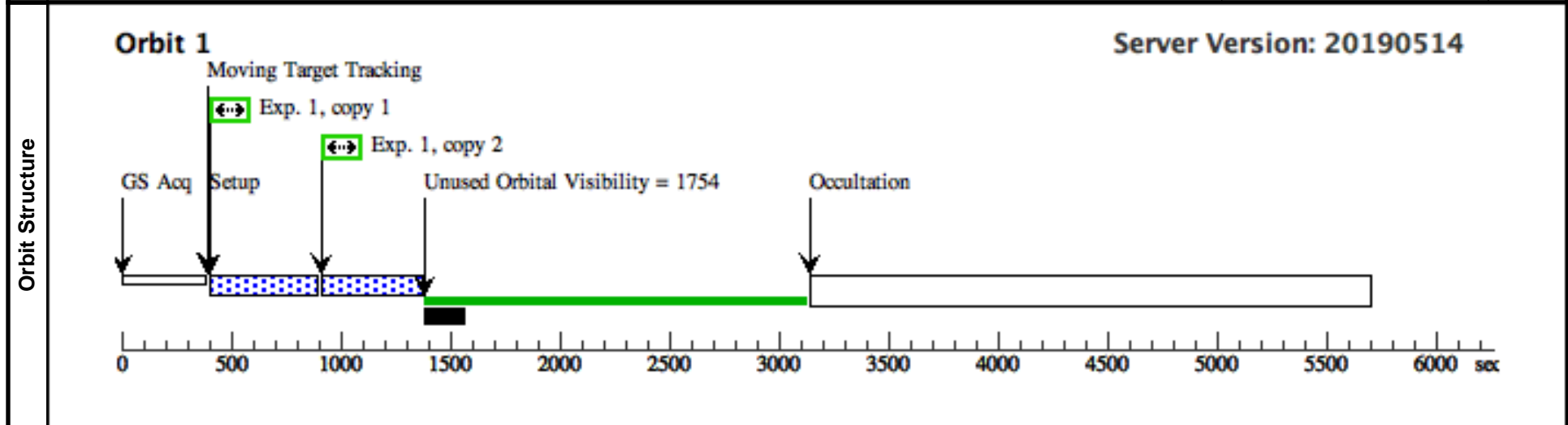
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(64) 2000OO67	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)	
									[=>(Copy 1)]	
									[=>(Copy 2)]	[1]



Visit	Proposal 16018, Visit 68					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(68)	2010TY53		TYPE=COMET,Q=21.069117012607 95,E=0.4619371404521349,I=22.4537 3593667661,O=111.4764226526011, W=2.832720500947765,T=05-NOV- 2042:17:32:07,TimeScale=TDB,EQ UINOX=J2000,EPOCH=13-JAN- 2014:00:00:00,EpochTimeScale=TDB			
<i>Comments: Description=Centaur Extended=NO</i>							

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(68) 2010TY53		WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)
									[==>(Copy 1)]	
									[==>(Copy 2)]	[1]



Proposal 16018 - Visit 69 - Centaurs and Activity Beyond the Water Sublimation Zone

Fri Oct 04 17:00:55 GMT 2019

Visit	Proposal 16018, Visit 69					
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: (none)					

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(69)	2007RW10	TYPE=COMET,Q=21.215007437350 61,E=0.2990558294302,I=36.1023653 6913693,O=187.0431642595452,W=9 6.42928759650334,T=01-MAY- 1985:00:36:42,TimeScale=TDB,EQ UINOX=J2000,EPOCH=28-AUG- 2013:00:00:00,EpochTimeScale=TDB				EARTH
	<i>Comments: Description=Centaur Extended=NO</i>						

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(69) 2007RW10	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP				300 Secs X 2 (600 Secs)	
									[=>(Copy 1)]	
									[=>(Copy 2)]	[1]

