



## 15662 - Galactic Winds across the Gas-Rich Merger Sequence

Cycle: 26, Proposal Category: GO

(UV 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) IRAS-04103-2838	COS/FUV COS/NUV	4	12-Dec-2019 09:00:13.0	yes
02	(2) 2MASX-J05210136-2521450	COS/FUV COS/NUV	3	12-Dec-2019 09:00:15.0	yes
03	(3) IRAS-07598+6508	COS/FUV COS/NUV	1	12-Dec-2019 09:00:16.0	yes
04	(4) NAME-IRAS-F08572+3915-NW	COS/FUV COS/NUV	3	12-Dec-2019 09:00:16.0	yes
05	(5) IRAS-11119+3257	COS/FUV COS/NUV	5	12-Dec-2019 09:00:18.0	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>
06	(6) 4U-1317+06	COS/FUV COS/NUV	3	12-Dec-2019 09:00:19.0	yes
07	(7) 2MASX-J13331651-1755106	COS/FUV COS/NUV	3	12-Dec-2019 09:00:20.0	yes
08	(8) MRK-273	COS/FUV COS/NUV	2	12-Dec-2019 09:00:20.0	yes
09	(9) LEDA-165630	COS/FUV COS/NUV	5	12-Dec-2019 09:00:22.0	yes
10	(10) 2MASX-J15023198+1421352	COS/FUV COS/NUV	4	12-Dec-2019 09:00:23.0	yes
11	(11) 2MASX-J15265942+3558372	COS/FUV COS/NUV	2	12-Dec-2019 09:00:23.0	yes
12	(12) LEDA-2817004	COS/FUV COS/NUV	5	12-Dec-2019 09:00:24.0	yes
13	(13) 2MASX-J21244166-1744458	COS/FUV COS/NUV	1	12-Dec-2019 09:00:25.0	yes
14	(14) 2MASX-J23083397+0521293	COS/FUV COS/NUV	4	12-Dec-2019 09:00:26.0	yes
15	(15) 2MASX-J23254938+2834208	COS/FUV COS/NUV	5	12-Dec-2019 09:00:27.0	yes
16	(15) 2MASX-J23254938+2834208	COS/FUV COS/NUV	1	12-Dec-2019 09:00:28.0	yes

51 Total Orbits Used

## **ABSTRACT**

Galactic winds in gas-rich mergers are an essential element of galaxy and SMBH evolution. The most powerful of these outflows are driven by quasars and likely feed the circumgalactic medium. The outflow energetics are often dominated by the outer ( $>$  kpc) and cooler dusty molecular and neutral atomic gas phase, but the driving mechanism is best probed by the inner (sub-kpc) highly ionized gas phase. While current X-ray

Proposal 15662 (STScI Edit Number: 1, Created: Thursday, December 12, 2019 at 9:00:28 AM Eastern Standard Time) - Overview

observatories are not sensitive enough to carry out a systematic survey of these inner winds, recent results from two independent FUV studies have shown that COS is very well suited for this task. Prominent, highly blueshifted (1000 km/s) Ly-alpha emission has been detected in most ULIRGs, often accompanied by blueshifted absorption features. The internal kinematics of ULIRGs seem to be the single most important factor determining the profile and escape fraction of the Ly-alpha emission. However, the trends so far are entirely driven by the few AGN-ULIRGs in the current sample and are therefore highly uncertain. So here we propose to more than triple the sample size of AGN-ULIRGs (from 6 to 21 objects) and combine the results from our analysis of the new data and archival COS spectra to study, for the first time, the gaseous environments of gas-rich mergers as a function of host properties and age across the merger sequence ULIRG --> QSO. These data will allow us to distinguish between quasar-driven outflows, starburst-driven winds, and tidal debris around the mergers. They will also provide new constraints on the critically important warm-hot gas phase associated with the cooling shocked ISM predicted in some quasar feedback models.

## **OBSERVING DESCRIPTION**

We requested and were allocated 50 orbits to observe 15 targets with COS G130M. The requested number of orbits per target ranges from 1 to 5 orbits so the observing time for each target fits within a single visit.

For each visit, we first use ACQ/IMAGE to obtain a NUV image of the field and center the aperture on the intensity peak. For this procedure, we make use of MIRRORA for all of the targets except for #3 and 13, where the ETC count rate is above 50 counts per pixel, so we use MIRRORB for these two brighter targets. There is also a BOT warning for target #8 but the ETC count rate is less than 50 counts per pixel so we keep MIRRORA. The exposure times are generous to make sure that  $S/N > 20$ .

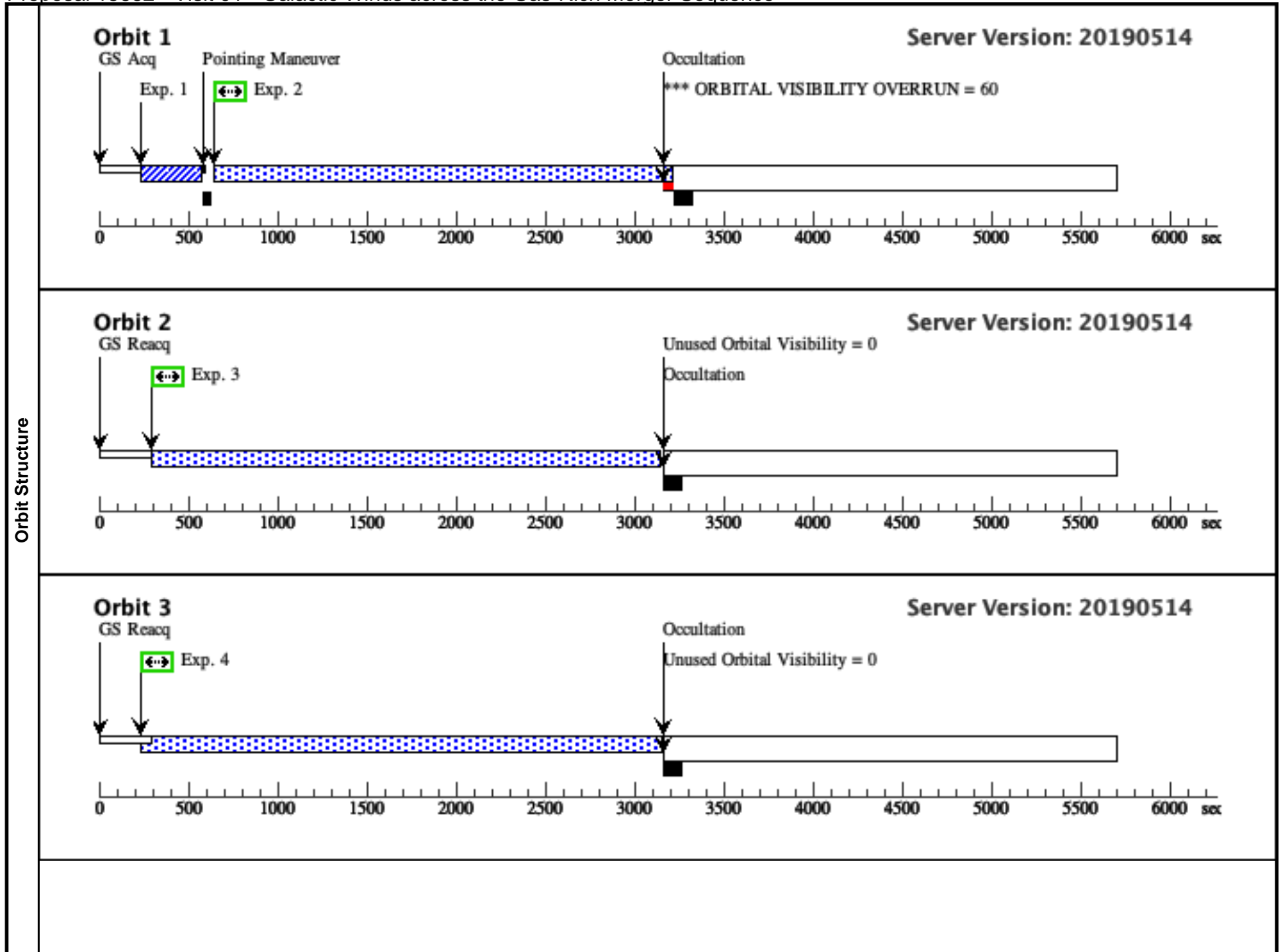
The spectroscopic exposures are split into 1, 2, or 4 equal-duration segments per orbit with different FP-POS values to reduce the fixed pattern noise. The number of segments per orbit is chosen to minimize the overhead and maximize the on-target exposure time. We get all four FP-POS settings for all targets, except targets #1, 9, 13, and 15 with cenwave = 1291 Å. For these targets, we only use FP-POS = 3 and 4 to get equal exposures for segments A and B. All of the observations are done in TIME-TAG mode. This temporal sampling will allow us to exclude poor quality data and get improved thermal correction and background removal. The wavelength setting is adjusted according to the redshift of the target and is selected to optimize the number of strong lines that can be observed with G130M. At all but the highest redshifts ( $z < 0.2$ ), Ly-alpha, the high-ionization lines from N V, and weaker low-ionization lines from Si and Si III fit within the wavelength coverage of the data. At the highest redshifts ( $z = 0.20-0.37$ ), we lose N V and Ly-alpha but gain Ly-beta and O VI as well as several weaker low-ionization lines. Following the COS 2025 policy (Table 2.1 of COS Handbook), Segment B is turned off for  $\lambda_c = 1291$  (FP-POS = 1, 2) and 1327 (FP-POS = 1, 2, 3, 4). For simplicity and to guard against

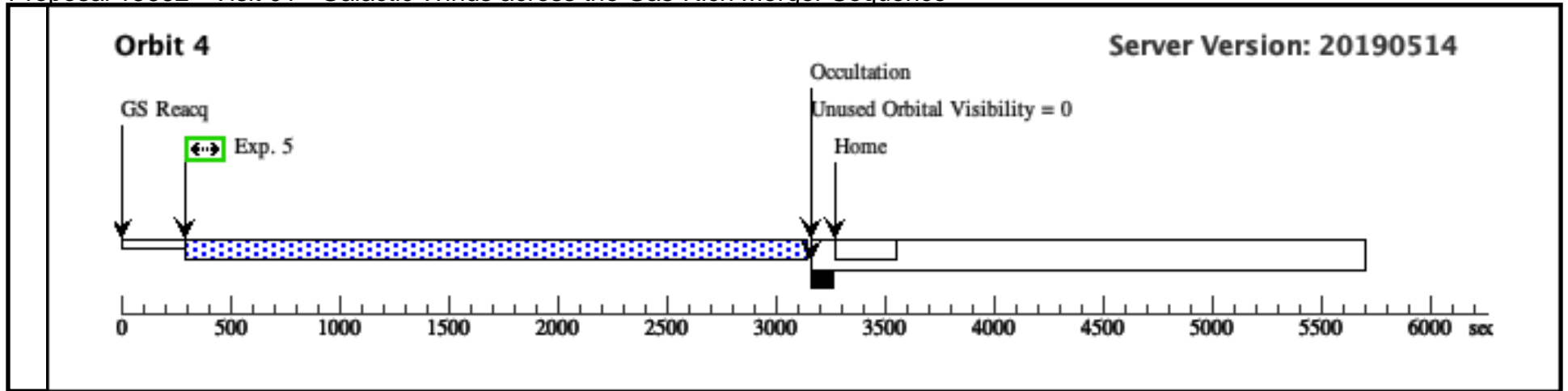
Proposal 15662 (STScI Edit Number: 1, Created: Thursday, December 12, 2019 at 9:00:28 AM Eastern Standard Time) - Overview  
the (unlikely) possibility that our targets are more than ~50% brighter than expected, we set buffer-time = exposure-time.

Proposal 15662 - Visit 01 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:28 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 01, scheduling</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	<b>Diagnostics</b>	(Visit 01) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 01) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN								
<b>Fixed Targets</b>		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(1)	IRAS-04103-2838	RA: 04 12 19.4229 (63.0809288d) Dec: -28 30 24.82 (-28.50689d) Equinox: J2000	Proper Motion RA: -3.8835039064912024E-4 sec of time/yr Proper Motion Dec: 0.00730647 arcsec/yr Epoch of Position: 1994.99 Redshift: 0.117	V=16.9 m_FUV = 20.2 (AB)	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.130 1455)	(1) IRAS-04103-2838 8	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs) [==>]	[1]
	2	(COS.sp.130 0570)	(1) IRAS-04103-2838 8	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=24 00; FLASH=YES; FP-POS=3			2400 Secs (2400 Secs) [==>]	[1]
	3	(COS.sp.130 0570)	(1) IRAS-04103-2838 8	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2799 Secs) [==>]	[2]
	4	(COS.sp.130 0570)	(1) IRAS-04103-2838 8	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=3			2799 Secs (2799 Secs) [==>]	[3]
	5	(COS.sp.130 0570)	(1) IRAS-04103-2838 8	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2799 Secs) [==>]	[4]

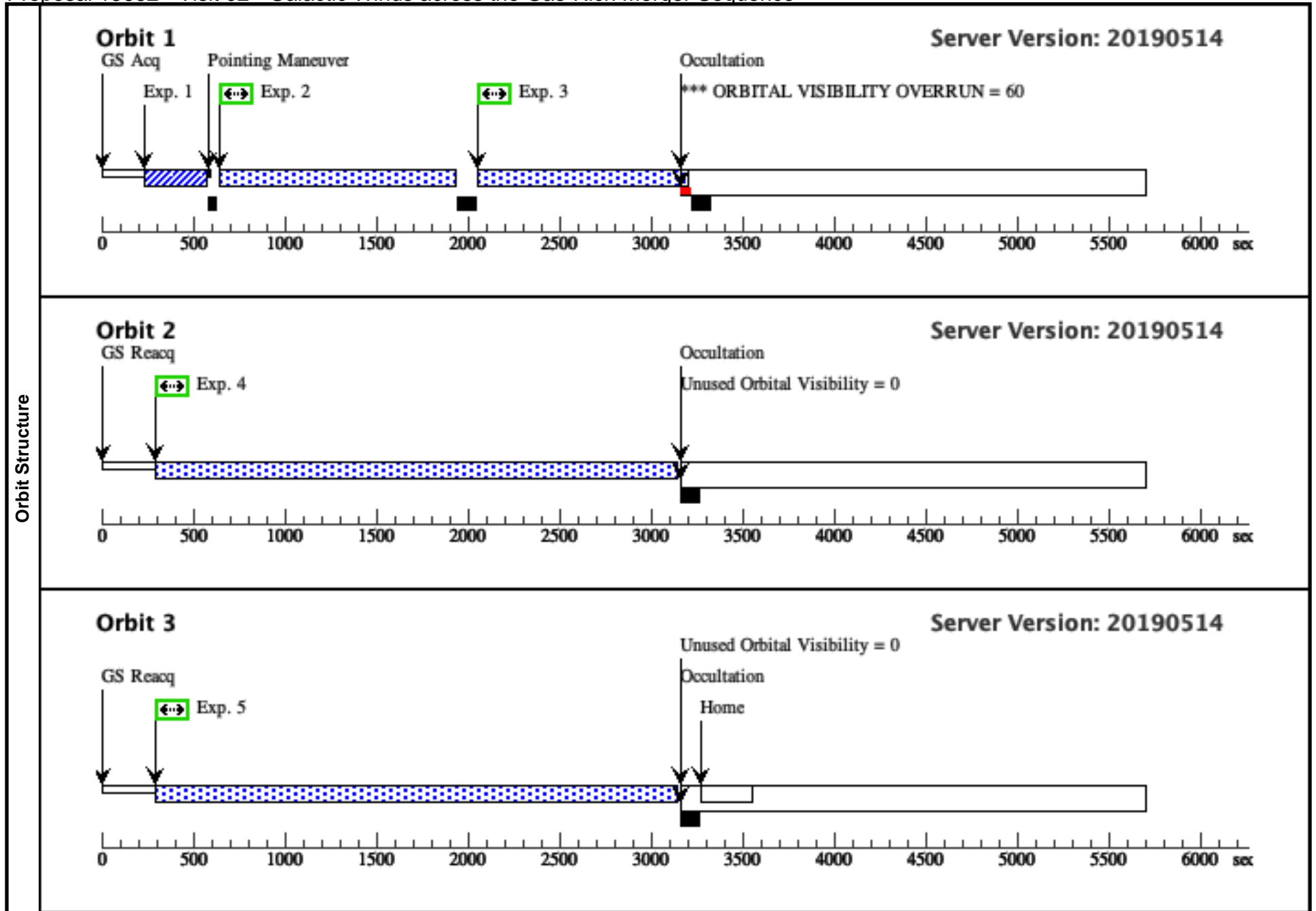




Proposal 15662 - Visit 02 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:28 GMT 2019

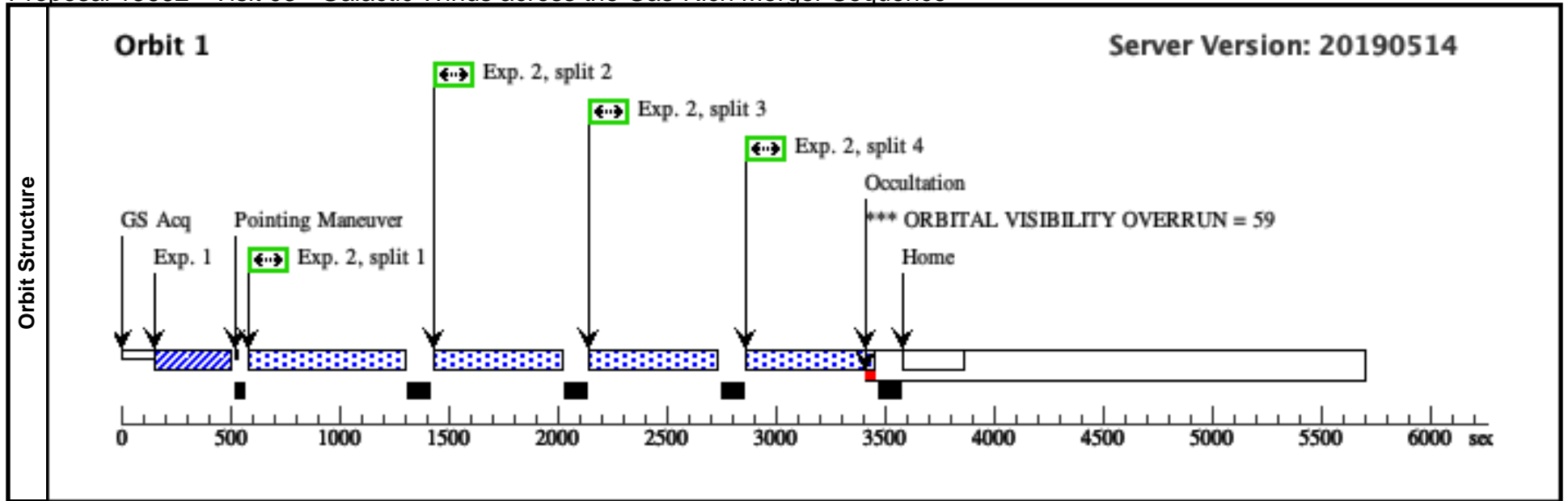
<b>Visit</b>	<b>Proposal 15662, Visit 02, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)																																																																	
	(Visit 02) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN																																																																	
<b>Fixed Targets</b>	<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>(2)</td> <td>2MASX-J05210136-2521450</td> <td>RA: 05 21 1.3880 (80.2557833d) Dec: -25 21 45.10 (-25.36253d) Equinox: J2000</td> <td>Redshift: 0.043</td> <td>V=14.75 m_FUV = 19.1 (AB)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	2MASX-J05210136-2521450	RA: 05 21 1.3880 (80.2557833d) Dec: -25 21 45.10 (-25.36253d) Equinox: J2000	Redshift: 0.043	V=14.75 m_FUV = 19.1 (AB)	Reference Frame: ICRS	Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO																																																				
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(2)	2MASX-J05210136-2521450	RA: 05 21 1.3880 (80.2557833d) Dec: -25 21 45.10 (-25.36253d) Equinox: J2000	Redshift: 0.043	V=14.75 m_FUV = 19.1 (AB)	Reference Frame: ICRS																																																													
<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</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>(COS.ta.130 1458)</td> <td>(2) 2MASX-J052101 36-2521450</td> <td>COS/NUV, ACQ/IMAGE, PSA</td> <td>MIRRORA</td> <td></td> <td></td> <td></td> <td>60 Secs (60 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>(COS.sp.130 0572)</td> <td>(2) 2MASX-J052101 36-2521450</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1222 A</td> <td>BUFFER-TIME=11 02; FLASH=YES; FP-POS=1</td> <td></td> <td></td> <td>1102 Secs (1102 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>3</td> <td>(COS.sp.130 0572)</td> <td>(2) 2MASX-J052101 36-2521450</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1222 A</td> <td>BUFFER-TIME=11 02; FLASH=YES; FP-POS=2</td> <td></td> <td></td> <td>1102 Secs (1102 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>4</td> <td>(COS.sp.130 0572)</td> <td>(2) 2MASX-J052101 36-2521450</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1222 A</td> <td>BUFFER-TIME=27 99; FLASH=YES; FP-POS=3</td> <td></td> <td></td> <td>2799 Secs (2799 Secs) [==&gt;]</td> <td>[2]</td> </tr> <tr> <td>5</td> <td>(COS.sp.130 0572)</td> <td>(2) 2MASX-J052101 36-2521450</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1222 A</td> <td>BUFFER-TIME=27 99; FLASH=YES; FP-POS=4</td> <td></td> <td></td> <td>2799 Secs (2799 Secs) [==&gt;]</td> <td>[3]</td> </tr> </tbody> </table>							#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	(COS.ta.130 1458)	(2) 2MASX-J052101 36-2521450	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs) [==>]	[1]	2	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 02; FLASH=YES; FP-POS=1			1102 Secs (1102 Secs) [==>]	[1]	3	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 02; FLASH=YES; FP-POS=2			1102 Secs (1102 Secs) [==>]	[1]	4	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=3			2799 Secs (2799 Secs) [==>]	[2]	5	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2799 Secs) [==>]	[3]
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																																																									
1	(COS.ta.130 1458)	(2) 2MASX-J052101 36-2521450	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs) [==>]	[1]																																																									
2	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 02; FLASH=YES; FP-POS=1			1102 Secs (1102 Secs) [==>]	[1]																																																									
3	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 02; FLASH=YES; FP-POS=2			1102 Secs (1102 Secs) [==>]	[1]																																																									
4	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=3			2799 Secs (2799 Secs) [==>]	[2]																																																									
5	(COS.sp.130 0572)	(2) 2MASX-J052101 36-2521450	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2799 Secs) [==>]	[3]																																																									



Proposal 15662 - Visit 03 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:28 GMT 2019

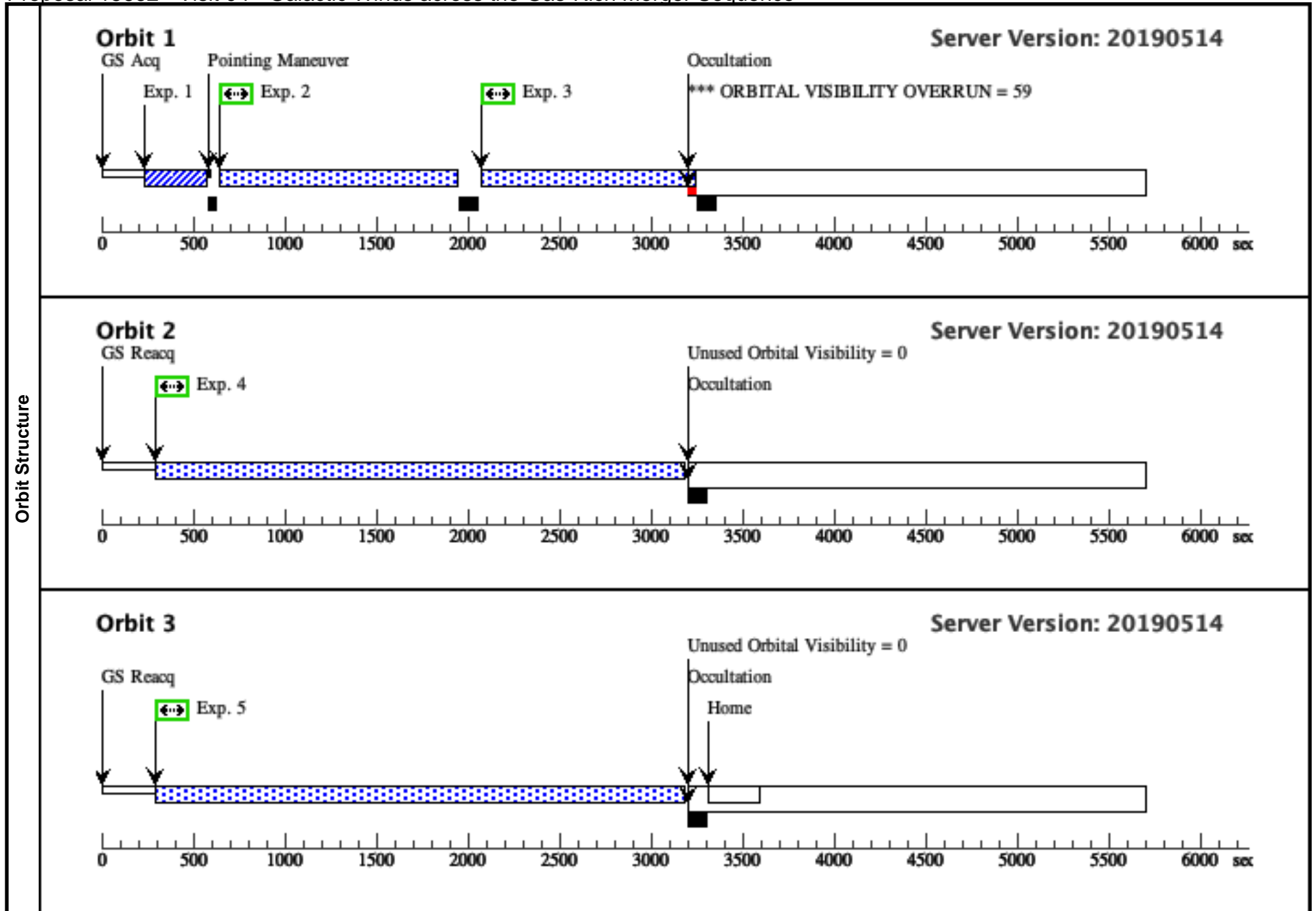
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	(Visit 03) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Diagnostics</b>										
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(3)	IRAS-07598+6508	RA: 08 04 30.4980 (121.1270750d) Dec: +64 59 52.78 (64.99799d) Equinox: J2000	Proper Motion RA: -5.641783970066916E-4 sec of time/yr Proper Motion Dec: - 0.0014601200000000176 arcsec/yr Epoch of Position: 1998.9 Redshift: 0.148	V=13.964 m_FUV = 17.6 (AB)	Reference Frame: ICRS				
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(COS.ta.130 1461)	(3) IRAS-07598+6508 8	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs (30 Secs)	
									[==>]	[1]
2	(COS.sp.130 0573)	(3) IRAS-07598+6508 8	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=53 7; FLASH=YES; FP-POS=ALL; SEGMENT=A				537 Secs (2148 Secs)	
									[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]



Proposal 15662 - Visit 04 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 04, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)											
	(Visit 04) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
<b>Diagnostics</b>												
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>					
	(4)	NAME-IRAS-F08572+3915-NW	RA: 09 00 25.3528 (135.1056367d) Dec: +39 03 54.05 (39.06501d) Equinox: J2000	Proper Motion RA: -0.0023949058190553814 sec of time/yr Proper Motion Dec: 0.0262731 arcsec/yr Epoch of Position: 1989.94 Redshift: 0.058	V=15.6662 m_FUV = 19.1 (AB)	Reference Frame: ICRS						
<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO												
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>		<b>Orbit</b>	
	1	(COS.ta.130 1469)	(4) NAME-IRAS-F08572+3915-NW	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs)			
									[==>]		[1]	
	2	(COS.sp.130 0574)	(4) NAME-IRAS-F08572+3915-NW	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 19;	FLASH=YES; FP-POS=1			1119 Secs (1119 Secs)		
									[==>]		[1]	
	3	(COS.sp.130 0574)	(4) NAME-IRAS-F08572+3915-NW	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 19;	FLASH=YES; FP-POS=2			1119 Secs (1119 Secs)		
									[==>]		[1]	
4	(COS.sp.130 0574)	(4) NAME-IRAS-F08572+3915-NW	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=28 34;	FLASH=YES; FP-POS=3			2834 Secs (2834 Secs)			
								[==>]		[2]		
5	(COS.sp.130 0574)	(4) NAME-IRAS-F08572+3915-NW	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=28 34;	FLASH=YES; FP-POS=4			2834 Secs (2834 Secs)			
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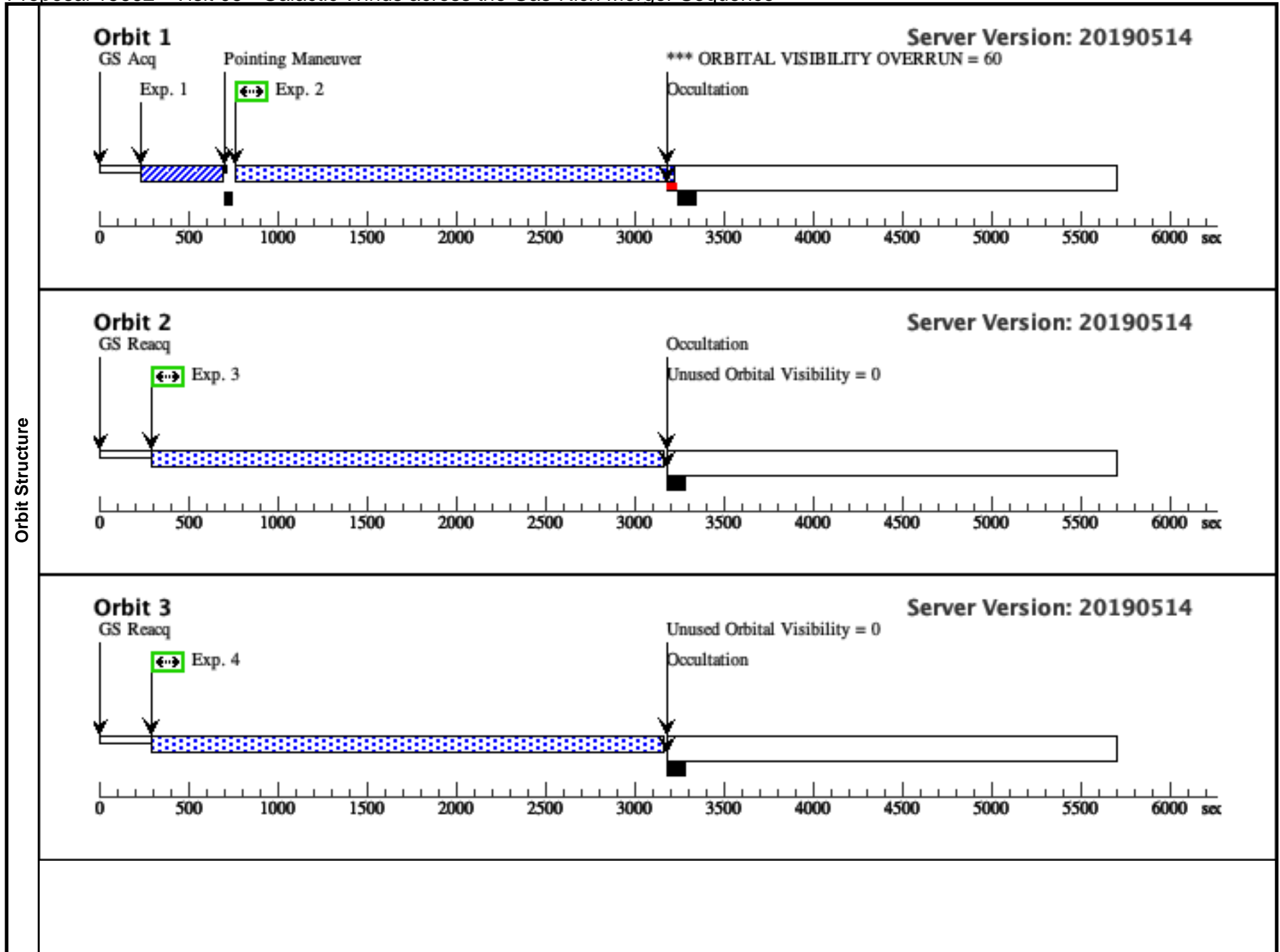
# Proposal 15662 - Visit 05 - Galactic Winds across the Gas-Rich Merger Sequence

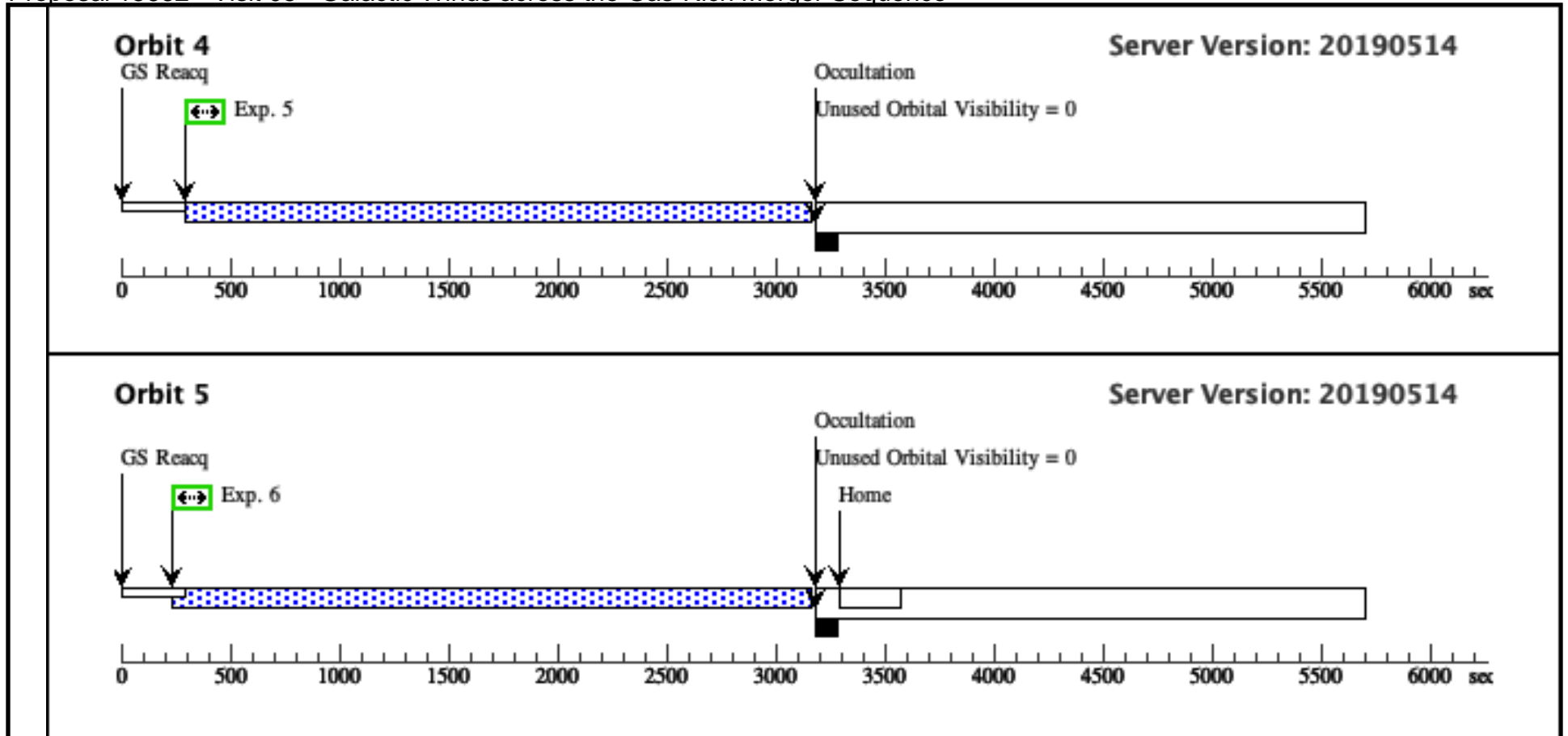
Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 05, scheduling</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)																
<b>Diagnostics</b>	(Visit 05) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 05) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN																
<b>Fixed Targets</b>	<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>(5)</td> <td>IRAS-11119+3257</td> <td>                     RA: 11 14 38.9063 (168.6621096d)                      Dec: +32 41 33.44 (32.69262d)                      Equinox: J2000                 </td> <td>                     Proper Motion RA: 6.499446890477423E-5                      sec of time/yr                      Proper Motion Dec: -0.014179700000000026                      arcsec/yr                      Epoch of Position: 1992.09                      Redshift: 0.189                 </td> <td>                     V=16.6552                      m_FUV = 21.4 (AB)                 </td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(5)	IRAS-11119+3257	RA: 11 14 38.9063 (168.6621096d) Dec: +32 41 33.44 (32.69262d) Equinox: J2000	Proper Motion RA: 6.499446890477423E-5 sec of time/yr Proper Motion Dec: -0.014179700000000026 arcsec/yr Epoch of Position: 1992.09 Redshift: 0.189	V=16.6552 m_FUV = 21.4 (AB)	Reference Frame: ICRS	Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO			
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous												
(5)	IRAS-11119+3257	RA: 11 14 38.9063 (168.6621096d) Dec: +32 41 33.44 (32.69262d) Equinox: J2000	Proper Motion RA: 6.499446890477423E-5 sec of time/yr Proper Motion Dec: -0.014179700000000026 arcsec/yr Epoch of Position: 1992.09 Redshift: 0.189	V=16.6552 m_FUV = 21.4 (AB)	Reference Frame: ICRS												

Proposal 15662 - Visit 05 - Galactic Winds across the Gas-Rich Merger Sequence

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	(COS.ta.130 1475)	(5) IRAS-11119+325 7	COS/NUV, ACQ/IMAGE, PSA	MIRRORA					120 Secs (120 Secs)	
										[==>]	[1]
	2	(COS.sp.130 0576)	(5) IRAS-11119+325 7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=22 81;	FLASH=YES; FP-POS=1; SEGMENT=A			2281 Secs (2281 Secs)	
										[==>]	[1]
	3	(COS.sp.130 0576)	(5) IRAS-11119+325 7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=28 14;	FLASH=YES; FP-POS=2; SEGMENT=A			2814 Secs (2814 Secs)	
										[==>]	[2]
4	(COS.sp.130 0576)	(5) IRAS-11119+325 7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=28 14;	FLASH=YES; FP-POS=3; SEGMENT=A			2814 Secs (2814 Secs)		
									[==>]	[3]	
5	(COS.sp.130 0576)	(5) IRAS-11119+325 7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=28 14;	FLASH=YES; FP-POS=4; SEGMENT=A			2814 Secs (2814 Secs)		
									[==>]	[4]	
6	(COS.sp.130 0576)	(5) IRAS-11119+325 7	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=28 14;	FLASH=YES; FP-POS=1; SEGMENT=A			2814 Secs (2814 Secs)		
									[==>]	[5]	

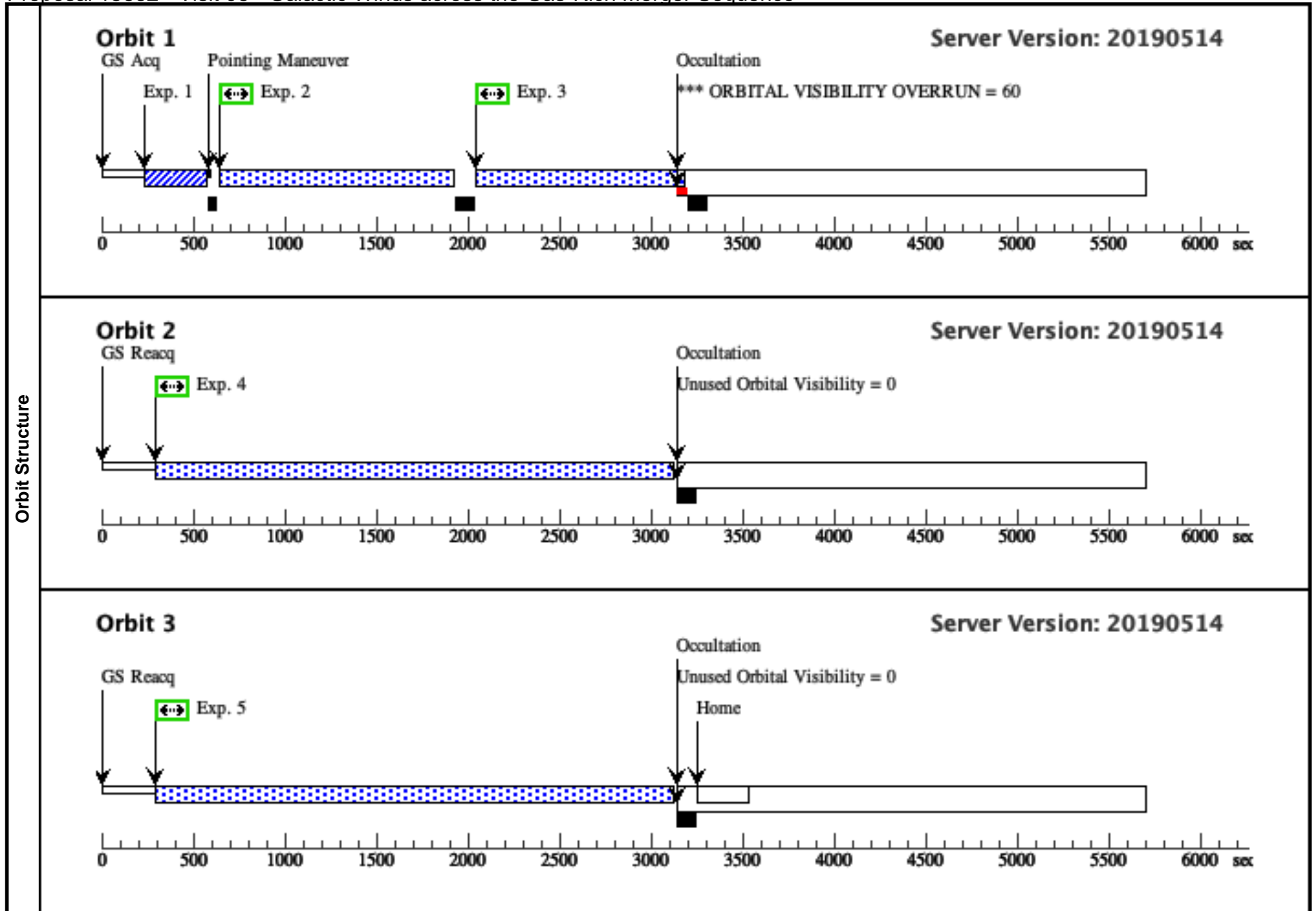




Proposal 15662 - Visit 06 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

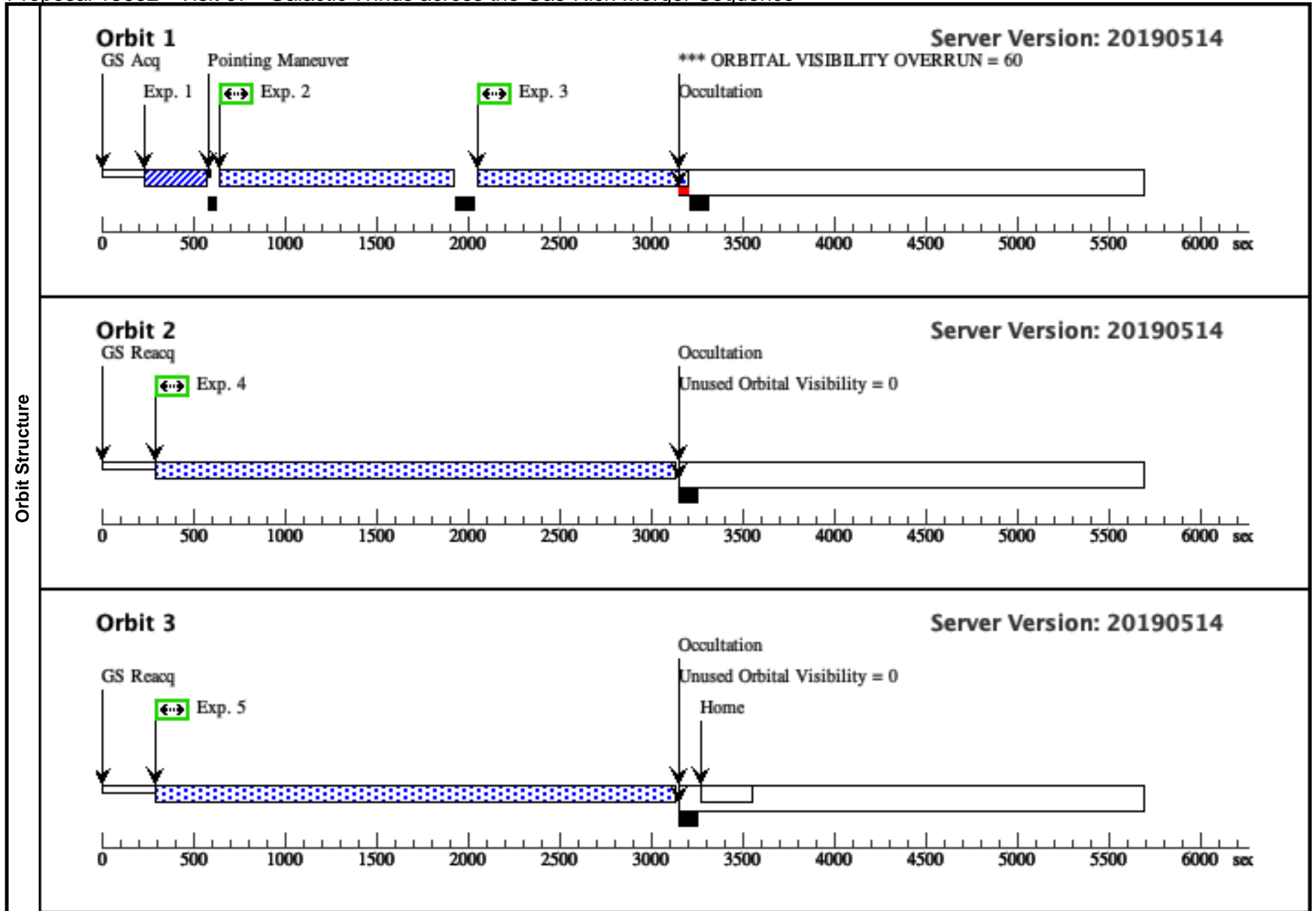
<b>Visit</b>	<b>Proposal 15662, Visit 06, scheduling</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)											
	(Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>					
	(6)	4U-1317+06	RA: 13 24 19.8962 (201.0829008d) Dec: +05 37 5.04 (5.61807d) Equinox: J2000	Proper Motion RA: 3.8419813221441724E-5 sec of time/yr Proper Motion Dec: 9.84567E-4 arcsec/yr Epoch of Position: 1997.18 Redshift: 0.205		V=17.7711 m_FUV = 19.4 (AB)	Reference Frame: ICRS					
<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO												
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>		<b>Orbit</b>	
	1	(COS.ta.130 0539)	(6) 4U-1317+06	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs)			
									[==>]		[1]	
	2	(COS.sp.130 0578)	(6) 4U-1317+06	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=10 92; FLASH=YES; FP-POS=1				1092 Secs (1092 Secs)		
									[==>]		[1]	
	3	(COS.sp.130 0578)	(6) 4U-1317+06	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=10 92; FLASH=YES; FP-POS=2				1092 Secs (1092 Secs)		
								[==>]		[1]		
4	(COS.sp.130 0578)	(6) 4U-1317+06	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=3				2779 Secs (2779 Secs)			
								[==>]		[2]		
5	(COS.sp.130 0578)	(6) 4U-1317+06	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=4				2779 Secs (2779 Secs)			
								[==>]		[3]		



Proposal 15662 - Visit 07 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

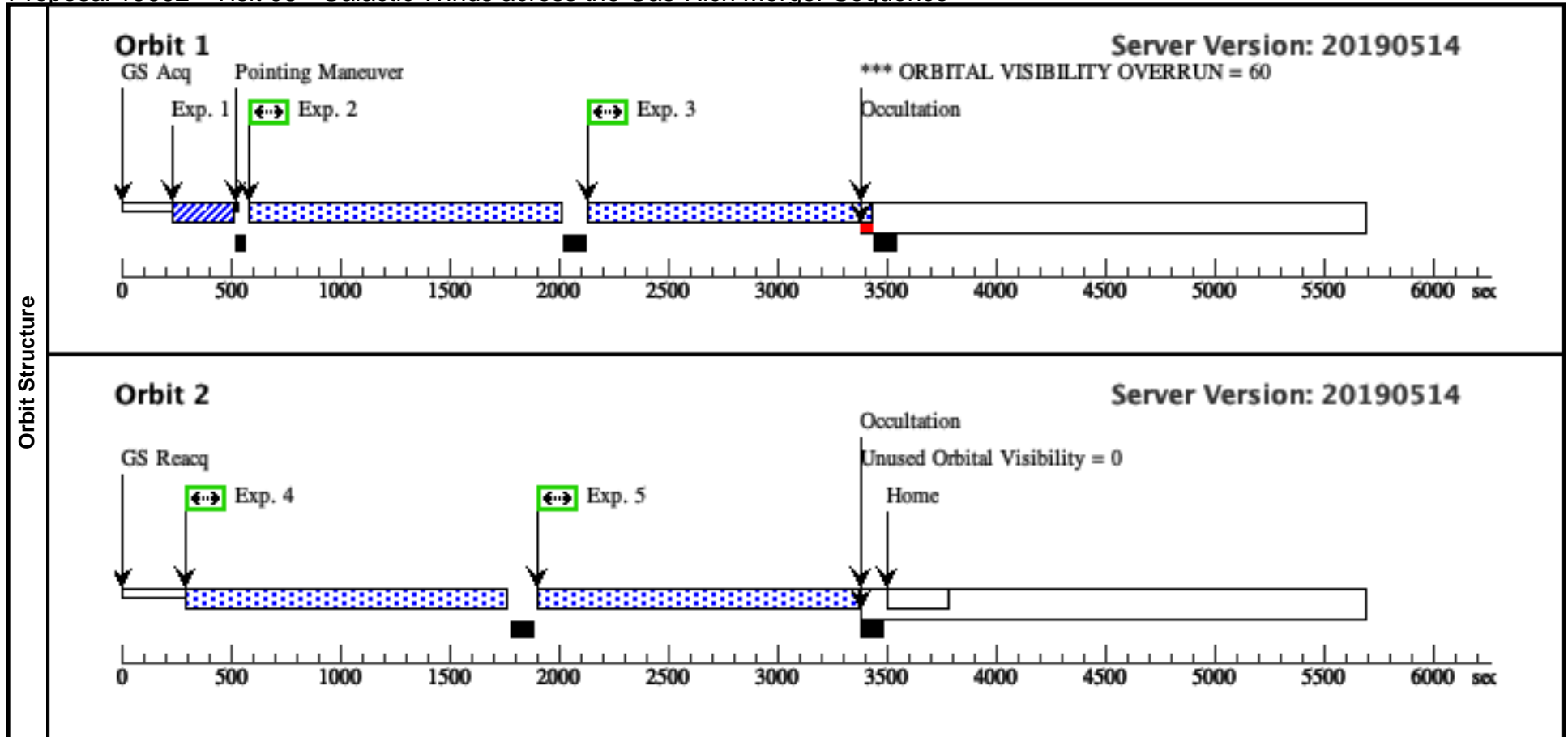
<b>Visit</b>	<b>Proposal 15662, Visit 07, scheduled</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	(Visit 07) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>			
	(7)	2MASX-J13331651-1755106	RA: 13 33 16.5417 (203.3189238d) Dec: -17 55 10.53 (-17.91959d) Equinox: J2000	Proper Motion RA: -4.7782988628242027E-4 sec of time/yr Proper Motion Dec: 5.10616E-4 arcsec/yr Epoch of Position: 1993.29 Redshift: 0.148		V=18.6 m_FUV = 19.5 (AB)	Reference Frame: ICRS			
<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(COS.ta.130 1482)	(7) 2MASX-J133316 51-1755106	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs) [==>]	[1]
	2	(COS.sp.130 0579)	(7) 2MASX-J133316 51-1755106	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=10 98; FLASH=YES; FP-POS=1; SEGMENT=A			1098 Secs (1098 Secs) [==>]	[1]
	3	(COS.sp.130 0579)	(7) 2MASX-J133316 51-1755106	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=10 98; FLASH=YES; FP-POS=2; SEGMENT=A			1098 Secs (1098 Secs) [==>]	[1]
	4	(COS.sp.130 0579)	(7) 2MASX-J133316 51-1755106	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 90; FLASH=YES; FP-POS=3; SEGMENT=A			2790 Secs (2790 Secs) [==>]	[2]
	5	(COS.sp.130 0579)	(7) 2MASX-J133316 51-1755106	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 90; FLASH=YES; FP-POS=4; SEGMENT=A			2790 Secs (2790 Secs) [==>]	[3]



Proposal 15662 - Visit 08 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

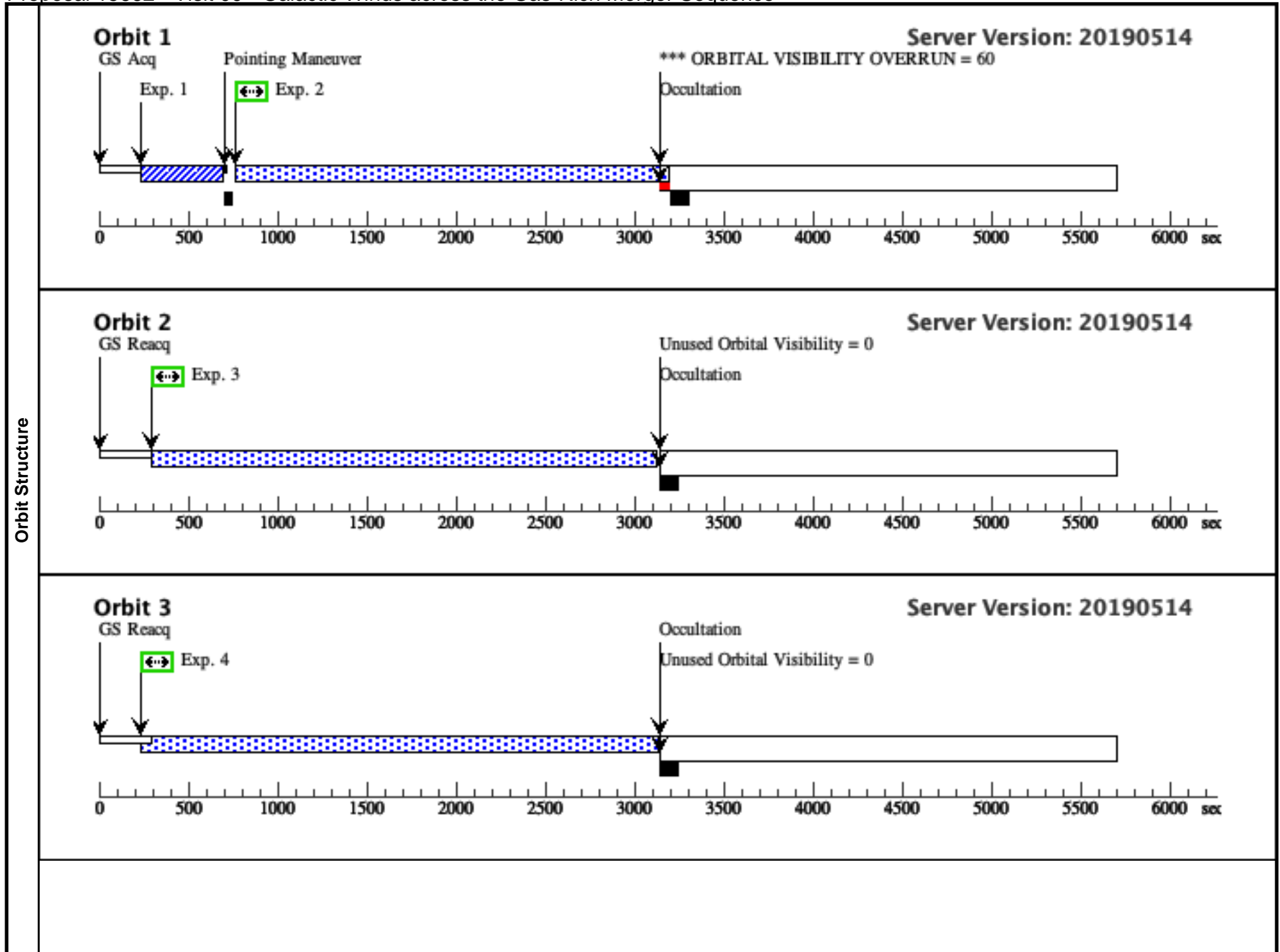
<b>Visit</b>	<b>Proposal 15662, Visit 08, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	(Visit 08) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>			
	(8)	MRK-273	RA: 13 44 42.0740 (206.1753083d) Dec: +55 53 13.00 (55.88694d) Equinox: J2000	Proper Motion RA: 2.3435243958439645E-4 sec of time/yr Proper Motion Dec: -3.934980000000223E-4 arcsec/yr Epoch of Position: 1993.31 Redshift: 0.038	V=11.9256 m_FUV = 18.6 (AB)	Reference Frame: ICRS				
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(COS.ta.130 2058)	(8) MRK-273	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	2	(COS.sp.130 0582)	(8) MRK-273	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=12 44; FLASH=YES; FP-POS=1			1244 Secs (1244 Secs) [==>]	[1]
	3	(COS.sp.130 0582)	(8) MRK-273	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=12 44; FLASH=YES; FP-POS=2			1244 Secs (1244 Secs) [==>]	[1]
	4	(COS.sp.130 0582)	(8) MRK-273	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=14 21; FLASH=YES; FP-POS=3			1421 Secs (1421 Secs) [==>]	[2]
	5	(COS.sp.130 0582)	(8) MRK-273	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=14 21; FLASH=YES; FP-POS=4			1421 Secs (1421 Secs) [==>]	[2]

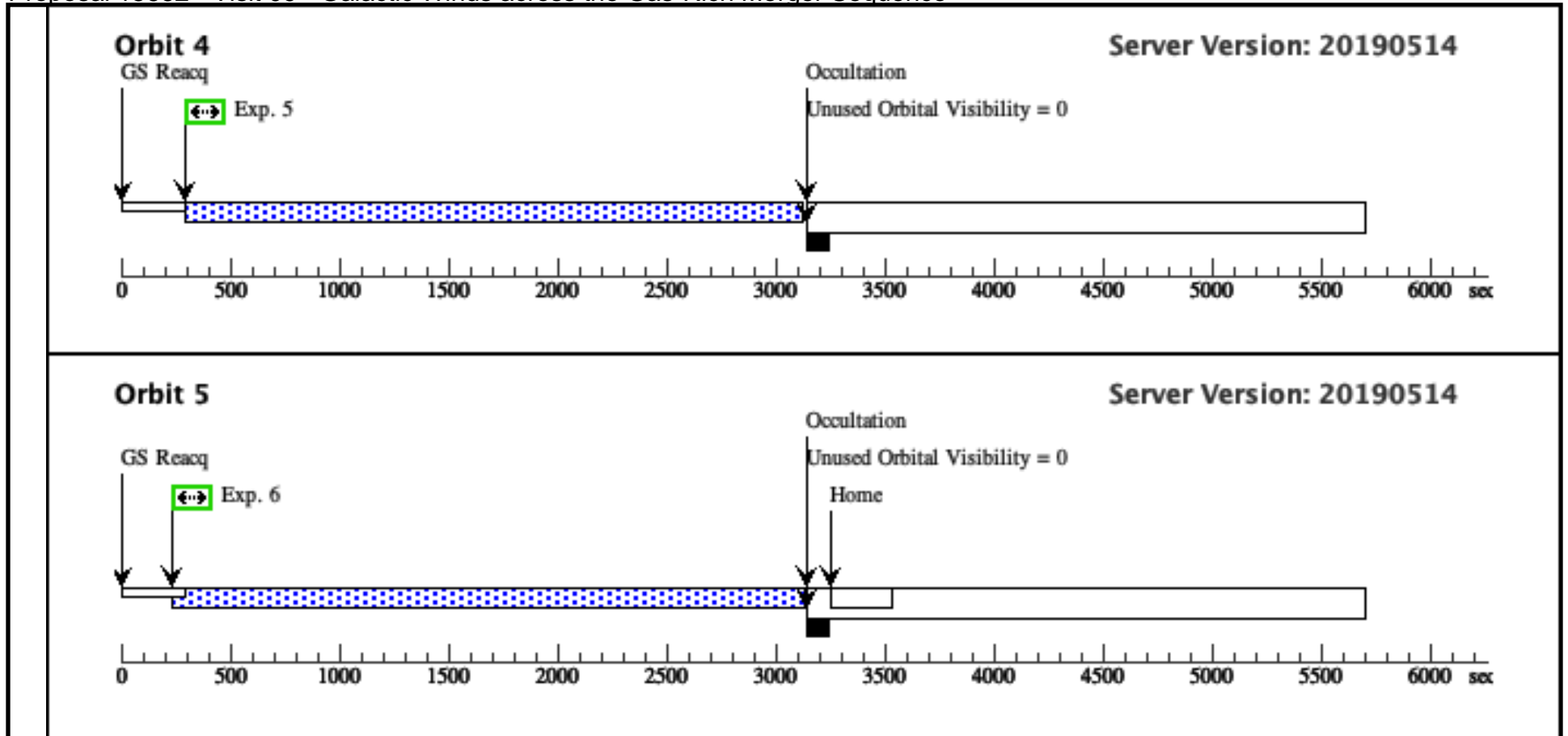


Proposal 15662 - Visit 09 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 09, scheduling</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	<b>Diagnosics</b> (Visit 09) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 09) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 09) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(9)	LEDA-165630	RA: 14 09 31.2488 (212.3802033d) Dec: +05 11 31.50 (5.19208d) Equinox: J2000	Proper Motion RA: -1.1673765153022432E-6 sec of time/yr Proper Motion Dec: -0.001944720000000018 arcsec/yr Epoch of Position: 1995.09 Redshift: 0.264	V=18.3968 m_FUV = 21.0 (AB)	Reference Frame: ICRS				
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.130 1489)	(9) LEDA-165630	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				120 Secs (120 Secs) [==>]	[1]
	2	(COS.sp.130 0583)	(9) LEDA-165630	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=22 60; FLASH=YES; FP-POS=3			2260 Secs (2260 Secs) [==>]	[1]
	3	(COS.sp.130 0583)	(9) LEDA-165630	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=4			2779 Secs (2779 Secs) [==>]	[2]
	4	(COS.sp.130 0583)	(9) LEDA-165630	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=3			2779 Secs (2779 Secs) [==>]	[3]
	5	(COS.sp.130 0583)	(9) LEDA-165630	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=4			2779 Secs (2779 Secs) [==>]	[4]
	6	(COS.sp.130 0583)	(9) LEDA-165630	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=3			2779 Secs (2779 Secs) [==>]	[5]

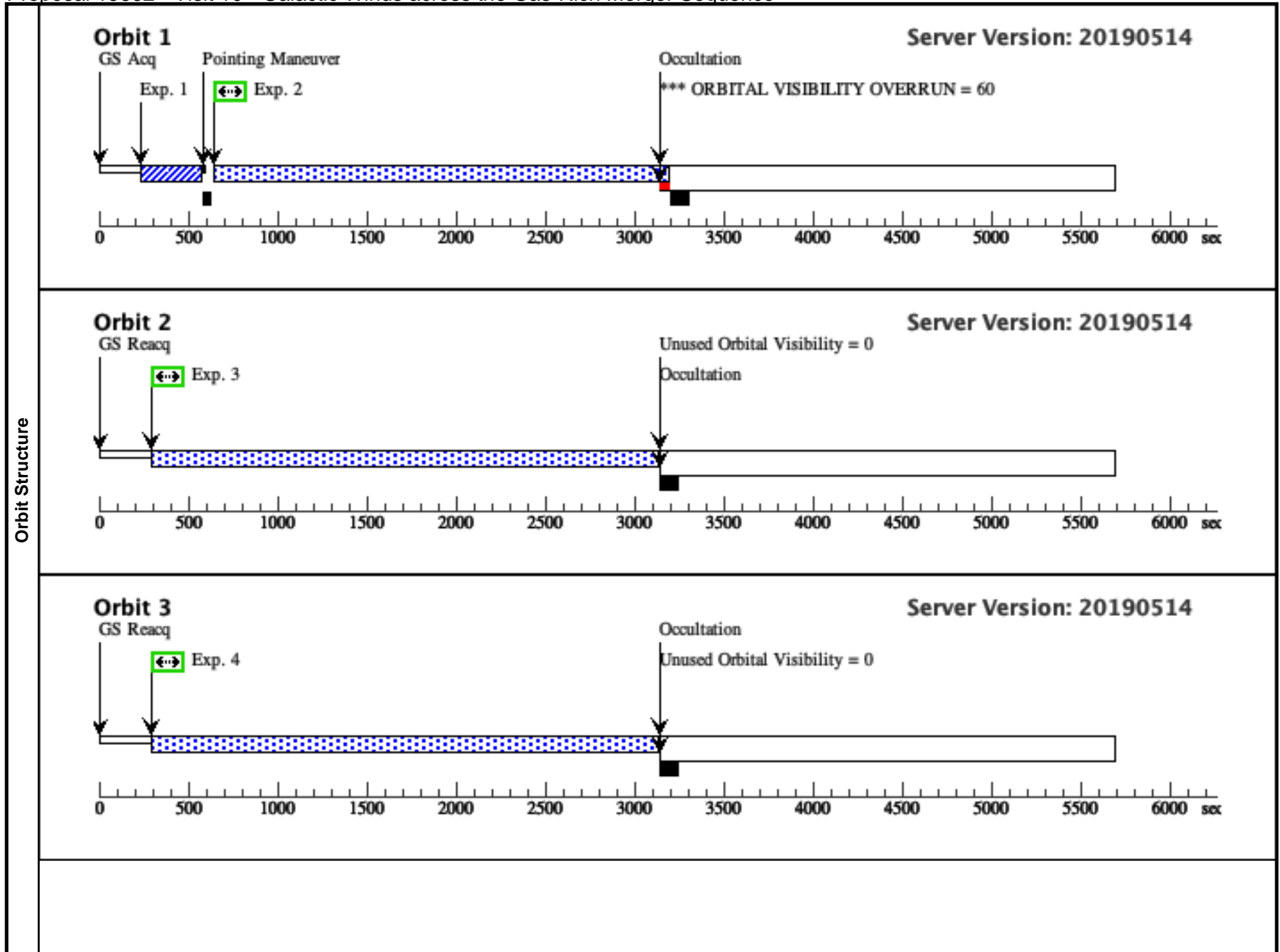


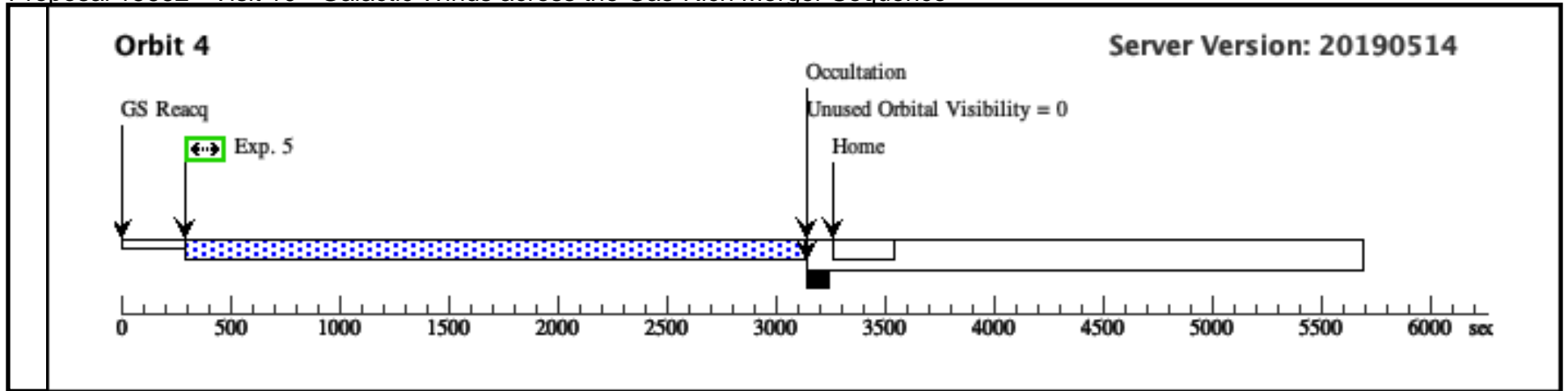


Proposal 15662 - Visit 10 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 10, scheduling</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	(Visit 10) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(10)	2MASX-J15023198+1421352	RA: 15 02 31.9336 (225.6330567d) Dec: +14 21 35.20 (14.35978d) Equinox: J2000	Proper Motion RA: 8.06201061257752E-5 sec of time/yr Proper Motion Dec: -0.001861490000000034 arcsec/yr Epoch of Position: 1991.37 Redshift: 0.163	V=17.1116 m_FUV = 20.3 (AB)	Reference Frame: ICRS				
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(COS.ta.130 1493)	(10) 2MASX-J15023 198+1421352	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs) [==>]	[1]
	2	(COS.sp.130 0584)	(10) 2MASX-J15023 198+1421352	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=23 70; FLASH=YES; FP-POS=1; SEGMENT=A			2370 Secs (2370 Secs) [==>]	[1]
	3	(COS.sp.130 0584)	(10) 2MASX-J15023 198+1421352	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 83; FLASH=YES; FP-POS=2; SEGMENT=A			2783 Secs (2783 Secs) [==>]	[2]
	4	(COS.sp.130 0584)	(10) 2MASX-J15023 198+1421352	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 83; FLASH=YES; FP-POS=3; SEGMENT=A			2783 Secs (2783 Secs) [==>]	[3]
	5	(COS.sp.130 0584)	(10) 2MASX-J15023 198+1421352	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 83; FLASH=YES; FP-POS=4; SEGMENT=A			2783 Secs (2783 Secs) [==>]	[4]

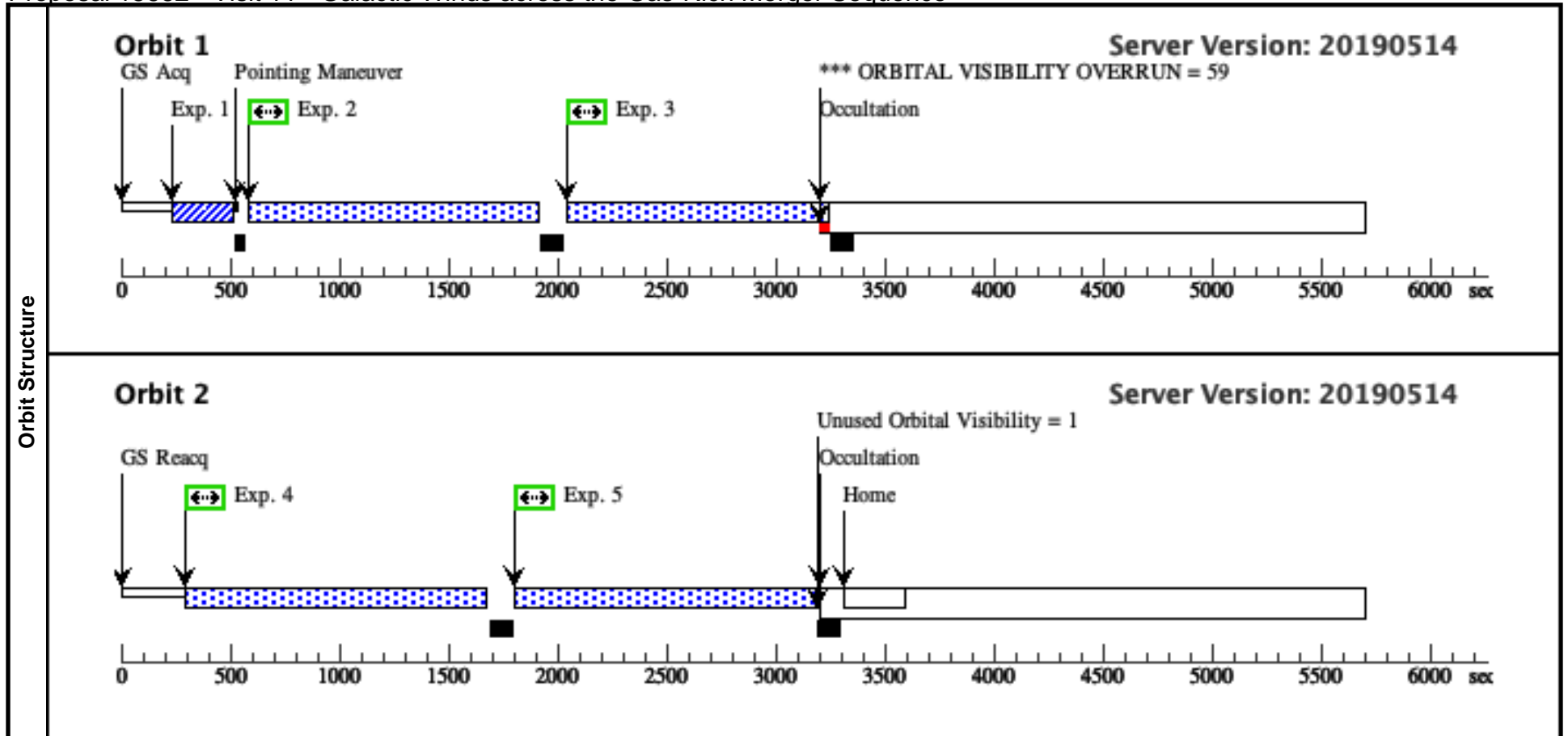




Proposal 15662 - Visit 11 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

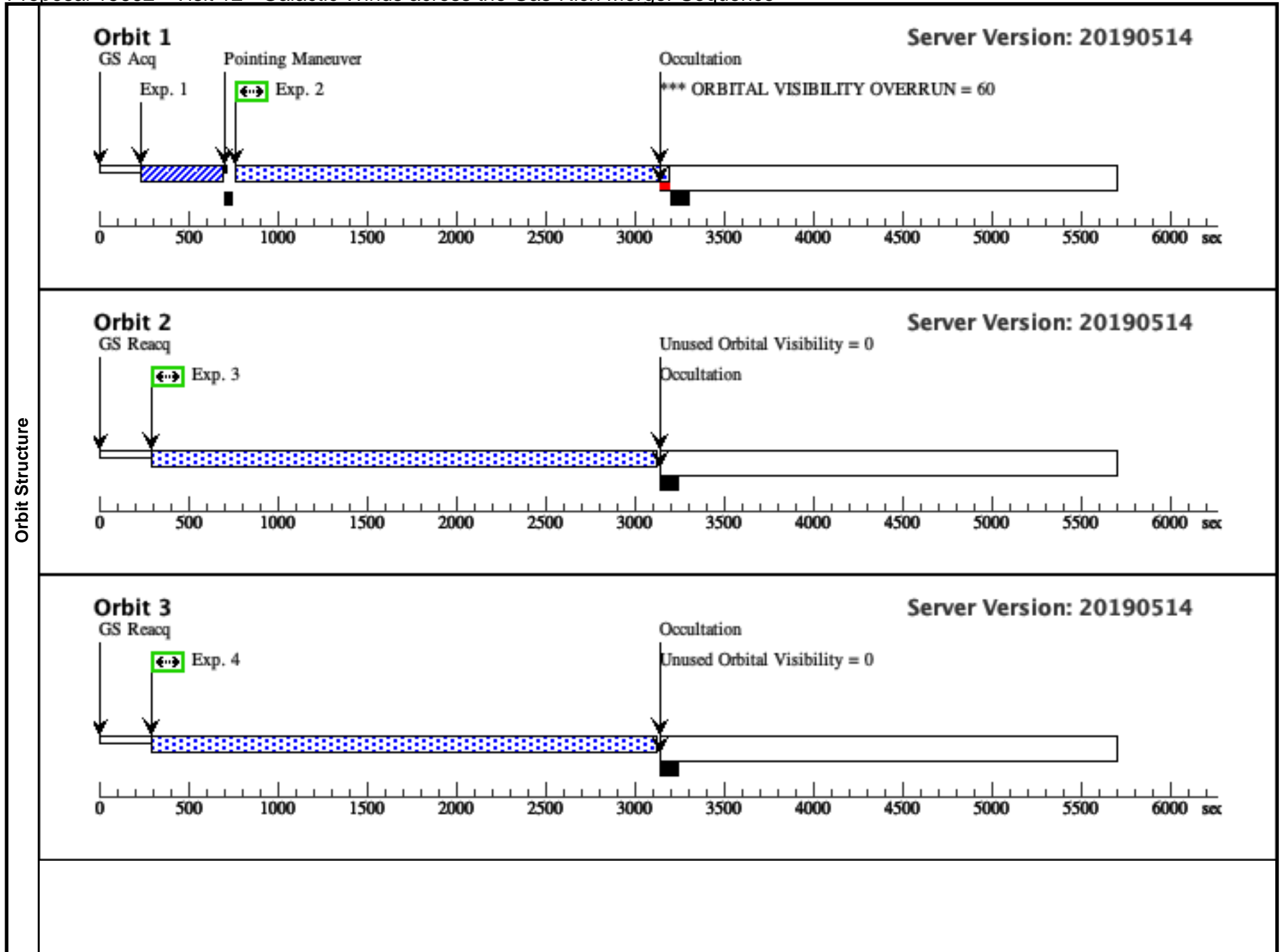
<b>Visit</b>	<b>Proposal 15662, Visit 11, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	(Visit 11) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(11)	2MASX-J15265942+3558372	RA: 15 26 59.4653 (231.7477721d) Dec: +35 58 37.62 (35.97712d) Equinox: J2000	Proper Motion RA: -9.597261323036706E-5 sec of time/yr Proper Motion Dec: -0.005970230000000015 arcsec/yr Epoch of Position: 1994.44 Redshift: 0.055	V=15.1582 m_FUV = 18.5 (AB)	Reference Frame: ICRS				
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.130 1495)	(11) 2MASX-J15265 942+3558372	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs (30 Secs) [==>]	[1]
	2	(COS.sp.130 0586)	(11) 2MASX-J15265 942+3558372	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 49; FLASH=YES; FP-POS=1			1149 Secs (1149 Secs) [==>]	[1]
	3	(COS.sp.130 0586)	(11) 2MASX-J15265 942+3558372	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=11 49; FLASH=YES; FP-POS=2			1149 Secs (1149 Secs) [==>]	[1]
	4	(COS.sp.130 0586)	(11) 2MASX-J15265 942+3558372	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=13 26; FLASH=YES; FP-POS=3			1326 Secs (1326 Secs) [==>]	[2]
	5	(COS.sp.130 0586)	(11) 2MASX-J15265 942+3558372	COS/FUV, TIME-TAG, PSA	G130M 1222 A	BUFFER-TIME=13 26; FLASH=YES; FP-POS=4			1326 Secs (1326 Secs) [==>]	[2]

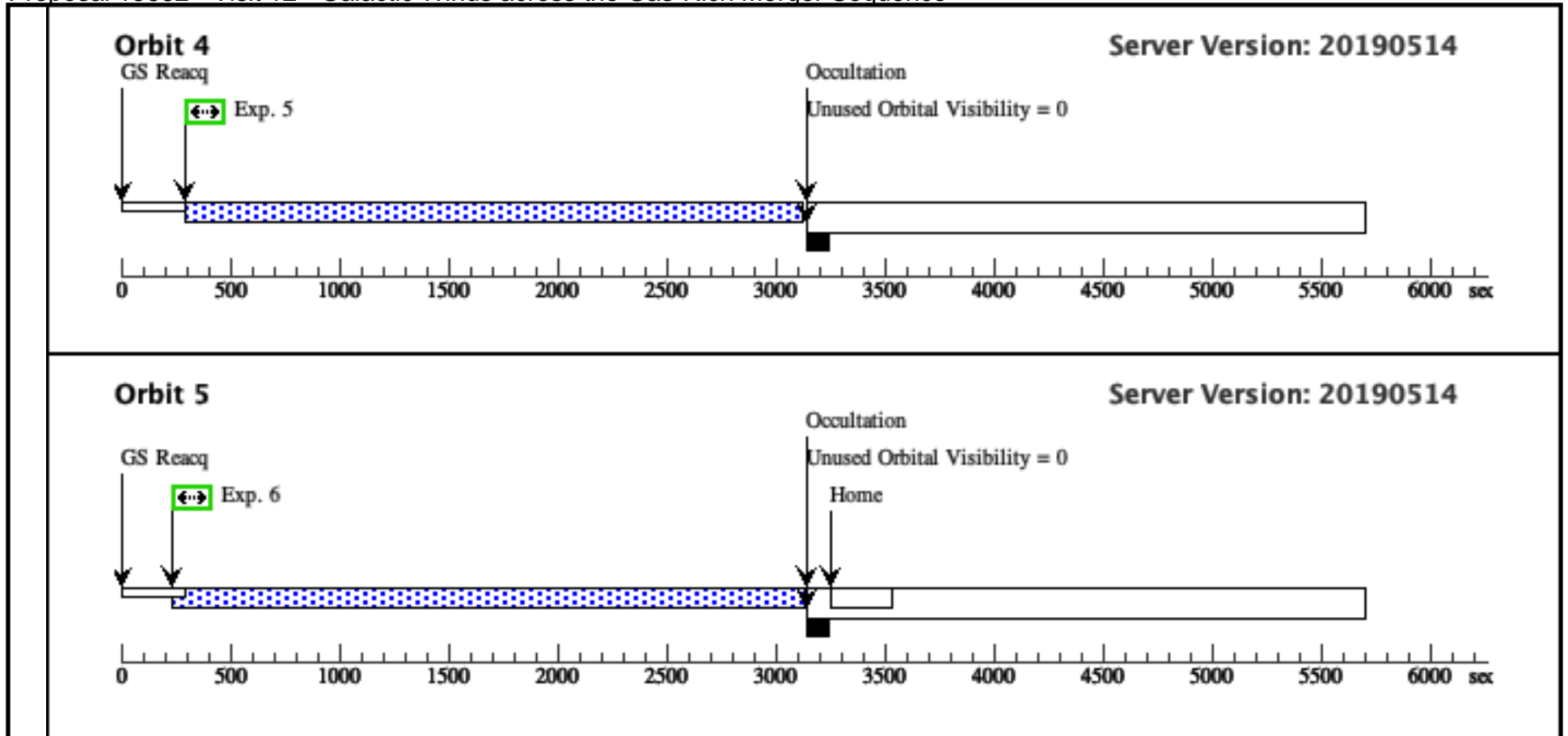


Proposal 15662 - Visit 12 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 12, scheduling</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	<b>Diagnostics</b>	(Visit 12) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 12) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN								
<b>Fixed Targets</b>		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(12)	LEDA-2817004	RA: 16 18 9.4189 (244.5392454d) Dec: +01 39 21.11 (1.65586d) Equinox: J2000	Proper Motion RA: 2.693558121377954E-4 sec of time/yr Proper Motion Dec: 0.0209246 arcsec/yr Epoch of Position: 1994.43 Redshift: 0.132	V=20.0 m_FUV = 20.9 (AB)	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.130 1497)	(12) LEDA-2817004	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				120 Secs (120 Secs) [==>]	[1]
	2	(COS.sp.130 0588)	(12) LEDA-2817004	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=22 43; FLASH=YES; FP-POS=1; SEGMENT=A			2243 Secs (2243 Secs) [==>]	[1]
	3	(COS.sp.130 0588)	(12) LEDA-2817004	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 76; FLASH=YES; FP-POS=2; SEGMENT=A			2776 Secs (2776 Secs) [==>]	[2]
	4	(COS.sp.130 0588)	(12) LEDA-2817004	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 76; FLASH=YES; FP-POS=3; SEGMENT=A			2776 Secs (2776 Secs) [==>]	[3]
	5	(COS.sp.130 0588)	(12) LEDA-2817004	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 76; FLASH=YES; FP-POS=4; SEGMENT=A			2776 Secs (2776 Secs) [==>]	[4]
	6	(COS.sp.130 0588)	(12) LEDA-2817004	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 76; FLASH=YES; FP-POS=1; SEGMENT=A			2776 Secs (2776 Secs) [==>]	[5]





Proposal 15662 - Visit 13 - Galactic Winds across the Gas-Rich Merger Sequence

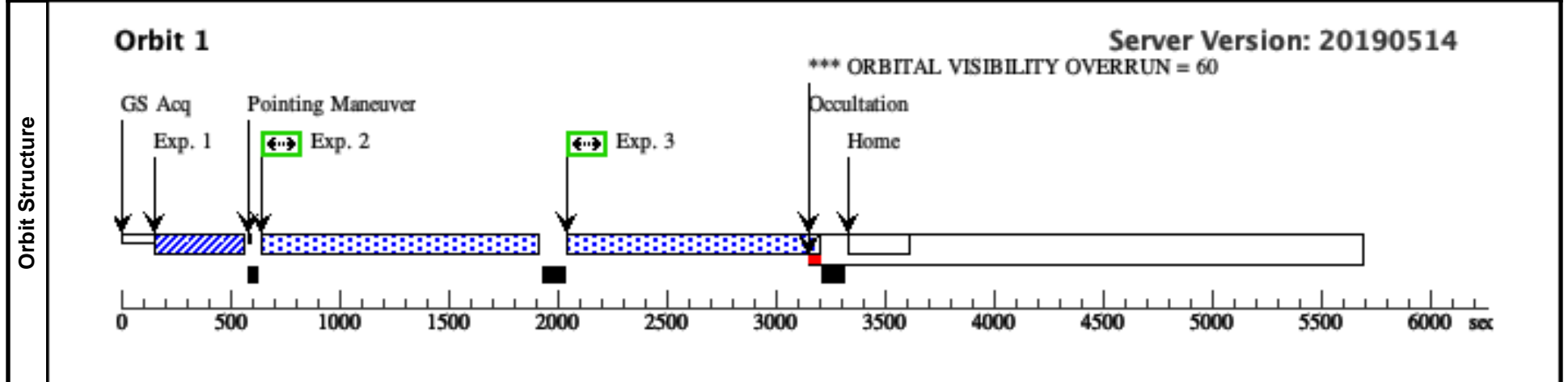
Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 13, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)
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<b>Diagnostics</b>	(Visit 13) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
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<b>Fixed Targets</b>	<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>(13)</td> <td>2MASX-J21244166-1744458</td> <td>RA: 21 24 41.6162 (321.1734008d) Dec: -17 44 45.59 (-17.74600d) Equinox: J2000</td> <td>Proper Motion RA: -3.834902447822414E-4 sec of time/yr Proper Motion Dec: 0.00268384 arcsec/yr Epoch of Position: 1991.74 Redshift: 0.112</td> <td>V=16.5 m_FUV = 17.3 (AB)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(13)	2MASX-J21244166-1744458	RA: 21 24 41.6162 (321.1734008d) Dec: -17 44 45.59 (-17.74600d) Equinox: J2000	Proper Motion RA: -3.834902447822414E-4 sec of time/yr Proper Motion Dec: 0.00268384 arcsec/yr Epoch of Position: 1991.74 Redshift: 0.112	V=16.5 m_FUV = 17.3 (AB)	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous							
(13)	2MASX-J21244166-1744458	RA: 21 24 41.6162 (321.1734008d) Dec: -17 44 45.59 (-17.74600d) Equinox: J2000	Proper Motion RA: -3.834902447822414E-4 sec of time/yr Proper Motion Dec: 0.00268384 arcsec/yr Epoch of Position: 1991.74 Redshift: 0.112	V=16.5 m_FUV = 17.3 (AB)	Reference Frame: ICRS								
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO													

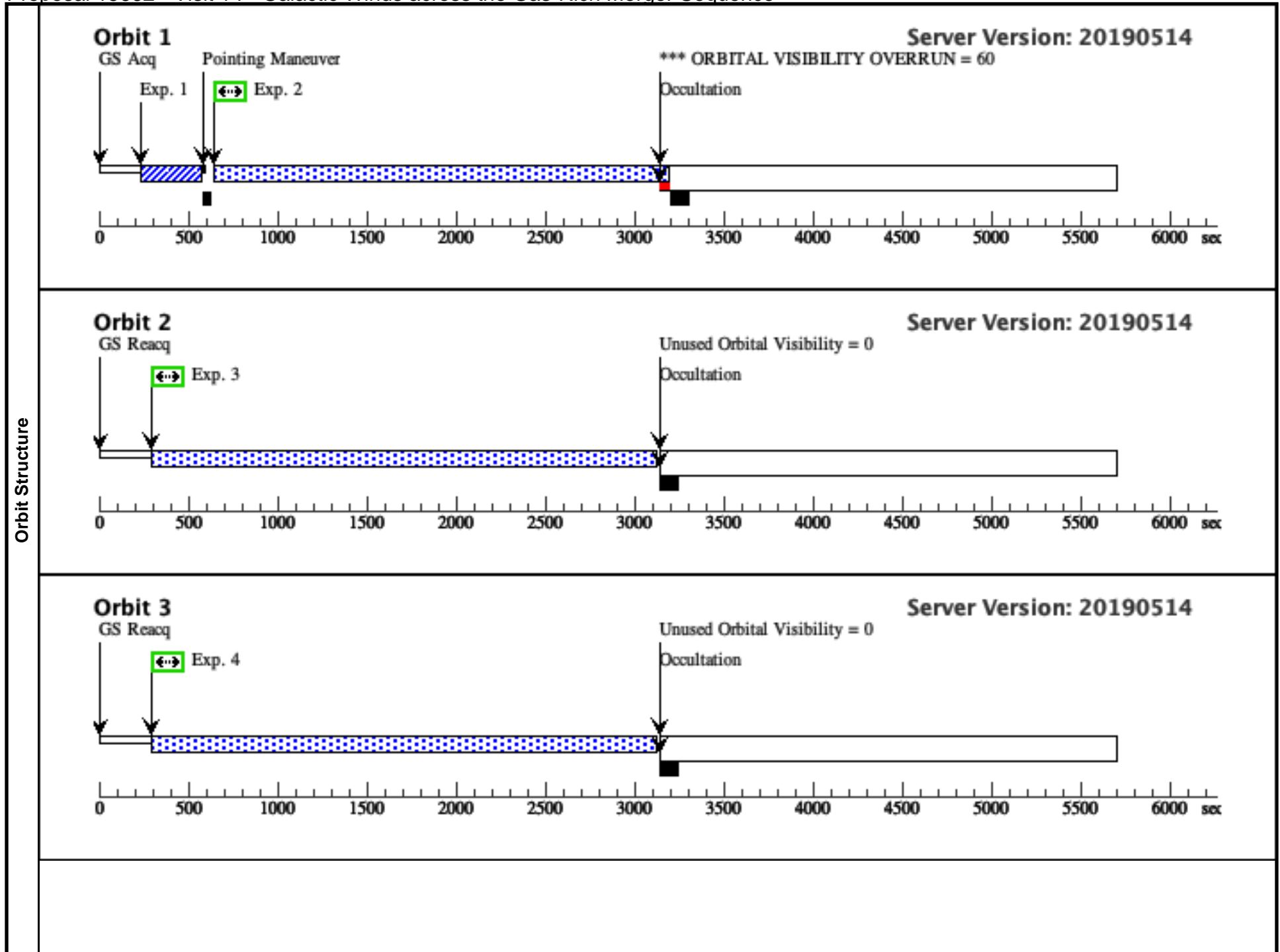
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	(COS.ta.130 1499)	(13) 2MASX-J21244166-1744458	COS/NUV, ACQ/IMAGE, PSA	MIRRORB					60 Secs (60 Secs)	
										[==>]	[1]
	2	(COS.sp.130 0589)	(13) 2MASX-J21244166-1744458	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1105; FLASH=YES; FP-POS=3				1105 Secs (1105 Secs)	
									[==>]	[1]	
3	(COS.sp.130 0589)	(13) 2MASX-J21244166-1744458	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1105; FLASH=YES; FP-POS=4				1105 Secs (1105 Secs)		
									[==>]	[1]	

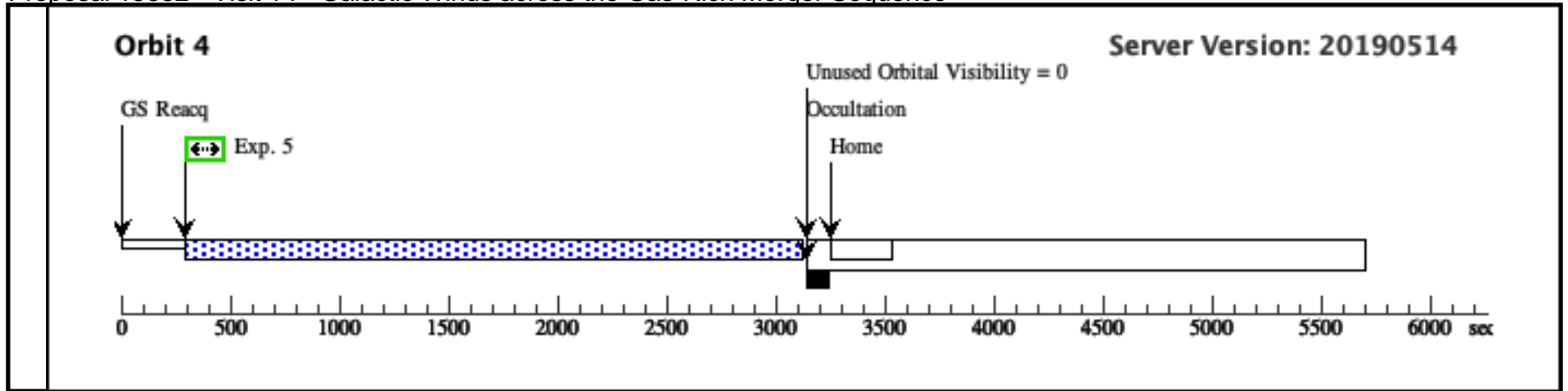


Proposal 15662 - Visit 14 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 14, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	(Visit 14) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>				
	(14)	2MASX-J23083397+0521293	RA: 23 08 33.9551 (347.1414796d) Dec: +05 21 29.91 (5.35831d) Equinox: J2000	Proper Motion RA: -2.925443667912532E-4 sec of time/yr Proper Motion Dec: 0.00151146 arcsec/yr Epoch of Position: 1990.78 Redshift: 0.173	V=16.3368 m_FUV = 20.2 (AB)	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(COS.ta.130 1501)	(14) 2MASX-J23083 397+0521293	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				60 Secs (60 Secs)	
									[==>]	[1]
	2	(COS.sp.130 0590)	(14) 2MASX-J23083 397+0521293	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=23 66; FLASH=YES; FP-POS=1; SEGMENT=A			2366 Secs (2366 Secs)	
									[==>]	[1]
	3	(COS.sp.130 0590)	(14) 2MASX-J23083 397+0521293	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=2; SEGMENT=A			2779 Secs (2779 Secs)	
								[==>]	[2]	
4	(COS.sp.130 0590)	(14) 2MASX-J23083 397+0521293	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=3; SEGMENT=A			2779 Secs (2779 Secs)		
								[==>]	[3]	
5	(COS.sp.130 0590)	(14) 2MASX-J23083 397+0521293	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=27 79; FLASH=YES; FP-POS=4; SEGMENT=A			2779 Secs (2779 Secs)		
								[==>]	[4]	

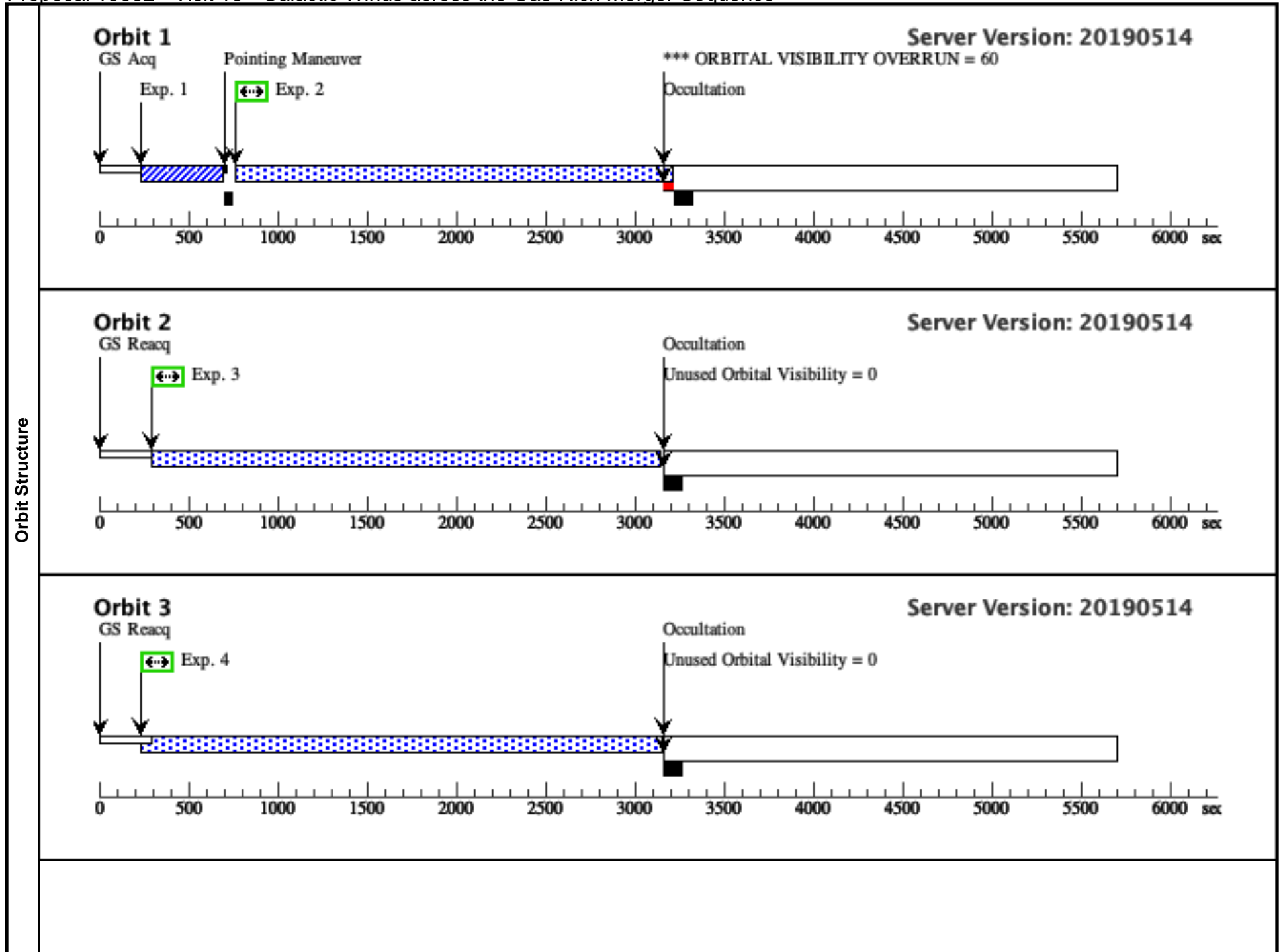


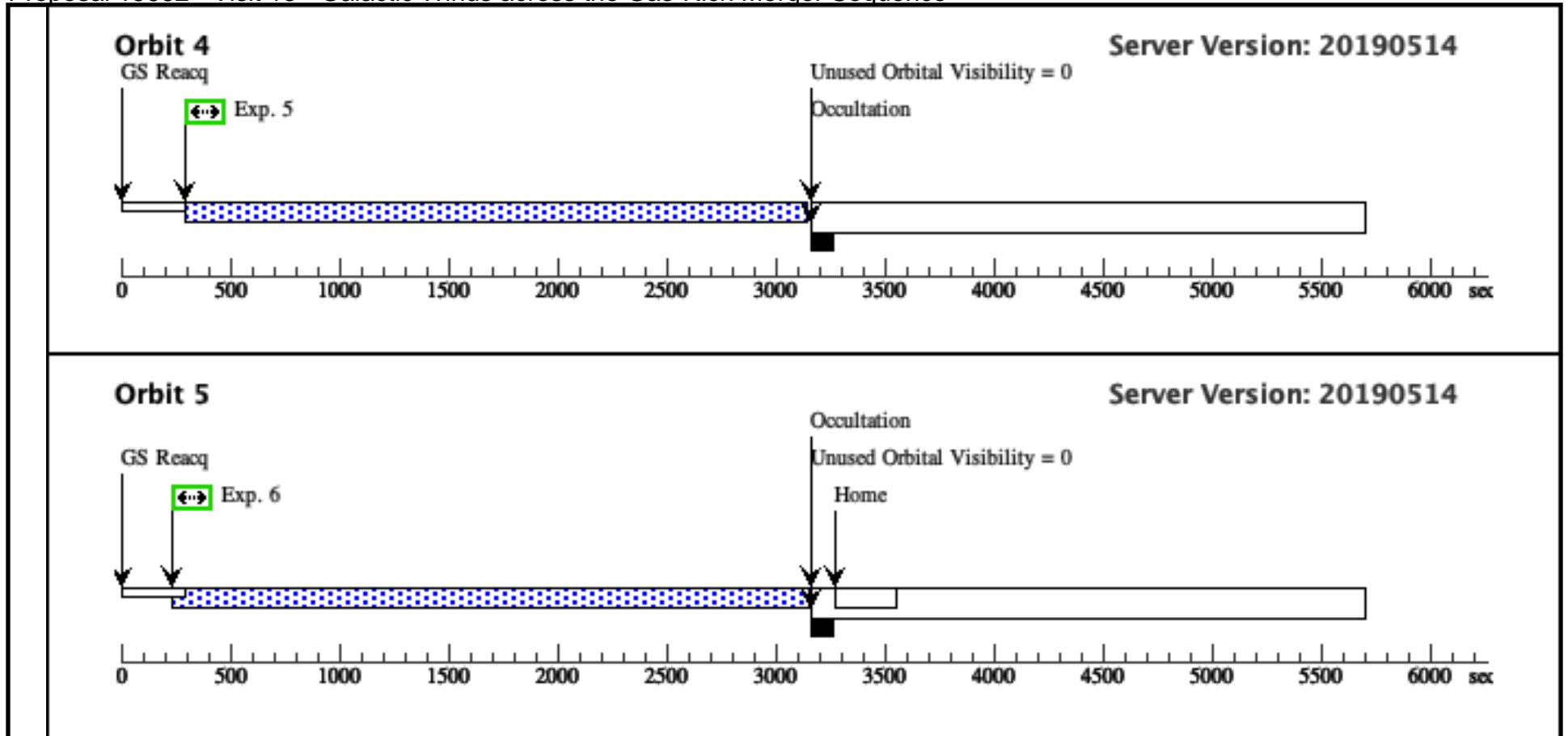


Proposal 15662 - Visit 15 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 15, failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)									
	<b>Diagnostics</b>	(Visit 15) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 15) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN								
<b>Fixed Targets</b>		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(15)	2MASX-J23254938+2834208	RA: 23 25 49.4165 (351.4559021d) Dec: +28 34 21.08 (28.57252d) Equinox: J2000	Proper Motion RA: -3.846146023552153E-4 sec of time/yr Proper Motion Dec: -0.00867471999999998 arcsec/yr Epoch of Position: 1991.76 Redshift: 0.114	V=16.3479 m_FUV = 20.9 (AB)	Reference Frame: ICRS				
Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database. Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO										
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.130 1503)	(15) 2MASX-J23254 938+2834208	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				120 Secs (120 Secs) [==>]	[1]
	2	(COS.sp.130 0591)	(15) 2MASX-J23254 938+2834208	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=22 80; FLASH=YES; FP-POS=3			2280 Secs (2280 Secs) [==>]	[1]
	3	(COS.sp.130 0591)	(15) 2MASX-J23254 938+2834208	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2799 Secs) [==>]	[2]
	4	(COS.sp.130 0591)	(15) 2MASX-J23254 938+2834208	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=3			2799 Secs (2799 Secs) [==>]	[3]
	5	(COS.sp.130 0591)	(15) 2MASX-J23254 938+2834208	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2799 Secs) [==>]	[4]
	6	(COS.sp.130 0591)	(15) 2MASX-J23254 938+2834208	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=3			2799 Secs (2799 Secs) [==>]	[5]





Proposal 15662 - Visit 16 - Galactic Winds across the Gas-Rich Merger Sequence

Thu Dec 12 14:00:29 GMT 2019

<b>Visit</b>	<b>Proposal 15662, Visit 16</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none) <i>Comments: Repeat of visit 15 orbit 4 which failed due to a GS problem.</i>				

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(15)	2MASX-J23254938+2834208	RA: 23 25 49.4165 (351.4559021d) Dec: +28 34 21.08 (28.57252d) Equinox: J2000	Proper Motion RA: -3.846146023552153E-4 sec of time/yr Proper Motion Dec: -0.00867471999999998 arcsec/yr Epoch of Position: 1991.76 Redshift: 0.114	V=16.3479 m_FUV = 20.9 (AB)	Reference Frame: ICRS
	<i>Comments: This object was generated by the targetselector and retrieved from the GSC 2.3 database.</i> Category=GALAXY Description=[QUASAR, ULTRALUMINOUS IR GAL] Extended=NO					

<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(COS.ta.130 1503)	(15) 2MASX-J23254 938+2834208	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				120 Secs (120 Secs) [==>]	[1]
	2	(COS.sp.130 0591)	(15) 2MASX-J23254 938+2834208	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=27 99; FLASH=YES; FP-POS=4			2799 Secs (2220 Secs) [==>2220.0 Secs ]	[1]

