



# 14747 - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from $z \sim 3$ LAEs with Powerful Optical Lines

Cycle: 24, Proposal Category: GO

(JWST Initiative)

(Availability Mode: SUPPORTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
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Dr. Nicolas Laporte (CoI) (ESA Member)	University College London (UCL)	n.laporte@ucl.ac.uk

## 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) SSA22.1.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:02.0	yes
02	(1) SSA22.1.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:04.0	yes
03	(1) SSA22.1.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:05.0	yes
04	(1) SSA22.1.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:05.0	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>
05	(1) SSA22.1.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:06.0	yes
06	(2) SSA22.2.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:07.0	yes
07	(2) SSA22.2.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:08.0	yes
08	(2) SSA22.2.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:08.0	yes
09	(2) SSA22.2.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:09.0	yes
10	(2) SSA22.2.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:10.0	yes
11	(3) SSA22.3.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:11.0	yes
12	(3) SSA22.3.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:11.0	yes
13	(3) SSA22.3.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:12.0	yes
14	(3) SSA22.3.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:13.0	yes
15	(3) SSA22.3.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:13.0	yes
16	(4) SSA22.4.IR	WFC3/IR	1	03-Nov-2017 20:04:14.0	yes
17	(5) SSA22.5.IR	WFC3/IR	1	03-Nov-2017 20:04:15.0	yes
18	(6) SSA22.6.IR	WFC3/IR	1	03-Nov-2017 20:04:16.0	yes
19	(7) SSA22.7.IR	WFC3/IR	1	03-Nov-2017 20:04:16.0	yes
53	(1) SSA22.1.UVIS	WFC3/UVIS	4	03-Nov-2017 20:04:17.0	yes

68 Total Orbits Used

## ABSTRACT

Cosmic reionization represents the first epoch when galaxies affect the bulk properties of the universe. Extensive programs with HST have established that galaxy populations at redshifts  $z > 6$  are likely abundant and luminous enough to reionize the IGM during the first billion years after the Big Bang. The critical remaining issue is to constrain separately the production rate of Lyman continuum (LyC) photons per unit UV luminosity and the fraction  $f_{\text{esc}}$  that escape to reionize the IGM. HST has the unique capability to measure LyC directly from systems as distant as  $z \sim 3$  via WFC/UVIS F336W, but this critical capability will not be possible with JWST and is required to quantify the importance of future reionization epoch galaxies it discovers. The measurement of LyC with HST at  $z < 3$  from broadly selected LBGs and LAEs thus far has provided  $f_{\text{esc}} \sim 0.01-0.1$ , likely too low to allow for galaxies to trigger reionization by  $z \sim 6$  if  $f_{\text{esc}}$  does not increase with redshift. Key to this challenging measurement of  $f_{\text{esc}}$  is

the target-selection. We therefore propose the Lyman Continuum Escape Survey (LACES), designed to measure  $f_{\text{esc}}$  for  $z \sim 3$  Lyman Alpha Emitters in the SSA22 field whose strong  $[\text{OIII}]/[\text{OII}]$  indicates vigorous LyC production. We can use the constraints on  $f_{\text{esc}}$  from HST and the measured  $[\text{OIII}]/[\text{OII}]$  ratios from ground-based IR spectroscopy to break the degeneracy between the  $f_{\text{esc}}$  and the production rate of ionizing photons. These observations, performed at the highest redshift where  $f_{\text{esc}}$  is directly measurable, then set the stage for using JWST in just a few years time to evaluate the role of galaxies in reionization by measuring their OIII emission at  $z > 7$ .

### **OBSERVING DESCRIPTION**

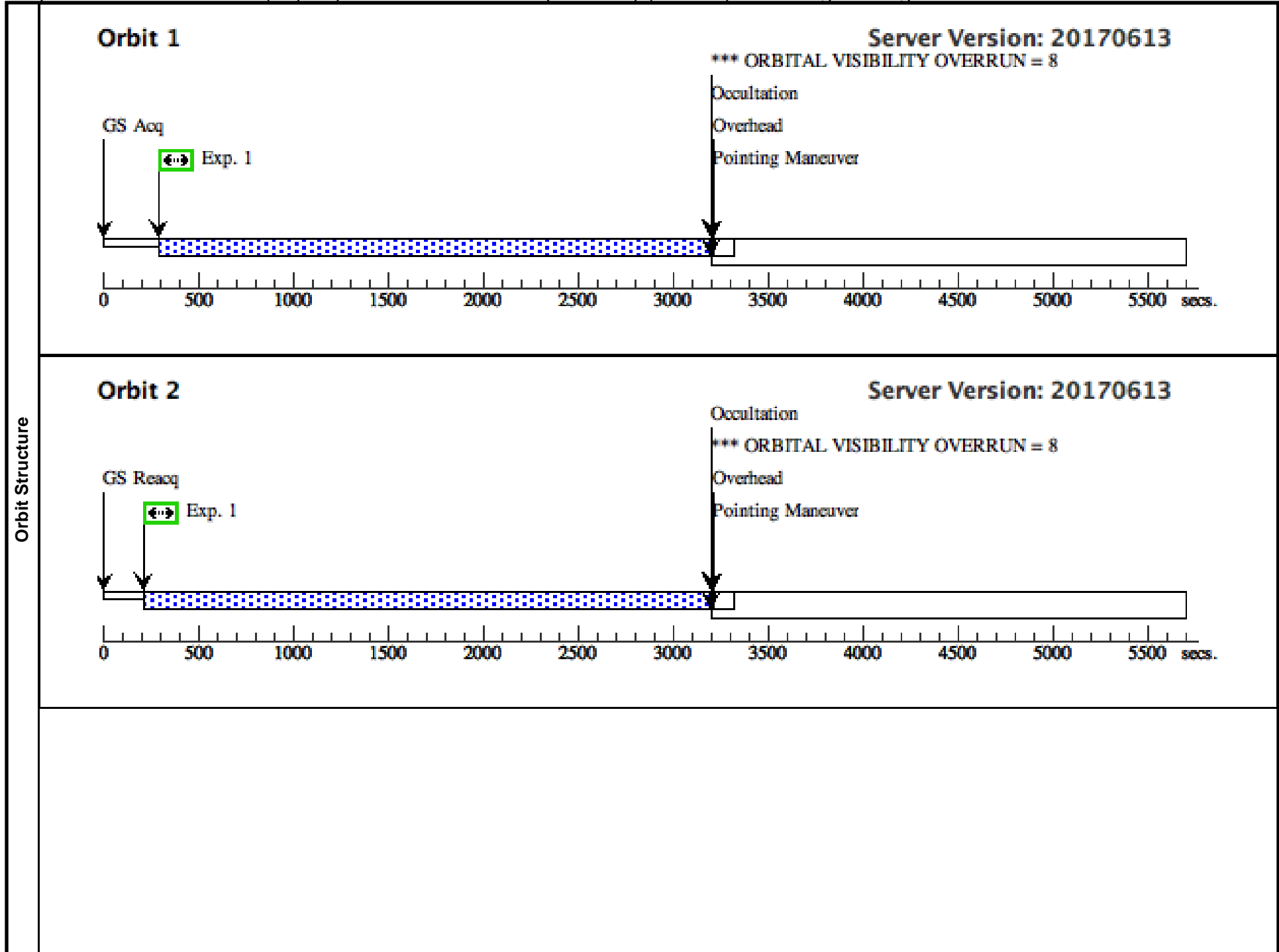
**WFC3/UV F336W Survey Design:** For the LACES observations in the SSA22, our total program comprises 60 orbits for the F336W component over 3 pointings plus single orbit exposures for associated F160W images over 4 pointings. To mitigate charge transfer inefficiency in the UV for the SSA22 field, we will need an additional 6 electrons of post-flash per exposure to reach an average of 12e- per pixel and, to maximize efficiency, we propose full orbit exposures in 4 orbit visits. We utilize 4-point box dither patterns for each pointing, followed by a few arcseconds of POSTARGS between each pattern. There are orient constraints to maximize the number of OIII/OII strong emitters covered.

**WFC3/IR F160W Survey Design:** The Subaru narrow-band images used to locate Ly-alpha have excellent angular resolution (seeing typically  $\sim 0.6$  arcsec), but for interpreting F336W detections in terms of  $f_{\text{esc}}$  we must rule out possible interlopers using WFC3/IR imaging. We therefore will execute 4 suitably-placed single-orbit WFC3/IR F160W images to search for lower redshift contaminants to AB  $\sim 27$ .

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Sat Nov 04 00:04:19 GMT 2017

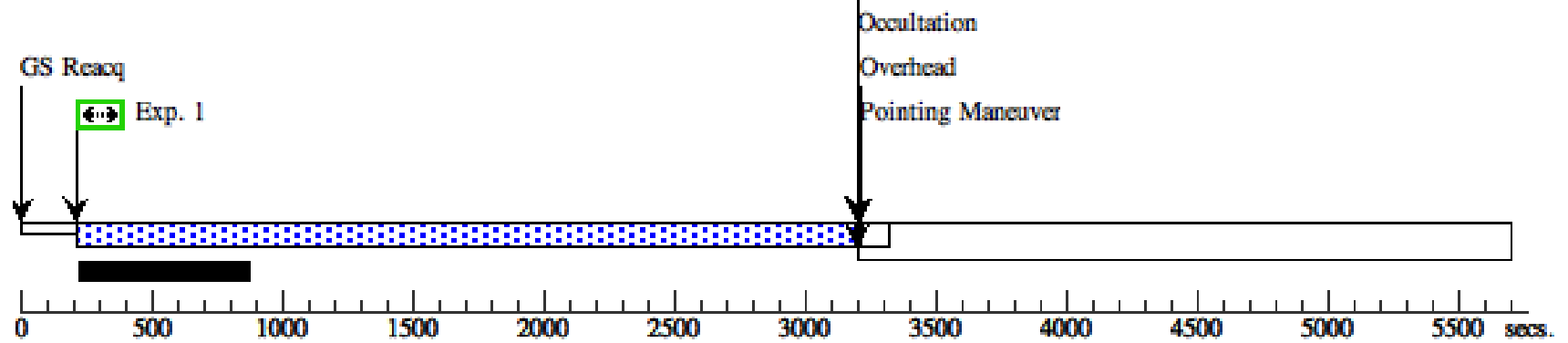
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<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>		<b>Miscellaneous</b>		
	(1)	SSA22.1.UVIS	RA: 22 16 51.8260 (334.2159417d) Dec: +00 19 32.42 (.32567d) Equinox: J2000				V=29		Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.1.1.1	(1) SSA22.1.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6		Pattern 1, Exps 1-1 in UVIS.1.1 (01) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
									[==>2980.0 Secs (Pattern 3)]		[3]
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### Orbit 3

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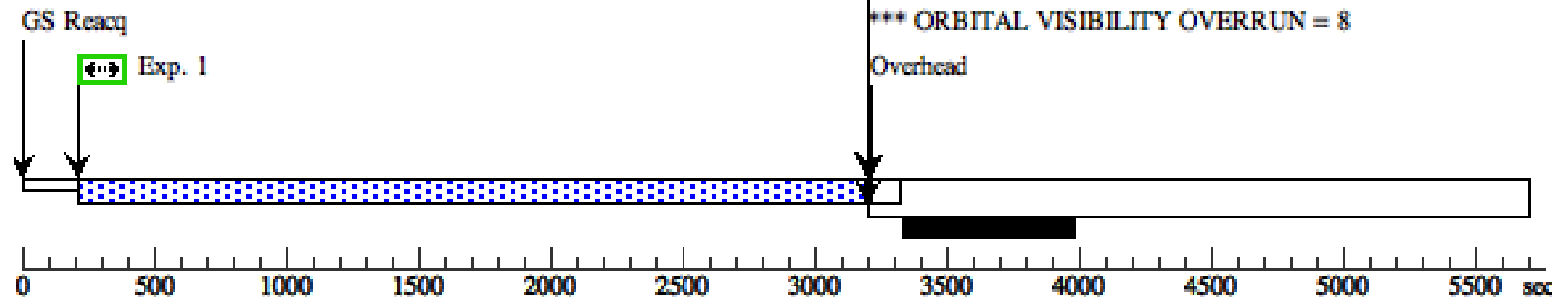
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### Orbit 4

Server Version: 20170613

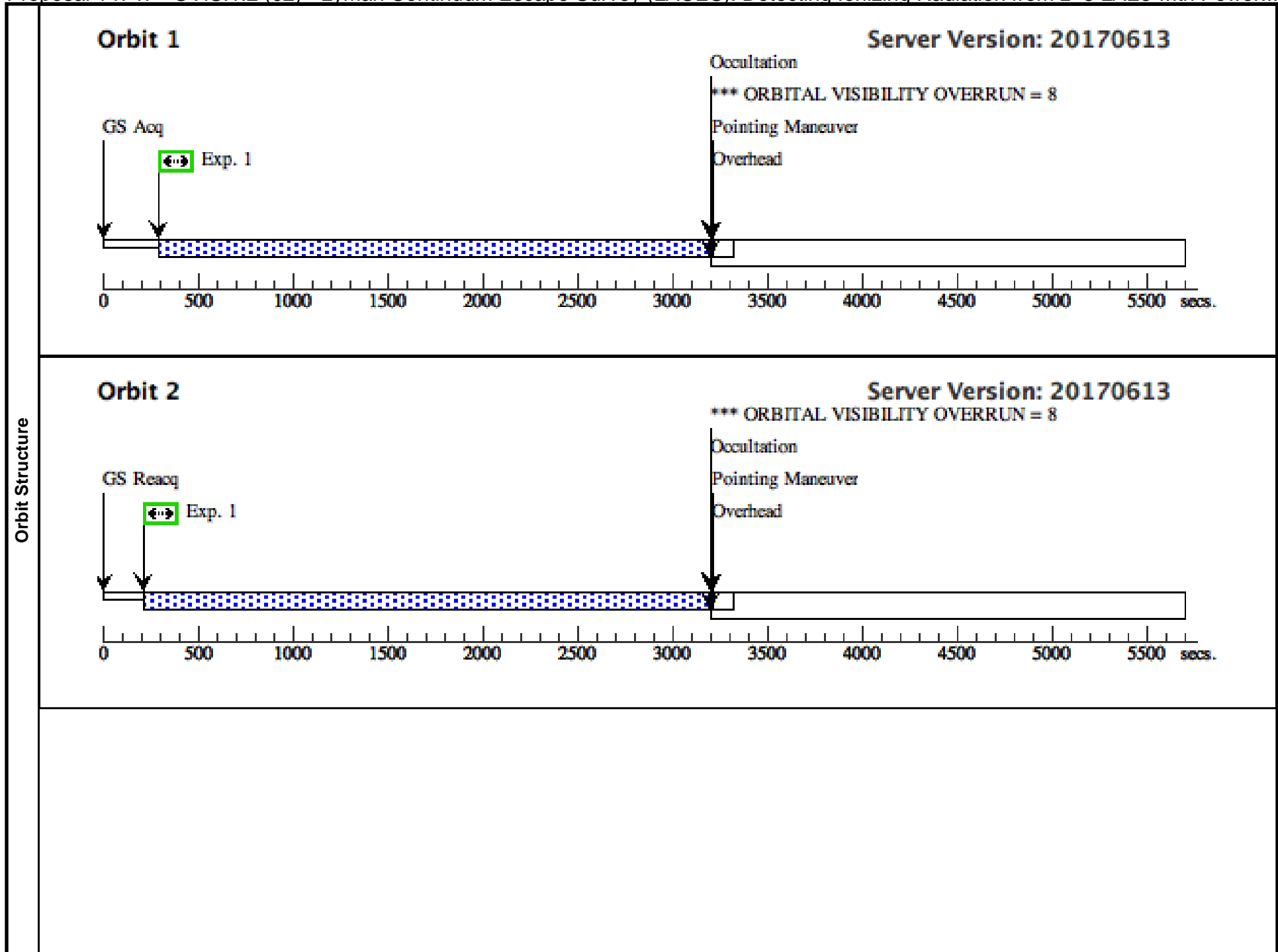
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Proposal 14747 - UVIS.1.2 (02) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

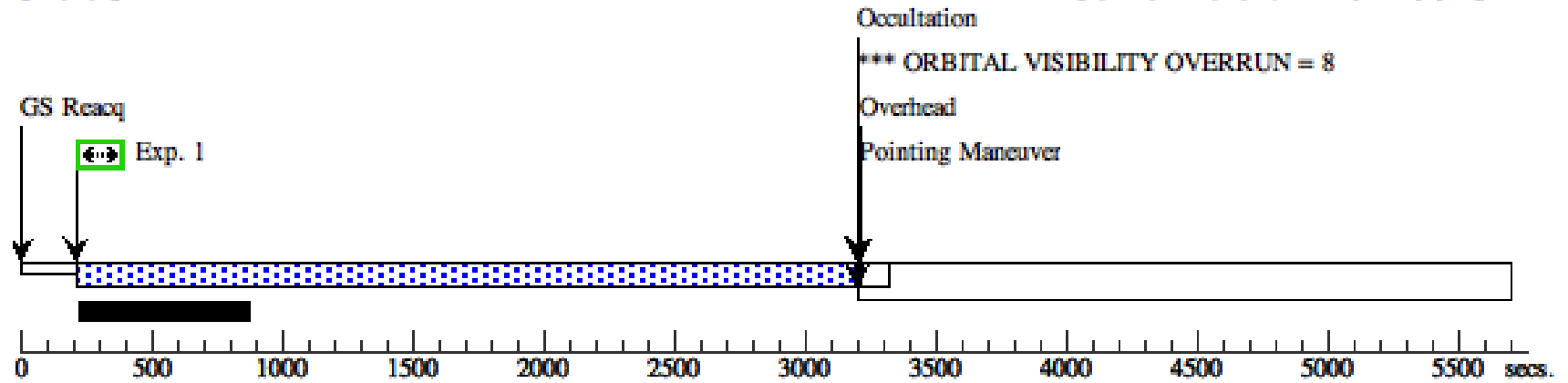
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<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>			
	(1)	SSA22.1.UVIS	RA: 22 16 51.8260 (334.2159417d) Dec: +00 19 32.42 (.32567d) Equinox: J2000				V=29	Reference Frame: ICRS			
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.1.1.1	(1) SSA22.1.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6		Pattern 1, Exps 1-1 in UVIS.1.2 (02) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
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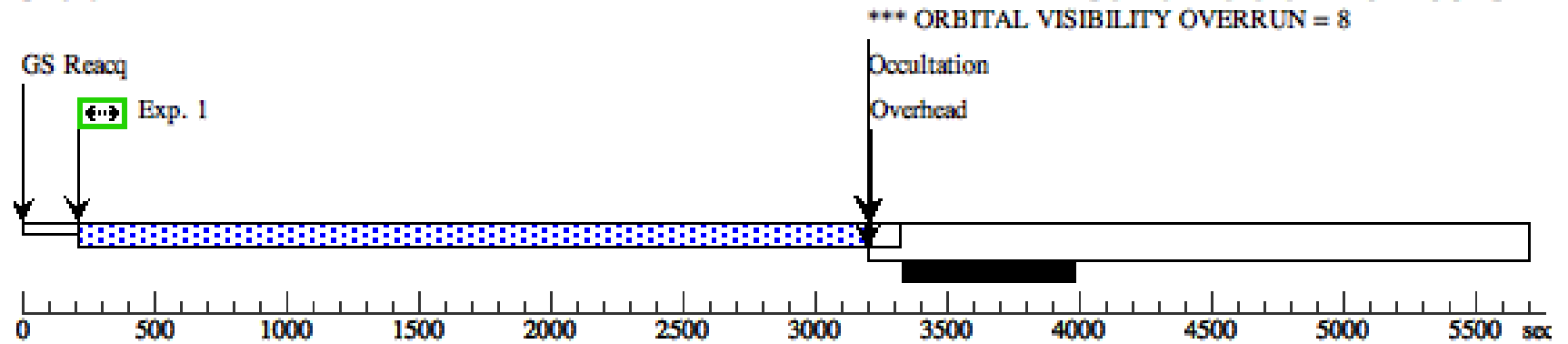
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Server Version: 20170613



### Orbit 4

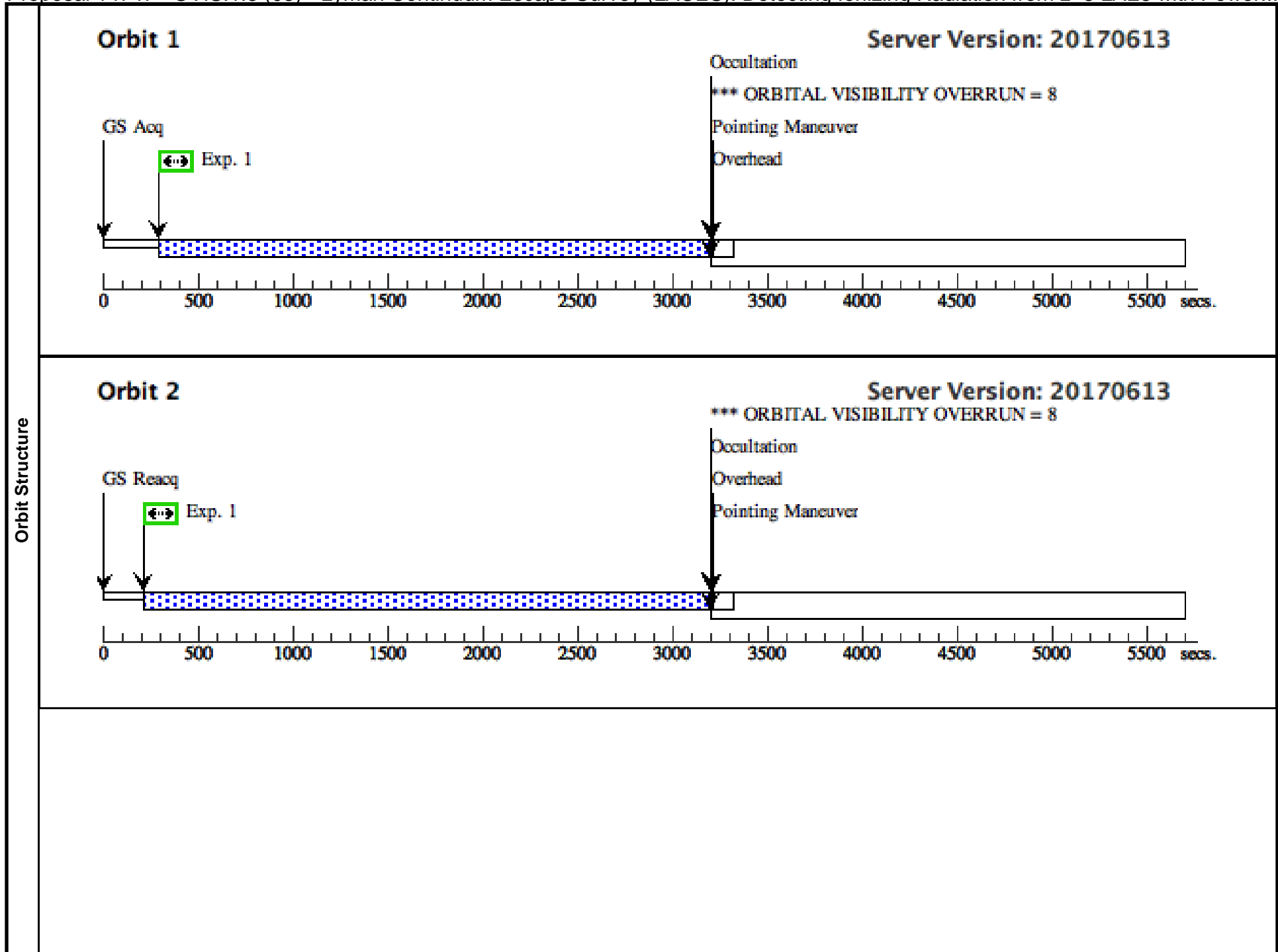
Server Version: 20170613



Proposal 14747 - UVIS.1.3 (03) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

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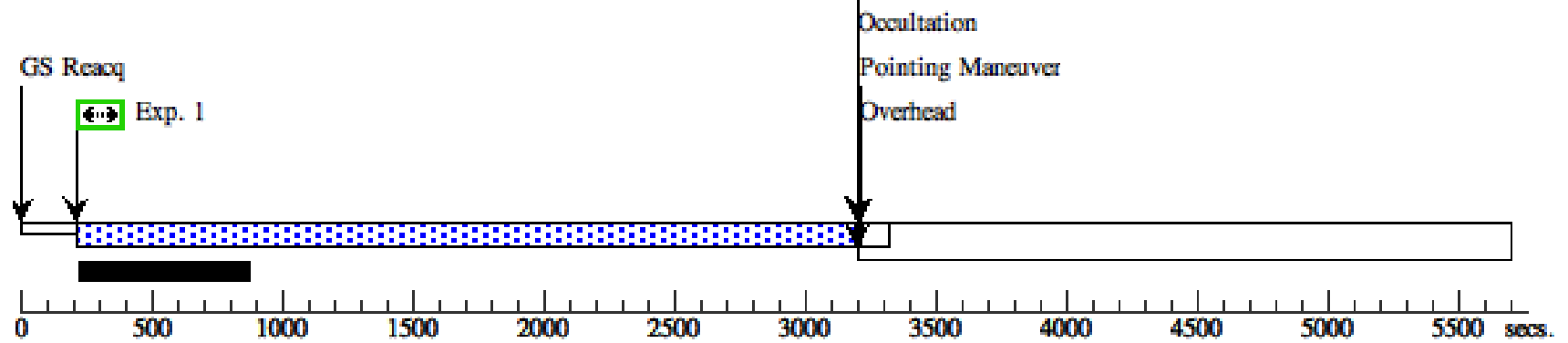
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<b>Diagnostics</b>	(UVIS.1.3 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.1.3 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.1.3 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.1.3 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
<b>Patterns</b>	#	<b>Primary Pattern</b>				<b>Secondary Pattern</b>			<b>Exposures</b>		
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<b>Fixed Targets</b>	#	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>			
	(1)	SSA22.1.UVIS	RA: 22 16 51.8260 (334.2159417d) Dec: +00 19 32.42 (.32567d) Equinox: J2000				V=29	Reference Frame: ICRS			
<b>Exposures</b>	#	<b>Label</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	UVIS.1.1.1	(1) SSA22.1.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6		Pattern 1, Exps 1-1 in UVIS.1.3 (03) (1)	2700 Secs (11809 Secs)	
										[==>2869.0 Secs (Pattern 1)]	[1]
										[==>2980.0 Secs (Pattern 2)]	[2]
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### Orbit 3

Server Version: 20170613

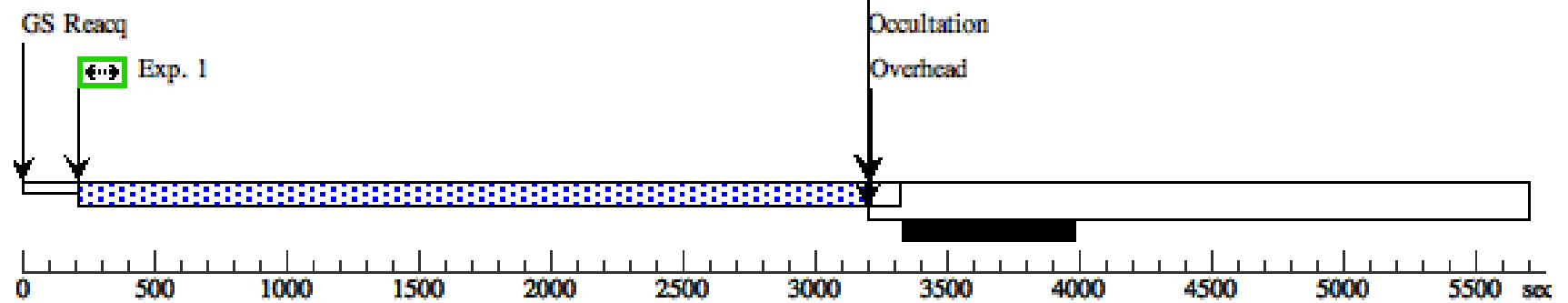
\*\*\* ORBITAL VISIBILITY OVERRUN = 8



### Orbit 4

Server Version: 20170613

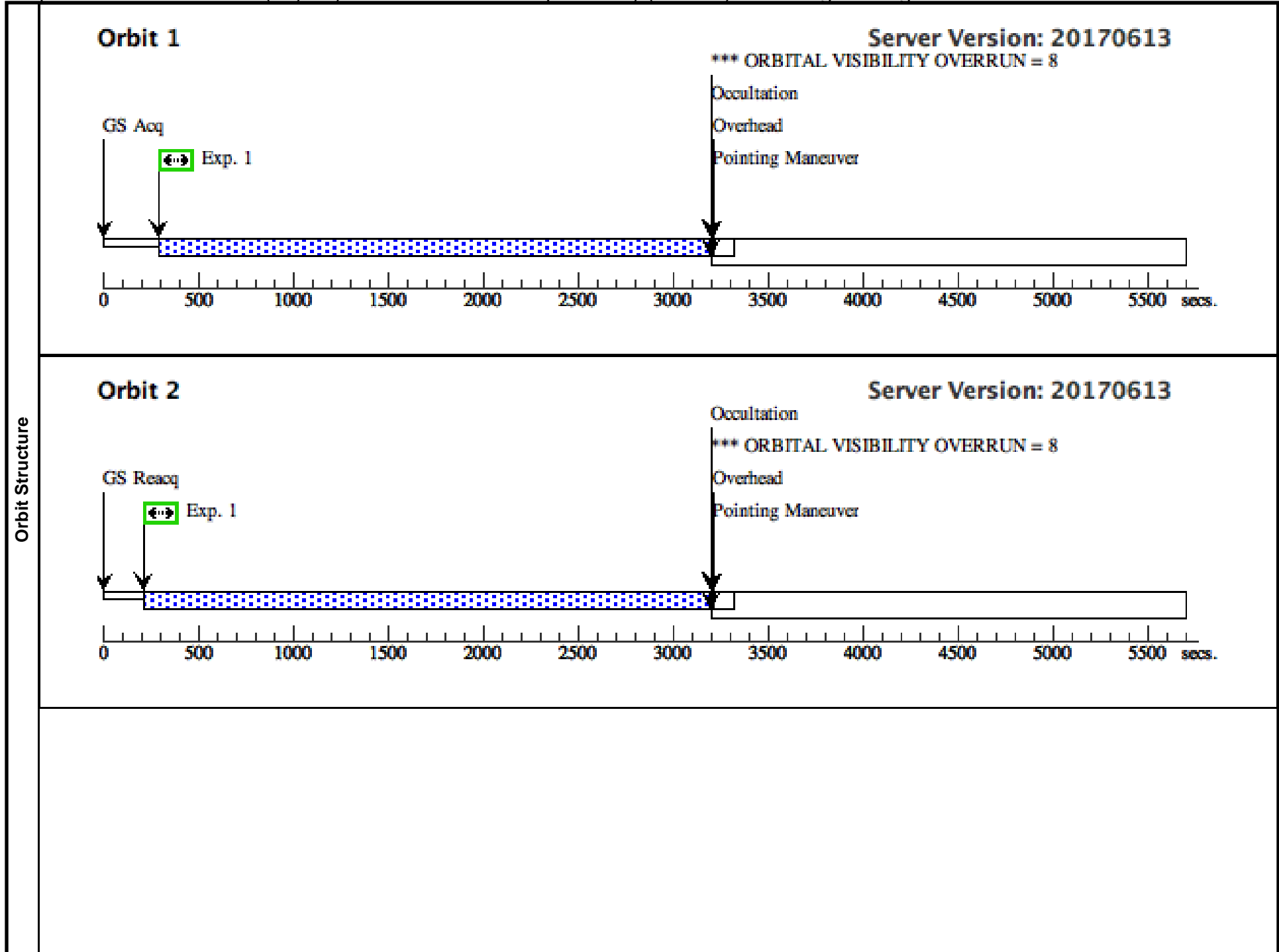
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Proposal 14747 - UVIS.1.4 (04) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

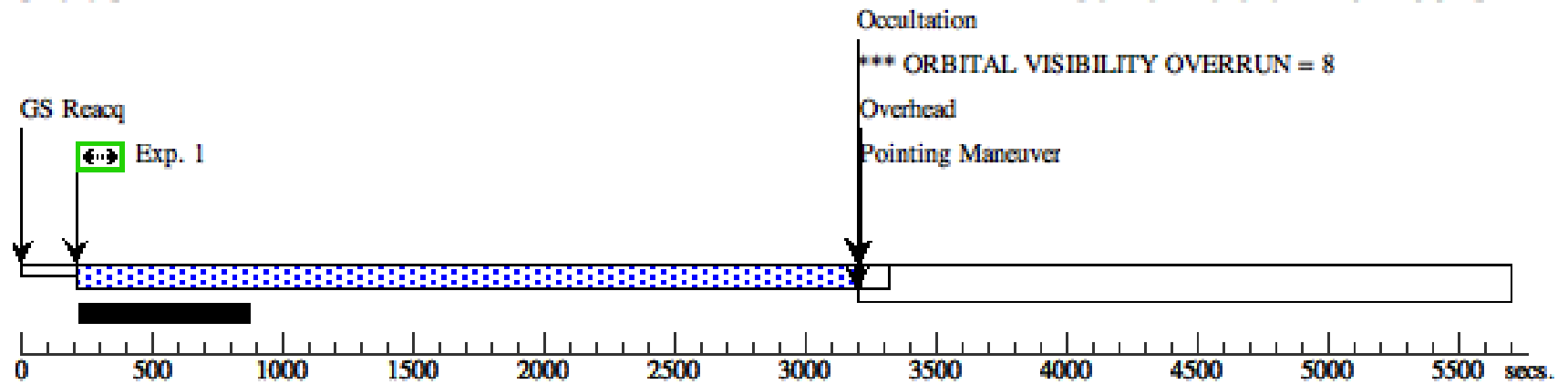
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<b>Diagnosics</b>											
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<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>		<b>Miscellaneous</b>		
	(1)	SSA22.1.UVIS	RA: 22 16 51.8260 (334.2159417d) Dec: +00 19 32.42 (.32567d) Equinox: J2000				V=29		Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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>
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									[==>2980.0 Secs (Pattern 2)]		[2]
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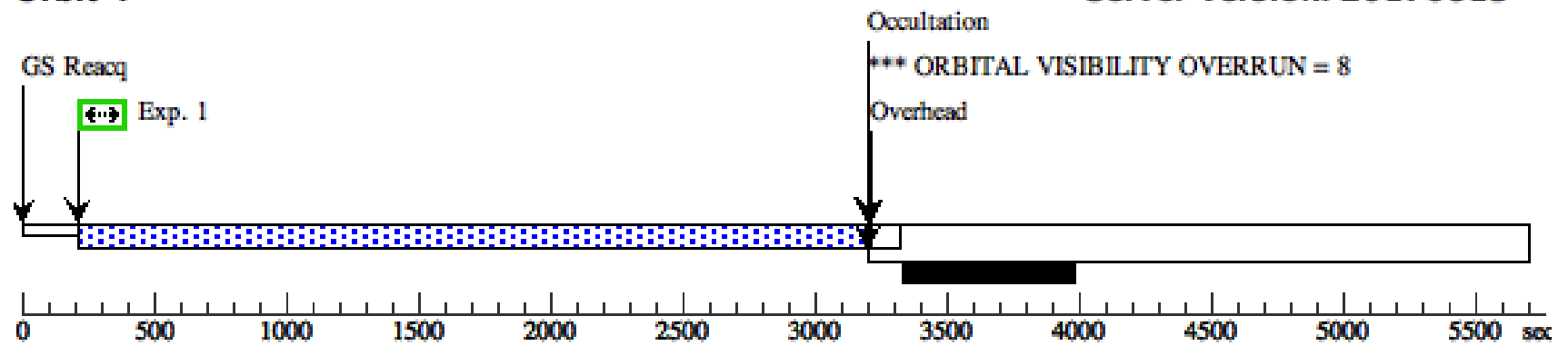
### Orbit 3

Server Version: 20170613



### Orbit 4

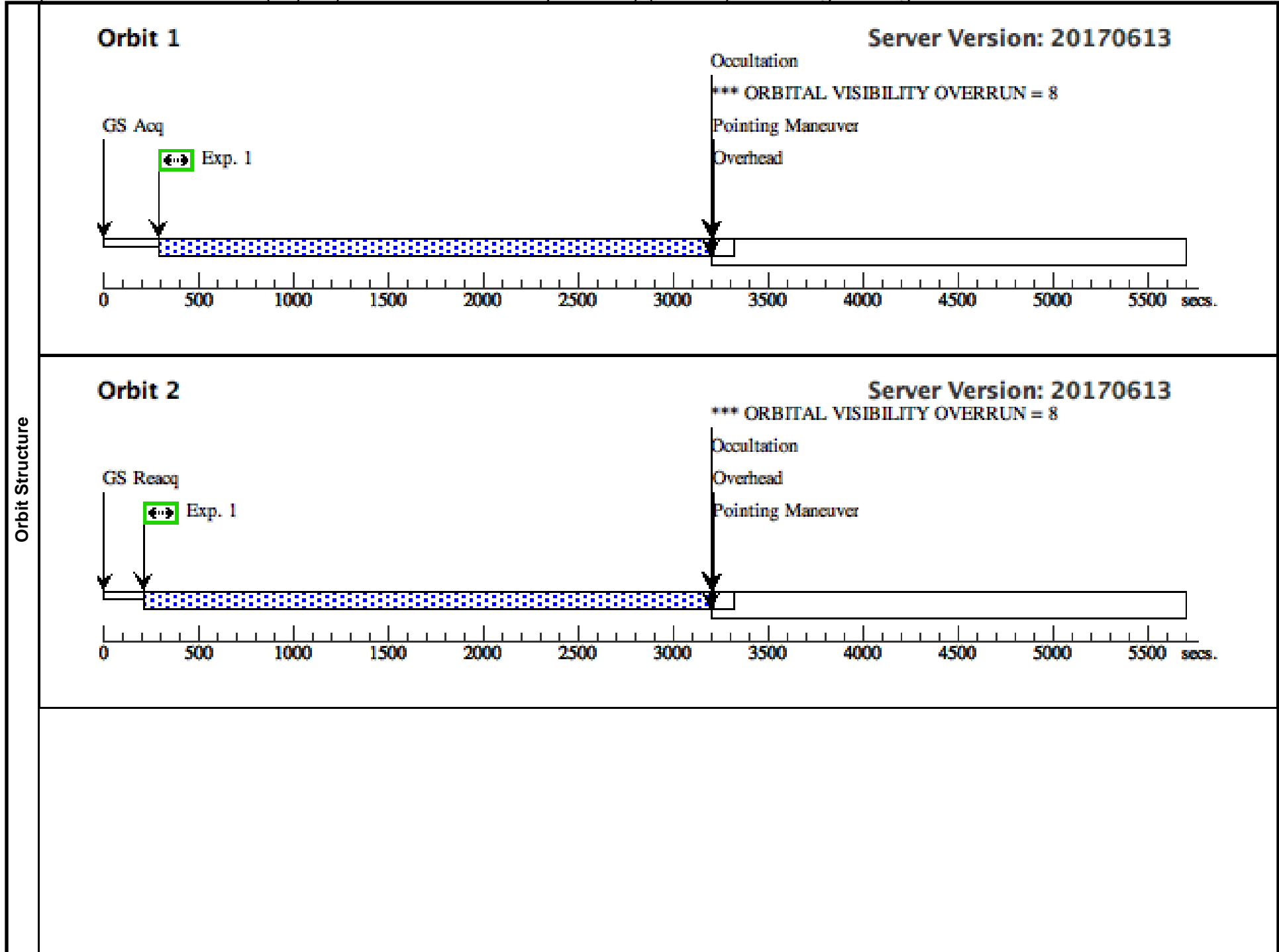
Server Version: 20170613



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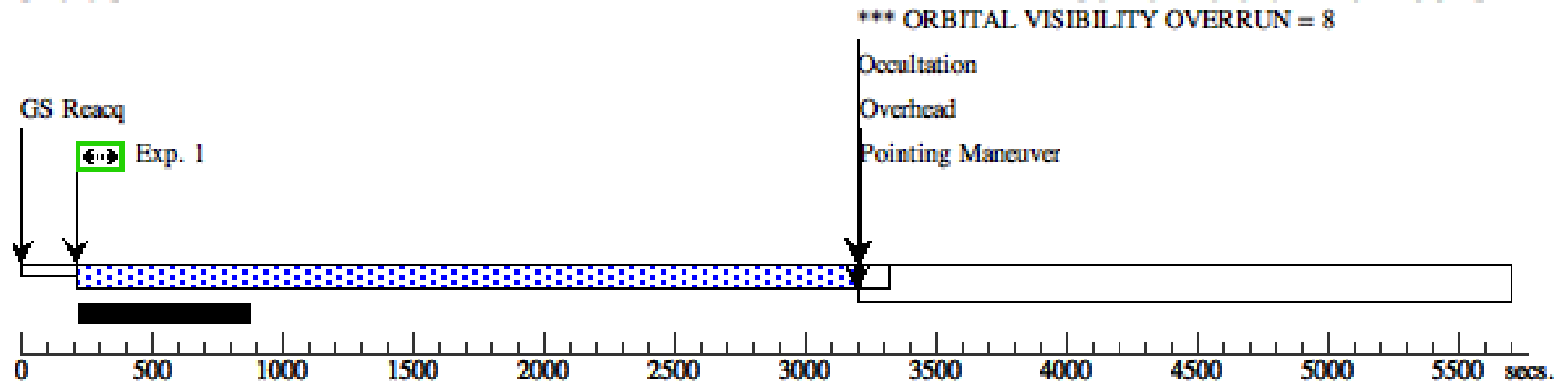
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<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
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<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>		<b>Miscellaneous</b>		
	(1)	SSA22.1.UVIS	RA: 22 16 51.8260 (334.2159417d) Dec: +00 19 32.42 (.32567d) Equinox: J2000				V=29		Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.1.1.1	(1) SSA22.1.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6		Pattern 1, Exps 1-1 in UVIS.1.5 (05) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]	[1]	
									[==>2980.0 Secs (Pattern 2)]	[2]	
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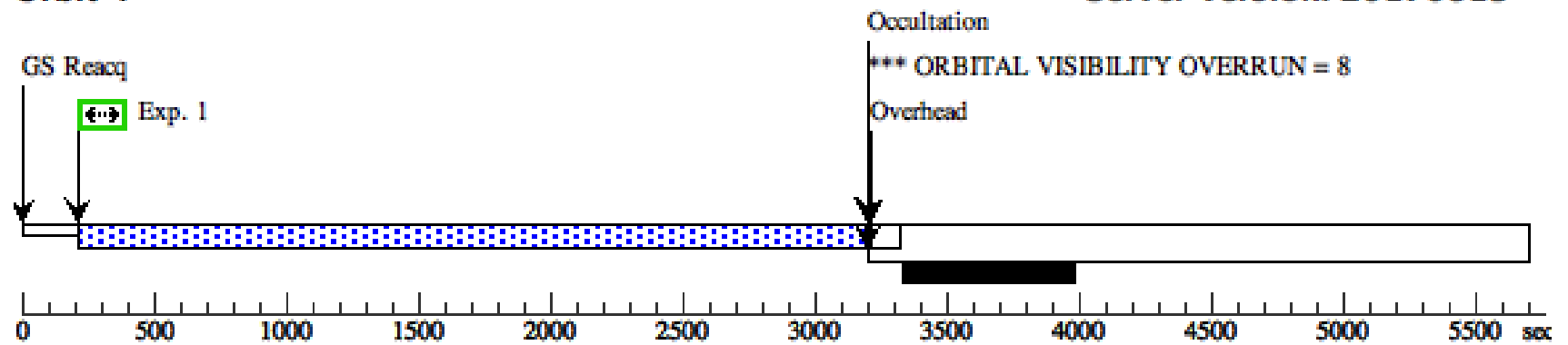
### Orbit 3

Server Version: 20170613



### Orbit 4

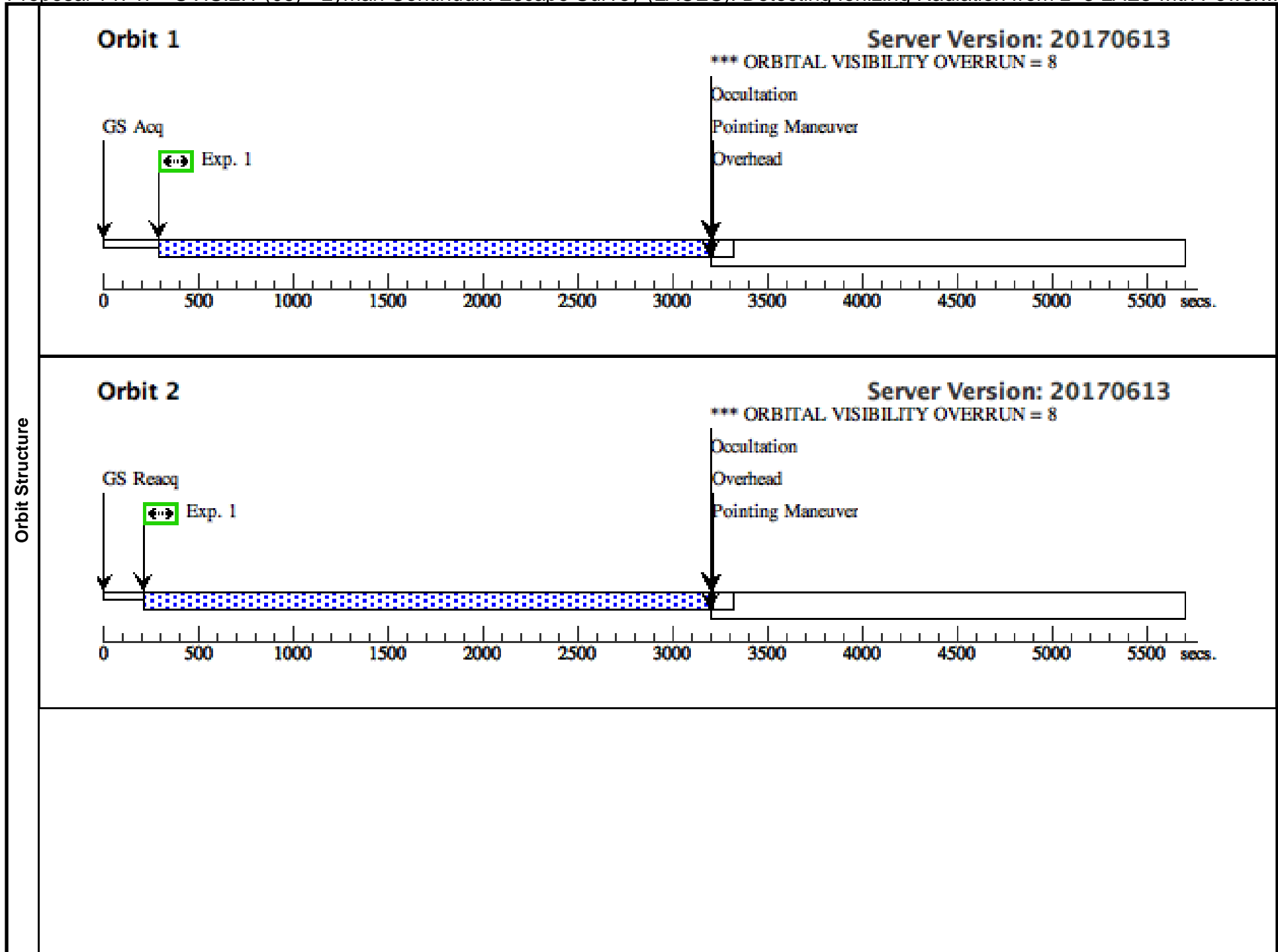
Server Version: 20170613



Proposal 14747 - UVIS.2.1 (06) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

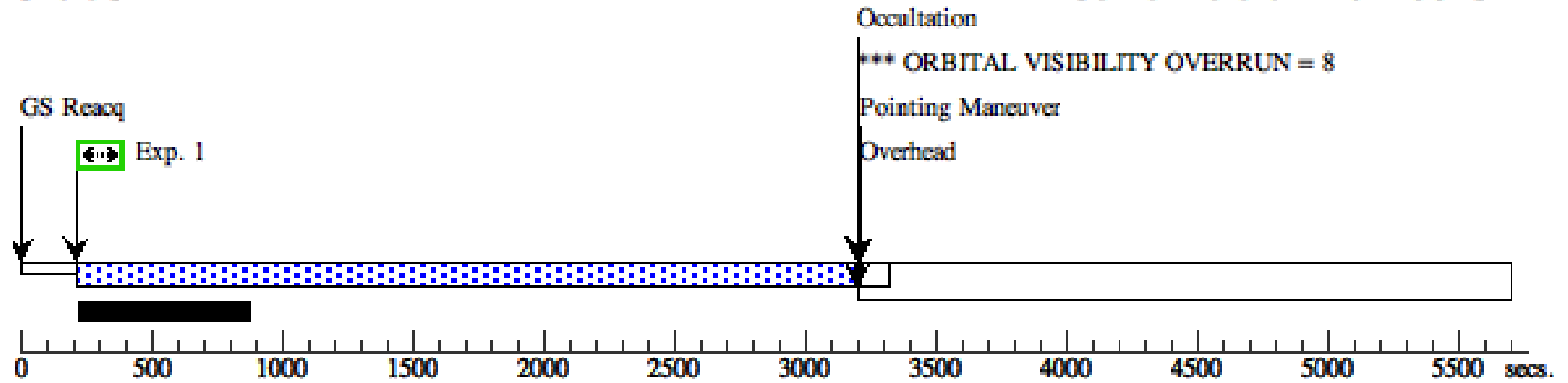
Sat Nov 04 00:04:19 GMT 2017

<b>Visit</b>	<b>Proposal 14747, UVIS.2.1 (06), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 98D TO 98 D										
	<b>Diagnostics</b>	(UVIS.2.1 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
(UVIS.2.1 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
(UVIS.2.1 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
(UVIS.2.1 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>		
	(2)	SSA22.2.UVIS	RA: 22 17 2.3920 (334.2599667d) Dec: +00 21 20.04 (.35557d) Equinox: J2000					V=29	Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.2.1.1	(2) SSA22.2.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.2.1 (06) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
									[==>2980.0 Secs (Pattern 3)]		[3]
								[==>2980.0 Secs (Pattern 4)]		[4]	



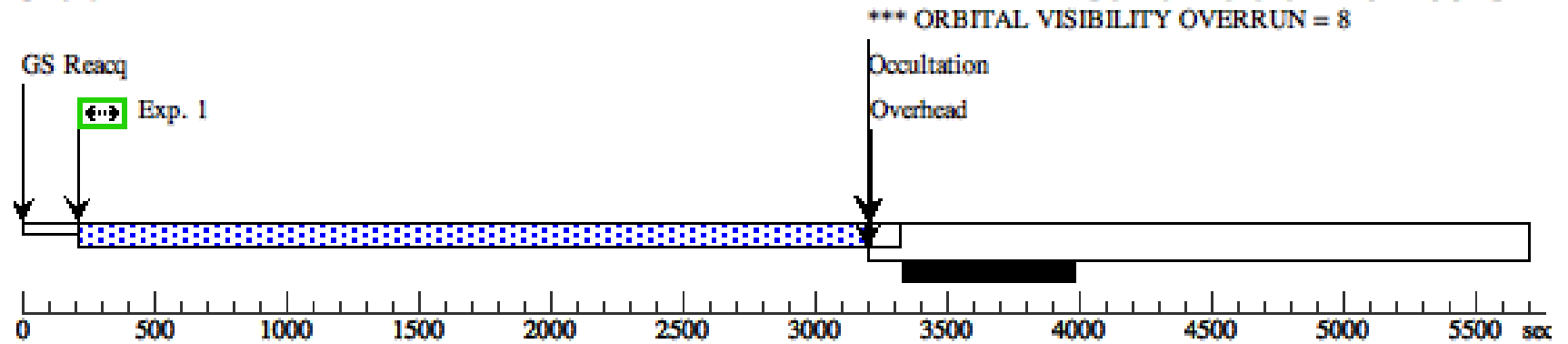
### Orbit 3

Server Version: 20170613



### Orbit 4

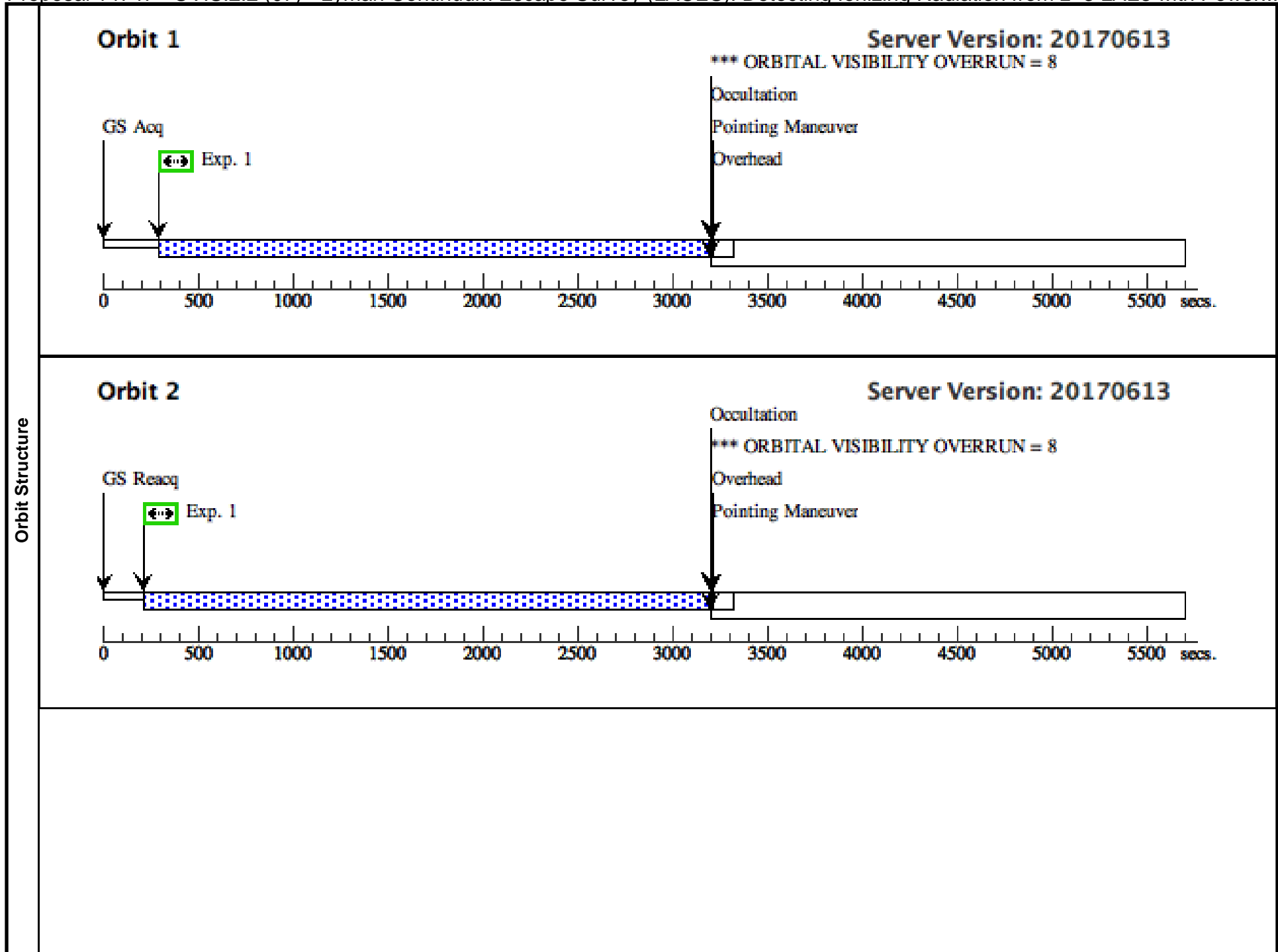
Server Version: 20170613



Proposal 14747 - UVIS.2.2 (07) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

Sat Nov 04 00:04:20 GMT 2017

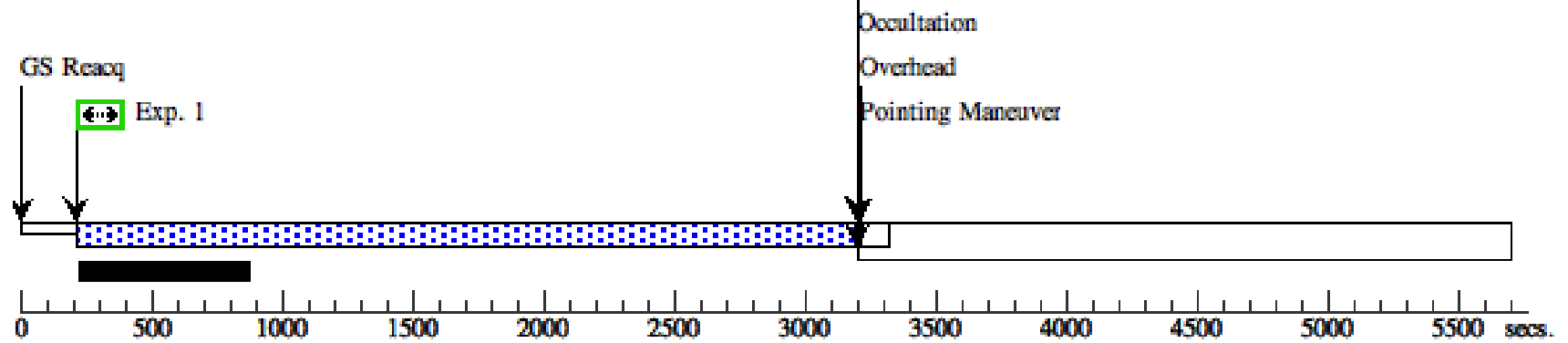
<b>Visit</b>	<b>Proposal 14747, UVIS.2.2 (07), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 98D TO 98 D										
	(UVIS.2.2 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.2 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.2 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.2 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>		
	(2)	SSA22.2.UVIS	RA: 22 17 2.3920 (334.2599667d) Dec: +00 21 20.04 (.35557d) Equinox: J2000					V=29	Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.2.1.1	(2) SSA22.2.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARI O BASE1B3	Pattern 1, Exps 1-1 in UVIS.2.2 (07) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
									[==>2980.0 Secs (Pattern 3)]		[3]
								[==>2980.0 Secs (Pattern 4)]		[4]	



### Orbit 3

Server Version: 20170613

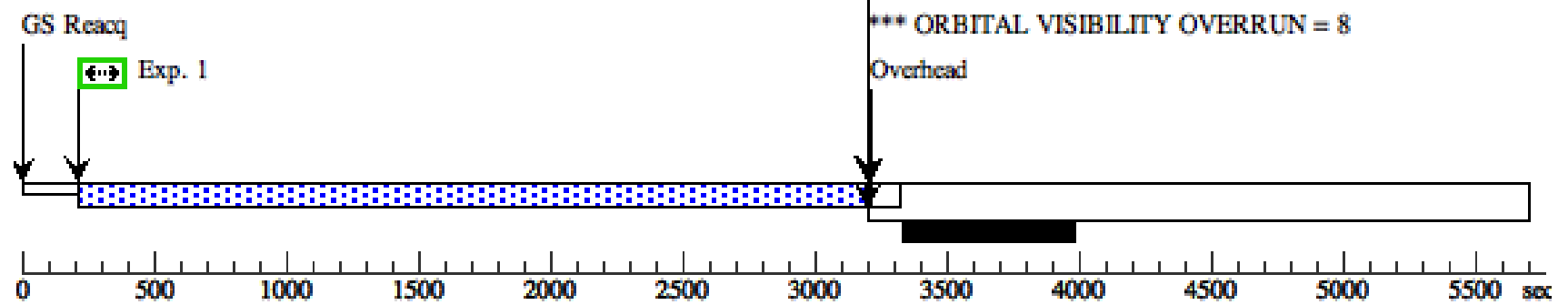
\*\*\* ORBITAL VISIBILITY OVERRUN = 8



### Orbit 4

Server Version: 20170613

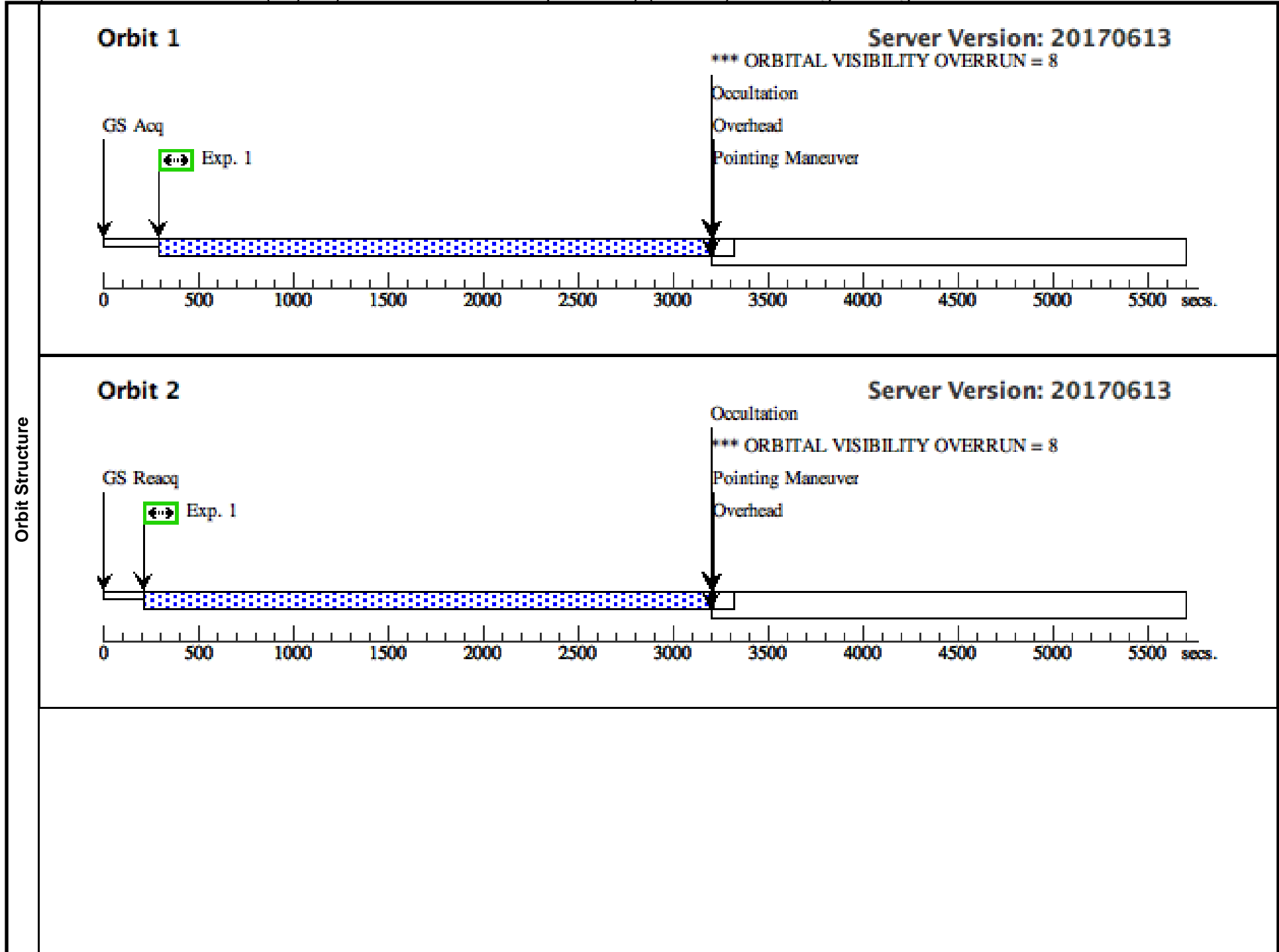
\*\*\* ORBITAL VISIBILITY OVERRUN = 8



Proposal 14747 - UVIS.2.3 (08) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

Sat Nov 04 00:04:20 GMT 2017

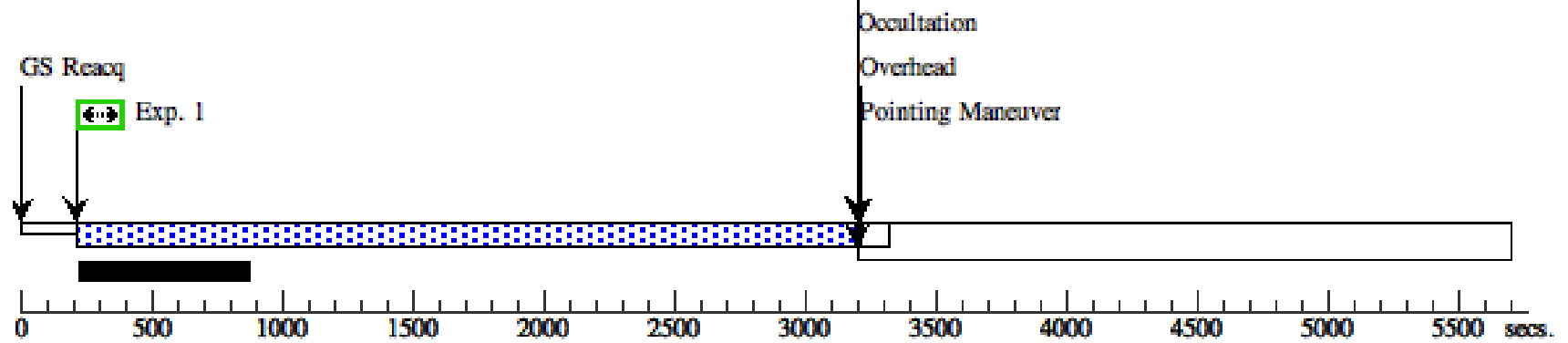
<b>Visit</b>	<b>Proposal 14747, UVIS.2.3 (08), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 98D TO 98 D										
	(UVIS.2.3 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.3 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.3 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.3 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>			<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>			
	(2)	SSA22.2.UVIS	RA: 22 17 2.3920 (334.2599667d) Dec: +00 21 20.04 (.35557d) Equinox: J2000				V=29	Reference Frame: ICRS			
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.2.1.1	(2) SSA22.2.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARI O BASE1B3	Pattern 1, Exps 1-1 in UVIS.2.3 (08) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
									[==>2980.0 Secs (Pattern 3)]		[3]
								[==>2980.0 Secs (Pattern 4)]		[4]	



### Orbit 3

Server Version: 20170613

\*\*\* ORBITAL VISIBILITY OVERRUN = 8



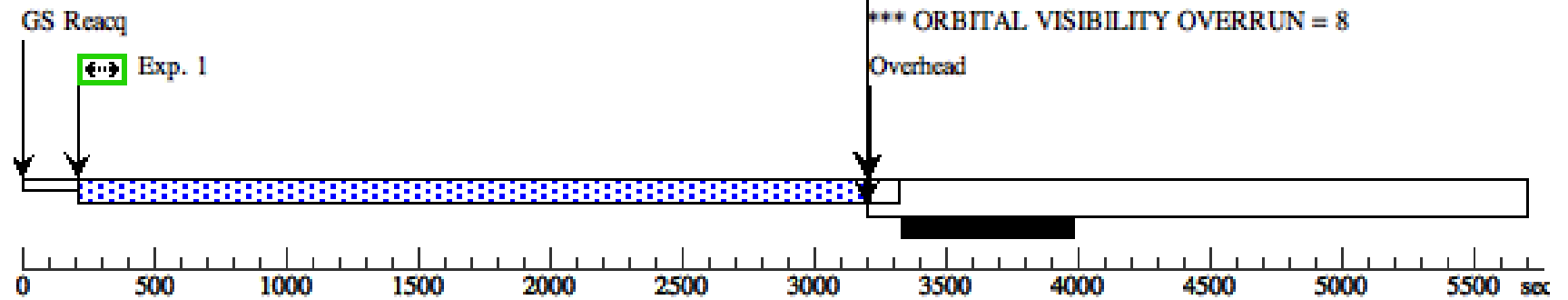
### Orbit 4

Server Version: 20170613

Occultation

\*\*\* ORBITAL VISIBILITY OVERRUN = 8

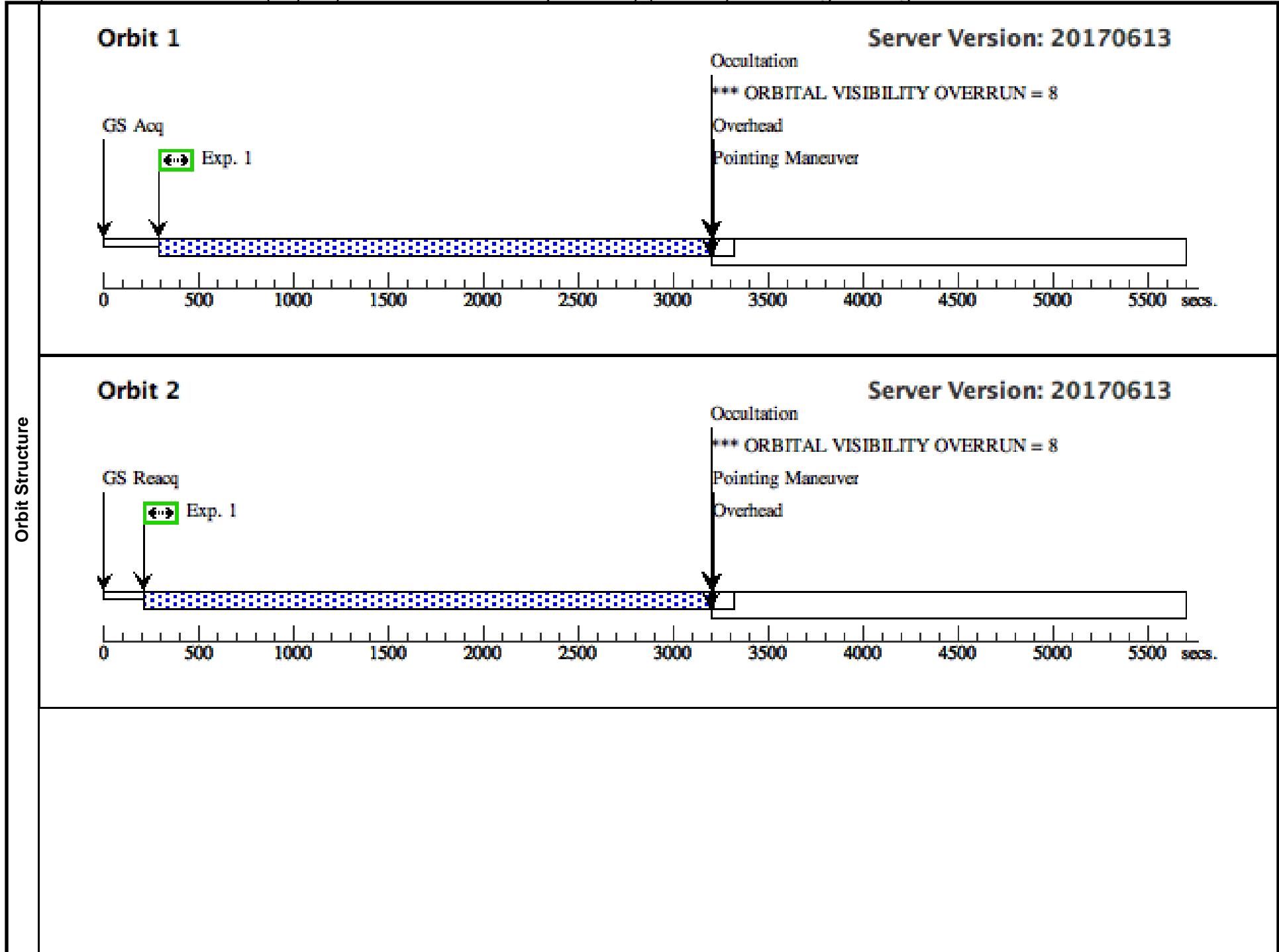
Overhead



Proposal 14747 - UVIS.2.4 (09) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

Sat Nov 04 00:04:20 GMT 2017

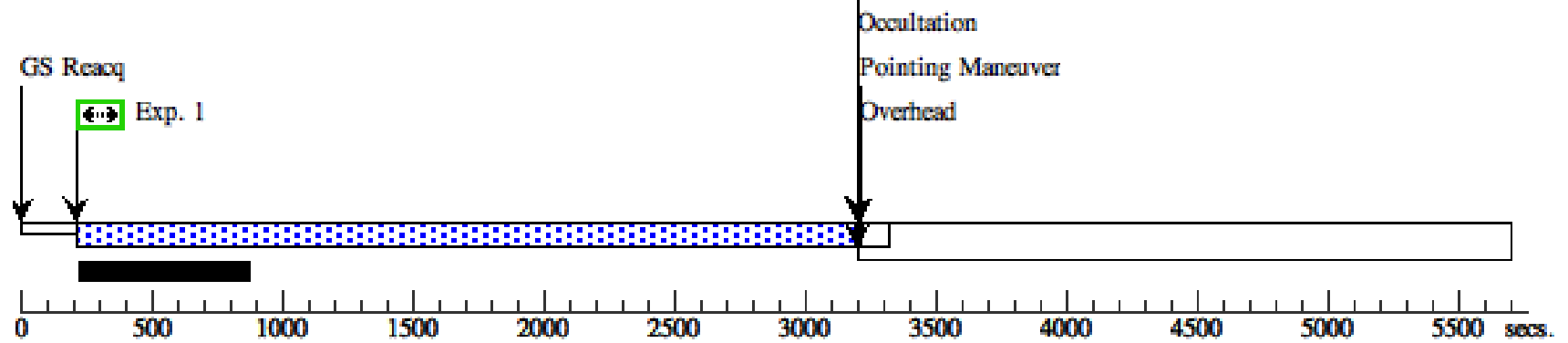
<b>Visit</b>	<b>Proposal 14747, UVIS.2.4 (09), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 98D TO 98 D										
	(UVIS.2.4 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.4 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.4 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.4 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>		
	(2)	SSA22.2.UVIS	RA: 22 17 2.3920 (334.2599667d) Dec: +00 21 20.04 (.35557d) Equinox: J2000					V=29	Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.2.1.1	(2) SSA22.2.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.2.4 (09) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
									[==>2980.0 Secs (Pattern 3)]		[3]
								[==>2980.0 Secs (Pattern 4)]		[4]	



### Orbit 3

Server Version: 20170613

\*\*\* ORBITAL VISIBILITY OVERRUN = 8



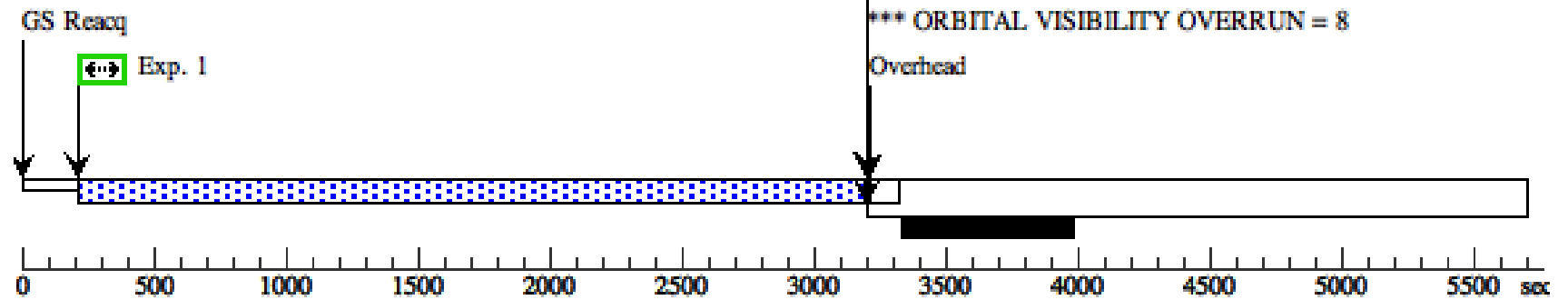
### Orbit 4

Server Version: 20170613

Occultation

\*\*\* ORBITAL VISIBILITY OVERRUN = 8

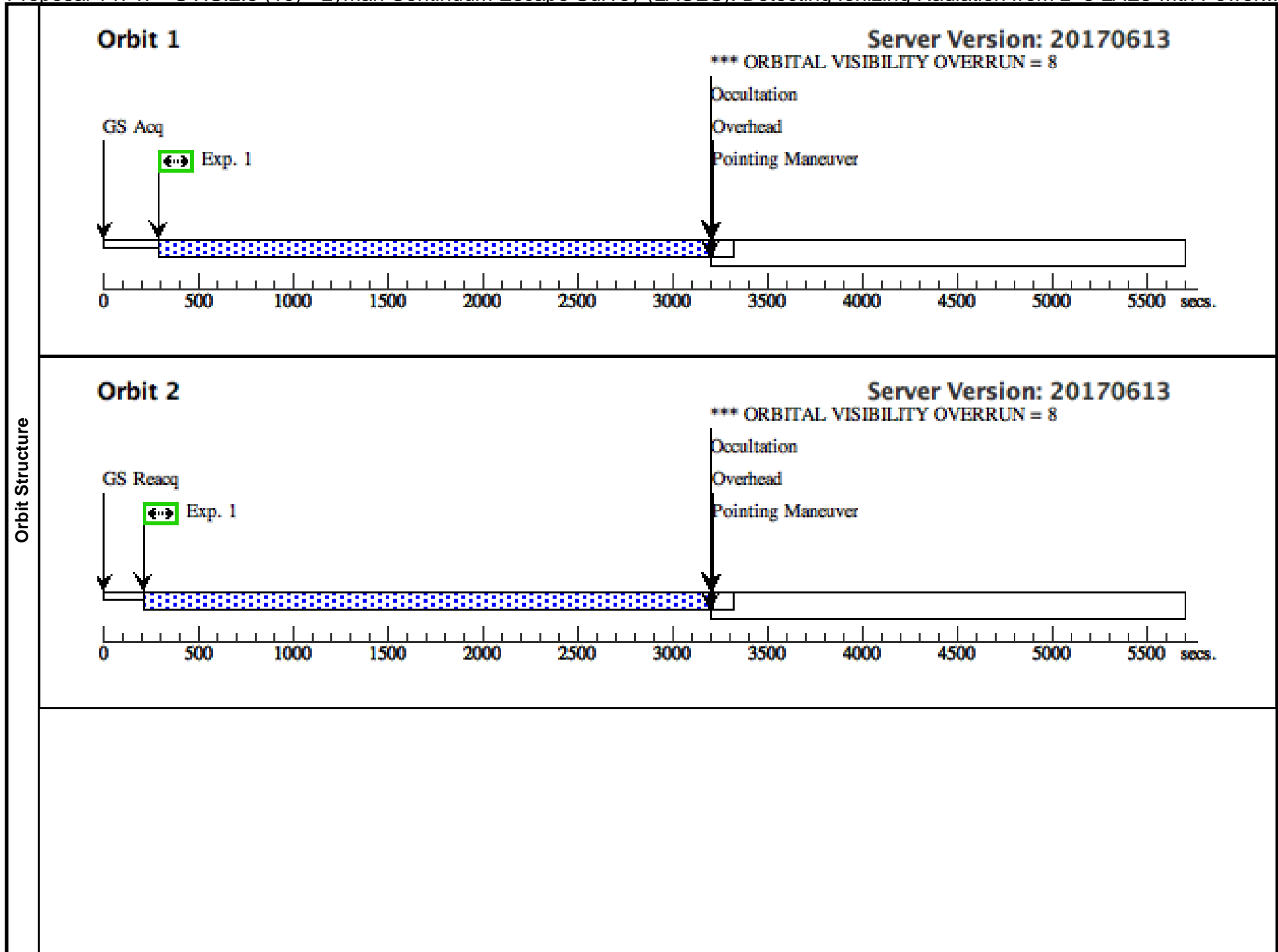
Overhead



Proposal 14747 - UVIS.2.5 (10) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

Sat Nov 04 00:04:20 GMT 2017

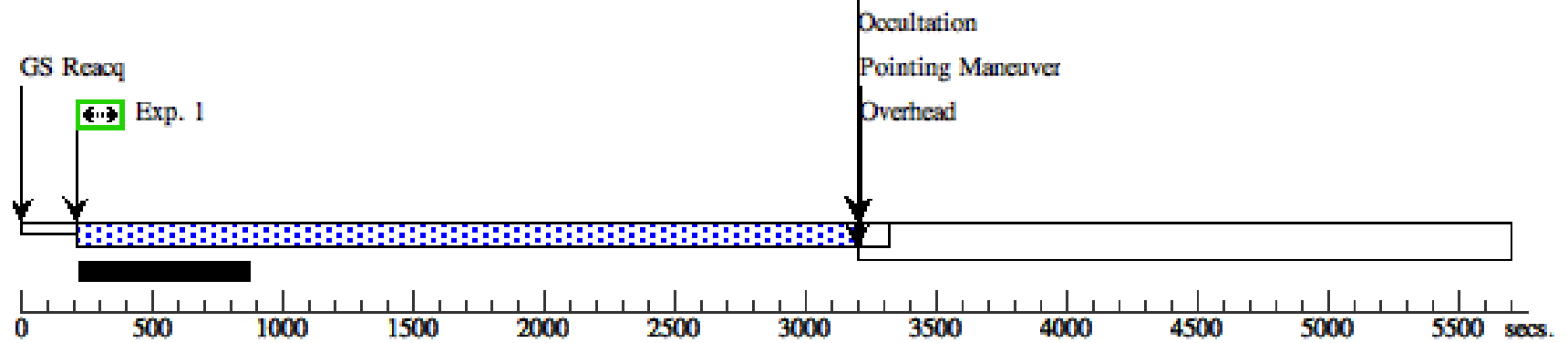
<b>Visit</b>	<b>Proposal 14747, UVIS.2.5 (10), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 98D TO 98 D										
	(UVIS.2.5 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.5 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.5 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.2.5 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
<b>Diagnosics</b>											
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>				<b>Secondary Pattern</b>				<b>Exposures</b>	
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false				(1)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>		
	(2)	SSA22.2.UVIS	RA: 22 17 2.3920 (334.2599667d) Dec: +00 21 20.04 (.35557d) Equinox: J2000					V=29	Reference Frame: ICRS		
<b>Exposures</b>	<b>#</b>	<b>Label</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	UVIS.2.1.1	(2) SSA22.2.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARI O BASE1B3	Pattern 1, Exps 1-1 in UVIS.2.5 (10) (1)	2700 Secs (11809 Secs)		
									[==>2869.0 Secs (Pattern 1)]		[1]
									[==>2980.0 Secs (Pattern 2)]		[2]
									[==>2980.0 Secs (Pattern 3)]		[3]
								[==>2980.0 Secs (Pattern 4)]		[4]	



### Orbit 3

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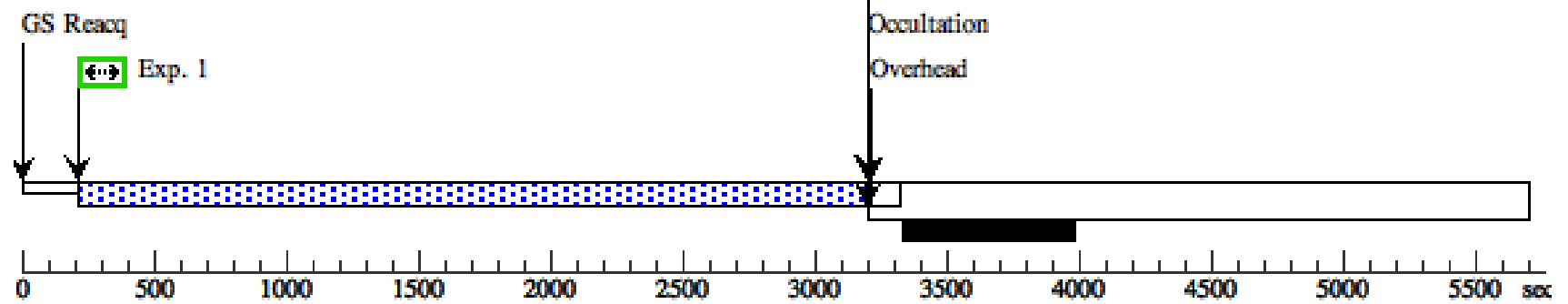
\*\*\* ORBITAL VISIBILITY OVERRUN = 8



### Orbit 4

Server Version: 20170613

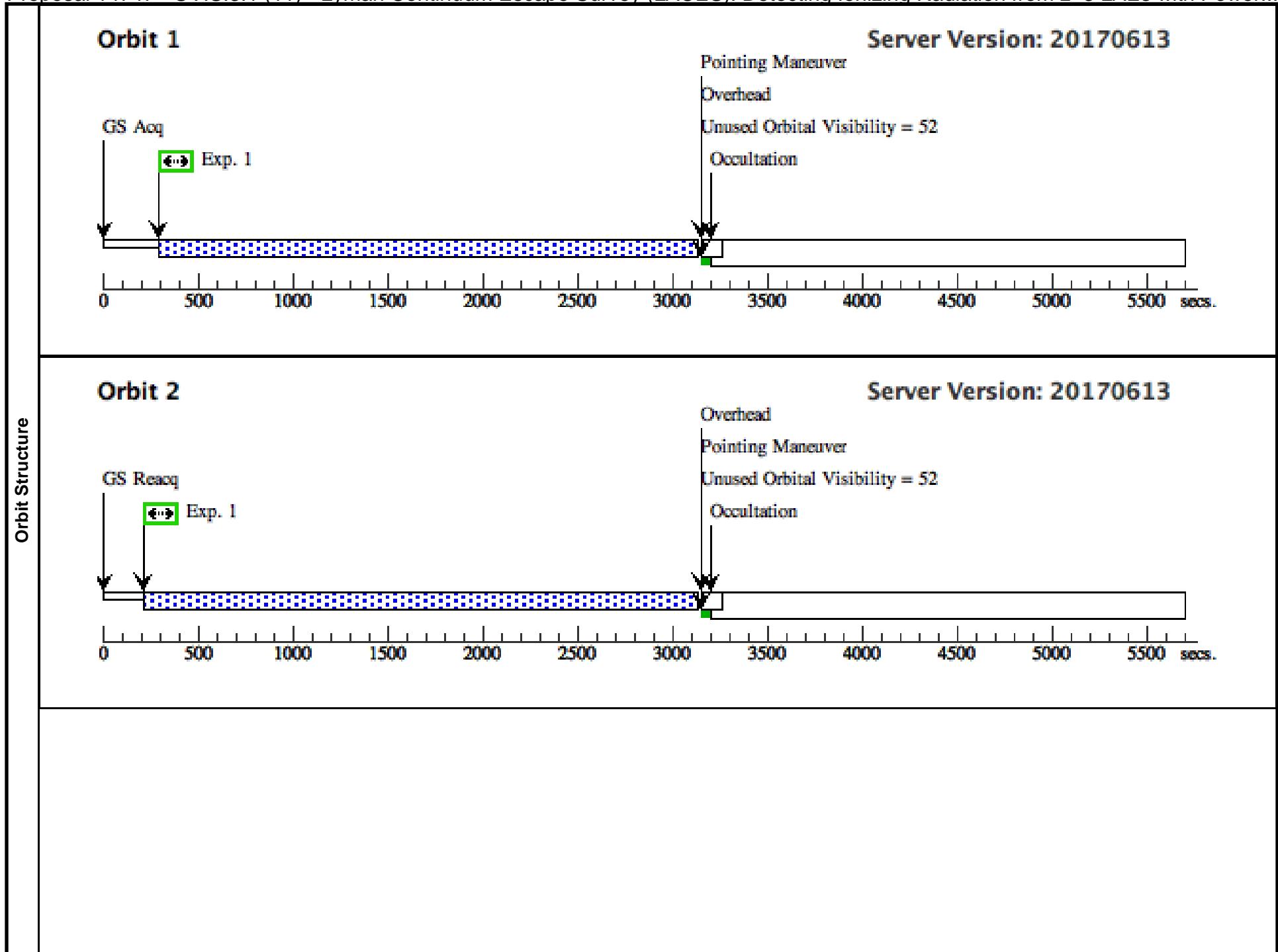
\*\*\* ORBITAL VISIBILITY OVERRUN = 8



Proposal 14747 - UVIS.3.1 (11) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

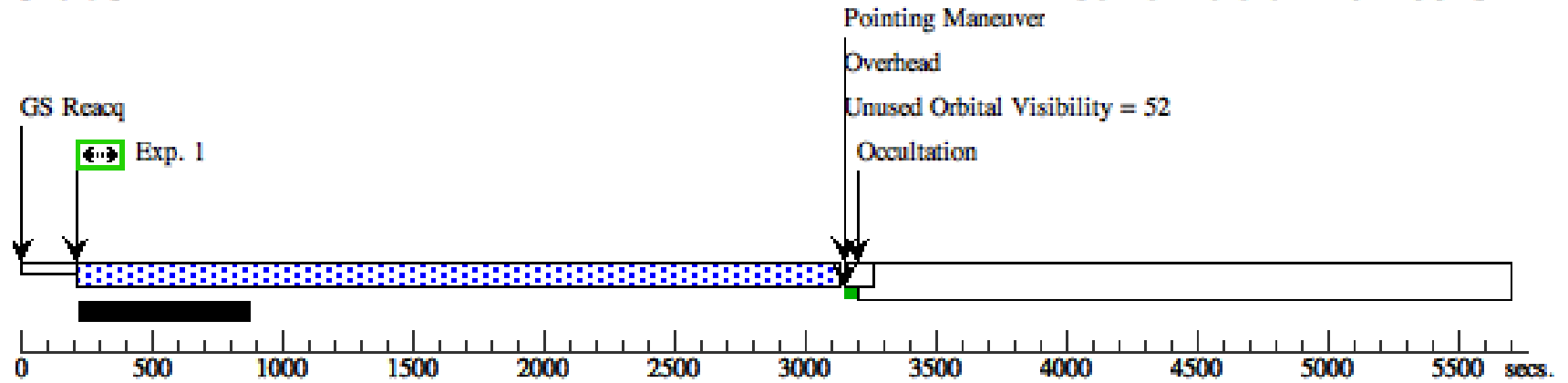
Sat Nov 04 00:04:20 GMT 2017

Visit	Proposal 14747, UVIS.3.1 (11), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 240D TO 240 D										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	SSA22.3.UVIS	RA: 22 17 12.0600 (334.3002500d) Dec: +00 18 44.50 (.31236d) Equinox: J2000				V=29			Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	UVIS.3.1.1	(3) SSA22.3.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.3.1 (11) (1)	2700 Secs (11569 Secs)		
									[=>2809.0 Secs (Pattern 1)]		[1]
									[=>2920.0 Secs (Pattern 2)]		[2]
									[=>2920.0 Secs (Pattern 3)]		[3]
								[=>2920.0 Secs (Pattern 4)]		[4]	



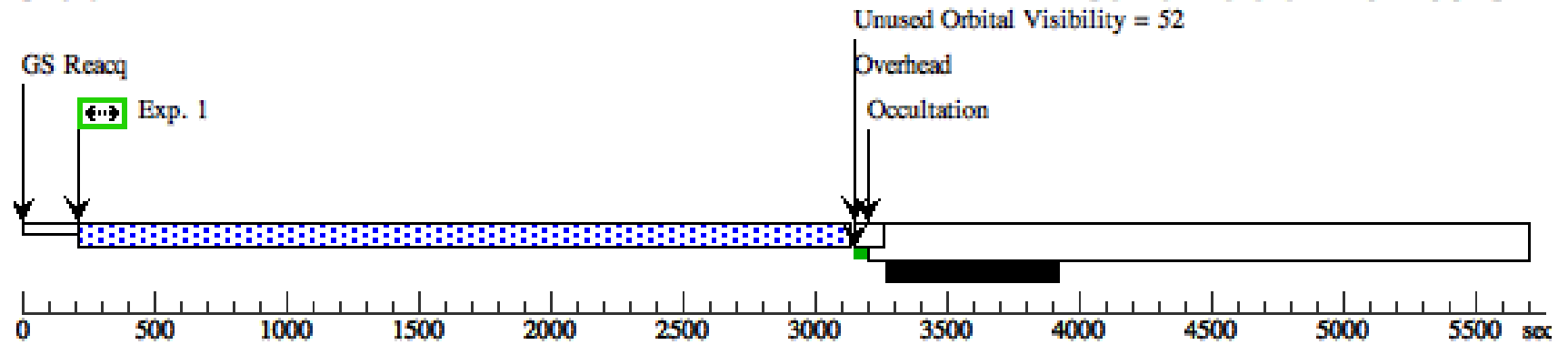
### Orbit 3

Server Version: 20170613



### Orbit 4

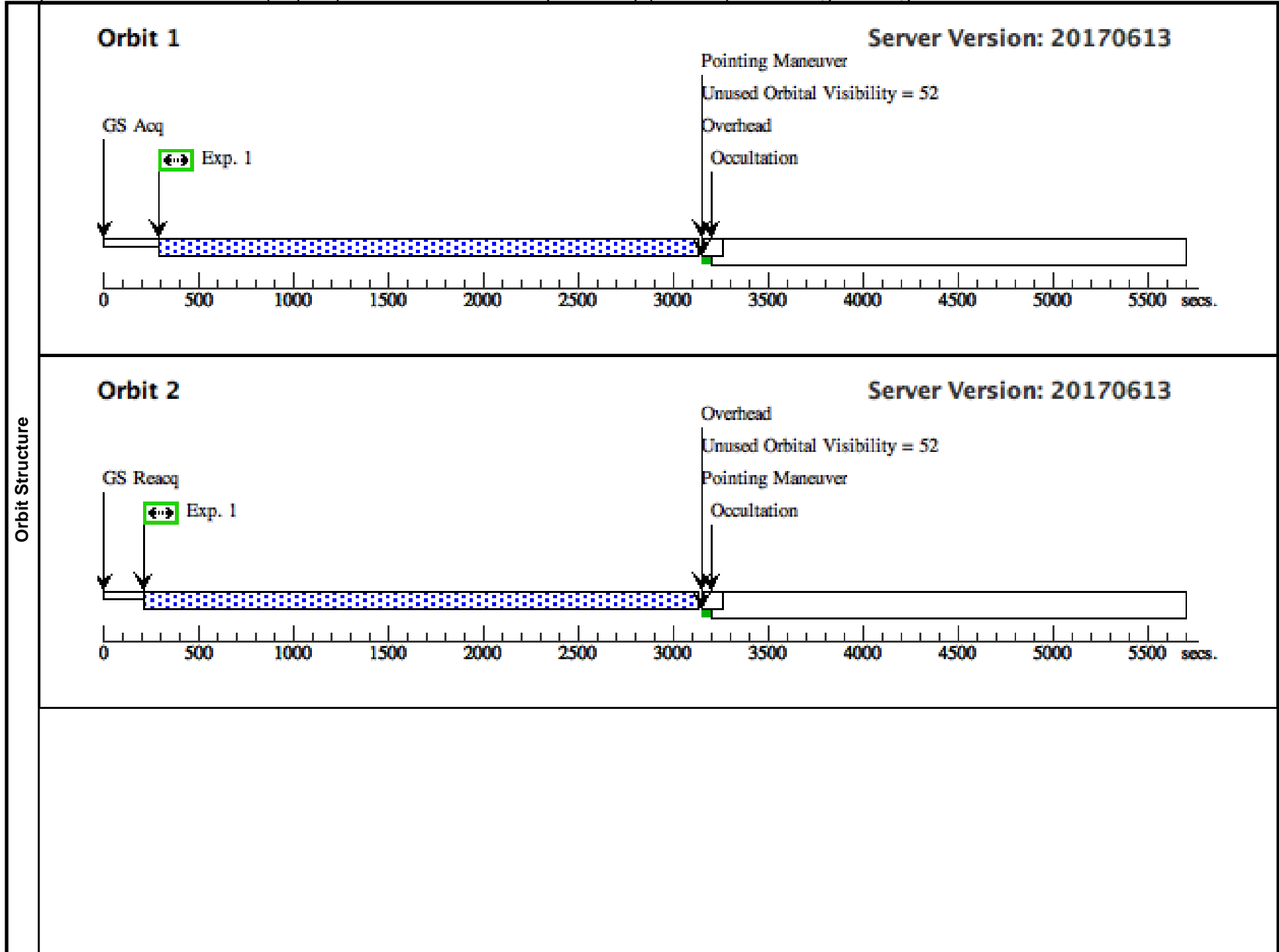
Server Version: 20170613



Proposal 14747 - UVIS.3.2 (12) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

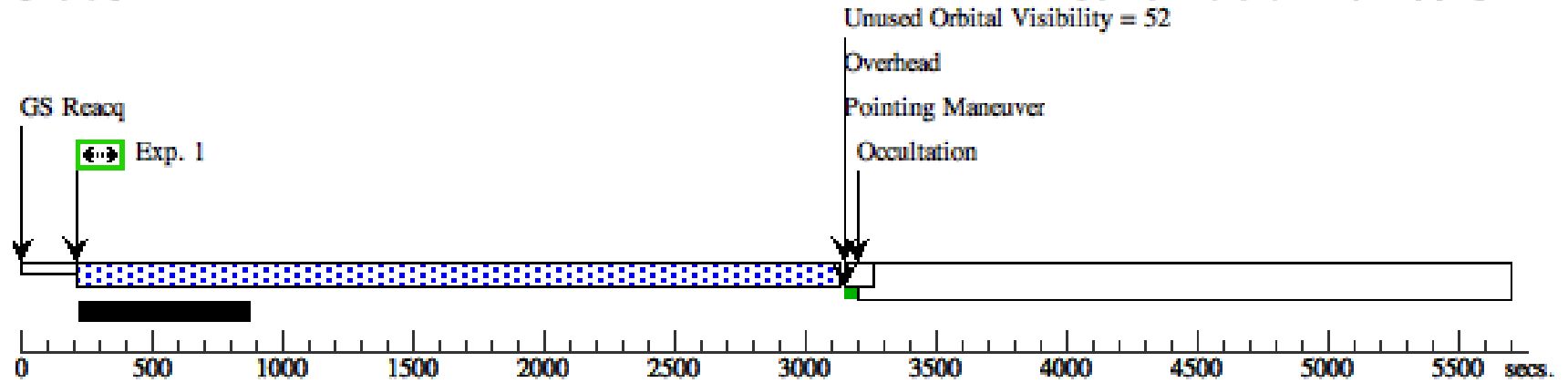
Sat Nov 04 00:04:20 GMT 2017

Visit	Proposal 14747, UVIS.3.2 (12), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 240D TO 240 D										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	SSA22.3.UVIS	RA: 22 17 12.0600 (334.3002500d) Dec: +00 18 44.50 (.31236d) Equinox: J2000				V=29			Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	UVIS.3.1.1	(3) SSA22.3.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.3.2 (12) (1)	2700 Secs (11569 Secs)		
									[=>2809.0 Secs (Pattern 1)]		[1]
									[=>2920.0 Secs (Pattern 2)]		[2]
									[=>2920.0 Secs (Pattern 3)]		[3]
								[=>2920.0 Secs (Pattern 4)]		[4]	



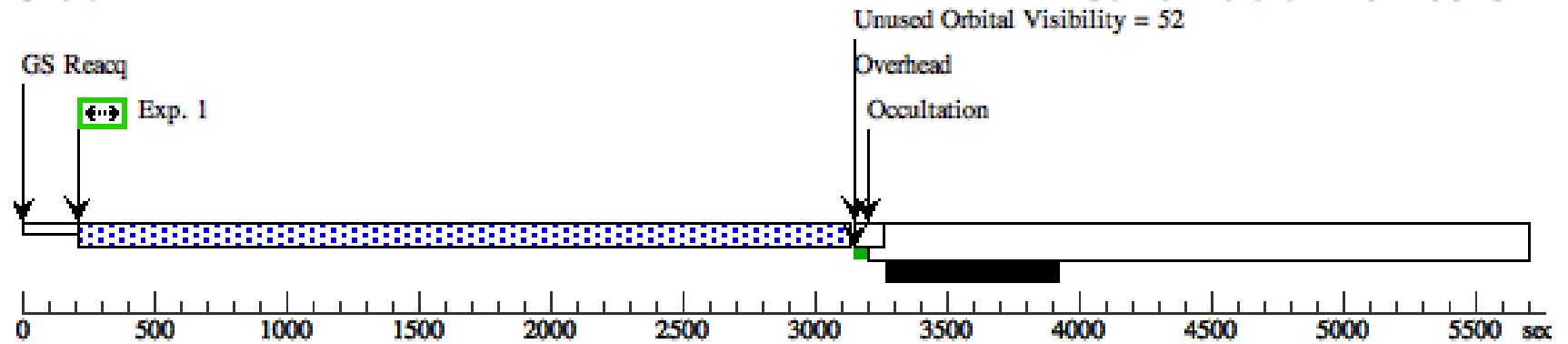
### Orbit 3

Server Version: 20170613



### Orbit 4

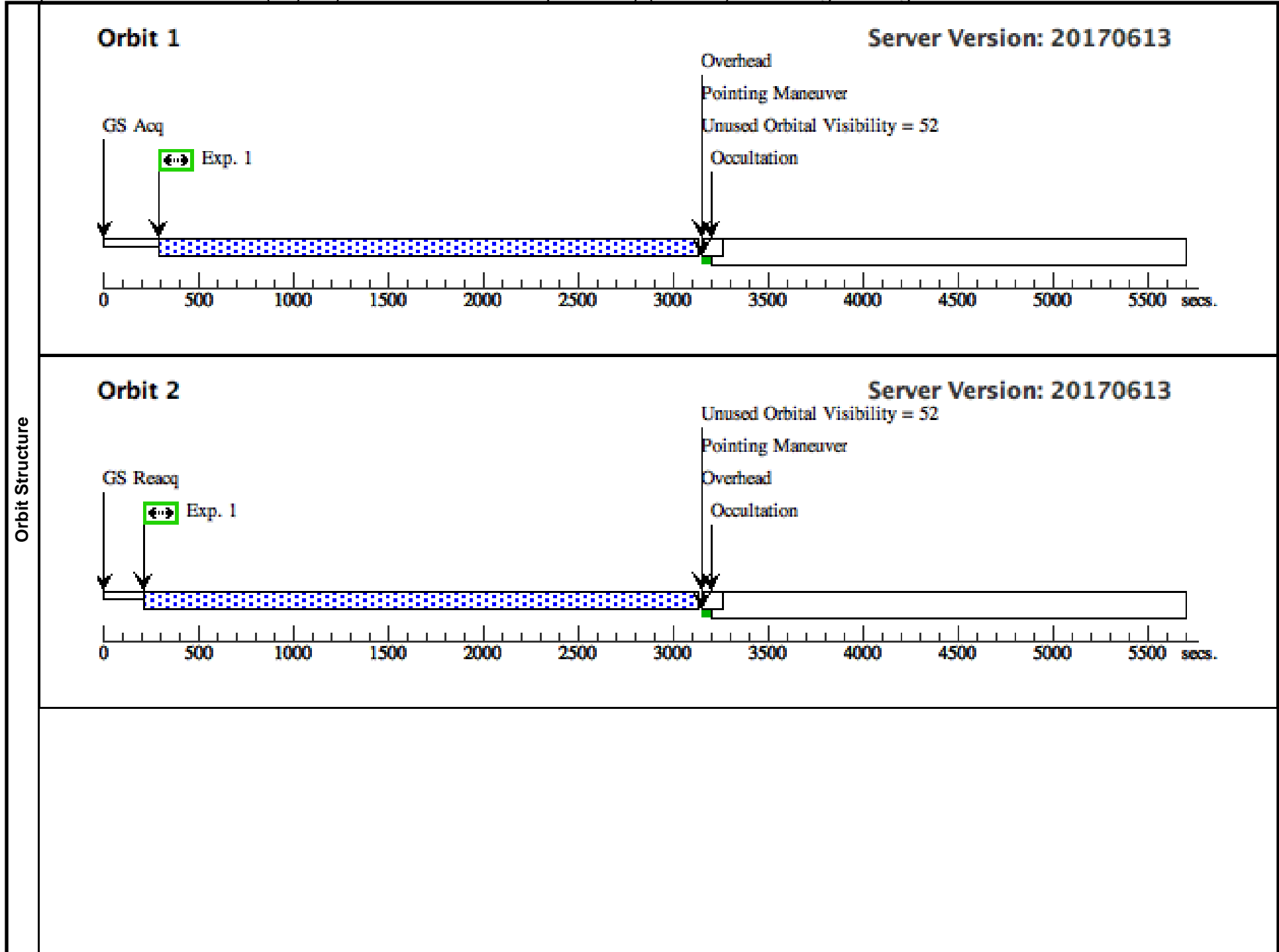
Server Version: 20170613



Proposal 14747 - UVIS.3.3 (13) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

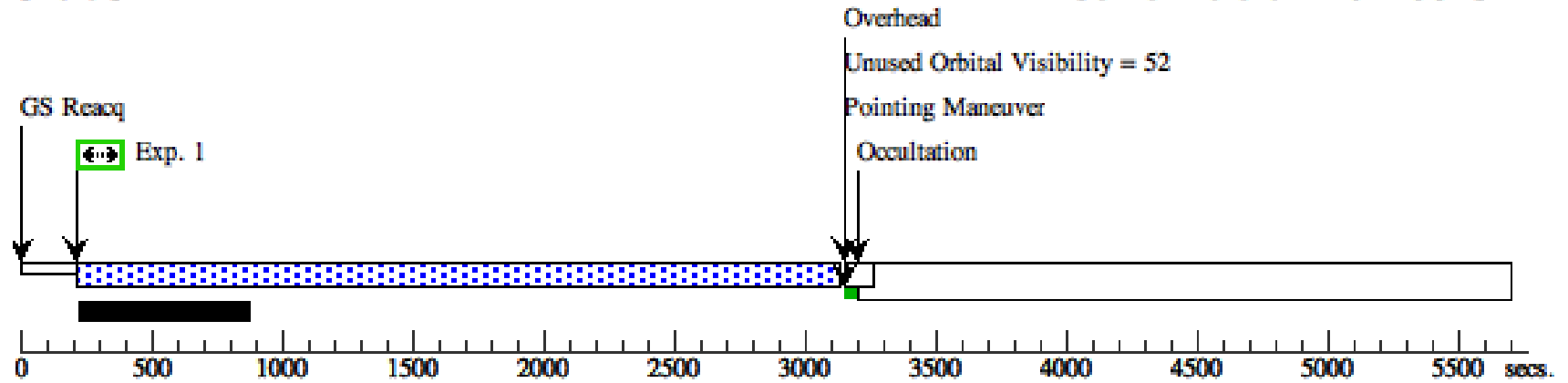
Sat Nov 04 00:04:20 GMT 2017

Visit	Proposal 14747, UVIS.3.3 (13), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 240D TO 240 D										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	SSA22.3.UVIS	RA: 22 17 12.0600 (334.3002500d) Dec: +00 18 44.50 (.31236d) Equinox: J2000				V=29			Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	UVIS.3.1.1	(3) SSA22.3.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.3.3 (13) (1)	2700 Secs (11569 Secs)		
									[=>2809.0 Secs (Pattern 1)]		[1]
									[=>2920.0 Secs (Pattern 2)]		[2]
									[=>2920.0 Secs (Pattern 3)]		[3]
								[=>2920.0 Secs (Pattern 4)]		[4]	



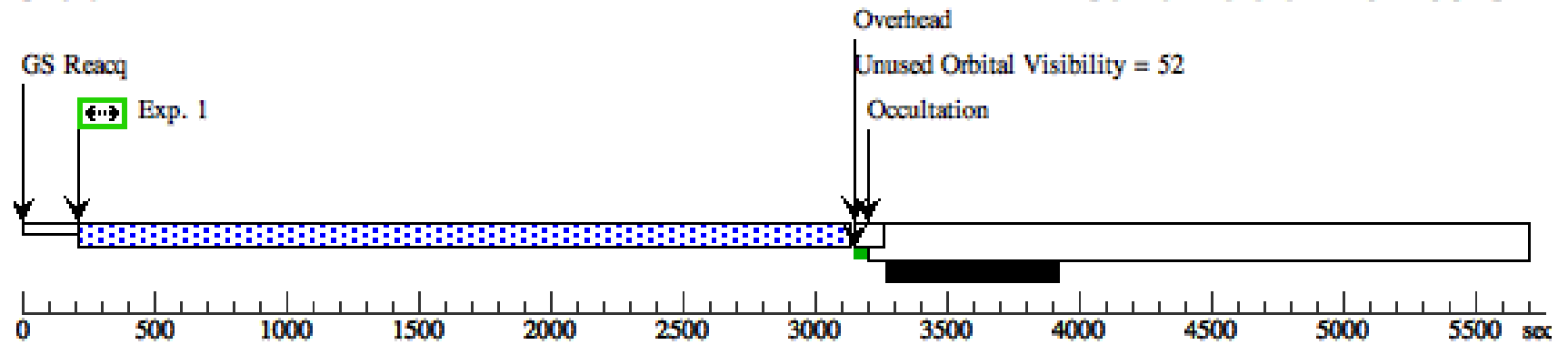
### Orbit 3

Server Version: 20170613



### Orbit 4

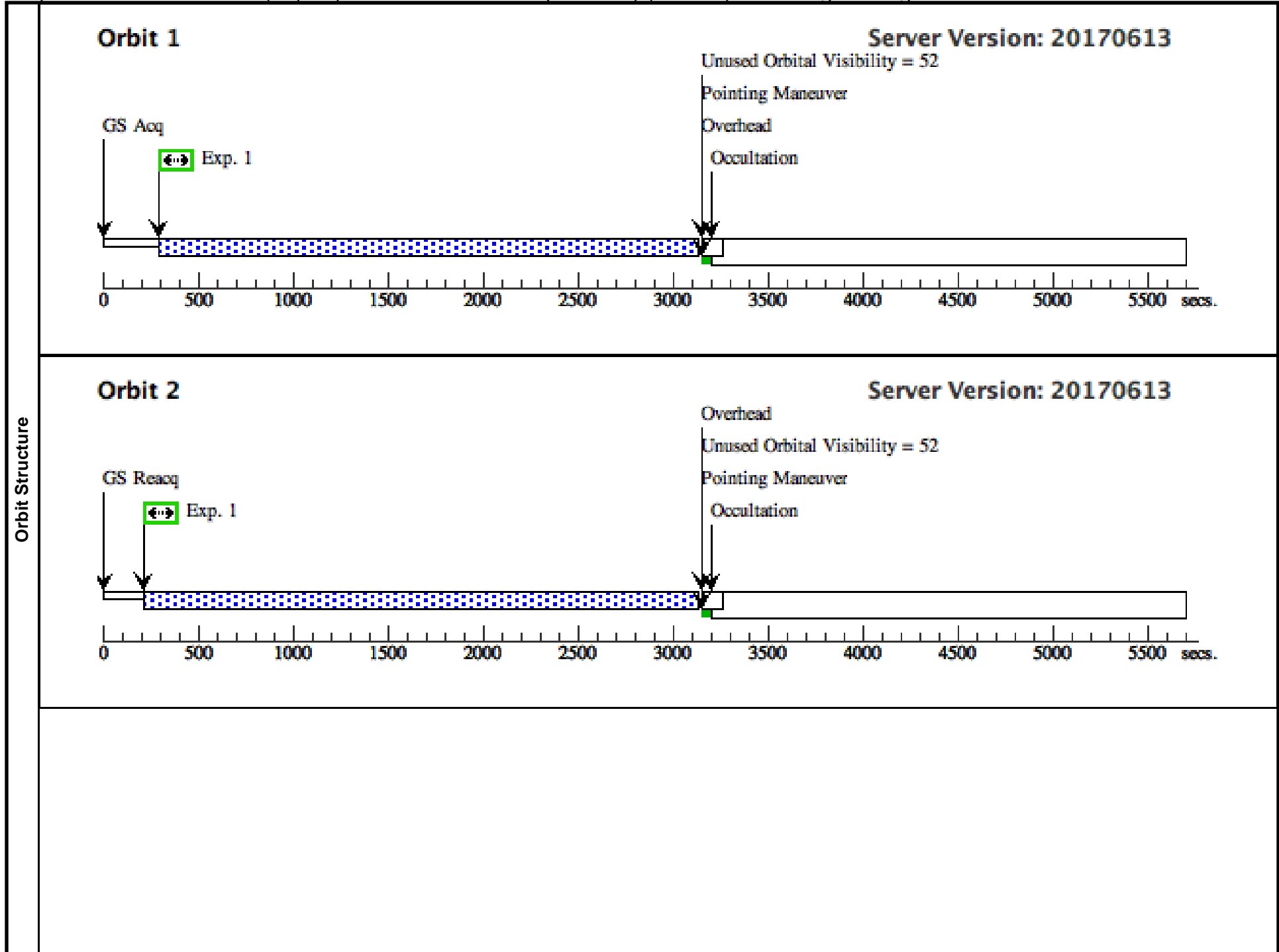
Server Version: 20170613



Proposal 14747 - UVIS.3.4 (14) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

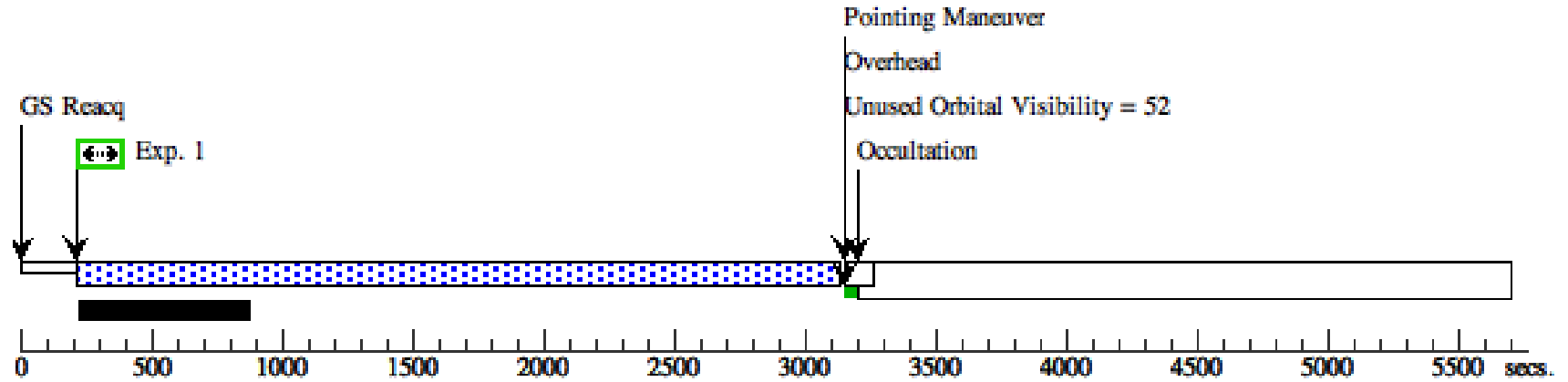
Sat Nov 04 00:04:20 GMT 2017

Visit	Proposal 14747, UVIS.3.4 (14), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 240D TO 240 D										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false							(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	SSA22.3.UVIS	RA: 22 17 12.0600 (334.3002500d) Dec: +00 18 44.50 (.31236d) Equinox: J2000				V=29			Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	UVIS.3.1.1	(3) SSA22.3.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.3.4 (14) (1)	2700 Secs (11569 Secs)		
									[=>2809.0 Secs (Pattern 1)]		[1]
									[=>2920.0 Secs (Pattern 2)]		[2]
									[=>2920.0 Secs (Pattern 3)]		[3]
								[=>2920.0 Secs (Pattern 4)]		[4]	



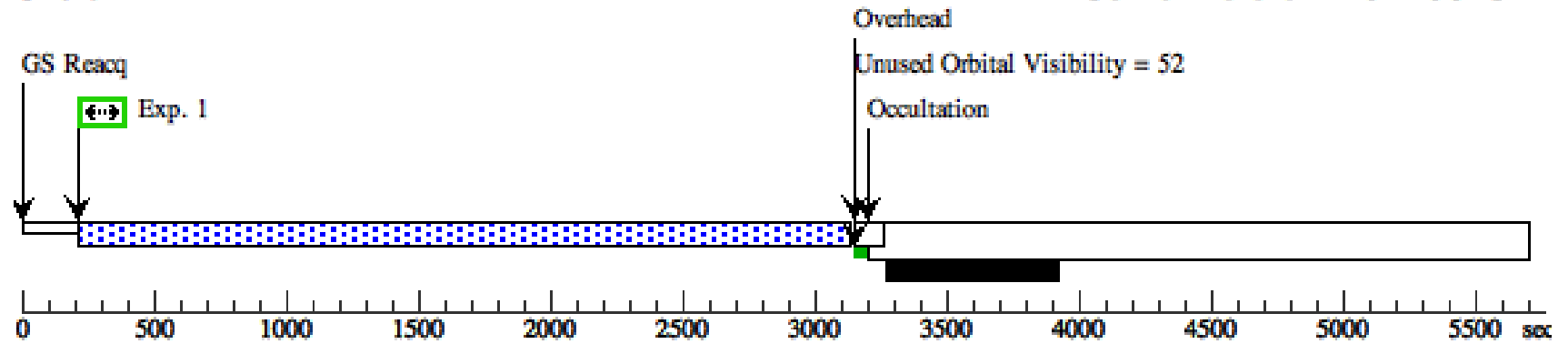
### Orbit 3

Server Version: 20170613



### Orbit 4

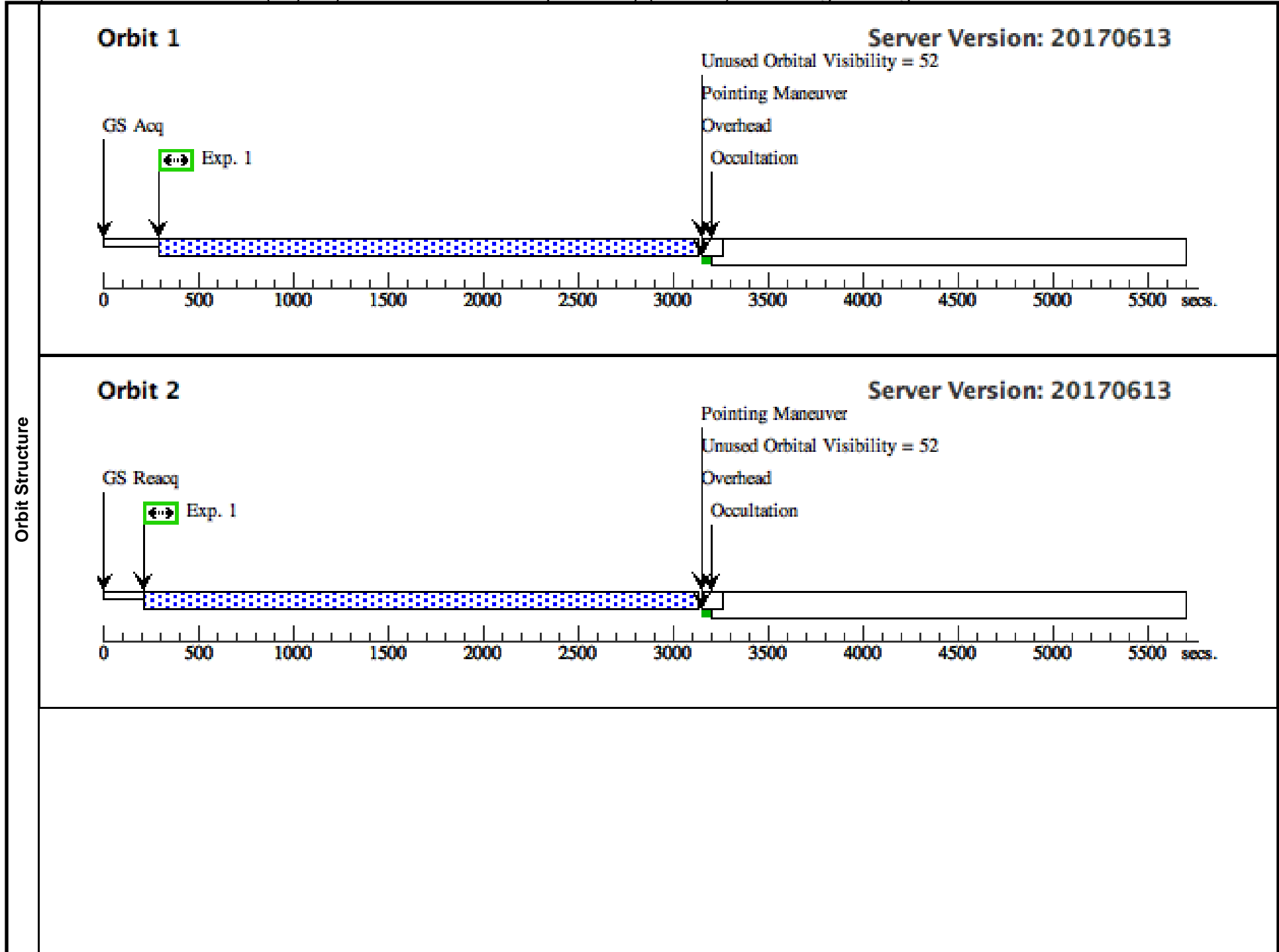
Server Version: 20170613



Proposal 14747 - UVIS.3.5 (15) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

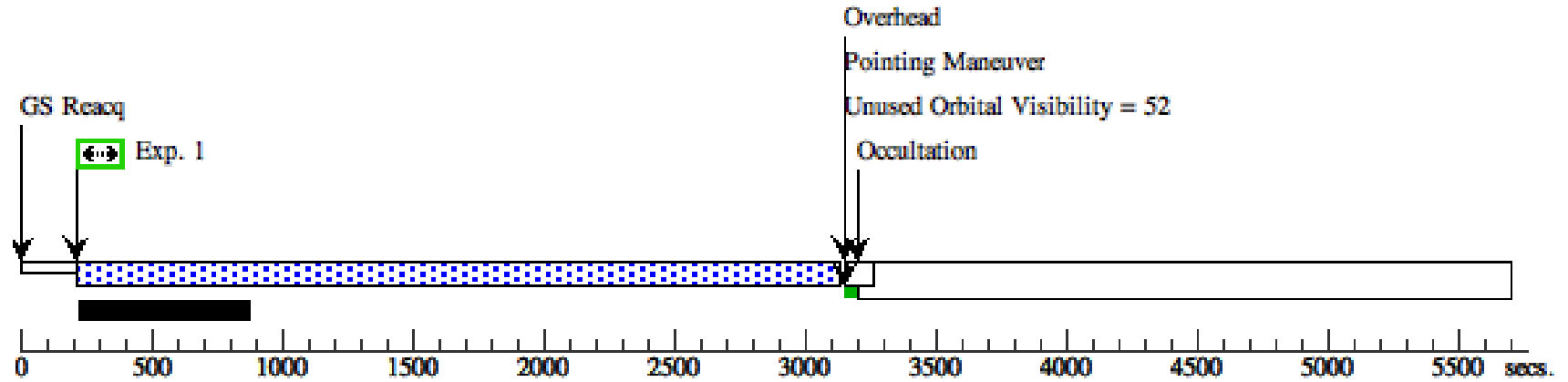
Sat Nov 04 00:04:20 GMT 2017

Visit	Proposal 14747, UVIS.3.5 (15), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 240D TO 240 D									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(3)	SSA22.3.UVIS	RA: 22 17 12.0600 (334.3002500d) Dec: +00 18 44.50 (.31236d) Equinox: J2000				V=29			Reference Frame: ICRS
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	UVIS.3.1.1	(3) SSA22.3.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-1 in UVIS.3.5 (15) (1)	2700 Secs (11569 Secs)	
									[==>2809.0 Secs (Pattern 1)]	[1]
									[==>2920.0 Secs (Pattern 2)]	[2]
									[==>2920.0 Secs (Pattern 3)]	[3]
								[==>2920.0 Secs (Pattern 4)]	[4]	



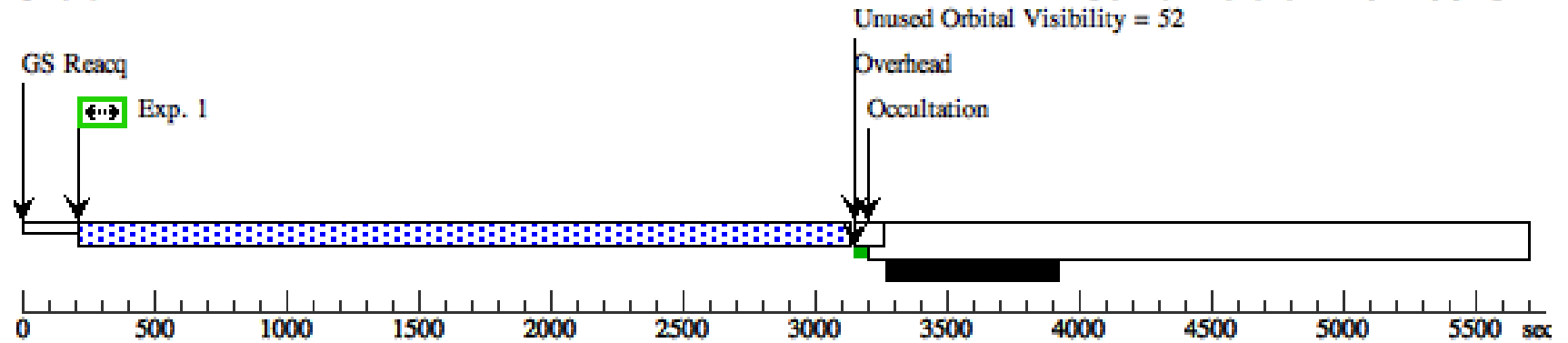
### Orbit 3

Server Version: 20170613



### Orbit 4

Server Version: 20170613

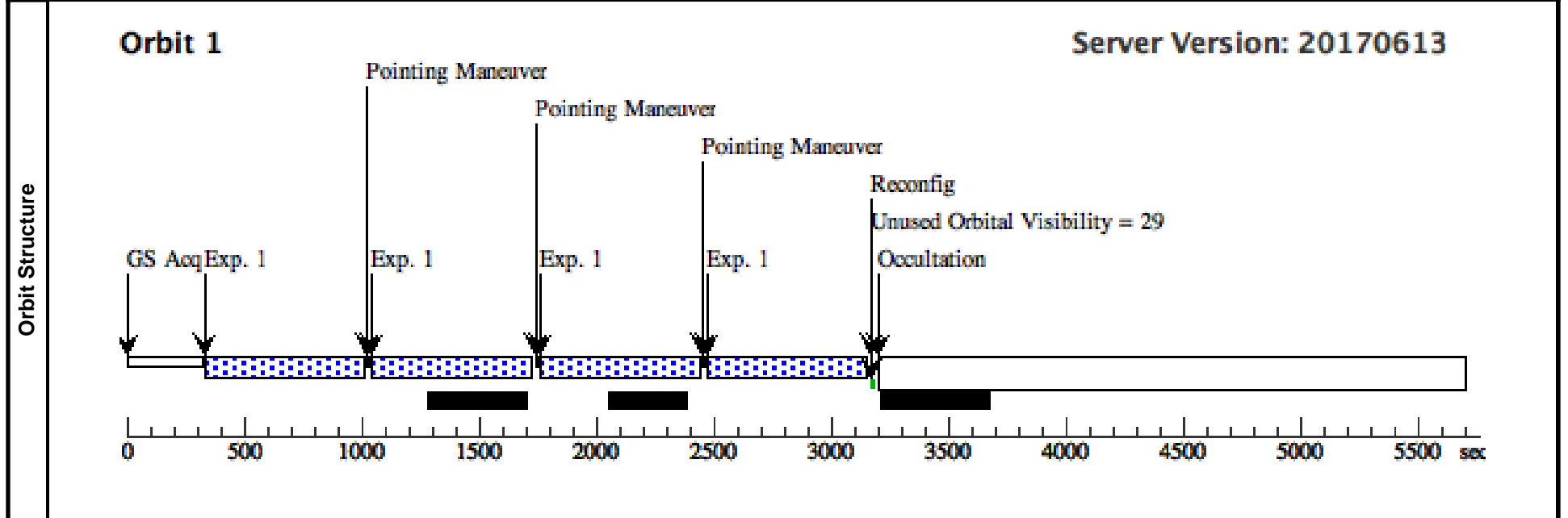


<b>Visit</b>	Proposal 14747, IR.1.1 (16), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 243D TO 243 D		
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<b>Patterns</b>	#	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>
	(2)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

<b>Fixed Targets</b>	#	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(4)	SSA22.4.IR	RA: 22 16 50.7530 (334.2114708d) Dec: +00 19 33.42 (.32595d) Equinox: J2000		V=27	Reference Frame: ICRS

<b>Exposures</b>	#	<b>Label</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	IR.1.1.1	(4) SSA22.4.IR	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=14	GS ACQ SCENARI O BASE1B3	Pattern 2, Exps 1-1 i n IR.1.1 (16) (2)	652.938154 Secs (2611.753 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]

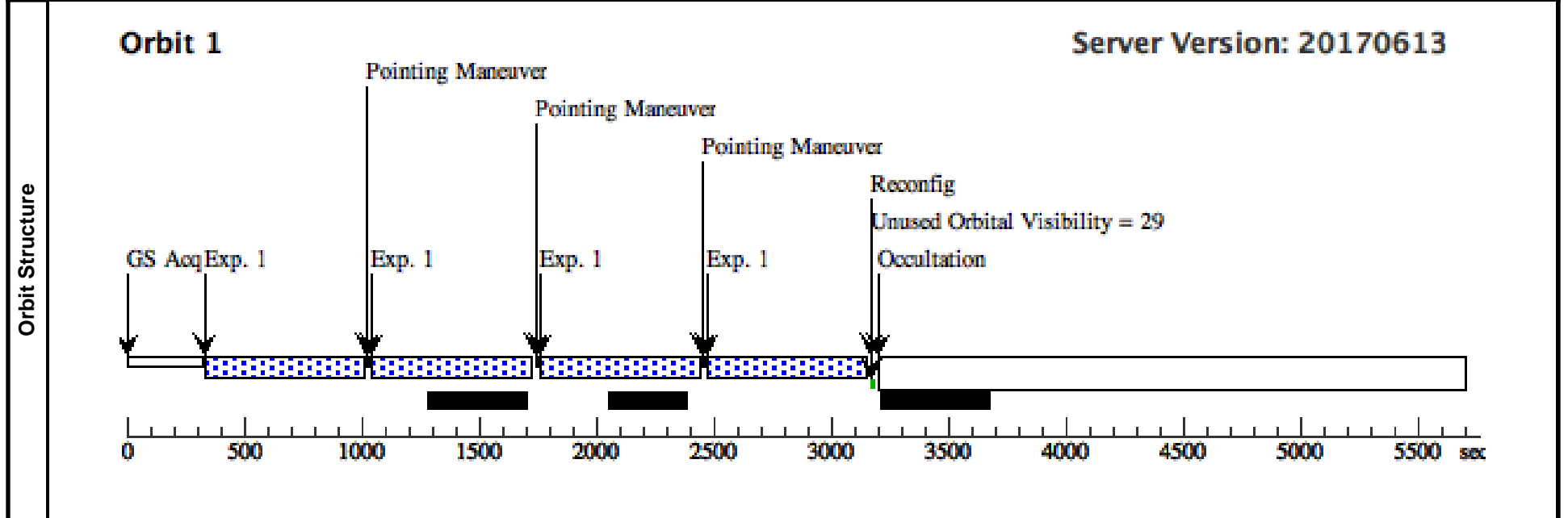


<b>Visit</b>	Proposal 14747, IR.2.1 (17), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 60.4D TO 60.4 D		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(2)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	SSA22.5.IR	RA: 22 16 58.7000 (334.2445833d) Dec: +00 20 50.10 (.34725d) Equinox: J2000		V=27	Reference Frame: ICRS

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	IR.2.1.1	(5) SSA22.5.IR	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=14			Pattern 2, Exps 1-1 in IR.2.1 (17) (2)	652.938154 Secs (2611.753 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]



Proposal 14747 - IR.3.1 (18) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Powerful ...

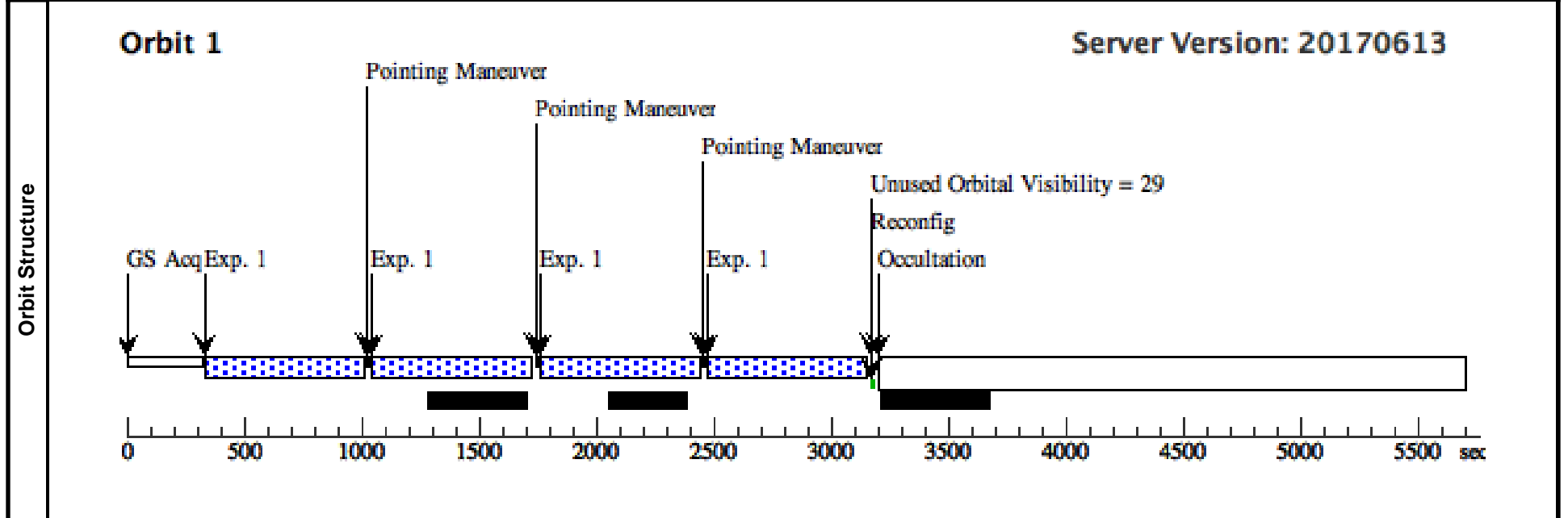
Sat Nov 04 00:04:20 GMT 2017

<b>Visit</b>	Proposal 14747, IR.3.1 (18), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 246D TO 246 D		
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<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(2)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(6)	SSA22.6.IR	RA: 22 17 6.1490 (334.2756208d) Dec: +00 21 48.78 (.36355d) Equinox: J2000		V=27	Reference Frame: ICRS

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	IR.3.1.1	(6) SSA22.6.IR	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=14			Pattern 2, Exps 1-1 i n IR.3.1 (18) (2)	652.938154 Secs (2611.753 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]

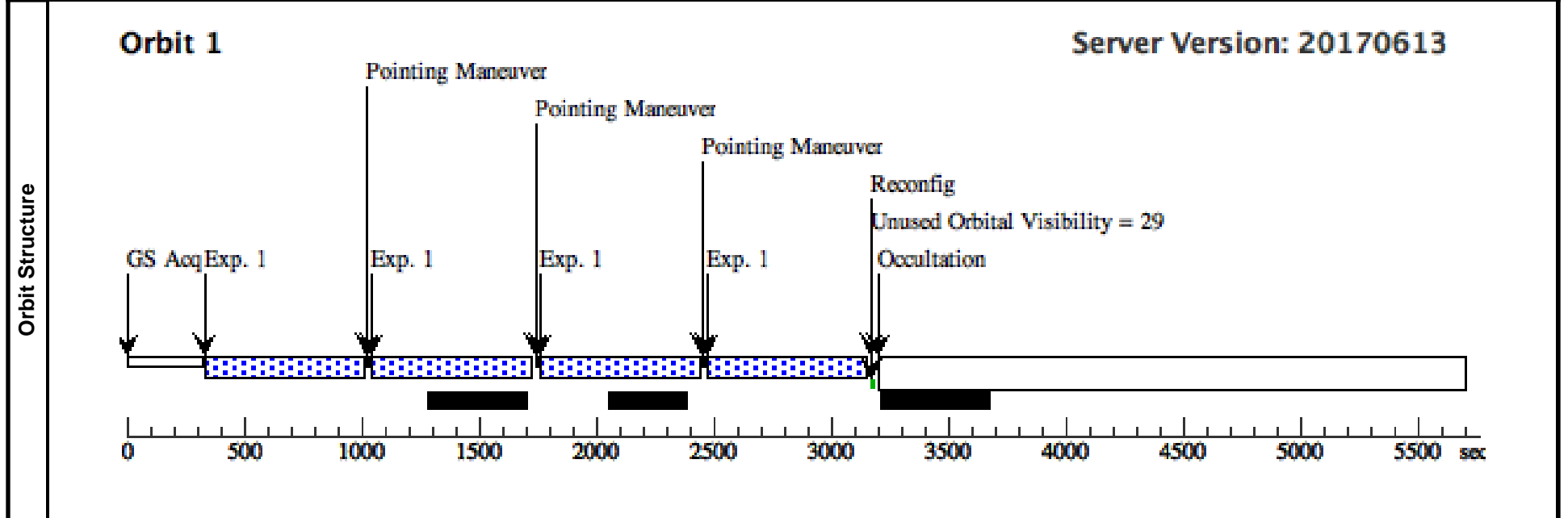


<b>Visit</b>	Proposal 14747, IR.4.1 (19), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 241D TO 241 D		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(2)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(7)	SSA22.7.IR	RA: 22 17 11.6500 (334.2985417d) Dec: +00 18 56.43 (.31567d) Equinox: J2000		V=27	Reference Frame: ICRS

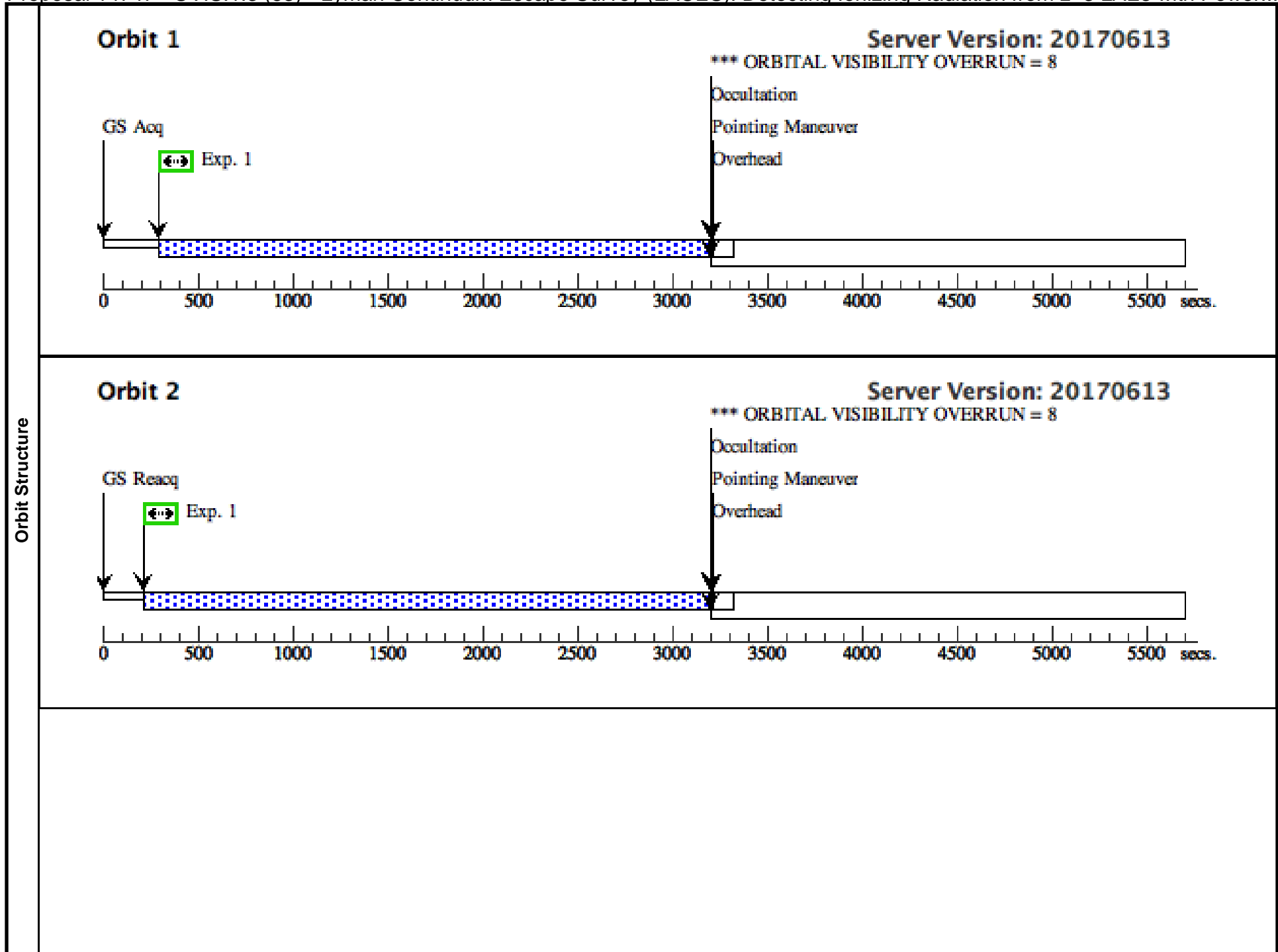
<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	IR.1.1.1	(7) SSA22.7.IR	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 50; NSAMP=14			Pattern 2, Exps 1-1 in IR.4.1 (19) (2)	652.938154 Secs (2611.753 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]



Proposal 14747 - UVIS.1.3 (53) - Lyman Continuum Escape Survey (LACES): Detecting Ionizing Radiation from z~3 LAEs with Power...

Sat Nov 04 00:04:20 GMT 2017

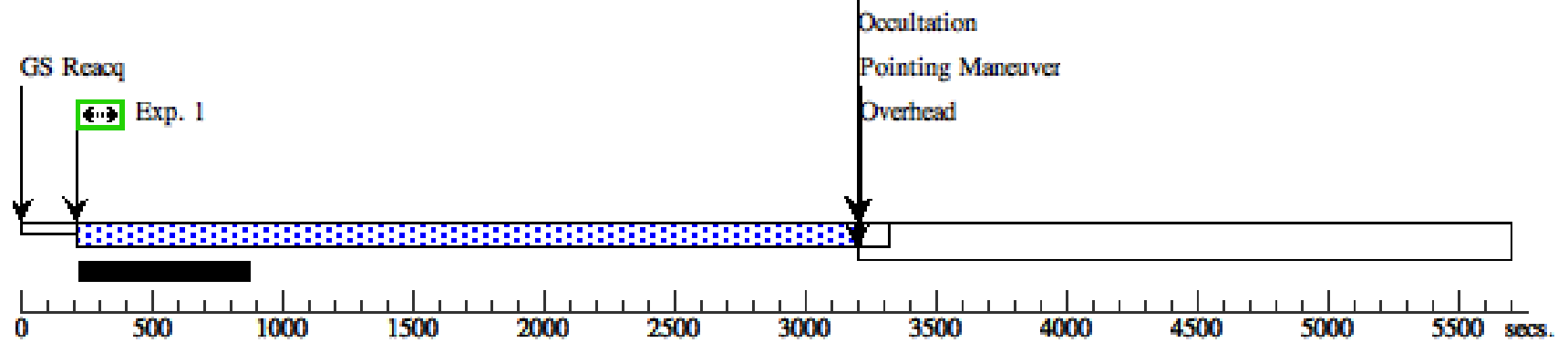
<b>Visit</b>	Proposal 14747, UVIS.1.3 (53) <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 60.2D TO 60.2 D										
<b>Diagnostics</b>	(UVIS.1.3 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.1.3 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.1.3 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (UVIS.1.3 (53)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN										
<b>Patterns</b>	#	<b>Primary Pattern</b>				<b>Secondary Pattern</b>			<b>Exposures</b>		
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112				Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false			(1)		
<b>Fixed Targets</b>	#	<b>Name</b>	<b>Target Coordinates</b>		<b>Targ. Coord. Corrections</b>		<b>Fluxes</b>	<b>Miscellaneous</b>			
	(1)	SSA22.1.UVIS	RA: 22 16 51.8260 (334.2159417d) Dec: +00 19 32.42 (.32567d) Equinox: J2000				V=29	Reference Frame: ICRS			
<b>Exposures</b>	#	<b>Label</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	UVIS.1.1.1	(1) SSA22.1.UVIS	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=6		Pattern 1, Exps 1-1 in UVIS.1.3 (53) (1)	2700 Secs (11809 Secs)	
										[==>2869.0 Secs (Pattern 1)]	[1]
										[==>2980.0 Secs (Pattern 2)]	[2]
										[==>2980.0 Secs (Pattern 3)]	[3]
									[==>2980.0 Secs (Pattern 4)]	[4]	



### Orbit 3

Server Version: 20170613

\*\*\* ORBITAL VISIBILITY OVERRUN = 8



### Orbit 4

Server Version: 20170613

Occultation

\*\*\* ORBITAL VISIBILITY OVERRUN = 8

Overhead

