



14265 - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Cycle: 23, 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) HS2154+2228	COS/NUV	3	15-Sep-2015 21:34:20.0	yes
02	(1) HS2154+2228	COS/NUV	3	15-Sep-2015 21:34:26.0	yes
03	(1) HS2154+2228	COS/NUV	3	15-Sep-2015 21:34:30.0	yes
04	(2) PG1718+481	COS/NUV	3	15-Sep-2015 21:34:34.0	yes
05	(2) PG1718+481	COS/NUV	3	15-Sep-2015 21:34:39.0	yes
06	(2) PG1718+481	COS/NUV	3	15-Sep-2015 21:34:43.0	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>
07	(3) PG1206+459	COS/NUV	4	15-Sep-2015 21:34:49.0	yes
08	(3) PG1206+459	COS/NUV	4	15-Sep-2015 21:34:54.0	yes
09	(3) PG1206+459	COS/NUV	4	15-Sep-2015 21:34:59.0	yes
10	(4) HE0331-4112	COS/NUV	4	15-Sep-2015 21:35:05.0	yes
11	(4) HE0331-4112	COS/NUV	4	15-Sep-2015 21:35:10.0	yes
12	(4) HE0331-4112	COS/NUV	4	15-Sep-2015 21:35:16.0	yes
13	(5) HE1211-1322	COS/NUV	4	15-Sep-2015 21:35:21.0	yes
14	(5) HE1211-1322	COS/NUV	4	15-Sep-2015 21:35:26.0	yes
15	(5) HE1211-1322	COS/NUV	4	15-Sep-2015 21:35:31.0	yes

54 Total Orbits Used

ABSTRACT

The intensity and spectral shape of the cosmic ionizing UV background radiation is important for understanding the physical state of the low-density, $\sim 10^4$ K intergalactic medium (IGM) which is the dominant reservoir of the baryons at all cosmic epochs. Despite its importance, the UV background is still poorly constrained both observationally and theoretically, especially at $z \sim 1$, a crucial time in cosmic evolution where 1) very little observational information is currently available, 2) the claimed IGM evolution break based on low-quality data occurs, 3) the cosmic star formation rate and QSO number density decrease rapidly and 4) there exist no UV radiation background measurements. Given that the properties of neutral hydrogen in the IGM are sensitive to the UV background, we propose a 54-orbit program to obtain COS G225M spectra of 5 QSOs with high S/N (~ 20 per resolution element), in order to cover the IGM at $z = 0.85$ to $z = 1.07$. High-S/N spectra enable direct profile fitting to the absorption lines, providing reliable HI column densities and line widths, and allowing deblending of metal lines. Direct comparisons with our Gadget-III cosmological simulations will be used to estimate the intensity and spectral shape of the UV background radiation and discriminate between the major IGM heating mechanisms at $z = 1$: photo-heating, galactic winds and blazars.

OBSERVING DESCRIPTION

There are 5 targets in this program, which are to be observed with three settings of the COS G225M grating, using central wavelengths 2339, 2373 and 2410 in order to get continuous coverage from 2224 to 2527 Å. Three orbits were allocated for each setting for HS2154+2228 and PG1718+481

Proposal 14265 (STScI Edit Number: 0, Created: Tuesday, September 15, 2015 8:35:34 PM EST) - Overview

and four orbits were allocated for each setting for PG1206+459, HE0331-4112 and HE1211-1322.

The setup is as follows:

First do an ACQ/SEARCH, with SCAN-SIZE=3, with exposure times calculated with the COS ETC, G225M-2339 to get S/N=40, using the target flux as found from GALEX data.

Next do ACQ/PEAKXD and ACQ/PEAKD to completely center.

Since the peakups use the NUV gratings, with only 100 Å wavelength coverage, it takes 100-250 seconds per step, so they take up more than half of the first orbit. For the three fainter targets, the exposure time has therefore been lowered slightly, to reach S/N=40 instead of 35, which yields a total of 120-180 extra seconds of exposure time.

There are three visits for each target, one for each central wavelength. The central wavelength is already set during peakup. A detailed check of the COS ETC shows small differences (~10 sec) in the exposure times when using the different central wavelengths. These have been taken into account, so that the exposure time in the first orbit is slightly longer for the 2410 setting than for 2373, which is longer than that for 2339.

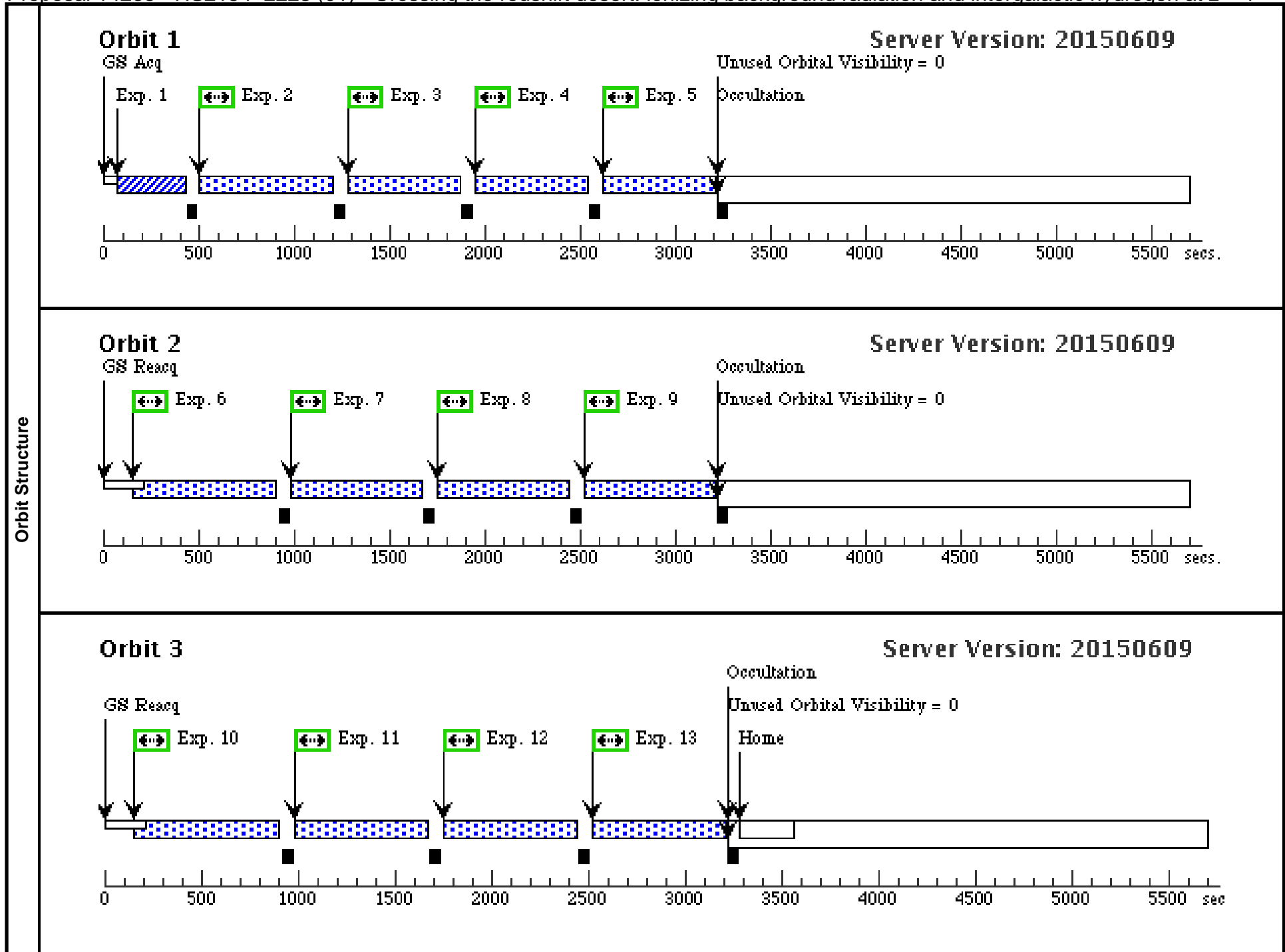
After peakup, all four FPPOS positions are used for the grating in the first and each subsequent orbit, the last two or three of which are identical.

Proposal 14265 - HS2154+2228 (01) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Visit	Proposal 14265, HS2154+2228 (01), implementation Wed Sep 16 01:35:34 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnostics	(HS2154+2228 (01)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (HS2154+2228 (01)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (HS2154+2228 (01)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.															
Fixed Targets		<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>HS2154+2228</td> <td>RA: 21 56 47.4700 (329.1977917d) Dec: +22 42 49.40 (22.71372d) Equinox: J2000</td> <td>Redshift: 1.290</td> <td>V=15.20+/-0.1 1.1E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	HS2154+2228	RA: 21 56 47.4700 (329.1977917d) Dec: +22 42 49.40 (22.71372d) Equinox: J2000	Redshift: 1.290	V=15.20+/-0.1 1.1E-14 erg/cm ² /s/A
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Comments: Extended=NO																	

Proposal 14265 - HS2154+2228 (01) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HS2154+22 28-2339-AC Q/IMAGE (COS.ta.742 860)	(1) HS2154+2228	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			20 Secs (20 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=15.97 => 18 sec Count rate 1066/sec</i>									
	2	HS2154+22 28-a2339-1 (COS.sp.720 750)	(1) HS2154+2228	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			573 Secs (573 Secs) [==>]	[1]
	3	HS2154+22 28-a2339-2 (COS.sp.720 750)	(1) HS2154+2228	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			572 Secs (572 Secs) [==>]	[1]
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	7	HS2154+22 28-b2339-2 (COS.sp.720 750)	(1) HS2154+2228	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			671 Secs (671 Secs) [==>]	[2]
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	10	HS2154+22 28-c2339-1 (COS.sp.720 750)	(1) HS2154+2228	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			671 Secs (671 Secs) [==>]	[3]
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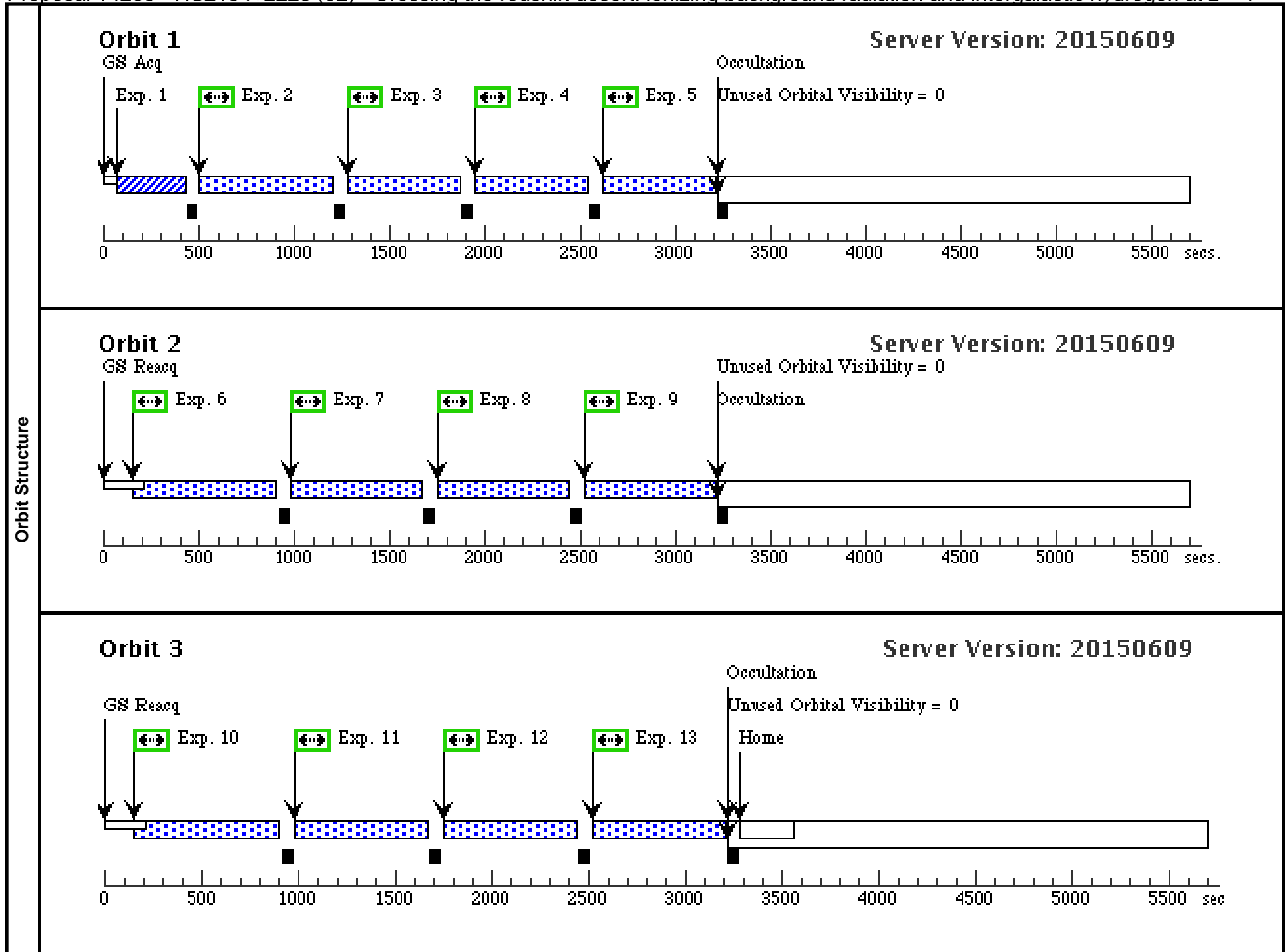


Proposal 14265 - HS2154+2228 (02) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Visit	Proposal 14265, HS2154+2228 (02), implementation Wed Sep 16 01:35:35 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																						
	Diagnostics	(HS2154+2228 (02)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (HS2154+2228 (02)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE. (HS2154+2228 (02)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																					
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	5	HS2154+22 28-a2373-4 (COS.sp.720 750)	(1) HS2154+2228	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			572 Secs (572 Secs) [==>]	[1]
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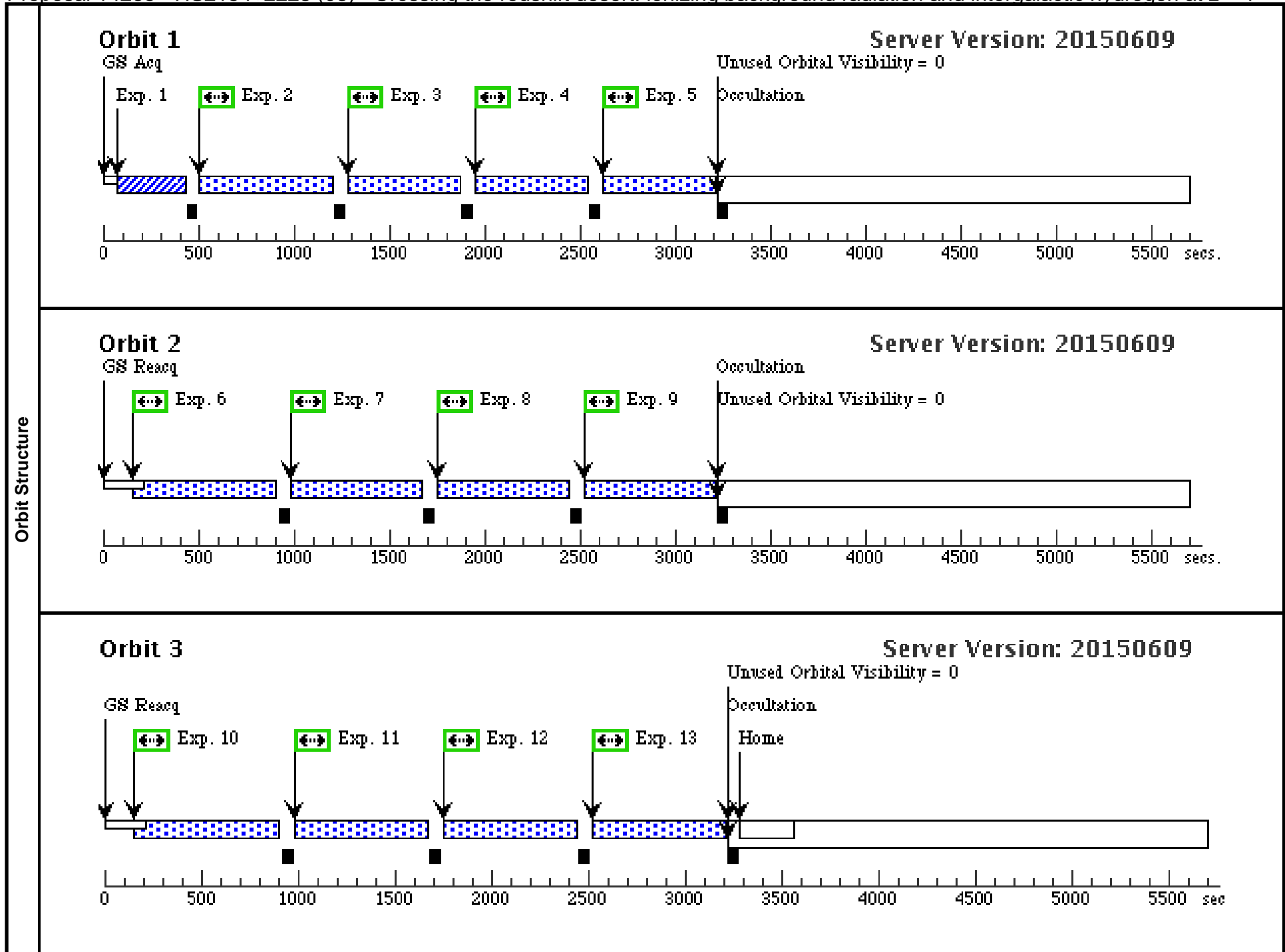


Proposal 14265 - HS2154+2228 (03) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

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Proposal 14265 - HS2154+2228 (03) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

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	7	HS2154+22 28-b2410-2 (COS.sp.720 750)	(1) HS2154+2228	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			671 Secs (671 Secs) [==>]	[2]
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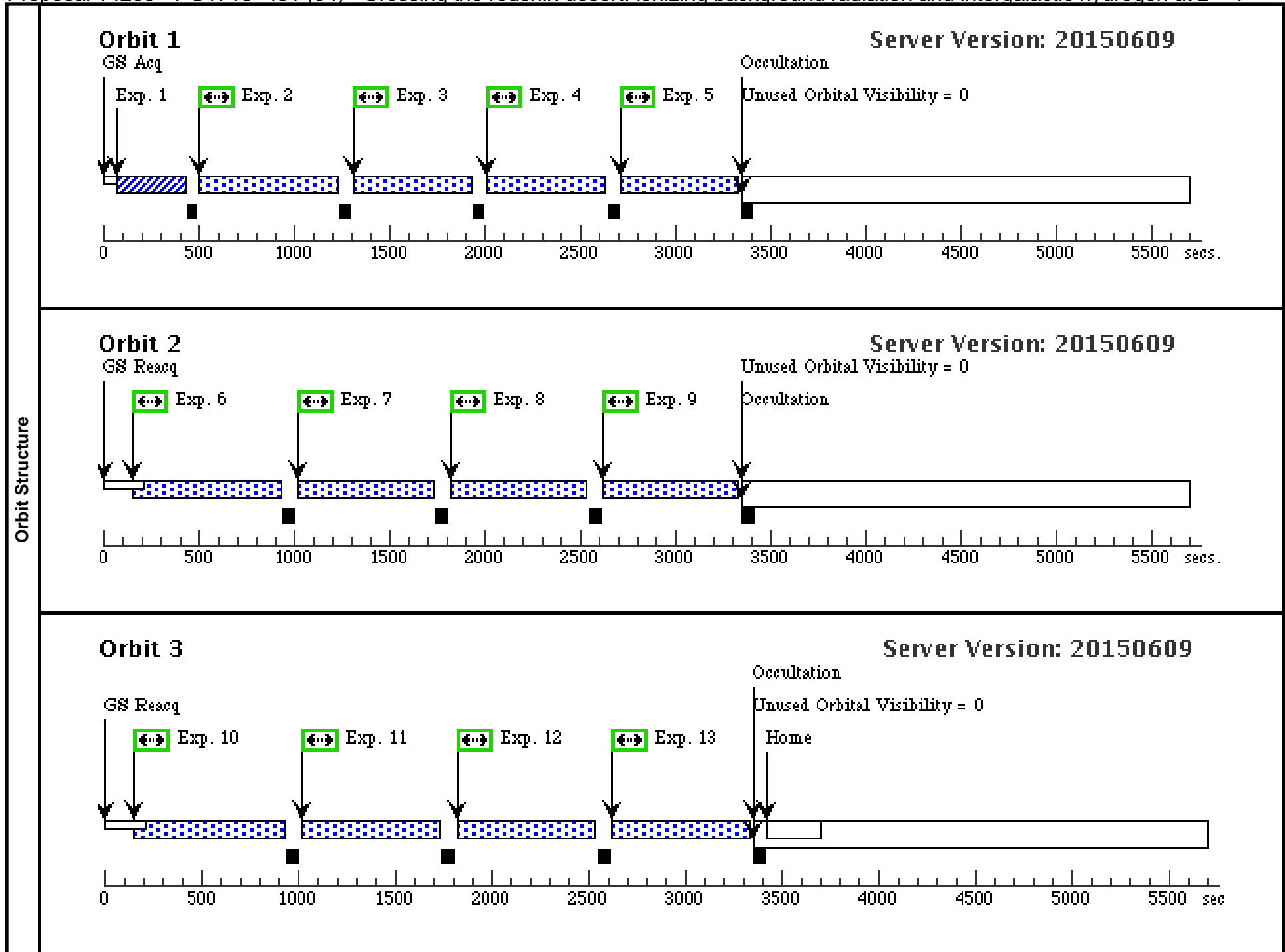


Proposal 14265 - PG1718+481 (04) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Visit	Proposal 14265, PG1718+481 (04), implementation Wed Sep 16 01:35:36 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnostics	(PG1718+481 (04)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE. (PG1718+481 (04)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (PG1718+481 (04)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS															
Fixed Targets		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 25%;">Target Coordinates</th> <th style="width: 20%;">Targ. Coord. Corrections</th> <th style="width: 15%;">Fluxes</th> <th style="width: 15%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td>PG1718+481</td> <td>RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000</td> <td>Redshift: 1.073</td> <td>V=14.6+/-0.1 0.99E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	PG1718+481	RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000	Redshift: 1.073	V=14.6+/-0.1 0.99E-14 erg/cm ² /s/A
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(2)	PG1718+481	RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000	Redshift: 1.073	V=14.6+/-0.1 0.99E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

Proposal 14265 - PG1718+481 (04) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	PG1718+481-2339-ACQ/IMAGE (COS.ta.742861)	(2) PG1718+481	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			20 Secs (20 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.05 => 20 sec Count rate 1057/sec</i>									
	2	PG1718+481-a2339-1 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=1554			605 Secs (605 Secs) [==>]	[1]
	3	PG1718+481-a2339-2 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=1554			605 Secs (605 Secs) [==>]	[1]
	4	PG1718+481-a2339-3 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=1554			605 Secs (605 Secs) [==>]	[1]
	5	PG1718+481-a2339-4 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=1554			604 Secs (604 Secs) [==>]	[1]
	6	PG1718+481-b2339-1 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=1554			697 Secs (697 Secs) [==>]	[2]
	7	PG1718+481-b2339-2 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=1554			696 Secs (696 Secs) [==>]	[2]
	8	PG1718+481-b2339-3 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=1554			696 Secs (696 Secs) [==>]	[2]
	9	PG1718+481-b2339-4 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=1554			696 Secs (696 Secs) [==>]	[2]
	10	PG1718+481-c2339-1 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=1554			697 Secs (697 Secs) [==>]	[3]
	11	PG1718+481-c2339-2 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=1554			696 Secs (696 Secs) [==>]	[3]
	12	PG1718+481-c2339-3 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=1554			696 Secs (696 Secs) [==>]	[3]
13	PG1718+481-c2339-4 (COS.sp.720753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=1554			696 Secs (696 Secs) [==>]	[3]	

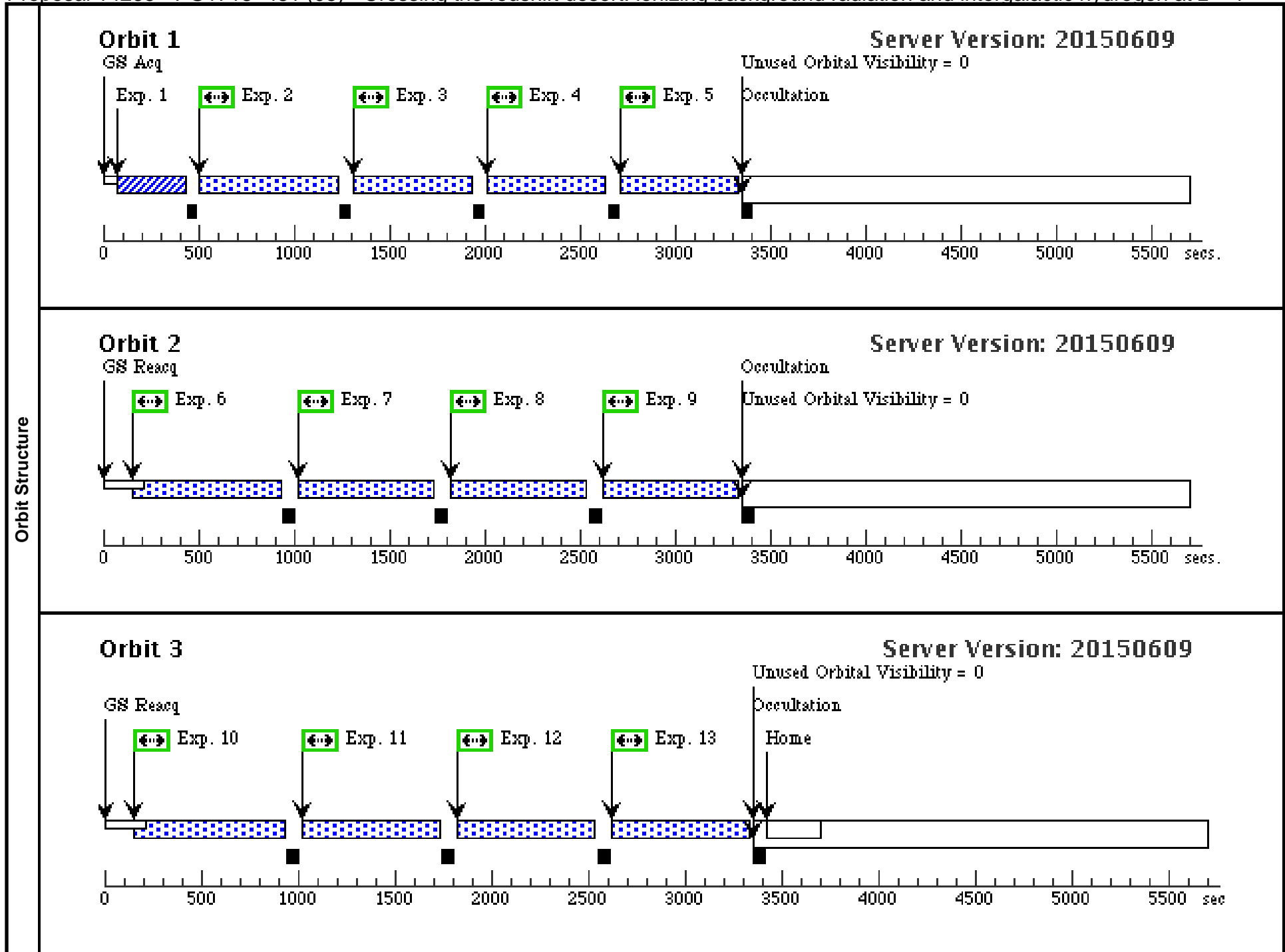


Proposal 14265 - PG1718+481 (05) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Visit	Proposal 14265, PG1718+481 (05), implementation Wed Sep 16 01:35:36 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnosics (PG1718+481 (05)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE. (PG1718+481 (05)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (PG1718+481 (05)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td>PG1718+481</td> <td>RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000</td> <td>Redshift: 1.073</td> <td>V=14.6+/-0.1 0.99E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	PG1718+481	RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000	Redshift: 1.073	V=14.6+/-0.1 0.99E-14 erg/cm ² /s/A	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	PG1718+481	RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000	Redshift: 1.073	V=14.6+/-0.1 0.99E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

Proposal 14265 - PG1718+481 (05) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	PG1718+48 1-2373-AC Q/IMAGE (COS.ta.742 861)	(2) PG1718+481	COS/NUV, ACQ/IMAGE, PSA	MIRRORB					20 Secs (20 Secs) [==>]	[1]
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.05 => 20 sec Count rate 1057/sec</i>										
	2	PG1718+48 1-a2373-1 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54				605 Secs (605 Secs) [==>]	[1]
	3	PG1718+48 1-a2373-2 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54				605 Secs (605 Secs) [==>]	[1]
	4	PG1718+48 1-a2373-3 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54				605 Secs (605 Secs) [==>]	[1]
	5	PG1718+48 1-a2373-4 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54				604 Secs (604 Secs) [==>]	[1]
	6	PG1718+48 1-b2373-1 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54				697 Secs (697 Secs) [==>]	[2]
	7	PG1718+48 1-b2373-2 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54				696 Secs (696 Secs) [==>]	[2]
	8	PG1718+48 1-b2373-3 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54				696 Secs (696 Secs) [==>]	[2]
	9	PG1718+48 1-b2373-4 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54				696 Secs (696 Secs) [==>]	[2]
	10	PG1718+48 1-c2373-1 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54				697 Secs (697 Secs) [==>]	[3]
	11	PG1718+48 1-c2373-2 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54				696 Secs (696 Secs) [==>]	[3]
12	PG1718+48 1-c2373-3 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54				696 Secs (696 Secs) [==>]	[3]	
13	PG1718+48 1-c2373-4 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54				696 Secs (696 Secs) [==>]	[3]	

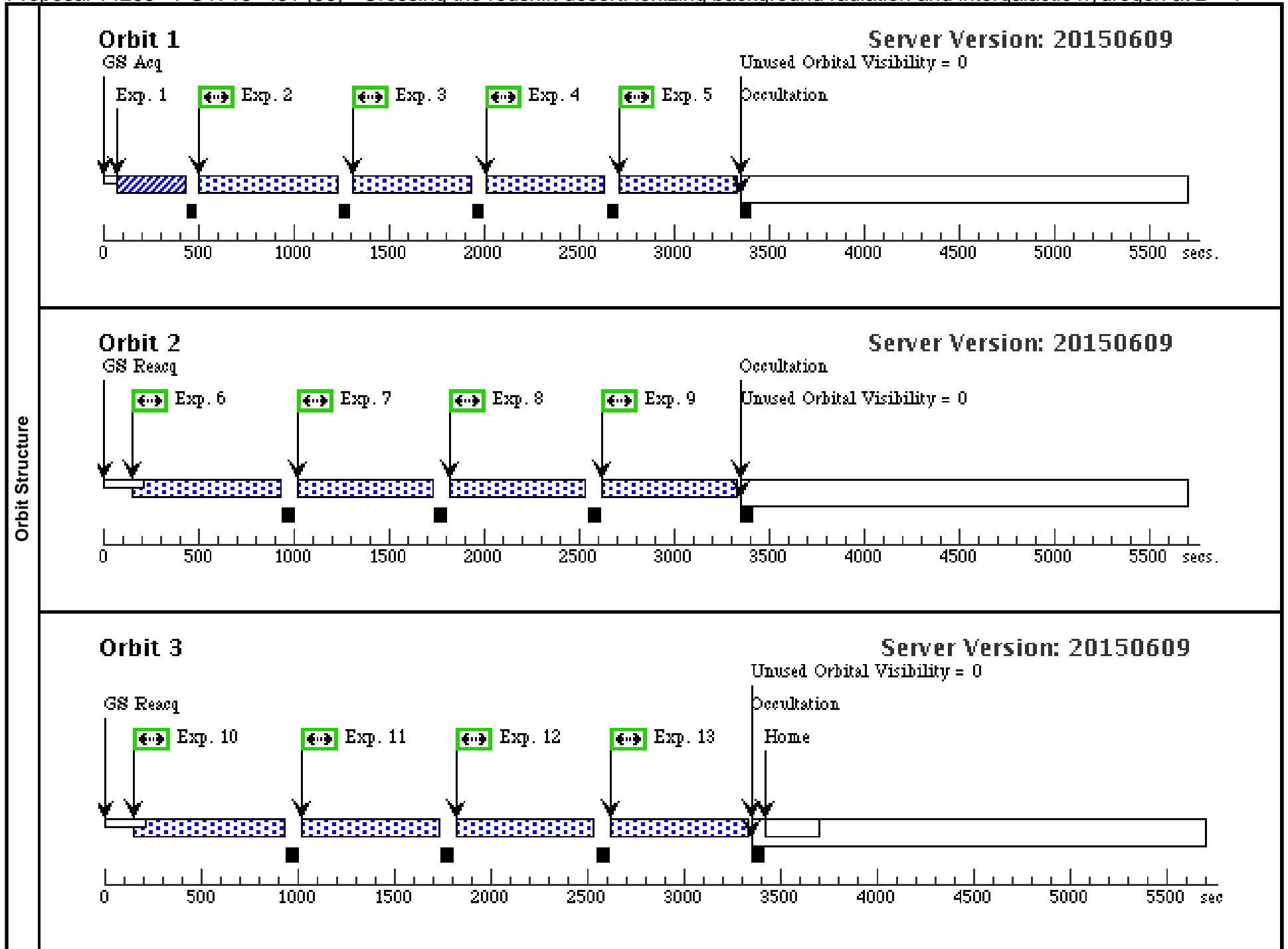


Proposal 14265 - PG1718+481 (06) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Visit	Proposal 14265, PG1718+481 (06), implementation Wed Sep 16 01:35:36 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnostics	(PG1718+481 (06)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE. (PG1718+481 (06)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (PG1718+481 (06)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS															
Fixed Targets		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 25%;">Target Coordinates</th> <th style="width: 20%;">Targ. Coord. Corrections</th> <th style="width: 15%;">Fluxes</th> <th style="width: 15%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td>PG1718+481</td> <td>RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000</td> <td>Redshift: 1.073</td> <td>V=14.6+/-0.1 0.99E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	PG1718+481	RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000	Redshift: 1.073	V=14.6+/-0.1 0.99E-14 erg/cm ² /s/A
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	PG1718+481	RA: 17 19 38.2800 (259.9095000d) Dec: +48 04 12.25 (48.07007d) Equinox: J2000	Redshift: 1.073	V=14.6+/-0.1 0.99E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

Proposal 14265 - PG1718+481 (06) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	PG1718+481-2410-AC Q/IMAGE (COS.ta.720 740)	(2) PG1718+481	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			20 Secs (20 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.05 => 20 sec Count rate 1057/sec</i>									
	2	PG1718+481-a2410-1 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			605 Secs (605 Secs) [==>]	[1]
	3	PG1718+481-a2410-2 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			605 Secs (605 Secs) [==>]	[1]
	4	PG1718+481-a2410-3 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			605 Secs (605 Secs) [==>]	[1]
	5	PG1718+481-a2410-4 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			604 Secs (604 Secs) [==>]	[1]
	6	PG1718+481-b2410-1 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	7	PG1718+481-b2410-2 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	8	PG1718+481-b2410-3 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	9	PG1718+481-b2410-4 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	10	PG1718+481-c2410-1 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]
	11	PG1718+481-c2410-2 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
	12	PG1718+481-c2410-3 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
13	PG1718+481-c2410-4 (COS.sp.720 753)	(2) PG1718+481	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]	



Proposal 14265 - PG1206+459 (07) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

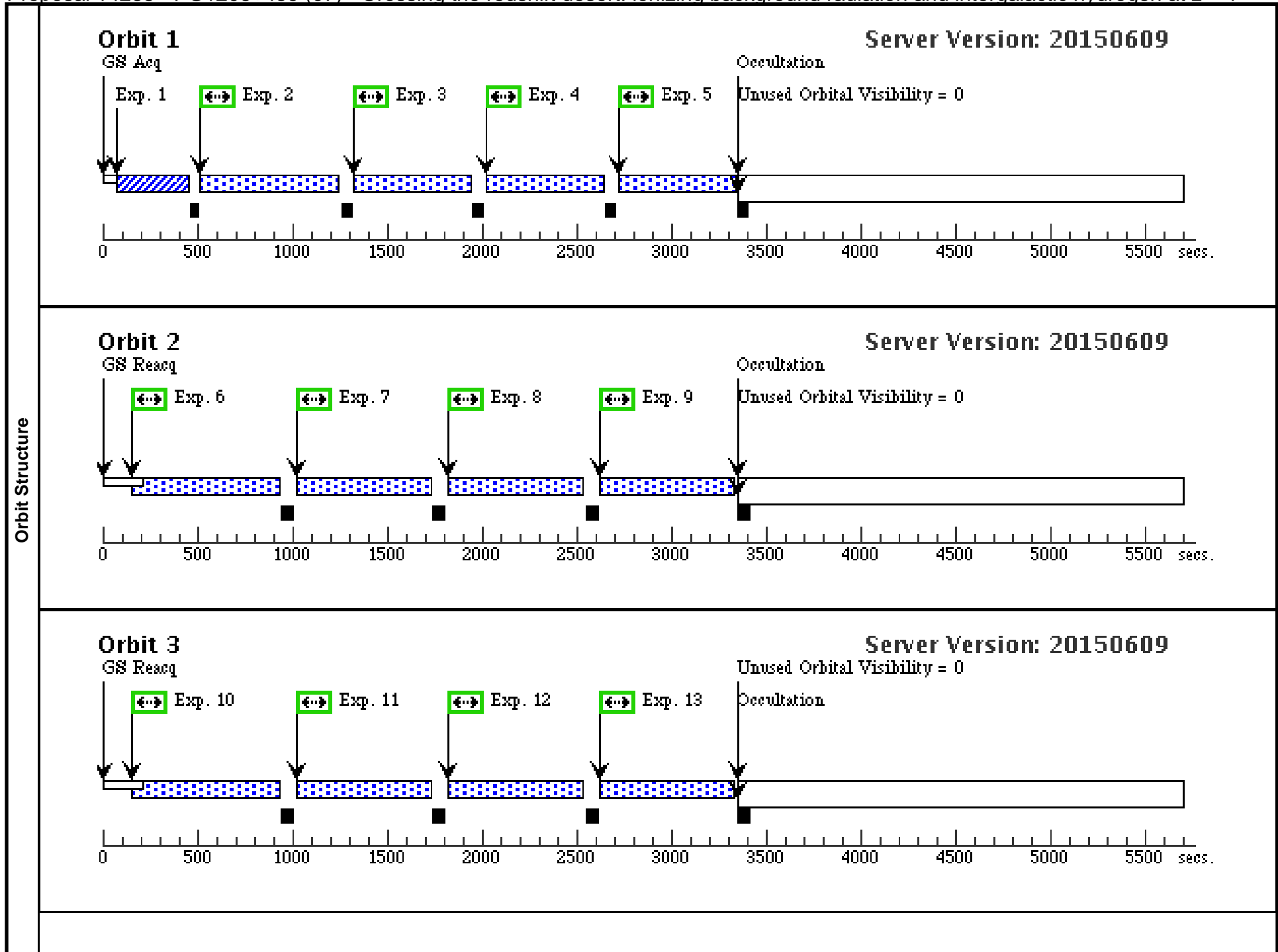
Visit	Proposal 14265, PG1206+459 (07), implementation Wed Sep 16 01:35:36 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnostics	(PG1206+459 (07)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS															
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	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(3)	PG1206+459	RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000	Redshift: 1.155	V=15.7 0.80E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

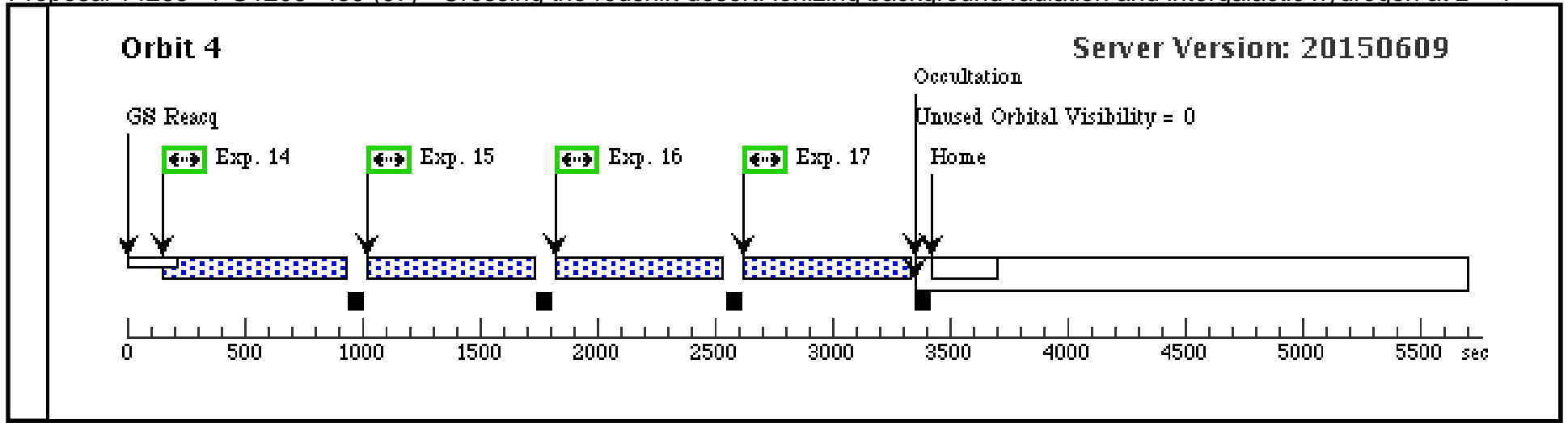
Proposal 14265 - PG1206+459 (07) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	PG1206+45 9-2339-AC Q/IMAGE (COS.ta.742 862)	(3) PG1206+459	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			29 Secs (29 Secs) [==>]	[1]	
	Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.46 => 29 sec Count rate 1020/sec									
	2	PG1206+45 9-a2339-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			601 Secs (601 Secs) [==>]	[1]
	3	PG1206+45 9-a2339-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	4	PG1206+45 9-a2339-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	5	PG1206+45 9-a2339-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	6	PG1206+45 9-b2339-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	7	PG1206+45 9-b2339-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	8	PG1206+45 9-b2339-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	9	PG1206+45 9-b2339-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	10	PG1206+45 9-c2339-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]
	11	PG1206+45 9-c2339-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
	12	PG1206+45 9-c2339-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
13	PG1206+45 9-c2339-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]	

Proposal 14265 - PG1206+459 (07) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	PG1206+45 9-d2339-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54	697 Secs (697 Secs)	
						[==>]	[4]
15	PG1206+45 9-d2339-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]
16	PG1206+45 9-d2339-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]
17	PG1206+45 9-d2339-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]





Proposal 14265 - PG1206+459 (08) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

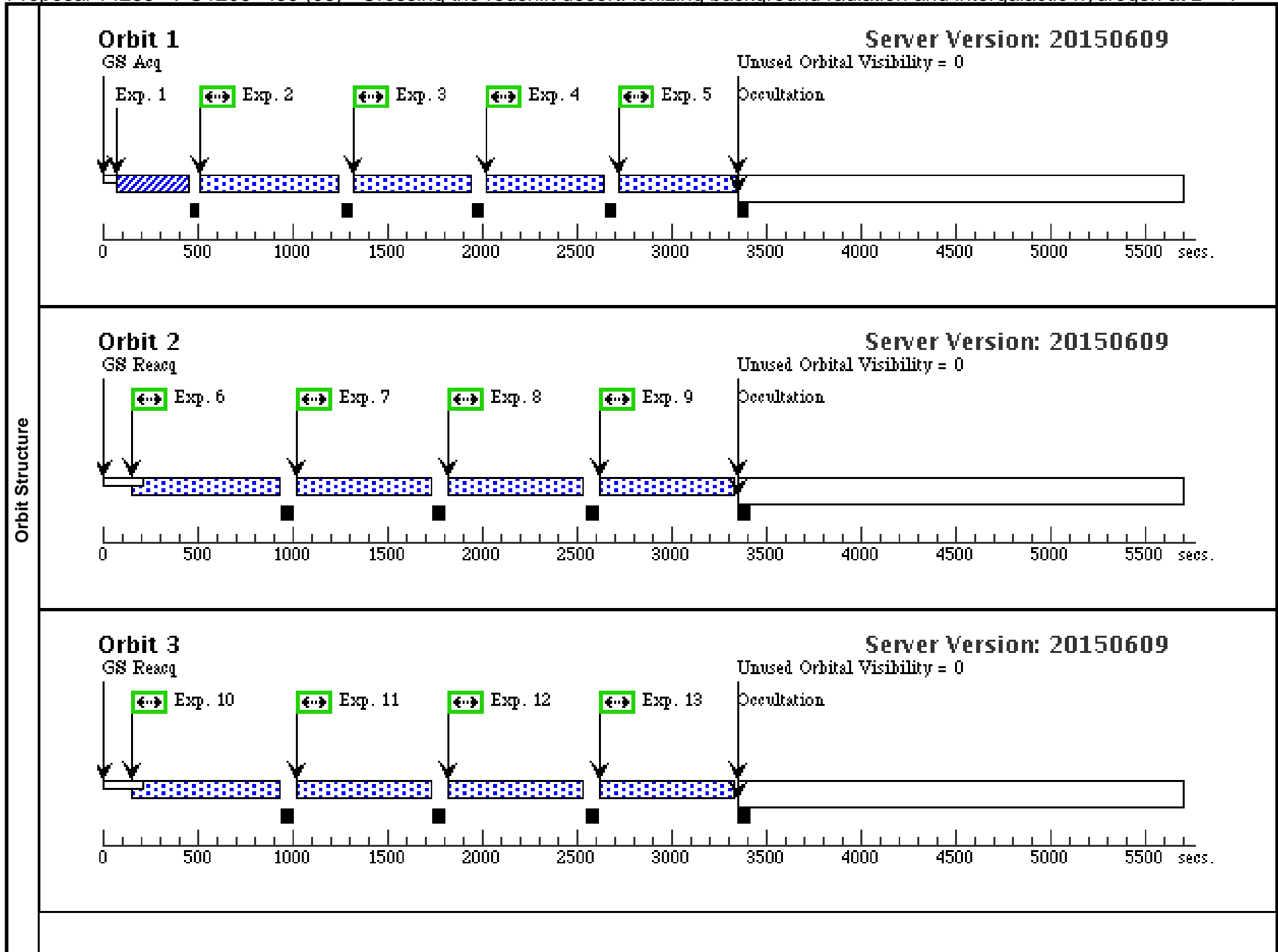
Visit	Proposal 14265, PG1206+459 (08), implementation Wed Sep 16 01:35:37 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnostics	(PG1206+459 (08)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS															
(PG1206+459 (08)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.																	
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Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(3)</td> <td>PG1206+459</td> <td>RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000</td> <td>Redshift: 1.155</td> <td>V=15.7 0.80E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	PG1206+459	RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000	Redshift: 1.155	V=15.7 0.80E-14 erg/cm ² /s/A	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(3)	PG1206+459	RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000	Redshift: 1.155	V=15.7 0.80E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

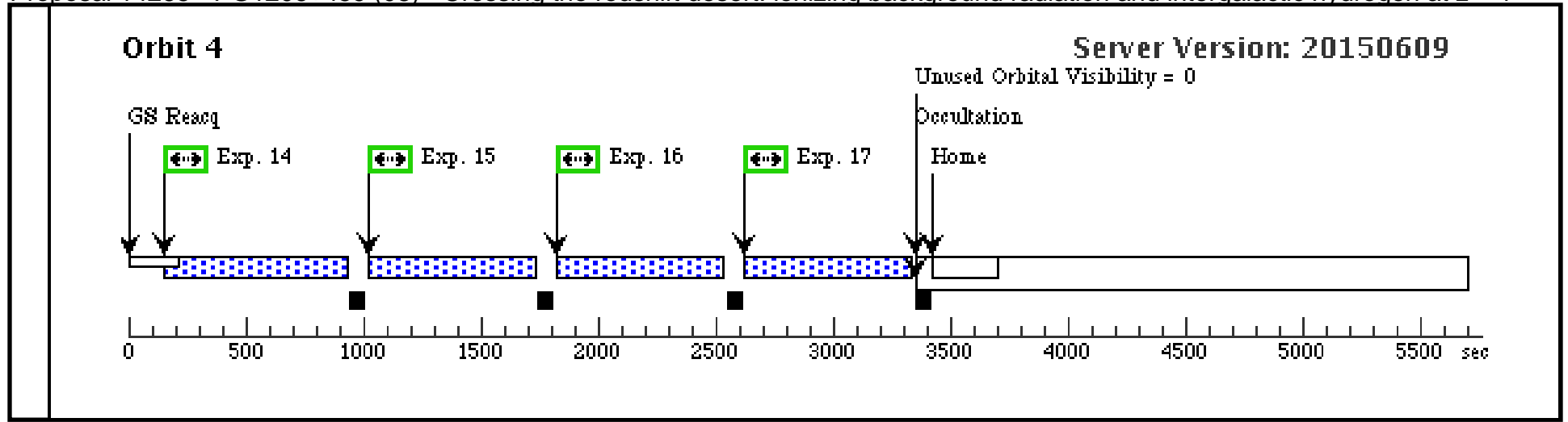
Proposal 14265 - PG1206+459 (08) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	PG1206+45 9-2373-AC Q/IMAGE (COS.ta.742 862)	(3) PG1206+459	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			29 Secs (29 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.46 => 29 sec Count rate 1020/sec</i>									
	2	PG1206+45 9-a2373-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			601 Secs (601 Secs) [==>]	[1]
	3	PG1206+45 9-a2373-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	4	PG1206+45 9-a2373-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	5	PG1206+45 9-a2373-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	6	PG1206+45 9-b2373-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	7	PG1206+45 9-b2373-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	8	PG1206+45 9-b2373-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	9	PG1206+45 9-b2373-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	10	PG1206+45 9-c2373-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]
	11	PG1206+45 9-c2373-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
	12	PG1206+45 9-c2373-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
13	PG1206+45 9-c2373-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]	

Proposal 14265 - PG1206+459 (08) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	PG1206+45 9-d2373-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54	697 Secs (697 Secs)	
						[==>]	[4]
15	PG1206+45 9-d2373-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]
16	PG1206+45 9-d2373-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]
17	PG1206+45 9-d2373-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]





Proposal 14265 - PG1206+459 (09) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at z ~ 1

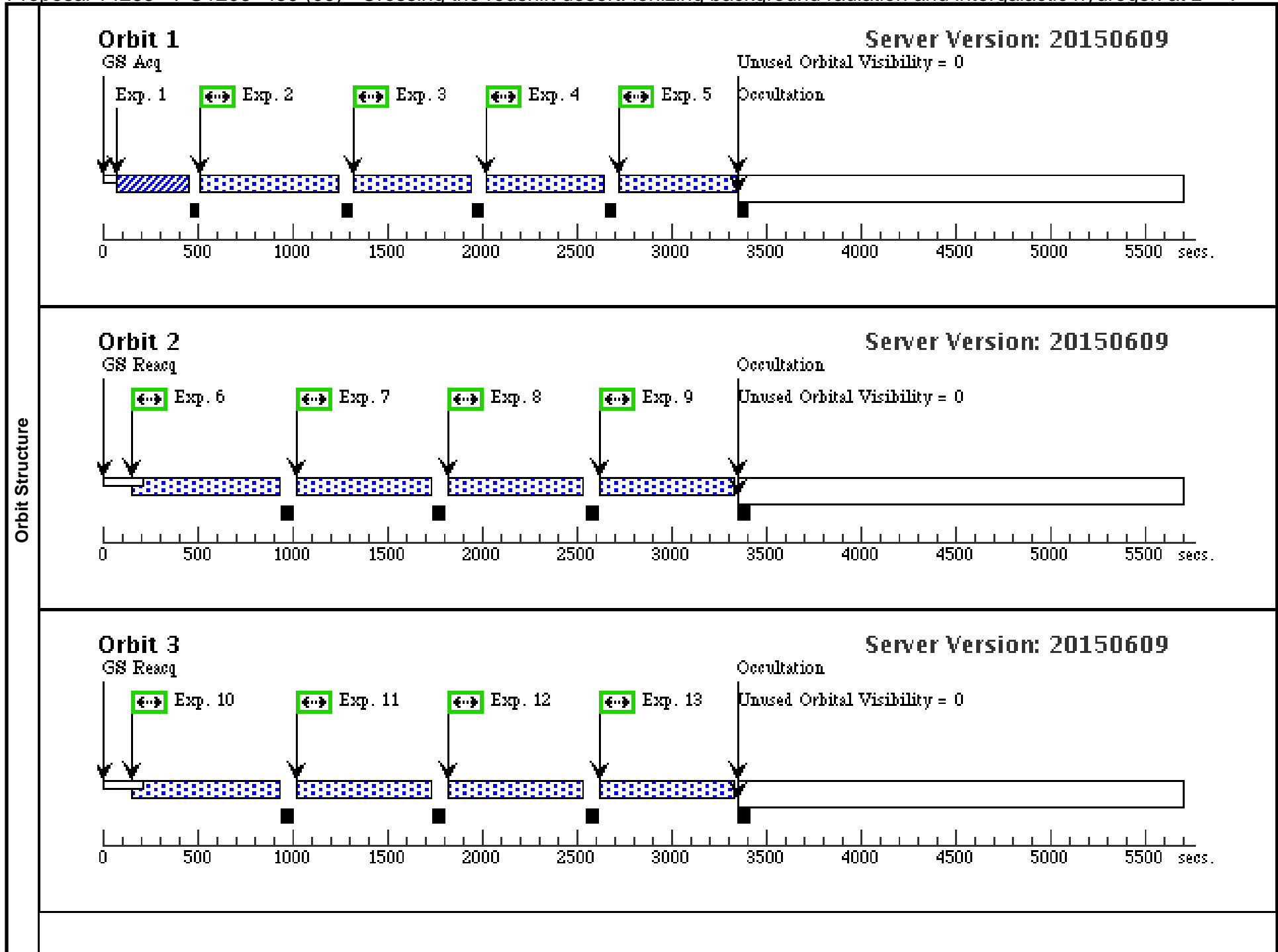
Visit	Proposal 14265, PG1206+459 (09), implementation Wed Sep 16 01:35:37 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																
	Diagnostics	(PG1206+459 (09)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (PG1206+459 (09)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS (PG1206+459 (09)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE. (PG1206+459 (09)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS															
Fixed Targets		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 25%;">Target Coordinates</th> <th style="width: 20%;">Targ. Coord. Corrections</th> <th style="width: 15%;">Fluxes</th> <th style="width: 15%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(3)</td> <td>PG1206+459</td> <td>RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000</td> <td>Redshift: 1.155</td> <td>V=15.7 0.80E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	PG1206+459	RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000	Redshift: 1.155	V=15.7 0.80E-14 erg/cm ² /s/A
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(3)	PG1206+459	RA: 12 08 58.0129 (182.2417204d) Dec: +45 40 35.49 (45.67652d) Equinox: J2000	Redshift: 1.155	V=15.7 0.80E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

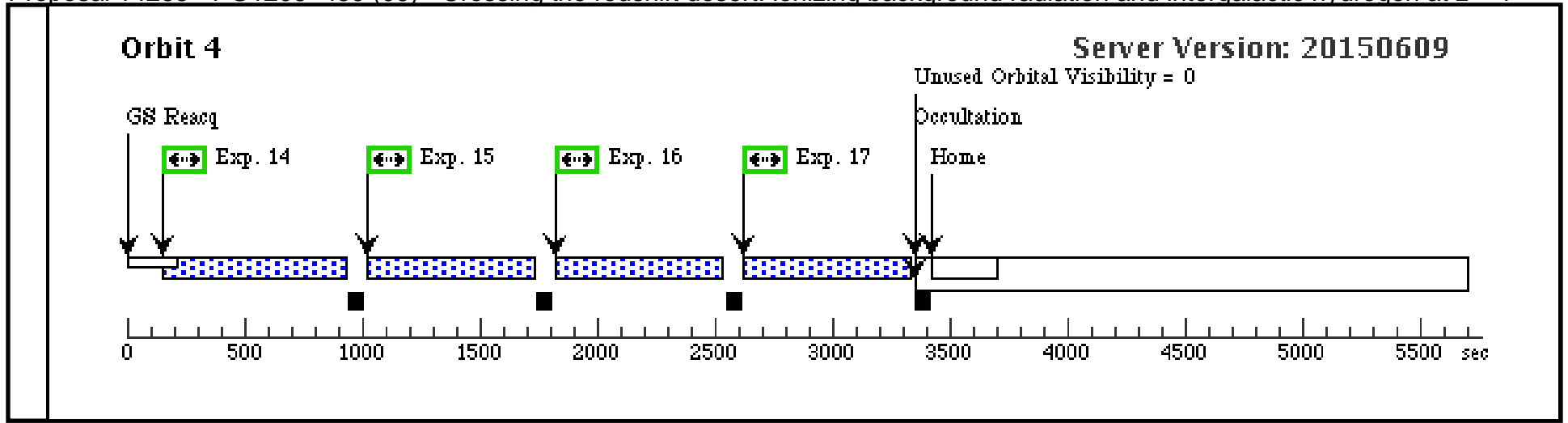
Proposal 14265 - PG1206+459 (09) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	PG1206+45 9-2410-AC Q/IMAGE (COS.ta.720 741)	(3) PG1206+459	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			29 Secs (29 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.46 => 29 sec</i>									
	2	PG1206+45 9-a2410-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			601 Secs (601 Secs) [==>]	[1]
	3	PG1206+45 9-a2410-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	4	PG1206+45 9-a2410-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	5	PG1206+45 9-a2410-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			600 Secs (600 Secs) [==>]	[1]
	6	PG1206+45 9-b2410-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	7	PG1206+45 9-b2410-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	8	PG1206+45 9-b2410-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	9	PG1206+45 9-b2410-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[2]
	10	PG1206+45 9-c2410-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]
	11	PG1206+45 9-c2410-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
	12	PG1206+45 9-c2410-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]
13	PG1206+45 9-c2410-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			696 Secs (696 Secs) [==>]	[3]	

Proposal 14265 - PG1206+459 (09) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	PG1206+45 9-d2410-1 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54	697 Secs (697 Secs)	
						[==>]	[4]
15	PG1206+45 9-d2410-2 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]
16	PG1206+45 9-d2410-3 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]
17	PG1206+45 9-d2410-4 (COS.sp.720 754)	(3) PG1206+459	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54	696 Secs (696 Secs)	
						[==>]	[4]





Proposal 14265 - HE0331-4112 (10) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

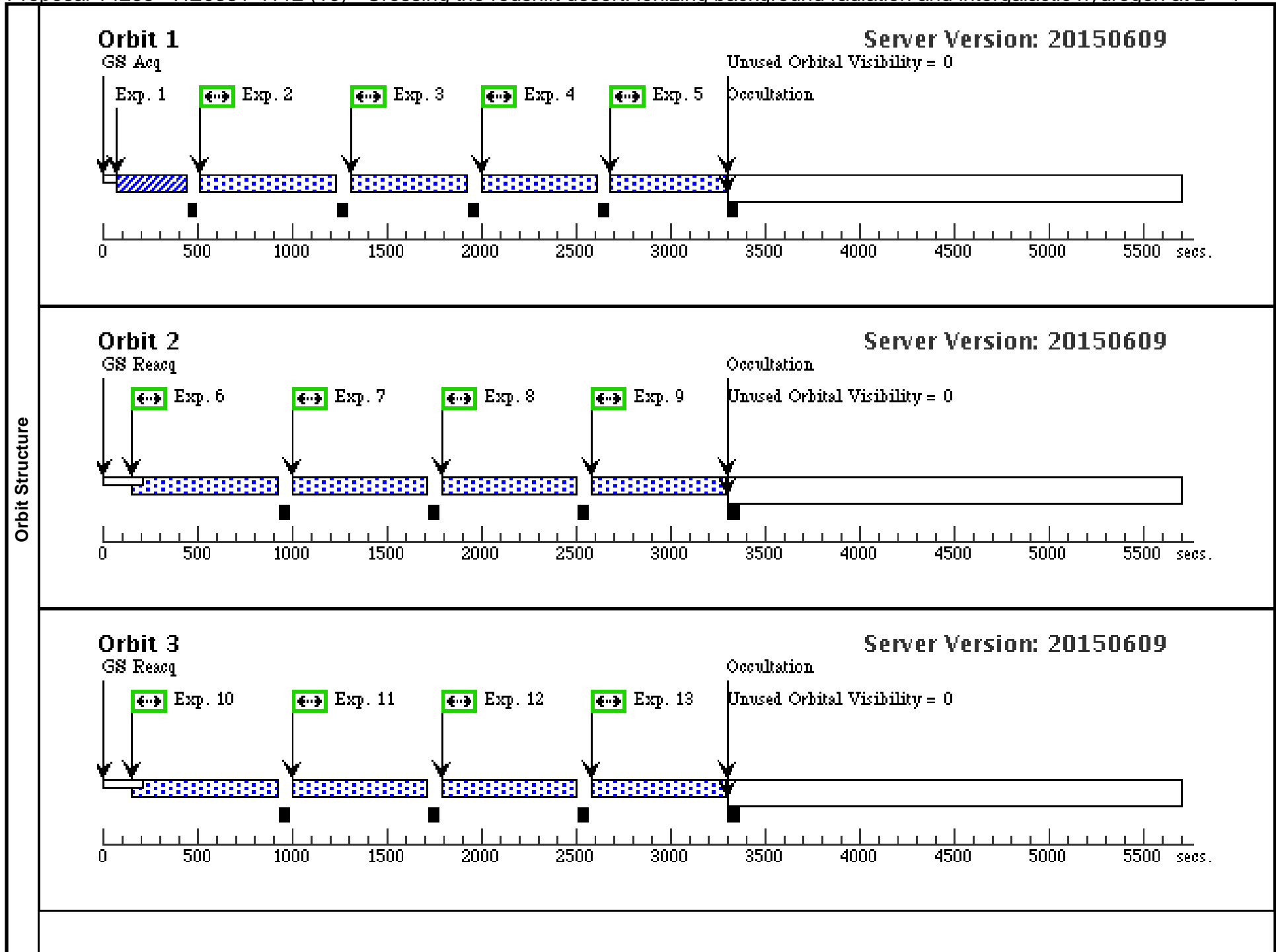
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	(HE0331-4112 (10)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																
	(HE0331-4112 (10)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																
	(HE0331-4112 (10)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.																
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(4)</td> <td>HE0331-4112</td> <td>RA: 03 33 7.0500 (53.2793750d) Dec: -41 02 1.30 (-41.03369d) Equinox: J2000</td> <td>Redshift: 1.117</td> <td>V=16.0 0.75E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(4)	HE0331-4112	RA: 03 33 7.0500 (53.2793750d) Dec: -41 02 1.30 (-41.03369d) Equinox: J2000	Redshift: 1.117	V=16.0 0.75E-14 erg/cm ² /s/A	Reference Frame: ICRS				
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(4)	HE0331-4112	RA: 03 33 7.0500 (53.2793750d) Dec: -41 02 1.30 (-41.03369d) Equinox: J2000	Redshift: 1.117	V=16.0 0.75E-14 erg/cm ² /s/A	Reference Frame: ICRS												
<i>Comments: Extended=NO</i>																	

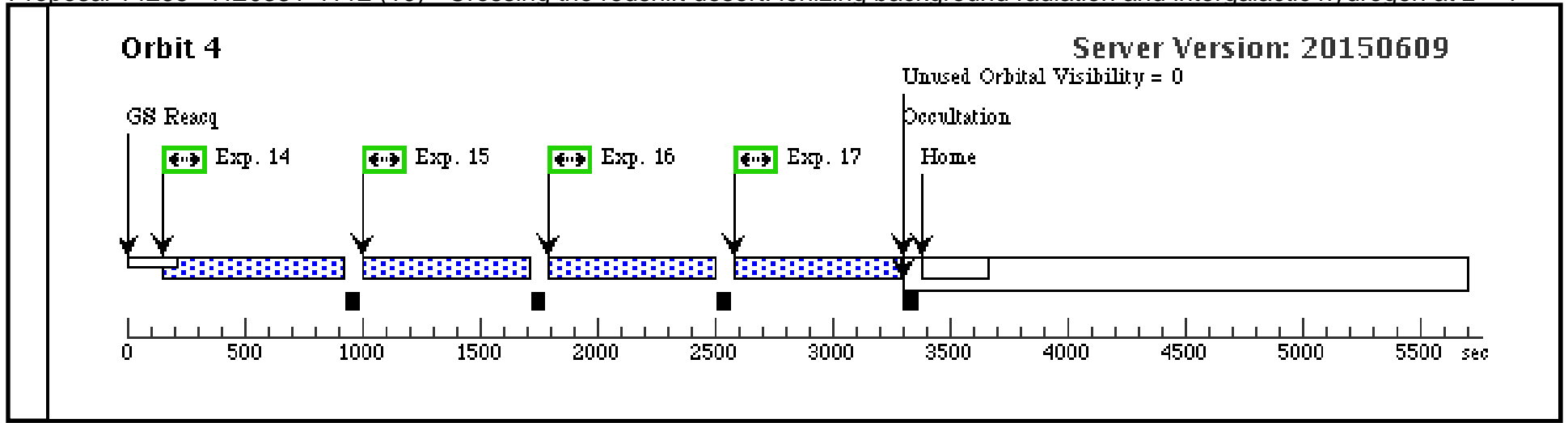
Proposal 14265 - HE0331-4112 (10) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HE0331-411 2-2339-AC Q/IMAGE (COS.ta.742 863)	(4) HE0331-4112	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			26 Secs (26 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.33 => 26 sec Count rate 1030/sec</i>									
	2	HE0331-411 2-a2339-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			591 Secs (591 Secs) [==>]	[1]
	3	HE0331-411 2-a2339-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			591 Secs (591 Secs) [==>]	[1]
	4	HE0331-411 2-a2339-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			590 Secs (590 Secs) [==>]	[1]
	5	HE0331-411 2-a2339-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			590 Secs (590 Secs) [==>]	[1]
	6	HE0331-411 2-b2339-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	7	HE0331-411 2-b2339-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	8	HE0331-411 2-b2339-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	9	HE0331-411 2-b2339-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	10	HE0331-411 2-c2339-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
	11	HE0331-411 2-c2339-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
	12	HE0331-411 2-c2339-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
13	HE0331-411 2-c2339-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]	

Proposal 14265 - HE0331-4112 (10) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	HE0331-411 (4) HE0331-4112 2-d2339-1 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
15	HE0331-411 (4) HE0331-4112 2-d2339-2 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
16	HE0331-411 (4) HE0331-4112 2-d2339-3 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
17	HE0331-411 (4) HE0331-4112 2-d2339-4 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54	697 Secs (697 Secs)	
					[==>]	[4]





Proposal 14265 - HE0331-4112 (11) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

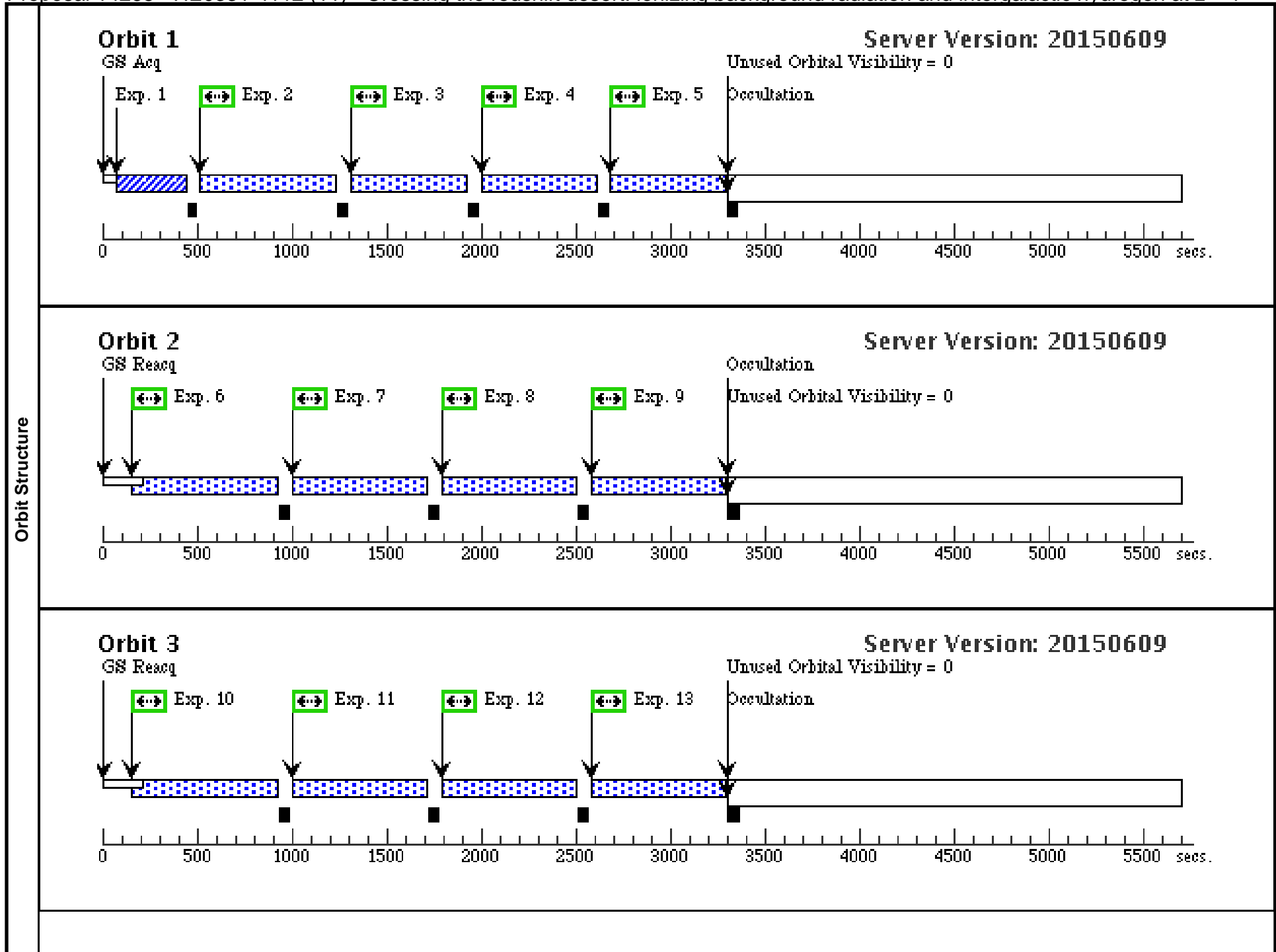
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	Diagnostics	(HE0331-4112 (11)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS				
(HE0331-4112 (11)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE0331-4112 (11)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.						
(HE0331-4112 (11)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(4)	HE0331-4112	RA: 03 33 7.0500 (53.2793750d) Dec: -41 02 1.30 (-41.03369d) Equinox: J2000	Redshift: 1.117	V=16.0 0.75E-14 erg/cm ² /s/A	Reference Frame: ICRS
<i>Comments: Extended=NO</i>						

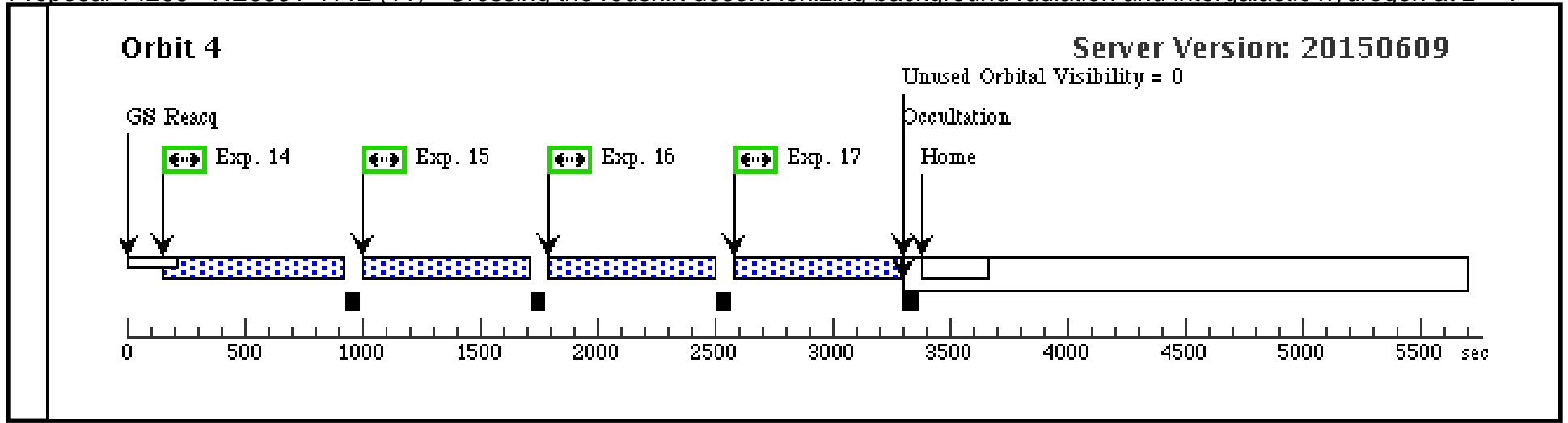
Proposal 14265 - HE0331-4112 (11) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HE0331-411 2-2373-AC Q/IMAGE (COS.ta.742 863)	(4) HE0331-4112	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			26 Secs (26 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.33 => 26 sec Count rate 1030/sec</i>									
	2	HE0331-411 2-a2373-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			591 Secs (591 Secs) [==>]	[1]
	3	HE0331-411 2-a2373-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			591 Secs (591 Secs) [==>]	[1]
	4	HE0331-411 2-a2373-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			590 Secs (590 Secs) [==>]	[1]
	5	HE0331-411 2-a2373-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			590 Secs (590 Secs) [==>]	[1]
	6	HE0331-411 2-b2373-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	7	HE0331-411 2-b2373-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	8	HE0331-411 2-b2373-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	9	HE0331-411 2-b2373-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	10	HE0331-411 2-c2373-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
	11	HE0331-411 2-c2373-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
	12	HE0331-411 2-c2373-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
13	HE0331-411 2-c2373-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]	

Proposal 14265 - HE0331-4112 (11) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	HE0331-411 (4) HE0331-4112 2-d2373-1 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
15	HE0331-411 (4) HE0331-4112 2-d2373-2 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
16	HE0331-411 (4) HE0331-4112 2-d2373-3 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
17	HE0331-411 (4) HE0331-4112 2-d2373-4 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54	697 Secs (697 Secs)	
					[==>]	[4]





Proposal 14265 - HE0331-4112 (12) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

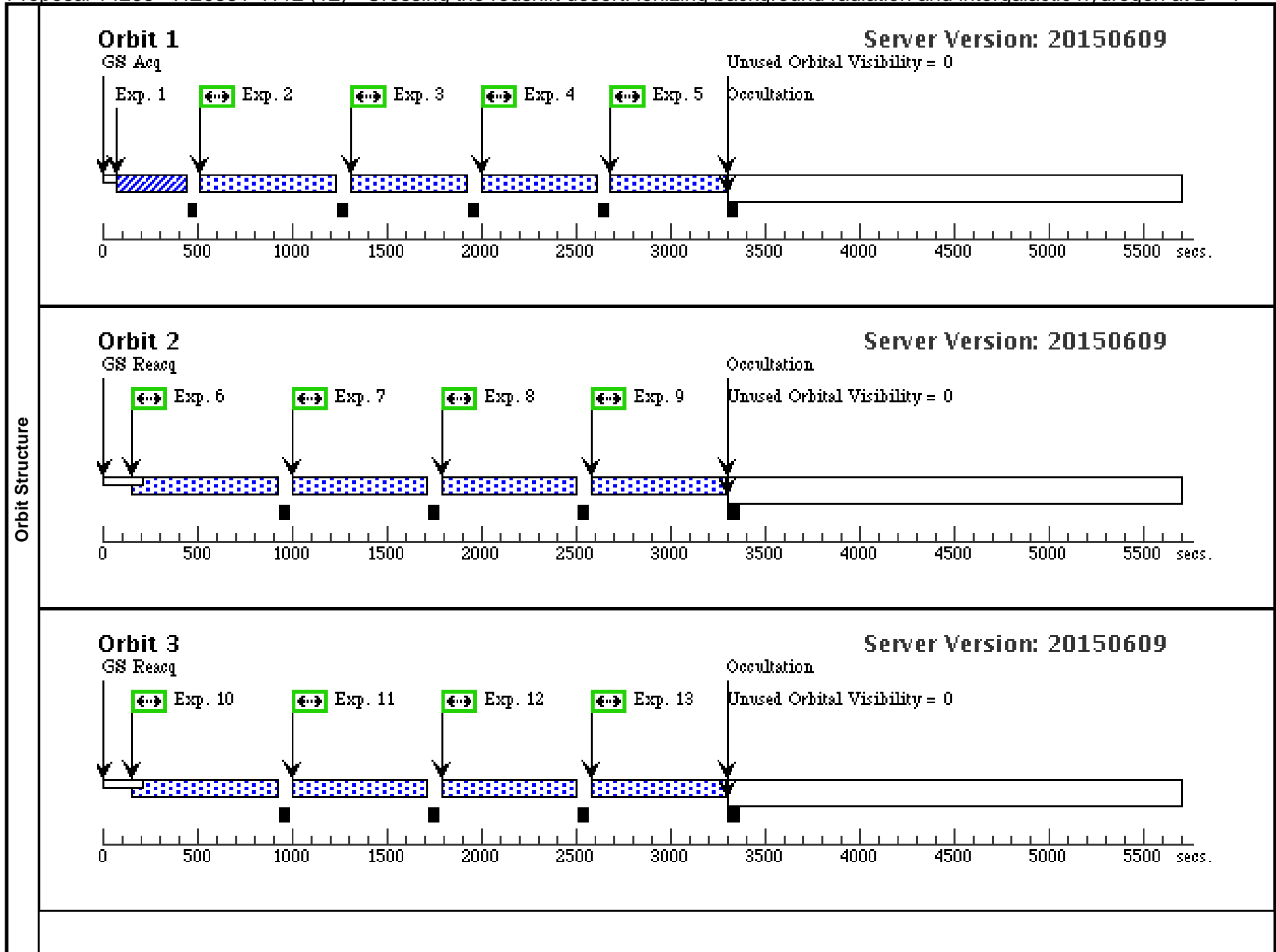
Visit	Proposal 14265, HE0331-4112 (12), implementation Wed Sep 16 01:35:38 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)					
	Diagnostics	(HE0331-4112 (12)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.				
(HE0331-4112 (12)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE0331-4112 (12)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE0331-4112 (12)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(4)	HE0331-4112	RA: 03 33 7.0500 (53.2793750d) Dec: -41 02 1.30 (-41.03369d) Equinox: J2000	Redshift: 1.117	V=16.0 0.75E-14 erg/cm ² /s/A	Reference Frame: ICRS
<i>Comments: Extended=NO</i>						

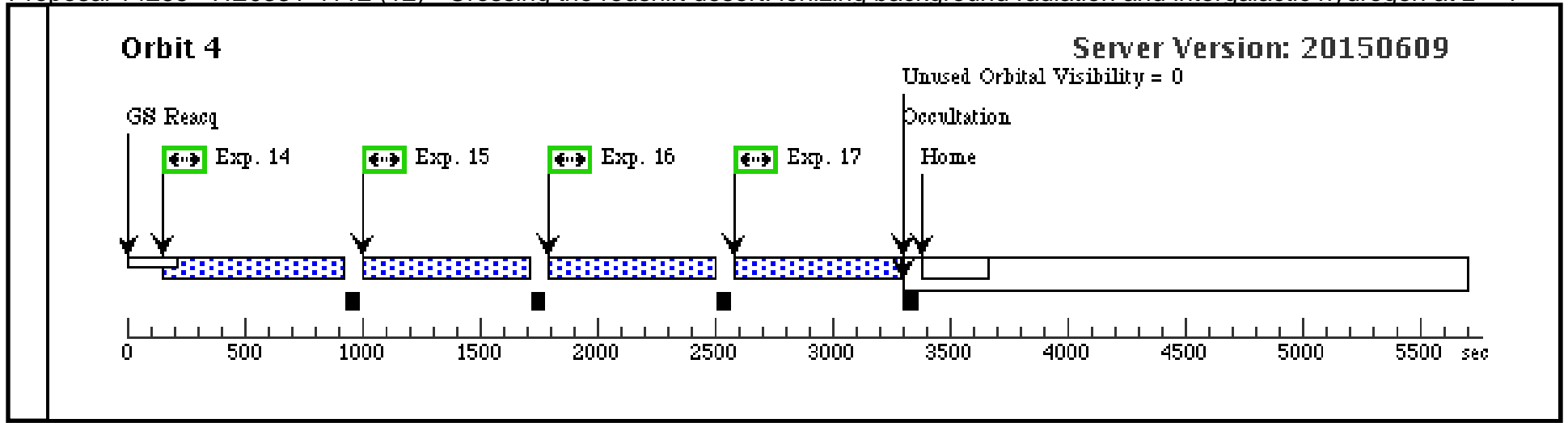
Proposal 14265 - HE0331-4112 (12) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HE0331-411 2-2410-AC Q/IMAGE (COS.ta.720 742)	(4) HE0331-4112	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			26 Secs (26 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.33 => 26 sec Count rate 1030/sec</i>									
	2	HE0331-411 2-a2410-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			591 Secs (591 Secs) [==>]	[1]
	3	HE0331-411 2-a2410-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			591 Secs (591 Secs) [==>]	[1]
	4	HE0331-411 2-a2410-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			590 Secs (590 Secs) [==>]	[1]
	5	HE0331-411 2-a2410-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			590 Secs (590 Secs) [==>]	[1]
	6	HE0331-411 2-b2410-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	7	HE0331-411 2-b2410-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	8	HE0331-411 2-b2410-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[2]
	9	HE0331-411 2-b2410-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[2]
	10	HE0331-411 2-c2410-1 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
	11	HE0331-411 2-c2410-2 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
	12	HE0331-411 2-c2410-3 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			690 Secs (690 Secs) [==>]	[3]
13	HE0331-411 2-c2410-4 (COS.sp.720 754)	(4) HE0331-4112	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			697 Secs (697 Secs) [==>]	[3]	

Proposal 14265 - HE0331-4112 (12) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	HE0331-411 (4) HE0331-4112 2-d2410-1 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
15	HE0331-411 (4) HE0331-4112 2-d2410-2 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
16	HE0331-411 (4) HE0331-4112 2-d2410-3 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54	690 Secs (690 Secs)	
					[==>]	[4]
17	HE0331-411 (4) HE0331-4112 2-d2410-4 (COS.sp.720 754)	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54	697 Secs (697 Secs)	
					[==>]	[4]





Proposal 14265 - HE1211-1322 (13) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

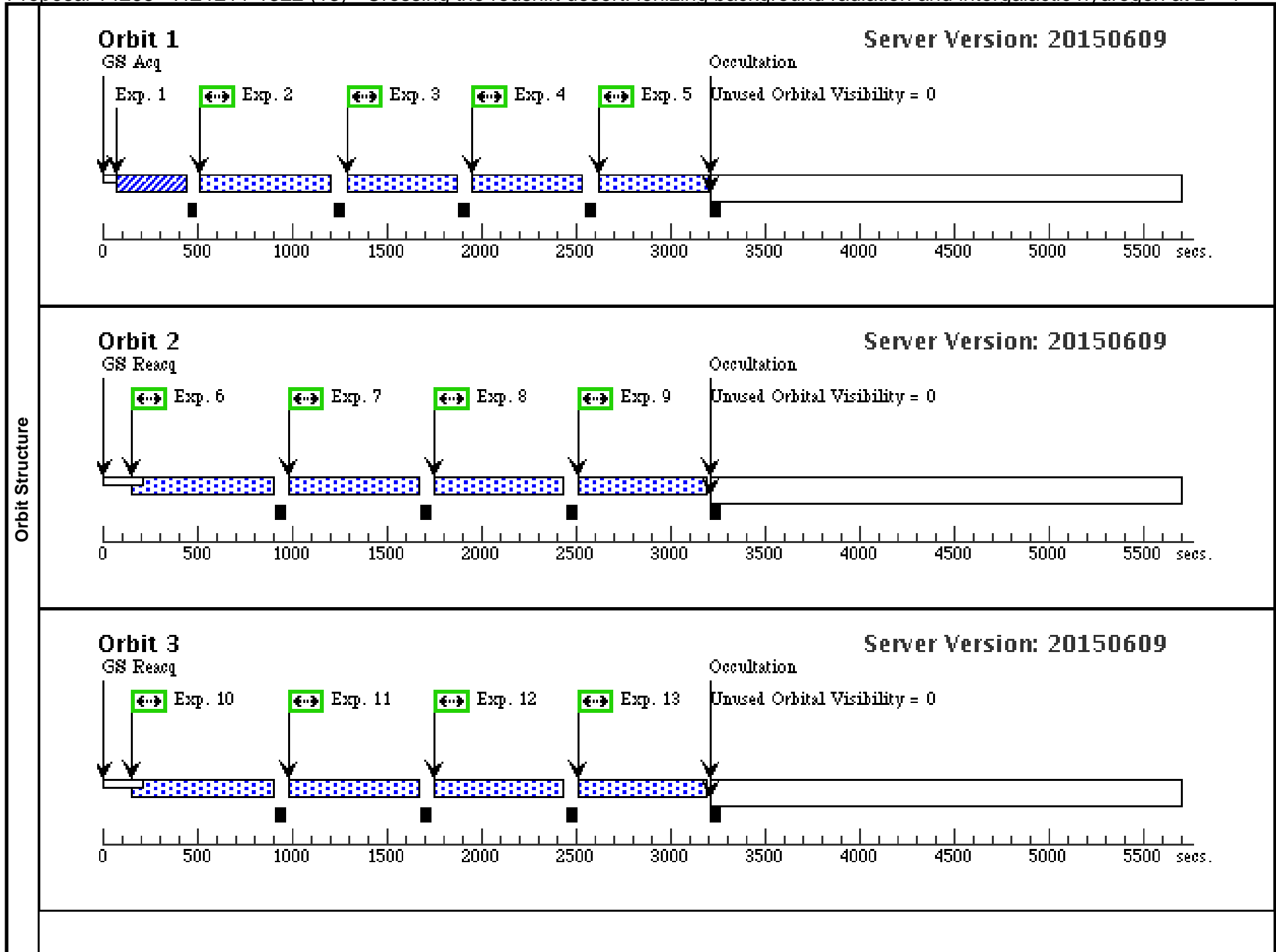
Visit	Proposal 14265, HE1211-1322 (13), implementation Wed Sep 16 01:35:38 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)					
	Diagnostics	(HE1211-1322 (13)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS				
(HE1211-1322 (13)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE1211-1322 (13)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE1211-1322 (13)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	HE1211-1322	RA: 12 13 46.3265 (183.4430271d) Dec: -13 38 51.44 (-13.64762d) Equinox: J2000	Redshift: 1.125	V=15.2 0.64E-14 erg/cm ² /s/A	Reference Frame: ICRS
<i>Comments: Extended=NO</i>						

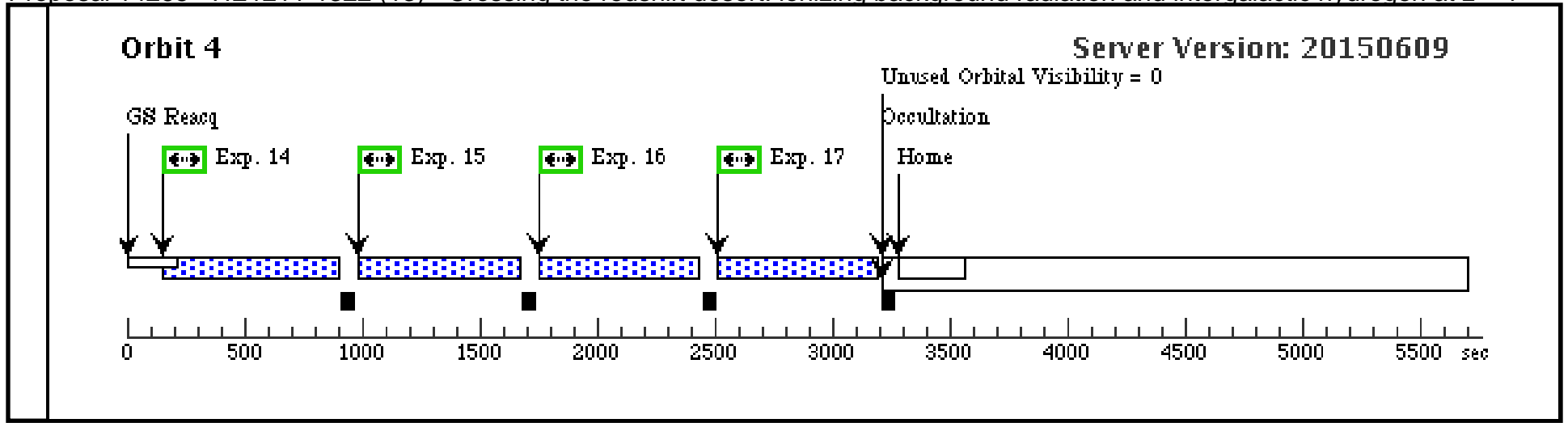
Proposal 14265 - HE1211-1322 (13) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HE1211-132 2-2339-AC Q/IMAGE (COS.ta.742 864)	(5) HE1211-1322	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			27 Secs (27 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.38 => 27 sec Count rate 1026/sec</i>									
	2	HE1211-132 2-a2339-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	3	HE1211-132 2-a2339-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	4	HE1211-132 2-a2339-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	5	HE1211-132 2-a2339-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			567 Secs (567 Secs) [==>]	[1]
	6	HE1211-132 2-b2339-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[2]
	7	HE1211-132 2-b2339-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[2]
	8	HE1211-132 2-b2339-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[2]
	9	HE1211-132 2-b2339-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[2]
	10	HE1211-132 2-c2339-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[3]
	11	HE1211-132 2-c2339-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[3]
	12	HE1211-132 2-c2339-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[3]
13	HE1211-132 2-c2339-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[3]	

Proposal 14265 - HE1211-1322 (13) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	HE1211-132 (5) HE1211-1322 2-d2339-1 (COS.sp.720 755)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=1; BUFFER-TIME=15 54	670 Secs (670 Secs)	
					[==>]	[4]
15	HE1211-132 (5) HE1211-1322 2-d2339-2 (COS.sp.720 755)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=2; BUFFER-TIME=15 54	670 Secs (670 Secs)	
					[==>]	[4]
16	HE1211-132 (5) HE1211-1322 2-d2339-3 (COS.sp.720 755)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=3; BUFFER-TIME=15 54	669 Secs (669 Secs)	
					[==>]	[4]
17	HE1211-132 (5) HE1211-1322 2-d2339-4 (COS.sp.720 755)	COS/NUV, TIME-TAG, PSA	G225M 2339 A	FP-POS=4; BUFFER-TIME=15 54	669 Secs (669 Secs)	
					[==>]	[4]





Proposal 14265 - HE1211-1322 (14) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

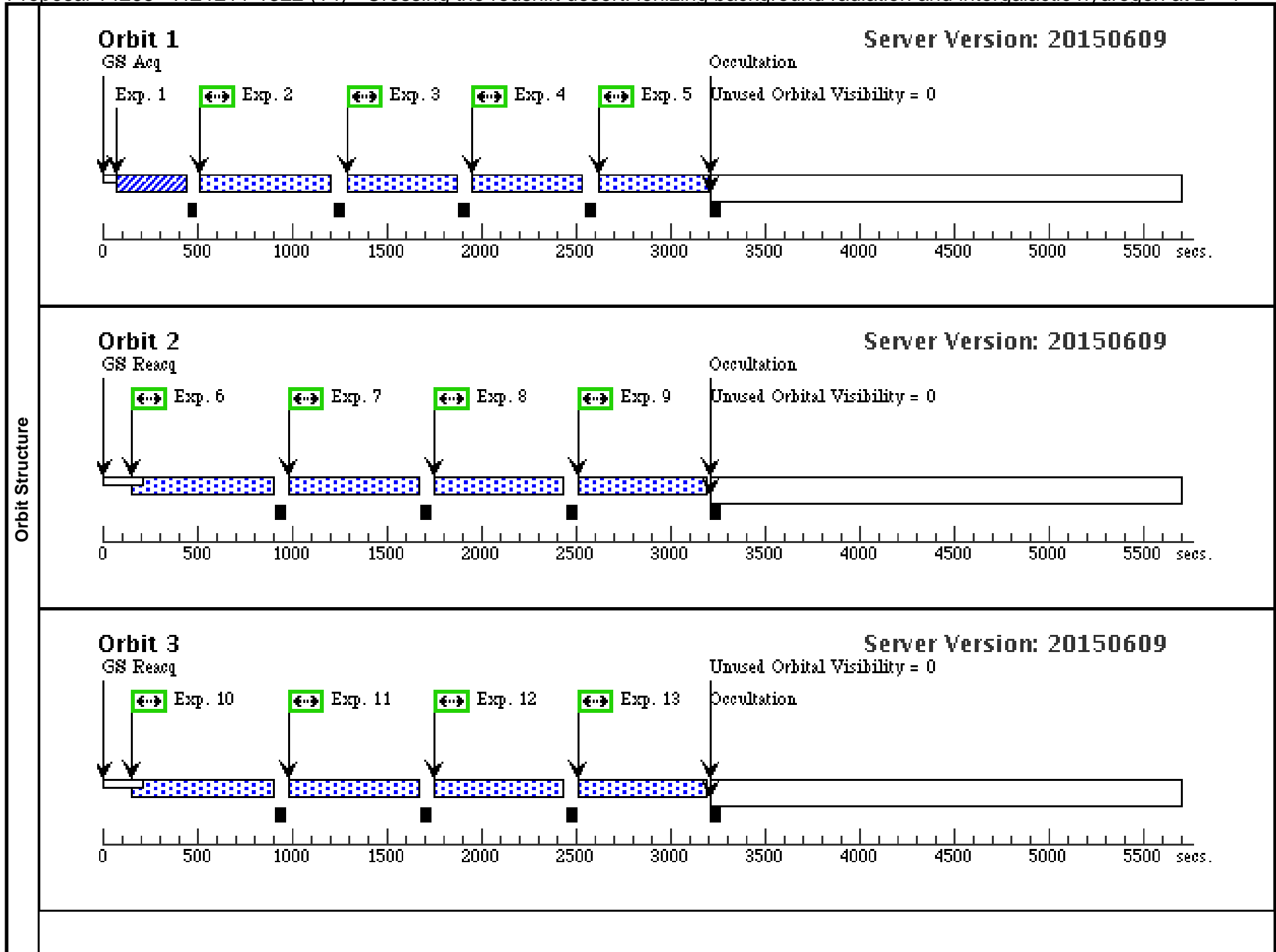
Visit	Proposal 14265, HE1211-1322 (14), implementation Wed Sep 16 01:35:38 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)					
	Diagnostics	(HE1211-1322 (14)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS				
(HE1211-1322 (14)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE1211-1322 (14)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS						
(HE1211-1322 (14)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	HE1211-1322	RA: 12 13 46.3265 (183.4430271d) Dec: -13 38 51.44 (-13.64762d) Equinox: J2000	Redshift: 1.125	V=15.2 0.64E-14 erg/cm ² /s/A	Reference Frame: ICRS
<i>Comments: Extended=NO</i>						

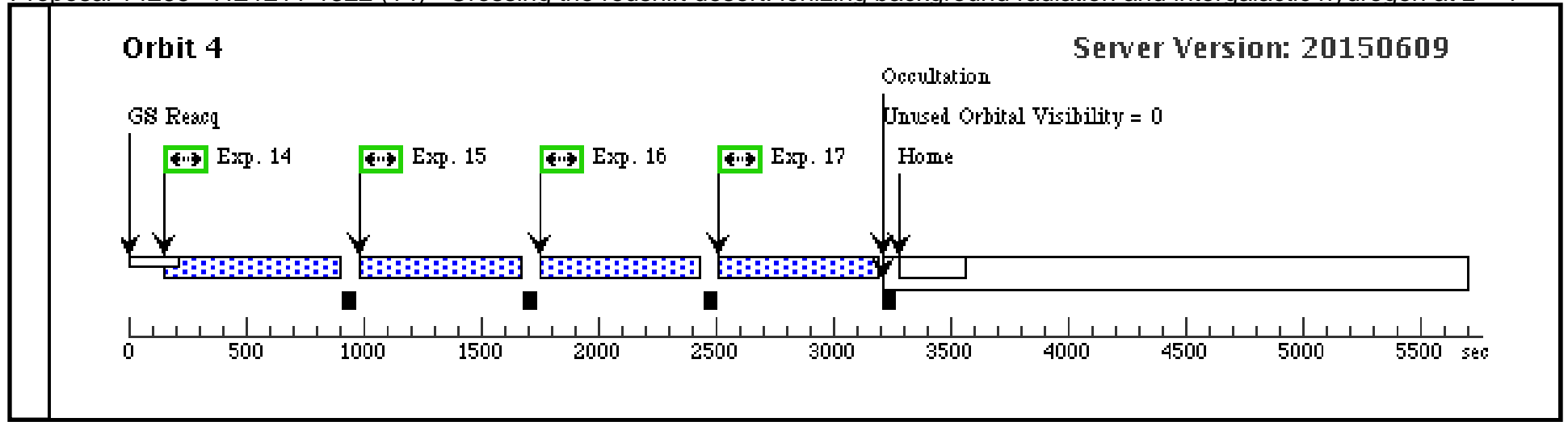
Proposal 14265 - HE1211-1322 (14) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HE1211-132 2-2373-AC Q/IMAGE (COS.ta.720 743)	(5) HE1211-1322	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			27 Secs (27 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.38 => 27 sec Count rate 1026/sec</i>									
	2	HE1211-132 2-a2373-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	3	HE1211-132 2-a2373-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	4	HE1211-132 2-a2373-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	5	HE1211-132 2-a2373-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			567 Secs (567 Secs) [==>]	[1]
	6	HE1211-132 2-b2373-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[2]
	7	HE1211-132 2-b2373-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[2]
	8	HE1211-132 2-b2373-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[2]
	9	HE1211-132 2-b2373-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[2]
	10	HE1211-132 2-c2373-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[3]
	11	HE1211-132 2-c2373-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[3]
	12	HE1211-132 2-c2373-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[3]
	13	HE1211-132 2-c2373-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[3]

Proposal 14265 - HE1211-1322 (14) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	HE1211-132 2-d2373-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=1; BUFFER-TIME=15 54	670 Secs (670 Secs)	
						[==>]	[4]
15	HE1211-132 2-d2373-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=2; BUFFER-TIME=15 54	670 Secs (670 Secs)	
						[==>]	[4]
16	HE1211-132 2-d2373-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=3; BUFFER-TIME=15 54	669 Secs (669 Secs)	
						[==>]	[4]
17	HE1211-132 2-d2373-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2373 A	FP-POS=4; BUFFER-TIME=15 54	669 Secs (669 Secs)	
						[==>]	[4]





Proposal 14265 - HE1211-1322 (15) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

Visit	Proposal 14265, HE1211-1322 (15), implementation Wed Sep 16 01:35:38 GMT 2015 Diagnostic Status: Warning Scientific Instruments: COS/NUV Special Requirements: (none)																						
	Diagnostics	(HE1211-1322 (15)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																					
(HE1211-1322 (15)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																							
(HE1211-1322 (15)) Warning (Form): If the target coordinates are not known to 0.4" (or better), an ACQ/SEARCH should precede the ACQ/IMAGE.																							
(HE1211-1322 (15)) Warning (Orbit Planner): INEFFICIENT ORDERING OF FP-POS POSITIONS																							
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(5)</td> <td>HE1211-1322</td> <td>RA: 12 13 46.3265 (183.4430271d) Dec: -13 38 51.44 (-13.64762d) Equinox: J2000</td> <td>Redshift: 1.125</td> <td>V=15.2 0.64E-14 erg/cm²/s/A</td> <td>Reference Frame: ICRS</td> </tr> <tr> <td colspan="6"><i>Comments: Extended=NO</i></td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(5)	HE1211-1322	RA: 12 13 46.3265 (183.4430271d) Dec: -13 38 51.44 (-13.64762d) Equinox: J2000	Redshift: 1.125	V=15.2 0.64E-14 erg/cm ² /s/A	Reference Frame: ICRS	<i>Comments: Extended=NO</i>					
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																	
(5)	HE1211-1322	RA: 12 13 46.3265 (183.4430271d) Dec: -13 38 51.44 (-13.64762d) Equinox: J2000	Redshift: 1.125	V=15.2 0.64E-14 erg/cm ² /s/A	Reference Frame: ICRS																		
<i>Comments: Extended=NO</i>																							

Proposal 14265 - HE1211-1322 (15) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	HE1211-132 2-2410-AC Q/IMAGE (COS.ta.720 743)	(5) HE1211-1322	COS/NUV, ACQ/IMAGE, PSA	MIRRORB			27 Secs (27 Secs) [==>]	[1]	
	<i>Comments: NUV acquisition exposure COS ETC result for S/N=40; GALEX M(NUV)=16.38 => 27 sec Count rate 1026/sec</i>									
	2	HE1211-132 2-a2410-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	3	HE1211-132 2-a2410-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	4	HE1211-132 2-a2410-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			568 Secs (568 Secs) [==>]	[1]
	5	HE1211-132 2-a2410-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			567 Secs (567 Secs) [==>]	[1]
	6	HE1211-132 2-b2410-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[2]
	7	HE1211-132 2-b2410-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[2]
	8	HE1211-132 2-b2410-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[2]
	9	HE1211-132 2-b2410-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[2]
	10	HE1211-132 2-c2410-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[3]
	11	HE1211-132 2-c2410-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54			670 Secs (670 Secs) [==>]	[3]
	12	HE1211-132 2-c2410-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[3]
13	HE1211-132 2-c2410-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54			669 Secs (669 Secs) [==>]	[3]	

Proposal 14265 - HE1211-1322 (15) - Crossing the redshift desert: ionizing background radiation and intergalactic hydrogen at $z \sim 1$

14	HE1211-132 2-d2410-1 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=1; BUFFER-TIME=15 54	670 Secs (670 Secs)	
						[==>]	[4]
15	HE1211-132 2-d2410-2 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=2; BUFFER-TIME=15 54	670 Secs (670 Secs)	
						[==>]	[4]
16	HE1211-132 2-d2410-3 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=3; BUFFER-TIME=15 54	669 Secs (669 Secs)	
						[==>]	[4]
17	HE1211-132 2-d2410-4 (COS.sp.720 755)	(5) HE1211-1322	COS/NUV, TIME-TAG, PSA	G225M 2410 A	FP-POS=4; BUFFER-TIME=15 54	669 Secs (669 Secs)	
						[==>]	[4]

