13444 - Constraining the size of intergalactic clouds with QSO pairs

Cycle: 21, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) HE2332-3556	COS/FUV	3	06-Nov-2013 21:01:30.0	yes
02	(2) RBS2023	COS/FUV	4	06-Nov-2013 21:01:47.0	yes
03	(3) CSO1022	COS/FUV	2	06-Nov-2013 21:01:59.0	yes
04	(4) SDSSJ135341.03+361948.0	COS/FUV	4	06-Nov-2013 21:02:13.0	yes
05	(5) HE2258-5524	COS/FUV	2	06-Nov-2013 21:02:23.0	yes
06	(6) HE2259-5524	COS/FUV	4	06-Nov-2013 21:02:37.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
07	(7) MS1217.0+0700	COS/FUV	2	06-Nov-2013 21:02:48.0	yes

21 Total Orbits Used

ABSTRACT

This proposal aims at a geometric estimate of the size of intergalactic absorbers (clouds) near redshift 0, which make up the 10^4 K photoionized phase of the intergalactic medium (IGM). Theoretically the size of these clouds is expected to be ~170 kpc at log N(HI)=13.3 and ~20 kpc at log N(HI)=16. So far, this has only be tested observationally for a few rare systems in which metal-line absorption allows photoionization modeling. We propose to observe 4 QSO pairs (7 new QSOs and 1 archival dataset) separated by 2 to 5 arcmin (corresponding to ~20 kpc at cz=1500 km/s). Using these data we can set a completely independent, geometrical, constraint on the cloud sizes, even if no metal lines are seen. The data will further allow determining velocity gradients in single clouds.

OBSERVING DESCRIPTION

There are 7 targets in this program, which are to be observed for 2, 3 or 4 orbits each.
The setup is as follows:

First do an ACQ/SEARCH, with SCAN-SIZE=3, with exposure times calculated with the COS ETC, G130M-1327 to get S/N=40, using the target flux as found from GALEX data.
Next do ACQ/PEAKXD and ACQ/PEAKD to completely center.
This takes about 900 seconds.

Then take spectra with central wavelength set to both 1327 and 1291, in order to get the maximum wavelength coverage (1134 to 1468 A), even though at the edges the S/N will be lower. However, the extra 40 A each end is useful to be able to identify more Lya or metal lines.

For a two orbit target, the first orbit has a 1327 setting, using FP-POS=3 and FP-POS-4. Then in the second orbit 1291 is used with FP-POS=3 and 4 for half the orbit each. I tried using FP-POS=1 through 4, but this took about 500 seconds off the exposure time.

For a three orbit target, the first orbit has 1327 FP-POS=1 & 2, while the second orbit has 1327 FP-POS=3 & 4, and the third orbit uses 1291 FP-

POS-3 & 4.

For a four orbit target, the first orbit has 1327 FP-POS=1 & 2, while the second orbit has 1327 FP-POS=3 & 4, the third orbit uses 1291 FP-POS-1 & 2, and the fourth orbit has 1291 FP-POS 3 & 4.

Visit

Proposal 13444, Visit 01, implementation Thu Nov 07 02:02:56 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(Visit 01) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

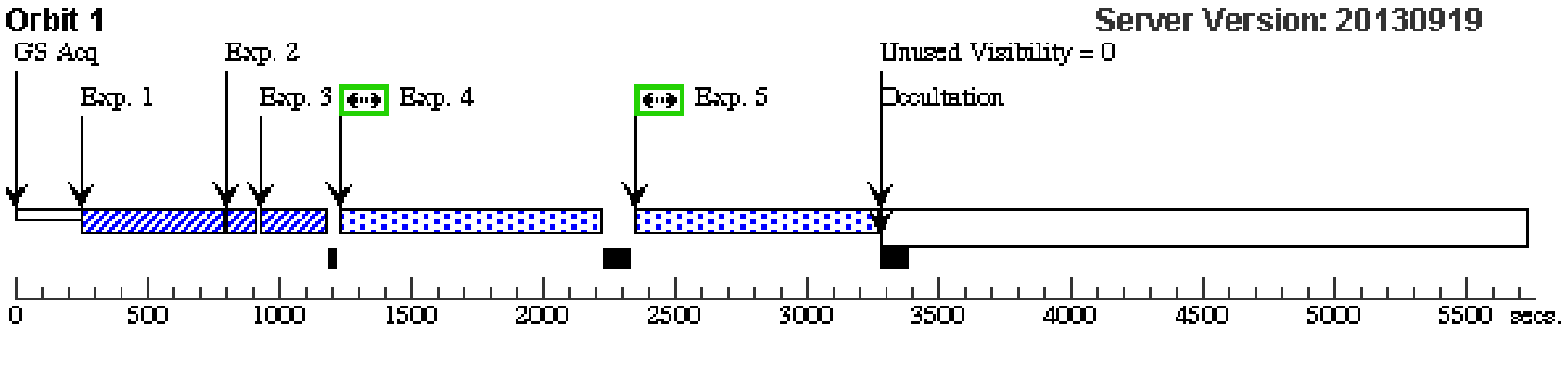
Fixed Targets

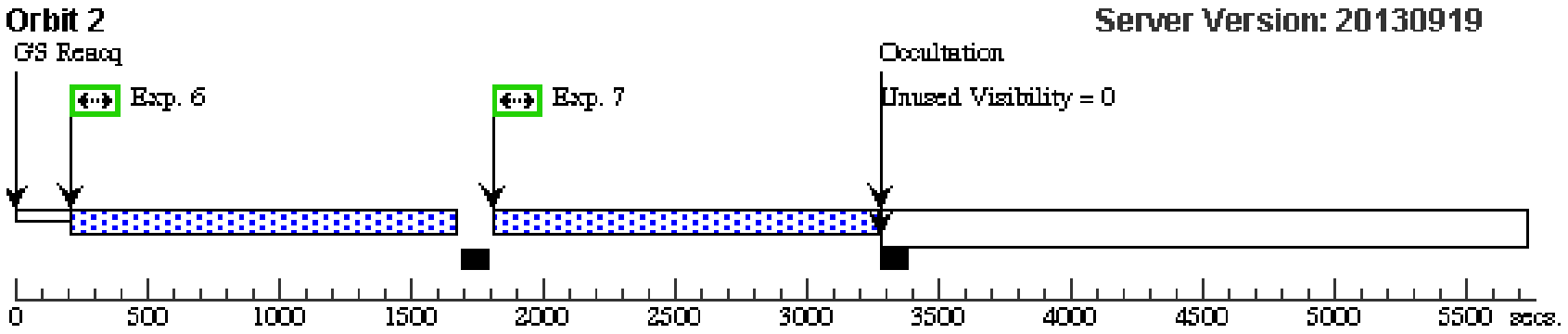
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HE2332-3556	RA: 23 34 44.4200 (353.6850833d) Dec: -35 39 47.00 (-35.66306d) Equinox: J2000	Epoch of Position: 2000	V=17.40+/-0.01 F=3.3E-15 z=0.110	Reference Frame: ICRS

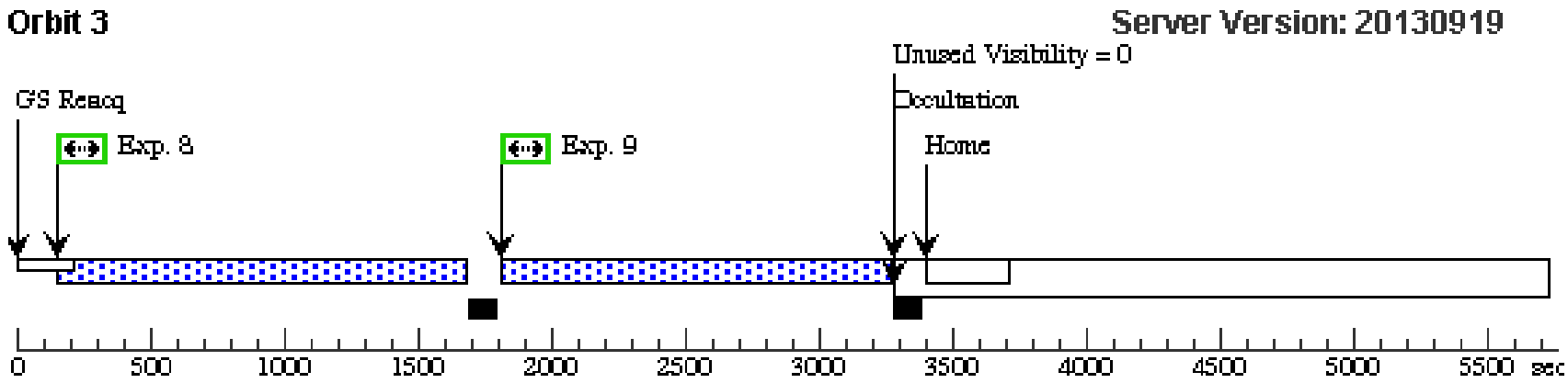
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	HE2332-3556-ACQ/SEARCH (COS.sa.51230 3)	(1) HE2332-3556	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			20 Secs (20 Secs) *[==>]*	*[1]*
	*Comments: Acquisition exposure with G130M spectral element Calcualated for 0.5*F(1700)=3.3E-15 erg/cm2/s/A COS ETC result for S/N=40 is 18 sec (id COS.sa.52303 Count rate 446/sec*								
2	HE2332-3556-ACQ/PEAKXD (COS.sa.51230 3)	(1) HE2332-3556	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				20 Secs (20 Secs) *[==>]*	*[1]*
3	HE2332-3556-ACQ/PEAKD (COS.sa.51230 3)	(1) HE2332-3556	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			20 Secs (20 Secs) *[==>]*	*[1]*
4	HE2332-3556-a1327:1 (COS.sp.51237 1)	(1) HE2332-3556	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=1; BUFFER-TIME=869			869 Secs (869 Secs) *[==>]*	*[1]*
	Comments: total exposure time 7375 sec flux 3.3E-15, expected S/N=14.2								
5	HE2332-3556-a1327:2 (COS.sp.51237 1)	(1) HE2332-3556	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=2; BUFFER-TIME=868			868 Secs (868 Secs) *[==>]*	*[1]*
6	HE2332-3556-b1327:3 (COS.sp.51237 1)	(1) HE2332-3556	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
7	HE2332-3556-b1327:4 (COS.sp.51237 1)	(1) HE2332-3556	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
8	HE2332-3556-c1291:1 (COS.sp.51237 1)	(1) HE2332-3556	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=1; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[3]*
9	HE2332-3556-c1291:2 (COS.sp.51237 1)	(1) HE2332-3556	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=2; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[3]*

Orbit Structure







Visit

Proposal 13444, Visit 02, implementation Thu Nov 07 02:02:59 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

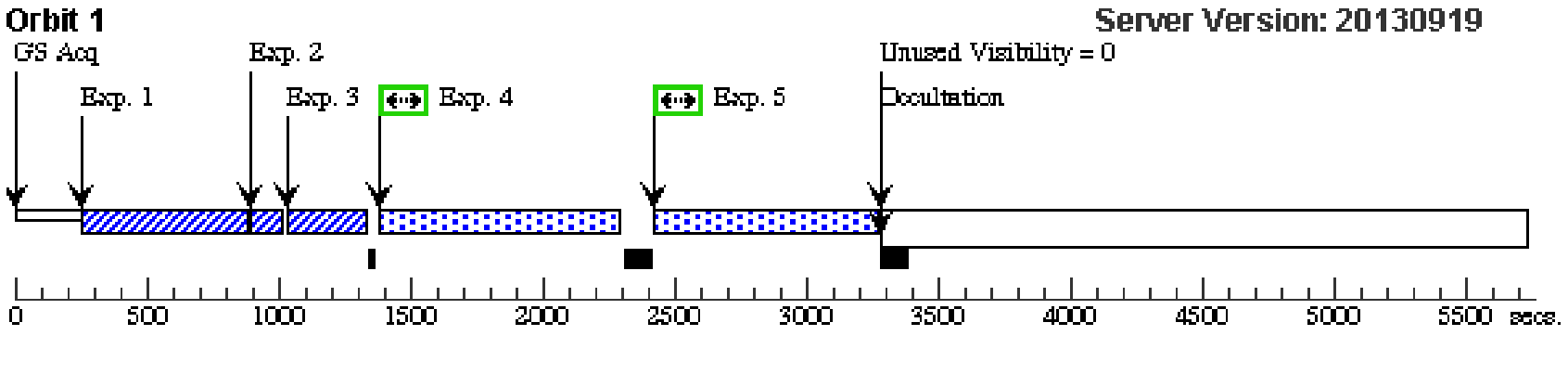
Fixed Targets

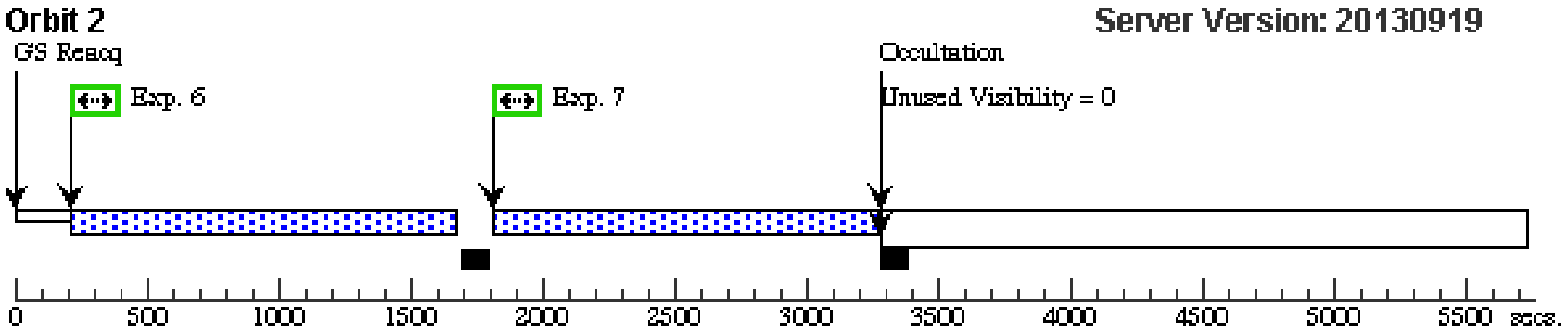
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	RBS2023	RA: 23 34 52.4800 (353.7186667d) Dec: -35 38 42.00 (-35.64500d) Equinox: J2000		V=17.10+/-0.01 F=2.2E-15 z=0.098	Reference Frame: ICRS

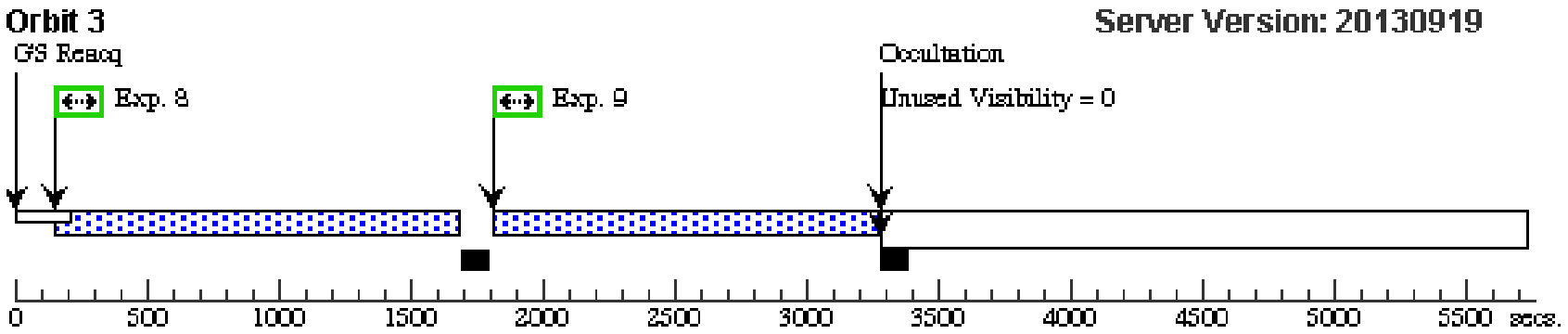
Exposures

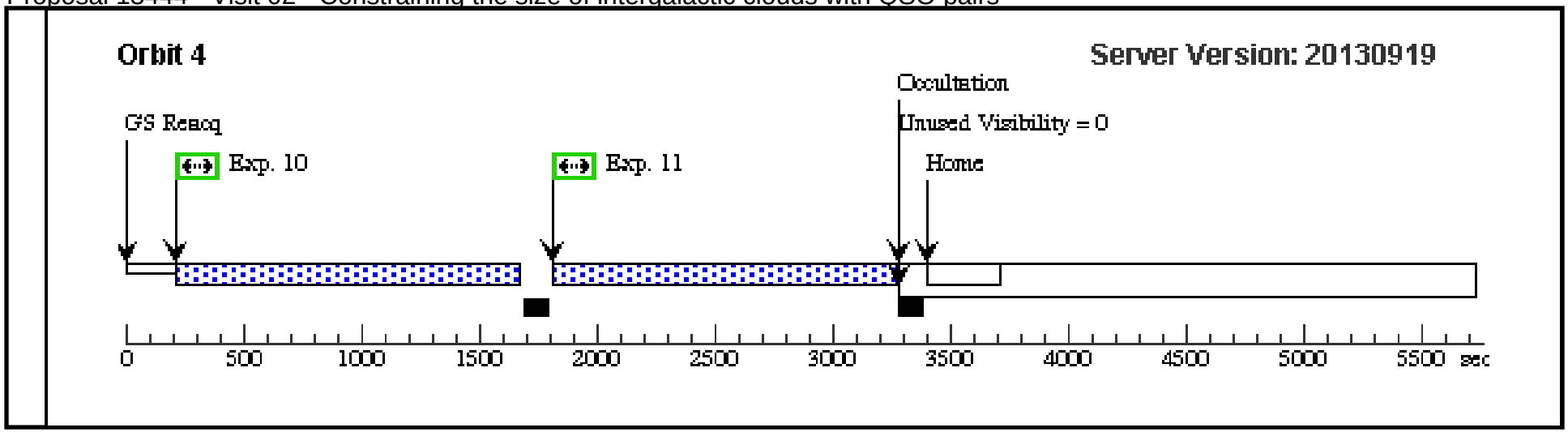
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	RBS2023-ACQ/SEARCH (COS.sa.512305)	(2) RBS2023	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			30 Secs (30 Secs) *[==>]*	*[1]*
	Comments: A cquisition exposure with G130M spectral element *Calcualated for 0.5*F(1700)=2.2E-15 erg/cm2/s/A* *COS ETC result for S/N=40 is 28 sec (id COS.sa.52305* *Count rate 410/sec*								
2	RBS2023-ACQ/PEAKXD (COS.sa.512305)	(2) RBS2023	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				30 Secs (30 Secs) *[==>]*	*[1]*
3	RBS2023-ACQ/PEAKD (COS.sa.512305)	(2) RBS2023	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			30 Secs (30 Secs) *[==>]*	*[1]*
4	RBS2023-a1327:1 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=1; BUFFER-TIME=794			794 Secs (794 Secs) *[==>]*	*[1]*
	Comments: total exposure time 10047 sec *flux 2.2E-15, expected S/N=13.4*								
5	RBS2023-a1327:2 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=2; BUFFER-TIME=793			793 Secs (793 Secs) *[==>]*	*[1]*
6	RBS2023-b1327:3 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
7	RBS2023-b1327:4 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
8	RBS2023-c1291:1 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=1; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[3]*
9	RBS2023-c1291:2 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=2; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[3]*
10	RBS2023-d1291:3 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[4]*
11	RBS2023-d1291:4 (COS.sp.512372)	(2) RBS2023	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[4]*

Orbit Structure





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sec

Visit

Proposal 13444, Visit 03, implementation Thu Nov 07 02:03:01 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(Visit 03) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

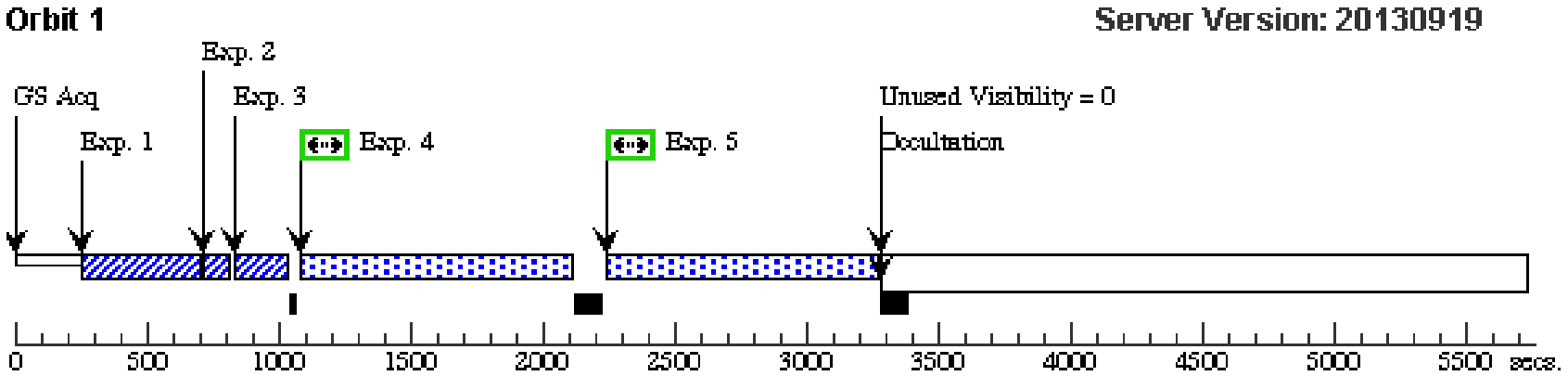
Fixed Targets

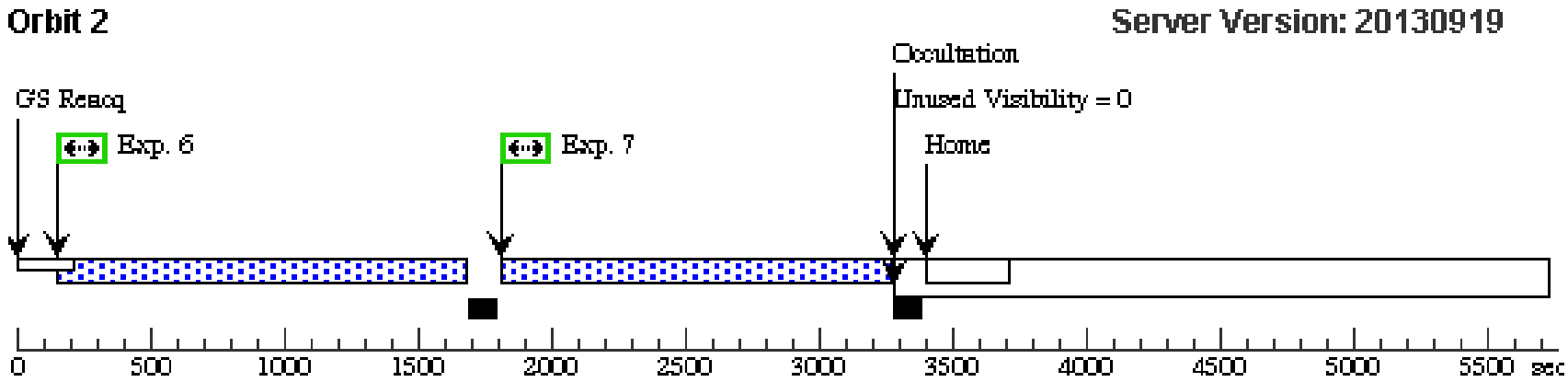
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	CSO1022	RA: 13 53 26.1700 (208.3590417d) Dec: +36 20 49.30 (36.34703d) Equinox: J2000		V=16.48+/-0.01 F=7.9E-15 z=0.284	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	CSO1022-ACQ/SEARCH (COS.sa.51230 6)	(3) CSO1022	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			10 Secs (10 Secs) *[==>]*	*[1]*
	Comments: Acquisition exposure with G130M spectral element *Calcualated for 0.5*F(1700)=7.8E-15 erg/cm2/s/A* *COS ETC result for S/N=40 is 8 sec (id COS.sa.52306* *Count rate 593/sec*								
2	CSO1022-ACQ/PEAKXD (COS.sa.51230 6)	(3) CSO1022	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				10 Secs (10 Secs) *[==>]*	*[1]*
3	CSO1022-ACQ/PEAKD (COS.sa.51230 6)	(3) CSO1022	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			10 Secs (10 Secs) *[==>]*	*[1]*
4	CSO1022-a 1327:3 (COS.sa.51237 3)	(3) CSO1022	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=979			979 Secs (979 Secs) *[==>]*	*[1]*
	Comments: total exposure time 4777 sec *flux 7.8E-15, expected S/N=17.6*								
5	CSO1022-a 1327:4 (COS.sa.51237 3)	(3) CSO1022	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=978			978 Secs (978 Secs) *[==>]*	*[1]*
6	CSO1022-b 1291:3 (COS.sa.51237 3)	(3) CSO1022	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
7	CSO1022-b 1291:4 (COS.sa.51237 3)	(3) CSO1022	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*

Orbit Structure





Visit

Proposal 13444, Visit 04, implementation Thu Nov 07 02:03:02 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

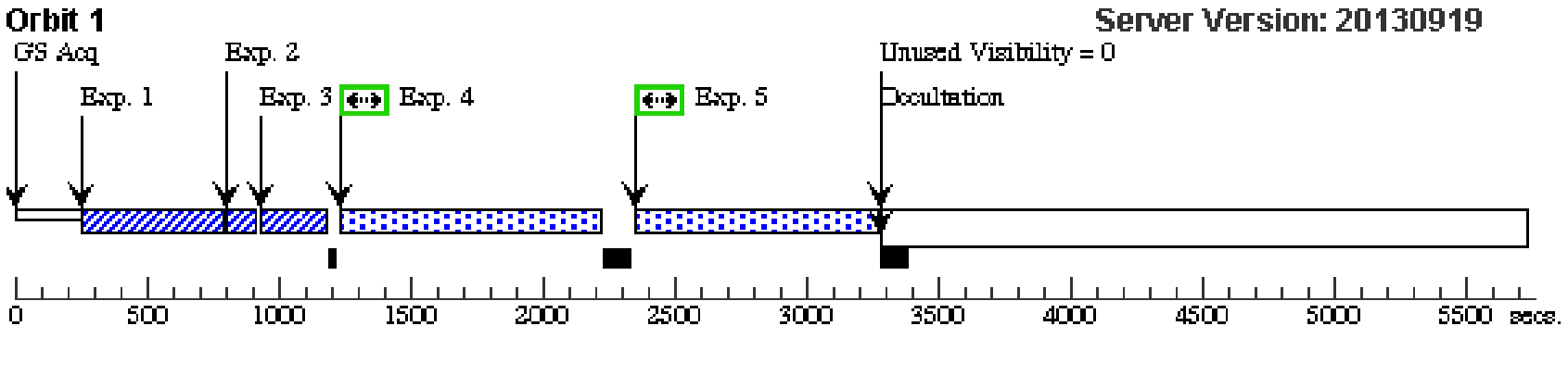
Fixed Targets

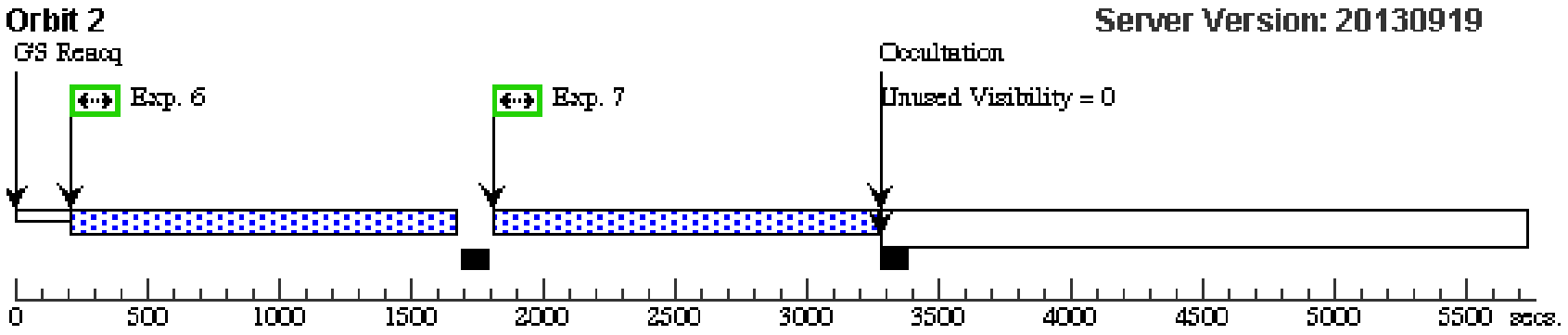
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSSJ135341.03+361948.0	RA: 13 53 41.0900 (208.4212083d) Dec: +36 19 47.40 (36.32983d) Equinox: J2000		V=17.80+/-0.01 F=3.3E-15 z=0.147	Reference Frame: ICRS

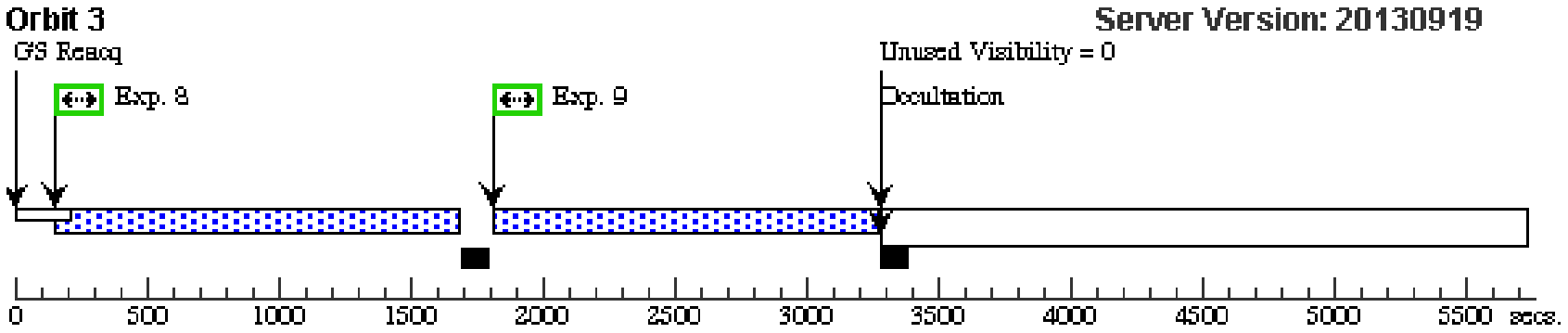
Exposures

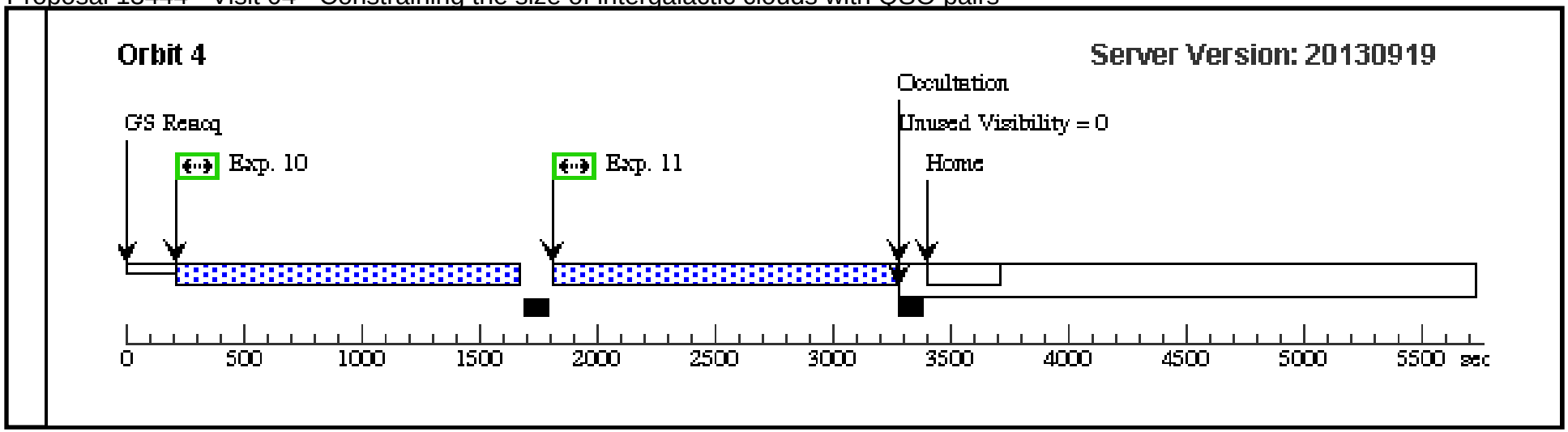
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	SDSSJ135341-ACQ/SEARCH (COS.sa.512307)	(4) SDSSJ135341.03+361948.0	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			20 Secs (20 Secs) *[==>]*	*[1]*
	Comments: A cquisition exposure with G130M spectral element *Calcualated for 0.5*F(1700)=3.3E-15 erg/cm2/s/A* *COS ETC result for S/N=40 is 18 sec (id COS.sa.52307* *Count rate 446/sec*								
2	SDSSJ135341-ACQ/PEAKXD (COS.sa.512307)	(4) SDSSJ135341.03+361948.0	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				20 Secs (20 Secs) *[==>]*	*[1]*
3	SDSSJ135341-ACQ/PEAKD (COS.sa.512307)	(4) SDSSJ135341.03+361948.0	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			20 Secs (20 Secs) *[==>]*	*[1]*
4	SDSSJ135341-a1327:1 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=1; BUFFER-TIME=869			869 Secs (869 Secs) *[==>]*	*[1]*
	Comments: total exposure time 10197 sec *flux 3.3E-15, expected S/N=16.6*								
5	SDSSJ135341-a1327:2 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=2; BUFFER-TIME=868			868 Secs (868 Secs) *[==>]*	*[1]*
6	SDSSJ135341-b1327:3 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
7	SDSSJ135341-b1327:4 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[2]*
8	SDSSJ135341-c1291:1 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=1; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[3]*
9	SDSSJ135341-c1291:2 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=2; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[3]*
10	SDSSJ135341-d1291:3 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[4]*
11	SDSSJ135341-d1291:4 (COS.sp.512374)	(4) SDSSJ135341.03+361948.0	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=1410			1410 Secs (1410 Secs) *[==>]*	*[4]*

Orbit Structure





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5500
sec

Visit

Proposal 13444, Visit 05, implementation Thu Nov 07 02:03:04 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(Visit 05) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

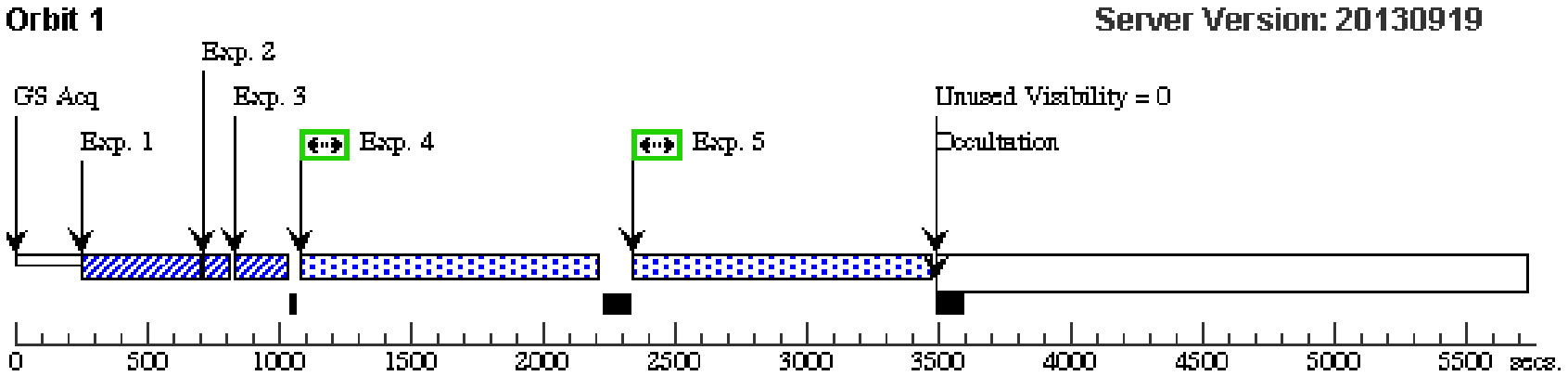
Fixed Targets

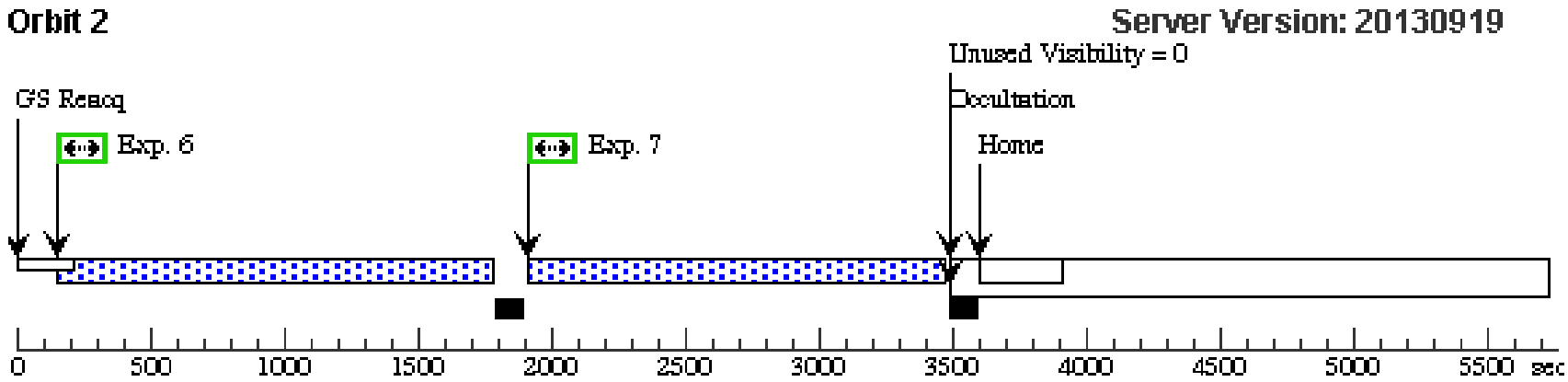
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HE2258-5524	RA: 23 01 52.0000 (345.4666667d) Dec: -55 08 31.00 (-55.14194d) Equinox: J2000		V=15.77+/-0.01 F=6.9E-15 z=0.140	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	HE2258-5524-ACQ/SEARCH (COS.sa.51230 8)	(5) HE2258-5524	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			10 Secs (10 Secs) *[==>]*	*[1]*
	Comments: Acquisition exposure with G130M spectral element *Calcualated for 0.5*F(1700)=6.9E-15 erg/cm2/s/A* *COS ETC result for S/N=40 is 8 sec (id COS.sa.52308* *Count rate 564/sec*								
2	HE2258-5524-ACQ/PEAKXD (COS.sa.51230 8)	(5) HE2258-5524	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				10 Secs (10 Secs) *[==>]*	*[1]*
3	HE2258-5524-ACQ/PEAKD (COS.sa.51230 8)	(5) HE2258-5524	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			10 Secs (10 Secs) *[==>]*	*[1]*
4	HE2258-5524-a1327:3 (COS.sa.51237 5)	(5) HE2258-5524	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=1081			1081 Secs (1081 Secs) *[==>]*	*[1]*
	Comments: total exposure time 5186 sec *flux 6.9E-15, expected S/N=17.3*								
5	HE2258-5524-a1327:4 (COS.sa.51237 5)	(5) HE2258-5524	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=1080			1080 Secs (1080 Secs) *[==>]*	*[1]*
6	HE2258-5524-b1291:1 (COS.sa.51237 5)	(5) HE2258-5524	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=1; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[2]*
7	HE2258-5524-b1291:2 (COS.sa.51237 5)	(5) HE2258-5524	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=2; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[2]*

Orbit Structure





Visit

Proposal 13444, Visit 06, implementation Thu Nov 07 02:03:05 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

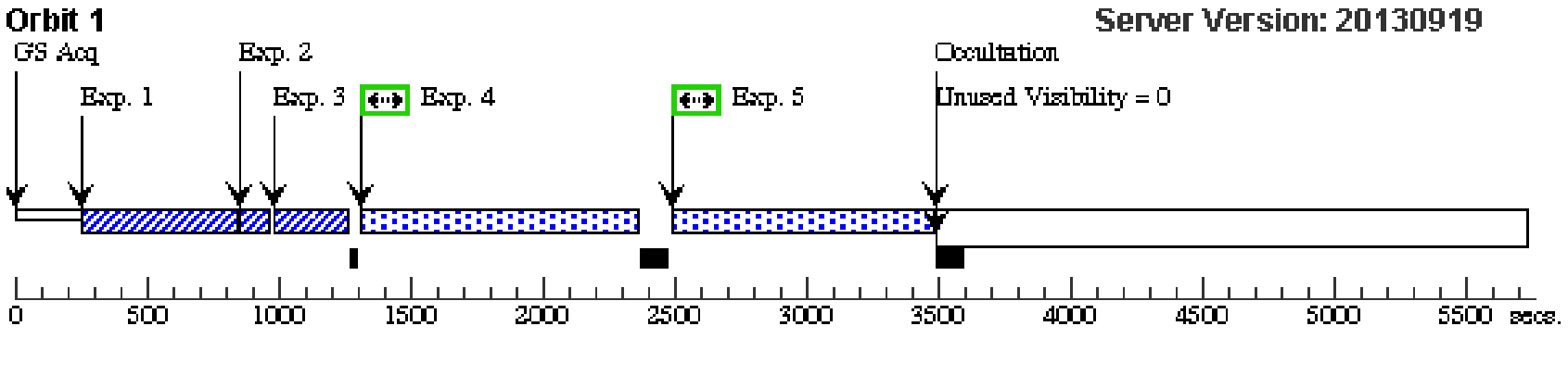
Fixed Targets

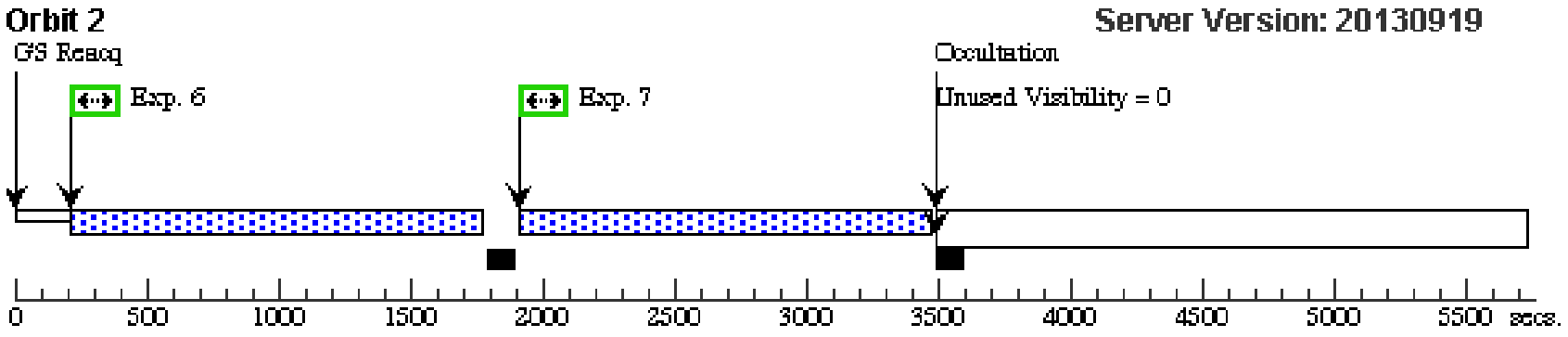
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	HE2259-5524	RA: 23 02 22.4200 (345.5934167d) Dec: -55 08 27.10 (-55.14086d) Equinox: J2000		V=17.09+/-0.01 F=2.6E-15 z=0.851	Reference Frame: ICRS

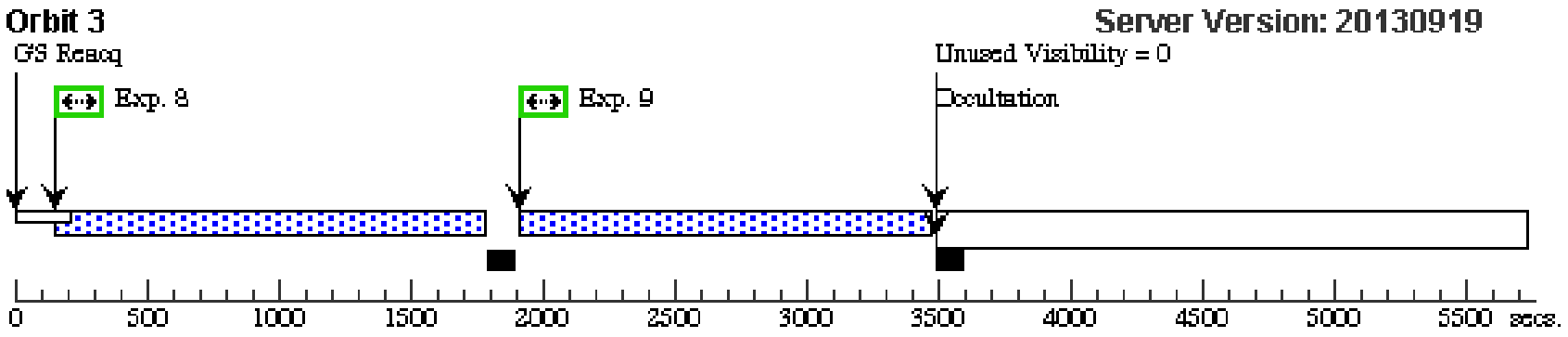
Exposures

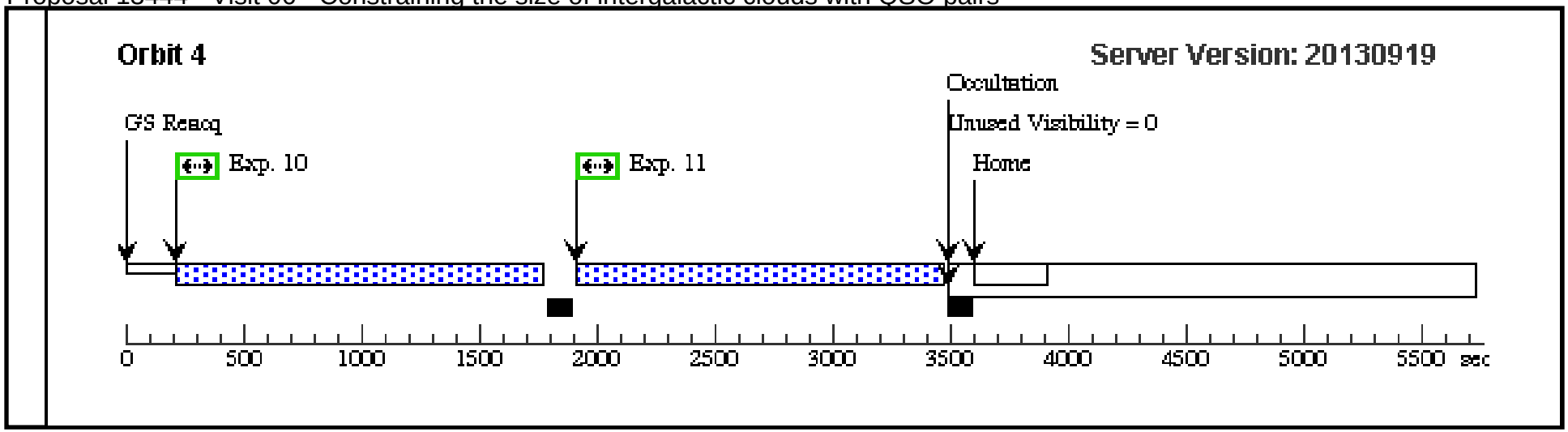
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	HE2259-5524-ACQ/SEARCH (COS.sa.512309)	(6) HE2259-5524	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			25 Secs (25 Secs) *[==>]*	*[1]*
	*Comments: A cquisition exposure with G130M spectral element Calcualated for 0.5*F(1700)=2.6E-15 erg/cm2/s/A COS ETC result for S/N=40 is 18 sec (id COS.sa.52308 Count rate 423/sec*								
2	HE2259-5524-ACQ/PEAKXD (COS.sa.512309)	(6) HE2259-5524	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				25 Secs (25 Secs) *[==>]*	*[1]*
3	HE2259-5524-ACQ/PEAKD (COS.sa.512309)	(6) HE2259-5524	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			25 Secs (25 Secs) *[==>]*	*[1]*
4	HE2259-5524-a1327:1 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=1; BUFFER-TIME=933			933 Secs (933 Secs) *[==>]*	*[1]*
	Comments: total exposure time 10938 sec flux 2.6E-15, expected S/N=15.3								
5	HE2259-5524-a1327:2 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=2; BUFFER-TIME=933			933 Secs (933 Secs) *[==>]*	*[1]*
6	HE2259-5524-b1327:3 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[2]*
7	HE2259-5524-b1327:4 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[2]*
8	HE2259-5524-c1291:1 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=1; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[3]*
9	HE2259-5524-c1291:2 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=2; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[3]*
10	HE2259-5524-d1291:3 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[4]*
11	HE2259-5524-d1291:4 (COS.sp.512376)	(6) HE2259-5524	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=1512			1512 Secs (1512 Secs) *[==>]*	*[4]*

Orbit Structure





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Proposal 13444 - Visit 07 - Constraining the size of intergalactic clouds with QSO pairs

Visit

Proposal 13444, Visit 07, implementation Thu Nov 07 02:03:06 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(Visit 07) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	MS1217.0+0700	RA: 12 19 30.8800 (184.8786667d) Dec: +06 43 34.10 (6.72614d) Equinox: J2000		V=17.13+/-0.01 F=5.2E-15 z=0.08	Reference Frame: ICRS

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	MS1217.0+0700-ACQ/SEARCH (COS.sa.512310)	(7) MS1217.0+0700	COS/FUV, ACQ/SEARCH, PSA	G130M 1327 A	SCAN-SIZE=3			12 Secs (12 Secs) *[==>]*	***[1]***
	Comments: Acquisition exposure with G130M spectral element *Calcualated for 0.5*F(1700)=5.2E-15 erg/cm2/s/A* *COS ETC result for S/N=40 is 11 sec (id COS.sa.52310* *Count rate 508/sec*								
2	MS1217.0+0700-ACQ/PEAKXD (COS.sa.512310)	(7) MS1217.0+0700	COS/FUV, ACQ/PEAKXD, PSA	G130M 1327 A				12 Secs (12 Secs) *[==>]*	***[1]***
3	MS1217.0+0700-ACQ/PEAKD (COS.sa.512310)	(7) MS1217.0+0700	COS/FUV, ACQ/PEAKD, PSA	G130M 1327 A	NUM-POS=5; STEP-SIZE=0.9			12 Secs (12 Secs) *[==>]*	***[1]***
4	MS1217.0+0700-a1327:3 (COS.sa.512378)	(7) MS1217.0+0700	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=3; BUFFER-TIME=937			937 Secs (937 Secs) *[==>]*	***[1]***
	Comments: Total exposure time in two orbits 4539 sec *flux=5.2E-15, expected S/N=14.1*								
5	MS1217.0+0700-a1327:4 (COS.sa.512378)	(7) MS1217.0+0700	COS/FUV, TIME-TAG, PSA	G130M 1327 A	FP-POS=4; BUFFER-TIME=936			936 Secs (936 Secs) *[==>]*	***[1]***
6	MS1217.0+0700-b1291:3 (COS.sa.512378)	(7) MS1217.0+0700	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=3; BUFFER-TIME=1383			1383 Secs (1383 Secs) *[==>]*	***[2]***
7	MS1217.0+0700-b1291:4 (COS.sa.512378)	(7) MS1217.0+0700	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FP-POS=4; BUFFER-TIME=1383			1383 Secs (1383 Secs) *[==>]*	***[2]***

Orbit Structure