12249 - Reionization of Intergalactic Helium at the Highest Redshifts

Cycle: 18, Proposal Category: GO

(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?*
A1	(1) SDSSJ1253+6817	COS/FUV COS/NUV	3	22-Dec-2010 21:58:33.0	yes
B1	(2) SDSS1711+6052	COS/FUV COS/NUV	3	22-Dec-2010 21:58:48.0	yes
B2	(2) SDSS1711+6052	COS/FUV COS/NUV	2	22-Dec-2010 21:58:57.0	yes
C1	(3) SDSS2346-0016	COS/FUV COS/NUV	5	22-Dec-2010 21:59:11.0	yes
C2	(3) SDSS2346-0016	COS/FUV COS/NUV	5	22-Dec-2010 21:59:22.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
02	(3) SDSS2346-0016	COS/FUV COS/NUV	5	22-Dec-2010 21:59:33.0	yes
D1	(4) SDSS1319+5202	COS/FUV COS/NUV	5	22-Dec-2010 21:59:45.0	yes
D2	(4) SDSS1319+5202	COS/FUV COS/NUV	5	22-Dec-2010 21:59:57.0	yes
E1	(3) SDSS2346-0016	COS/FUV COS/NUV	2	22-Dec-2010 22:00:08.0	yes

35 Total Orbits Used

ABSTRACT

In recent years, the number of quasars with clear sightlines to HeII Ly-alpha has more than tripled, enabling us to map IGM reionization between z=2.5-3.9. We propose COS/G140L spectroscopy for four quasars at z~3.5-3.9, as the brightest in the highest redshift range ever studied. We aim to probe the "penumbra" of the IGM's "dark ages" at the epoch of He II reionization, providing the longest trace yet of reionization history. The proposed quality COS spectra will reveal features of the patchy and rapidly evolving IGM helium ionization near this epoch; COS resolution may also reveal a predicted spectral signature that would establish the redshift of HeII reionization, disentangling the effects of damped absorption, associated absorbers, and proximity zones. The broad wavelength coverage of G140L will enable us to trace helium absorption all the way to the Lyman limit at 228*(1+z) A, and comparison of the four sightlines will unravel the effects of cosmic variance.

Our proposed study of z>3.4 quasars complements ongoing COS GTO and GO programs for z<3.3, and will add enormously to our understanding of the fluctuations in the patchy HeII Ly-alpha IGM optical depth, the growth in opacity to higher redshifts, and may reveal the onset epoch/redshift of IGM HeII reionization. By analogy, our study of HeII reionization may also shed light on the morphology of hydrogen reionization between z~6-10.

OBSERVING DESCRIPTION

We select buffer times slightly shorter than the respective exposure times. Several FP positions are chosen to reduce the effect of fixed-pattern noise. Grating setting of 1105 and 1290 are used for two targets, to avoid a wavelength gap and to cover as short wavelengths as possible.

ADDITIONAL COMMENTS

Two of the C1 exposures failed. Upon the approval of HOPR request 1828, these two exposures will be repeated in visit E1.

In visit A1, the FP positions are changed for exposure 5 and 6.

Visit

Proposal 12249, Visit A1, scheduling Thu Dec 23 03:00:14 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: CVZ

Comments: We will use several FP positions, and switch between wavelength 1105 and 1280A.
The spectrum will be with no gap in wavelength.

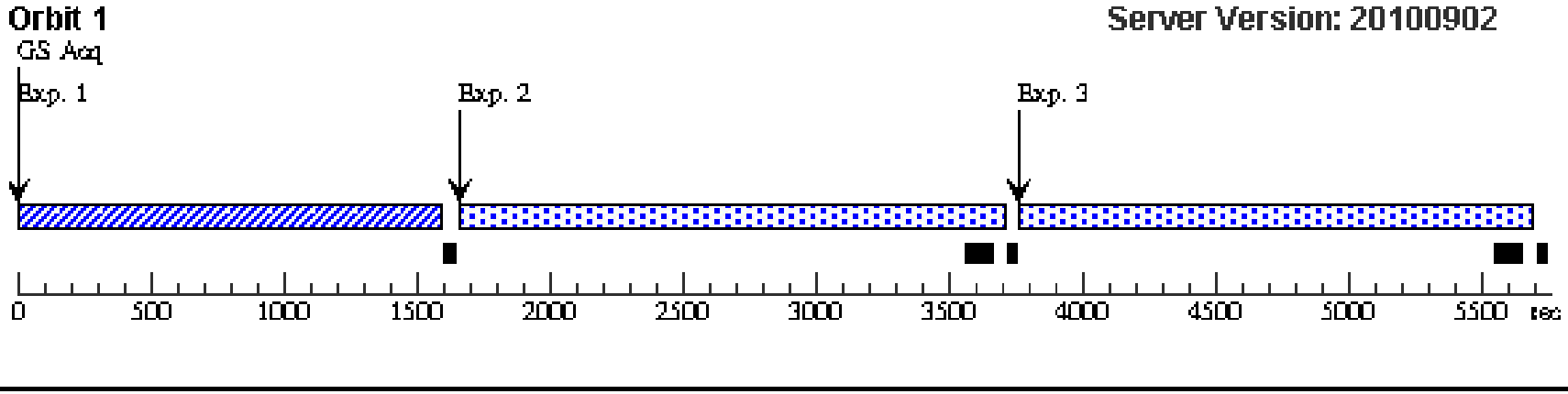
Fixed Targets

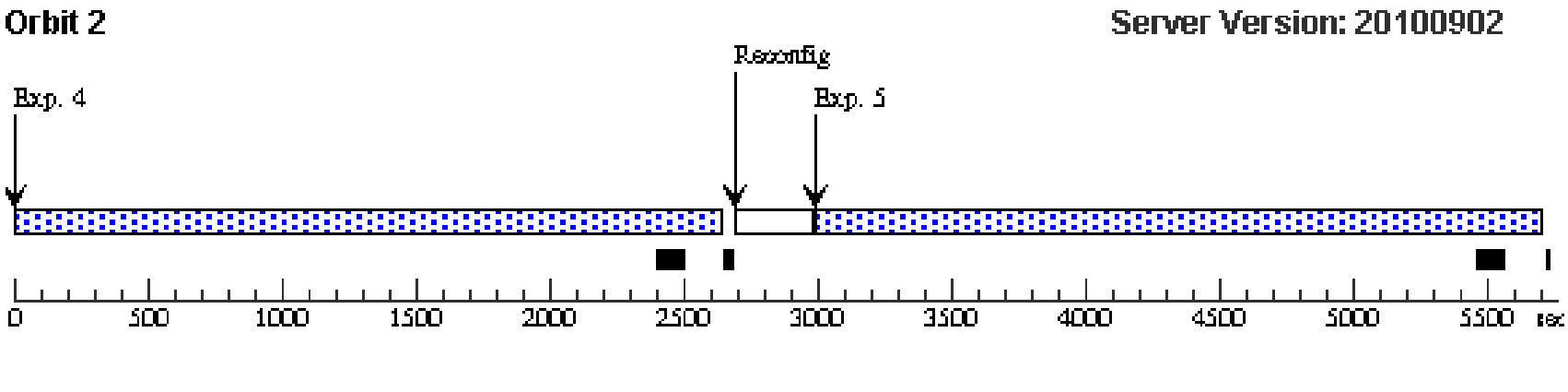
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ1253+6817	RA: 12 53 53.7146 (193.4738108d)	Proper Motion RA: null	V=18.4+/-0.2	Reference Frame: ICRS
		Dec: +68 17 14.20 (68.28728d)	Proper Motion Dec: null	9.4E-17 ergs/cm2/s/A at 1400A	
		Equinox: J2000	Epoch of Position:		

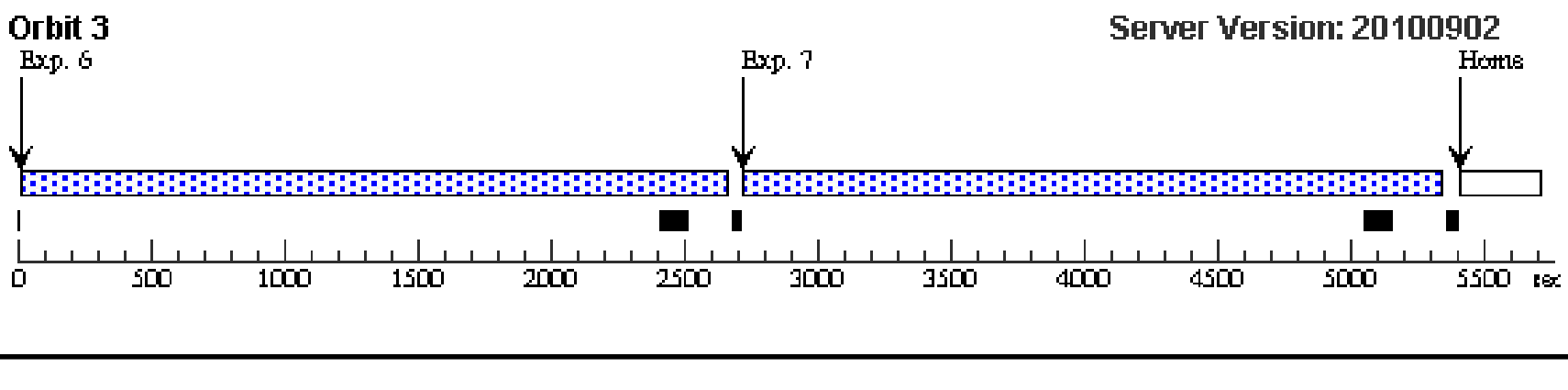
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(1) SDSSJ1253+6817	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				600 Secs	
								[==>]	***[1]***
2		(1) SDSSJ1253+6817	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=1;			1875 Secs	
				1280 A	BUFFER-TIME=1750			*[==>]*	***[1]***
3		(1) SDSSJ1253+6817	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=2;			1875 Secs	
				1280 A	BUFFER-TIME=1750			*[==>]*	***[1]***
4		(1) SDSSJ1253+6817	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;			2590 Secs	
				1280 A	BUFFER-TIME=2365			*[==>]*	***[2]***
5		(1) SDSSJ1253+6817	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=2;			2590 Secs	
				1105 A	BUFFER-TIME=2365			*[==>]*	***[2]***
6		(1) SDSSJ1253+6817	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;			2595 Secs	
				1105 A	BUFFER-TIME=2365			*[==>]*	***[3]***
7		(1) SDSSJ1253+6817	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2570 Secs	
				1105 A	BUFFER-TIME=2300			*[==>]*	***[3]***

Orbit Structure







Visit

Proposal 12249, Visit B1, scheduling Thu Dec 23 03:00:18 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

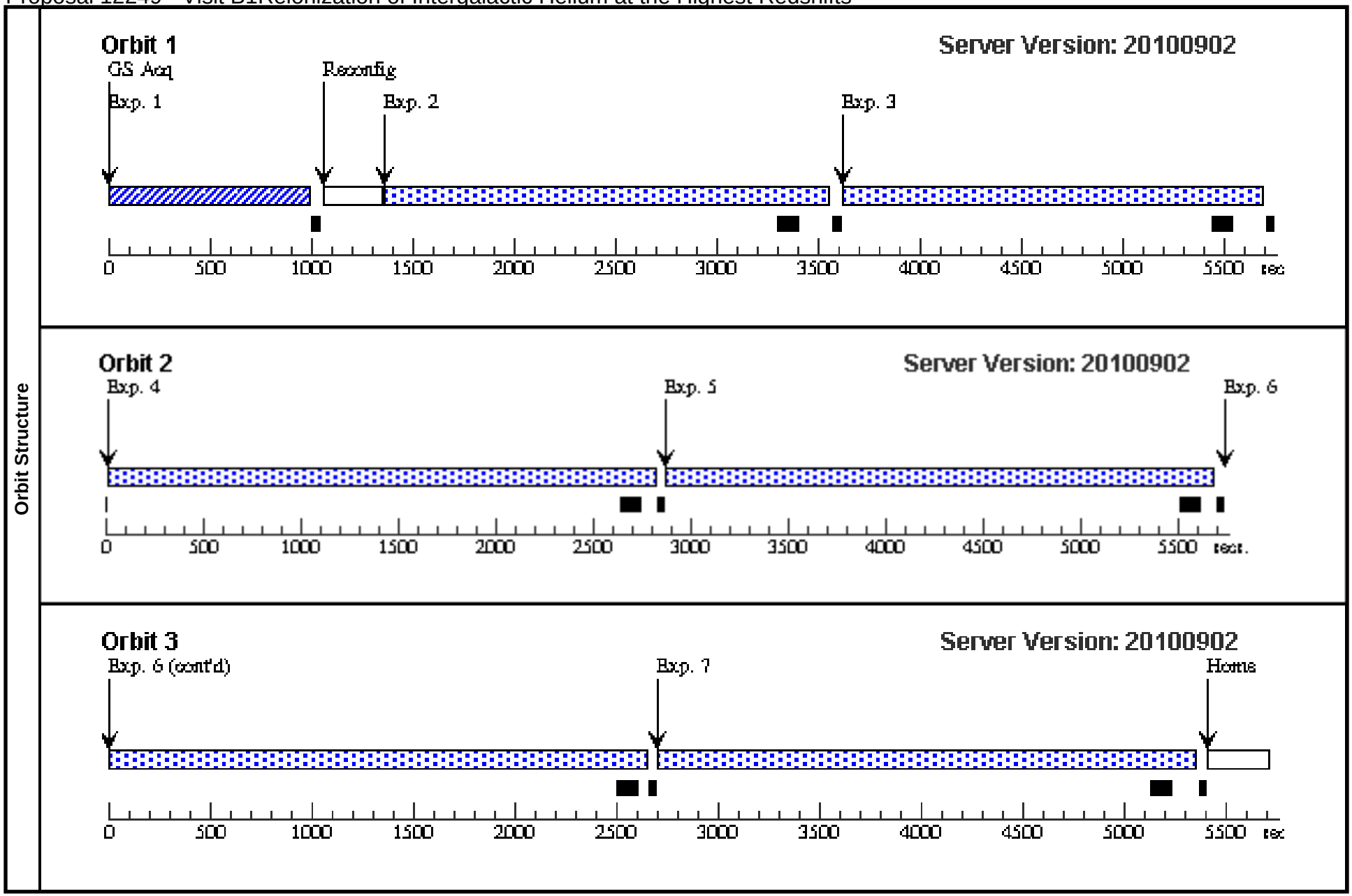
Special Requirements: CVZ

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSS1711+6052	RA: 17 11 34.4122 (257.8933842d) Dec: +60 52 40.39 (60.87789d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=19.3+/-0.2 3.7E-17 ergs/cm2/s/A at 1550A	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(2) SDSS1711+6052	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				300 Secs *[==>]*	*[1]*
2		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=1; BUFFER-TIME=1790			2020 Secs *[==>]*	*[1]*
3		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=2; BUFFER-TIME=1790			2020 Secs *[==>]*	*[1]*
4		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=3; BUFFER-TIME=2600			2760 Secs *[==>]*	*[2]*
5		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=3; BUFFER-TIME=2600			2760 Secs *[==>]*	*[2]*
6		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=4; BUFFER-TIME=2470			2600 Secs *[==>]*	*[2]*
7		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=4; BUFFER-TIME=2400			2600 Secs *[==>]*	*[3]*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Reconfig
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Exp. 2
Exp. 3
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3500
4000
4500
5000
5500
sec
Orbit 2
Server Version: 20100902
Exp. 4
Exp. 5
Exp. 6
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2500
3000
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4500
5000
5500
sec.
Orbit 3
Server Version: 20100902
Exp. 6 (cont'd)
Exp. 7
Home
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12249, Visit B2, implementation Thu Dec 23 03:00:20 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: CVZ

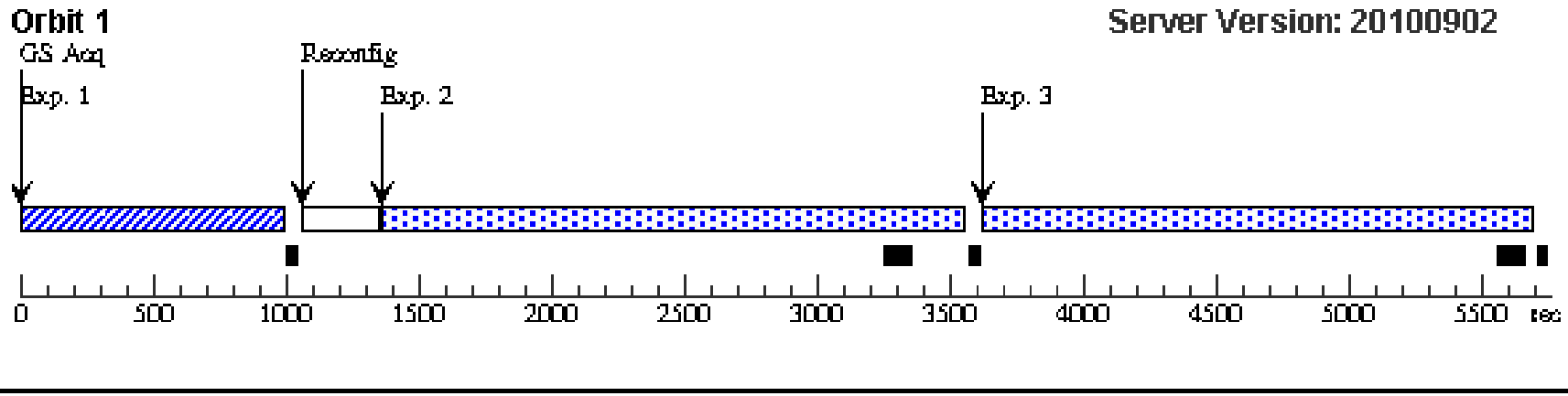
Fixed Targets

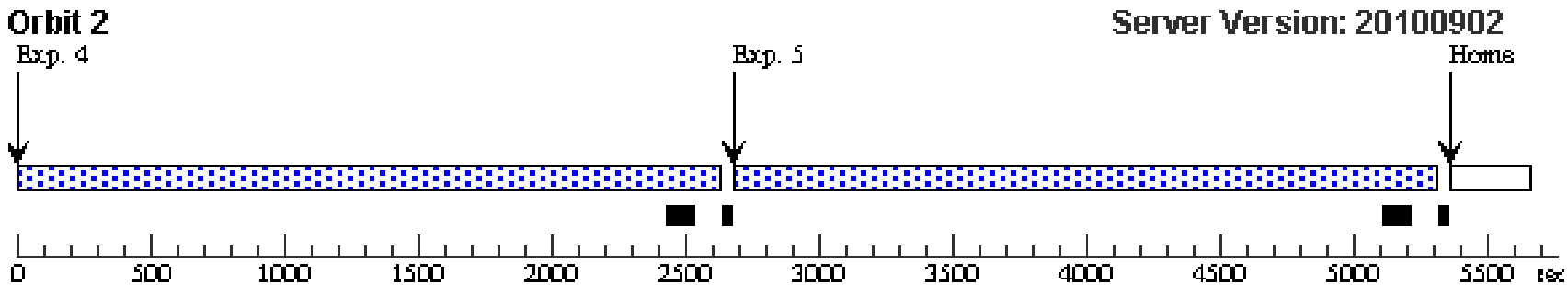
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	SDSS1711+6052	RA: 17 11 34.4122 (257.8933842d) Dec: +60 52 40.39 (60.87789d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=19.3+/-0.2 3.7E-17 ergs/cm2/s/A at 1550A	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(2) SDSS1711+6052	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				300 Secs	
								[==>]	***[1]***
2		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=1;			2020 Secs	
				1105 A	BUFFER-TIME=1740			*[==>]*	***[1]***
3		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=2;			2020 Secs	
				1105 A	BUFFER-TIME=1910			*[==>]*	***[1]***
4		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=3;			2575 Secs	
				1105 A	BUFFER-TIME=2400			*[==>]*	***[2]***
5		(2) SDSS1711+6052	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2575 Secs	
				1105 A	BUFFER-TIME=2400			*[==>]*	***[2]***

Orbit Structure





Visit

Proposal 12249, Visit C1, failed Thu Dec 23 03:00:21 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: We will use several FP positions and switch between wavelength 1105 and 1280A.

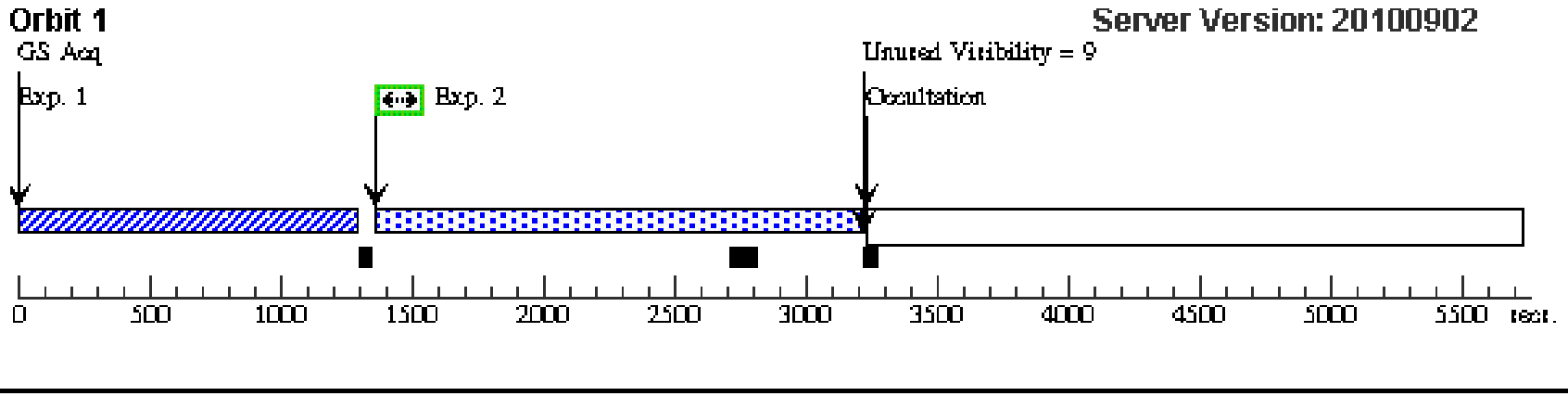
Fixed Targets

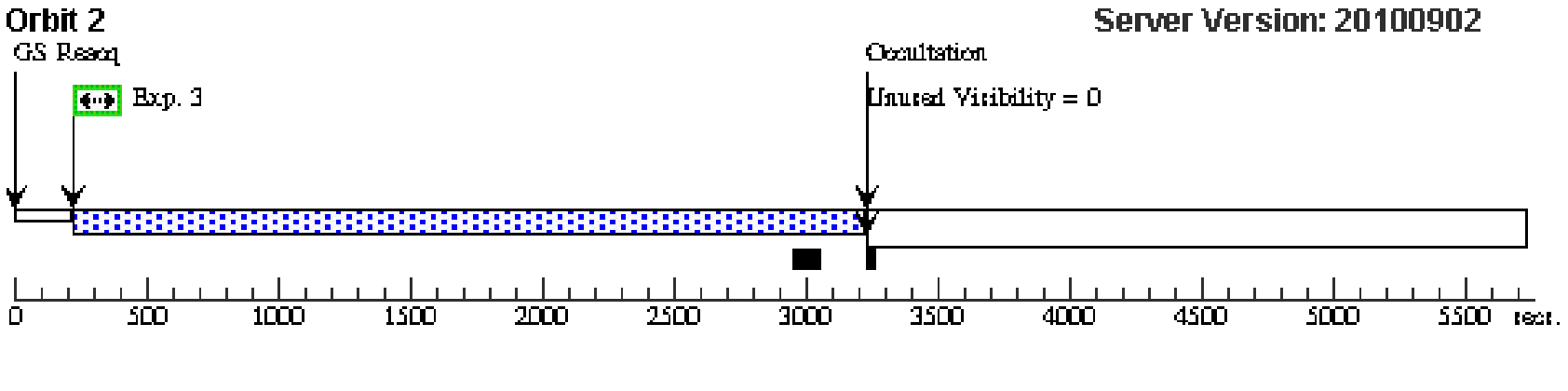
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS2346-0016	RA: 23 46 25.6616 (356.6069233d)	Proper Motion RA: null	V=17.8+/-0.2	Reference Frame: ICRS
		Dec: -00 16 0.47 (-.26680d)	Proper Motion Dec: null	3.7E-17 ergs/cm2/s/A at 1400A	
		Equinox: J2000	Epoch of Position:		

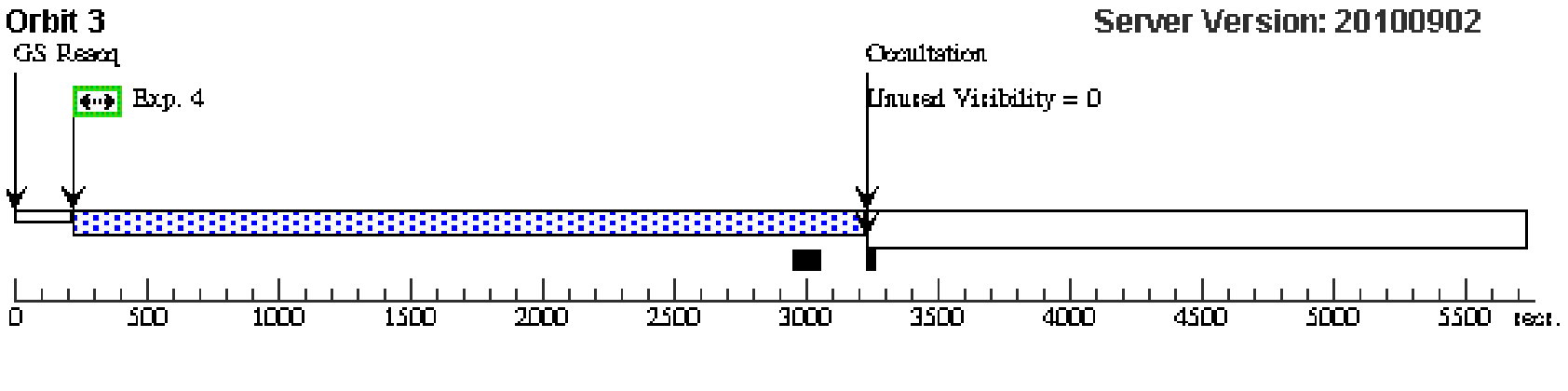
Exposures

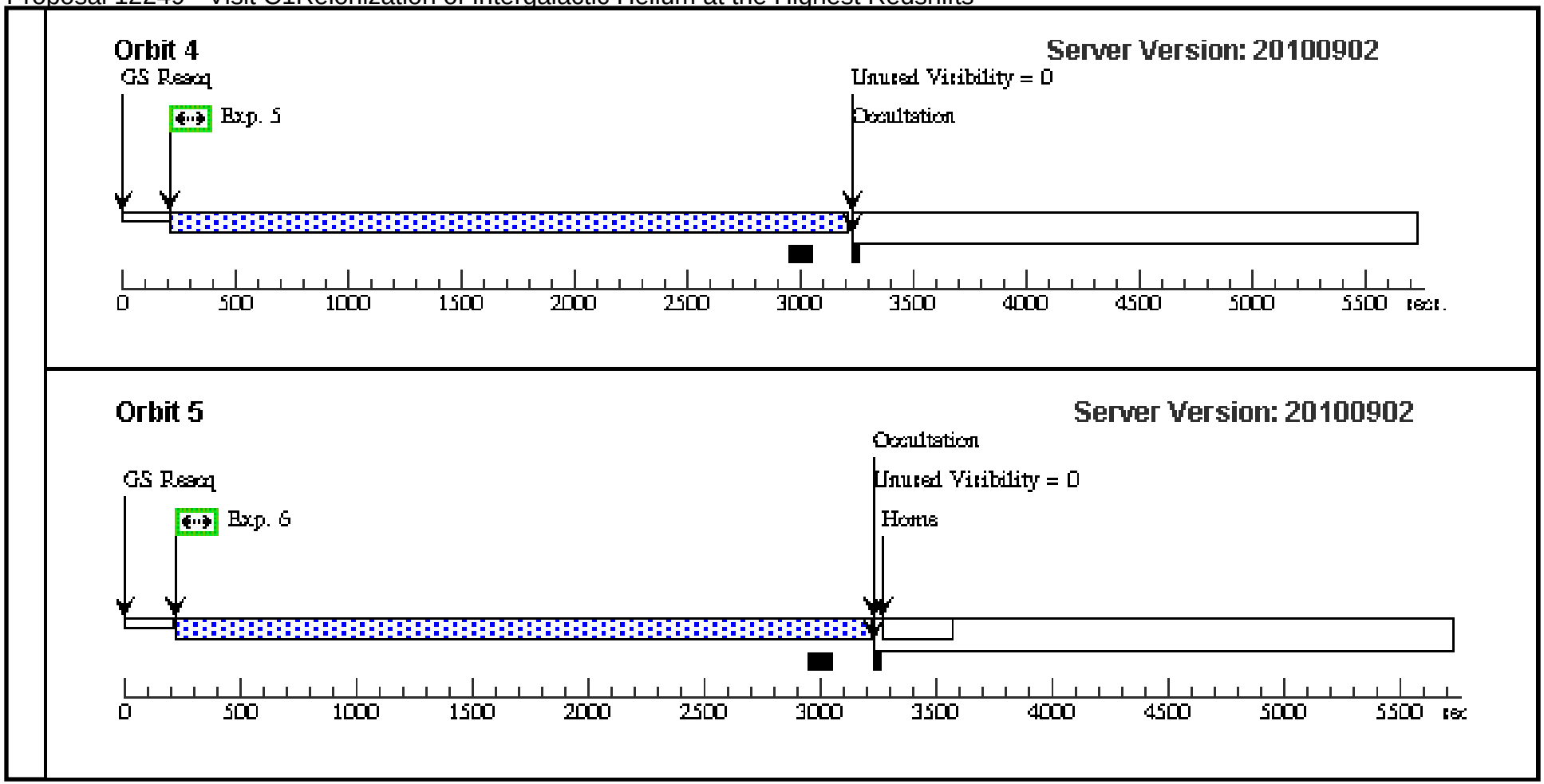
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(3) SDSS2346-0016	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				450 Secs	
								[==>]	***[1]***
2		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=1;			1370 Secs	
				1280 A	BUFFER-TIME=1200			*[==>1674.0 Secs]*	***[1]***
3		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=1;			2980 Secs	
				1280 A	BUFFER-TIME=2700			*[==>2948.0 Secs]*	***[2]***
4		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=1;			2980 Secs	
				1280 A	BUFFER-TIME=2700			*[==>2948.0 Secs]*	***[3]***
5		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=2;			2980 Secs	
				1280 A	BUFFER-TIME=2700			*[==>2948.0 Secs]*	***[4]***
6		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=2;			2980 Secs	
				1280 A	BUFFER-TIME=2700			*[==>2948.0 Secs]*	***[5]***

Orbit Structure





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1500
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3500
4000
4500
5000
5500
sec.
Orbit 5
Server Version: 20100902
Occultation
GS Reacq
Unused Visibility = 0
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12249, Visit C2, withdrawn Thu Dec 23 03:00:23 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: We will use several FP positions, and switch between wavelength 1105 and 1280A.
The spectrum will be with no gap in wavelength.

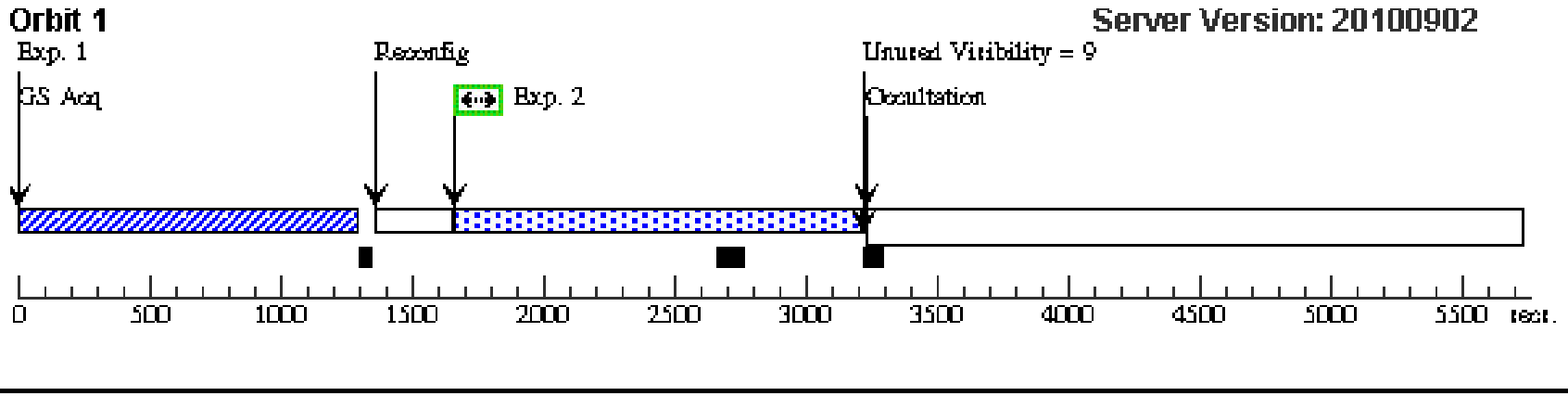
Fixed Targets

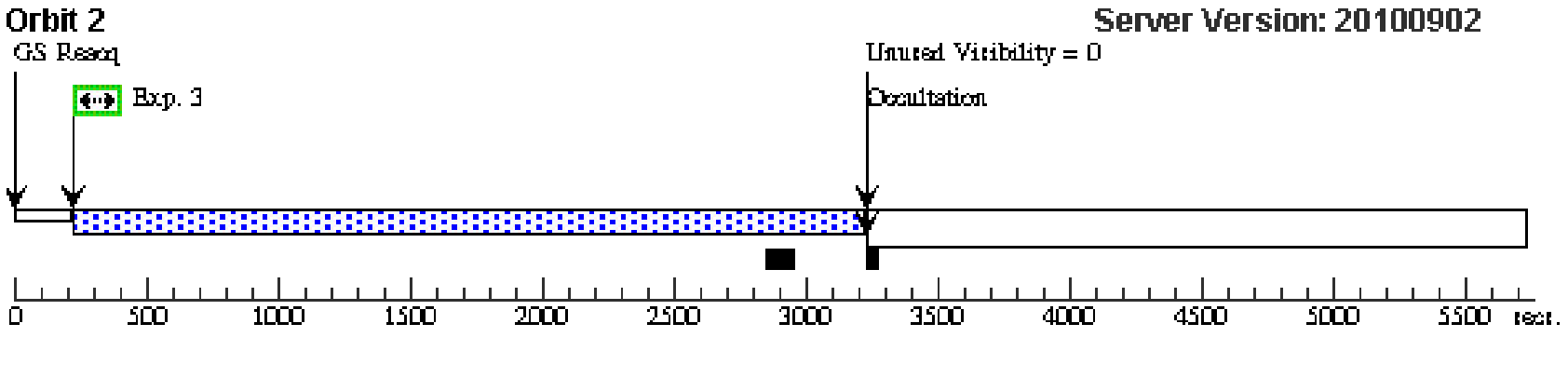
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS2346-0016	RA: 23 46 25.6616 (356.6069233d)	Proper Motion RA: null	V=17.8+/-0.2	Reference Frame: ICRS
		Dec: -00 16 0.47 (-.26680d)	Proper Motion Dec: null	3.7E-17 ergs/cm2/s/A at 1400A	
		Equinox: J2000	Epoch of Position:		

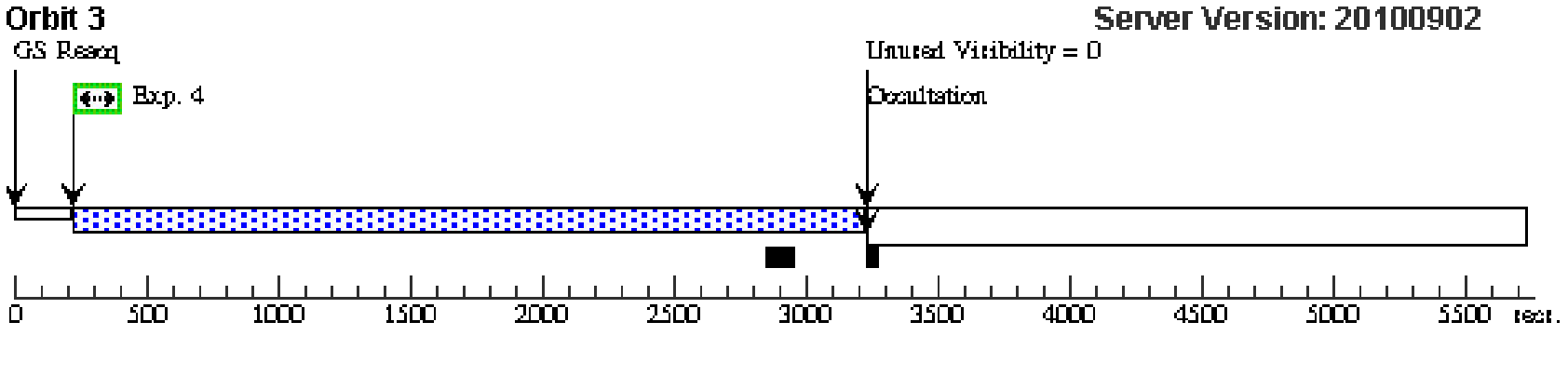
Exposures

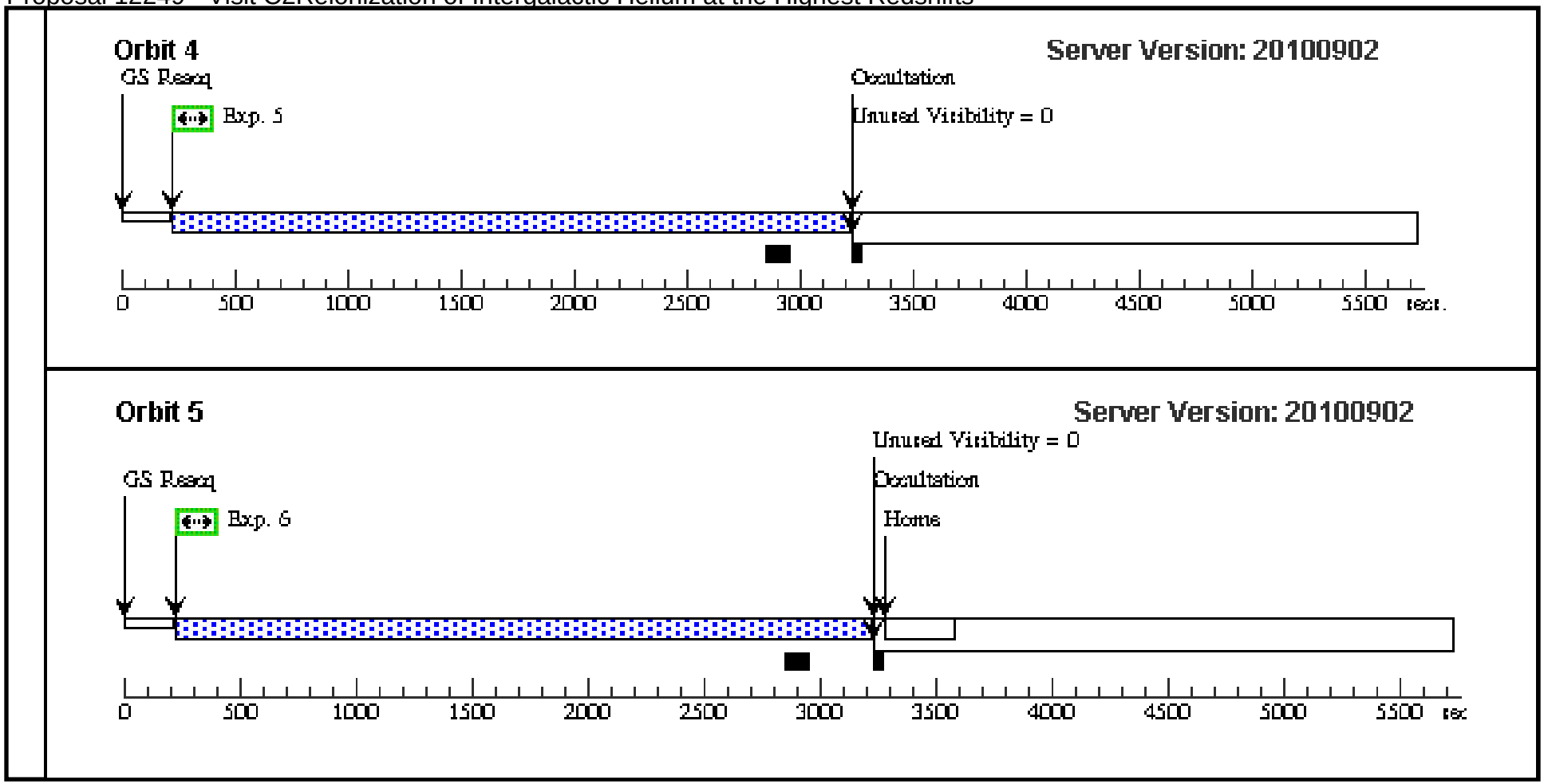
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(3) SDSS2346-0016	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				450 Secs	
								[==>]	***[1]***
2		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			1000 Secs	
				1105 A	BUFFER-TIME=850			*[==>1374.0 Secs]*	***[1]***
3		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[2]***
4		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[3]***
5		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[4]***
6		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[5]***

Orbit Structure





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GS Reacq
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2000
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4000
4500
5000
5500
sec.
Orbit 5
Server Version: 20100902
Unused Visibility = 0
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12249, Visit 02, completed Thu Dec 23 03:00:24 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: We will use several FP positions, and switch between wavelength 1105 and 1280A.
The spectrum will be with no gap in wavelength.

Copy of visit C2 with single star guiding.

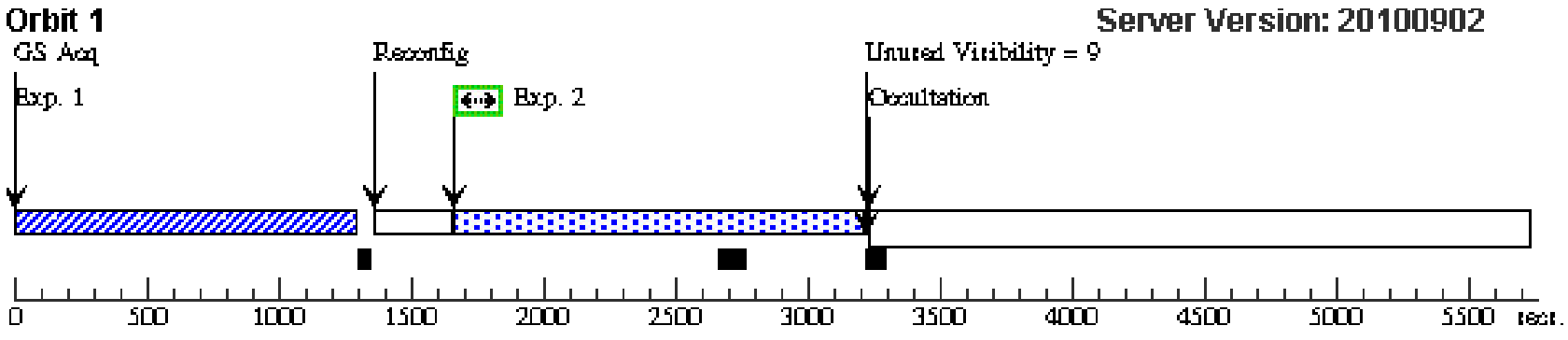
Fixed Targets

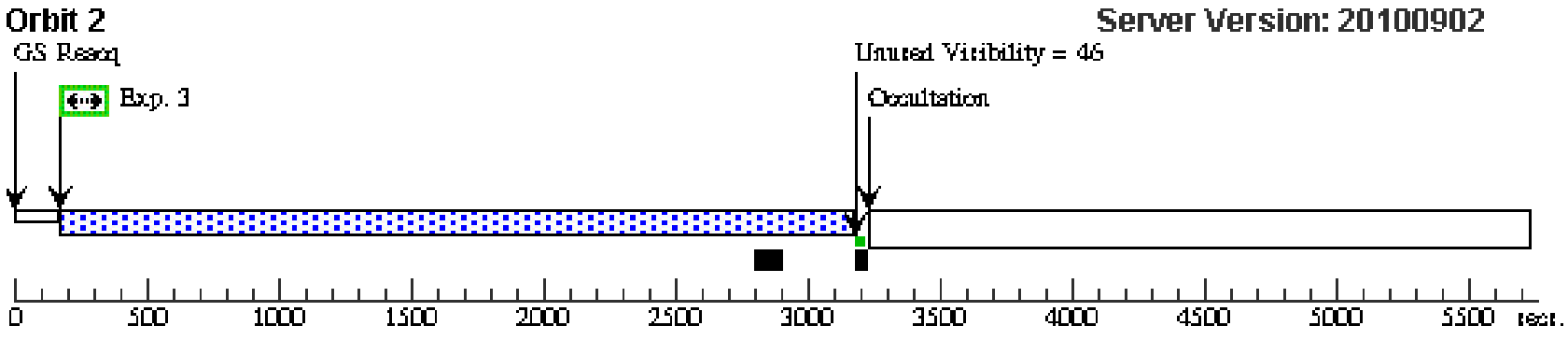
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS2346-0016	RA: 23 46 25.6616 (356.6069233d)	Proper Motion RA: null	V=17.8+/-0.2	Reference Frame: ICRS
		Dec: -00 16 0.47 (-.26680d)	Proper Motion Dec: null	3.7E-17 ergs/cm2/s/A at 1400A	
		Equinox: J2000	Epoch of Position:		

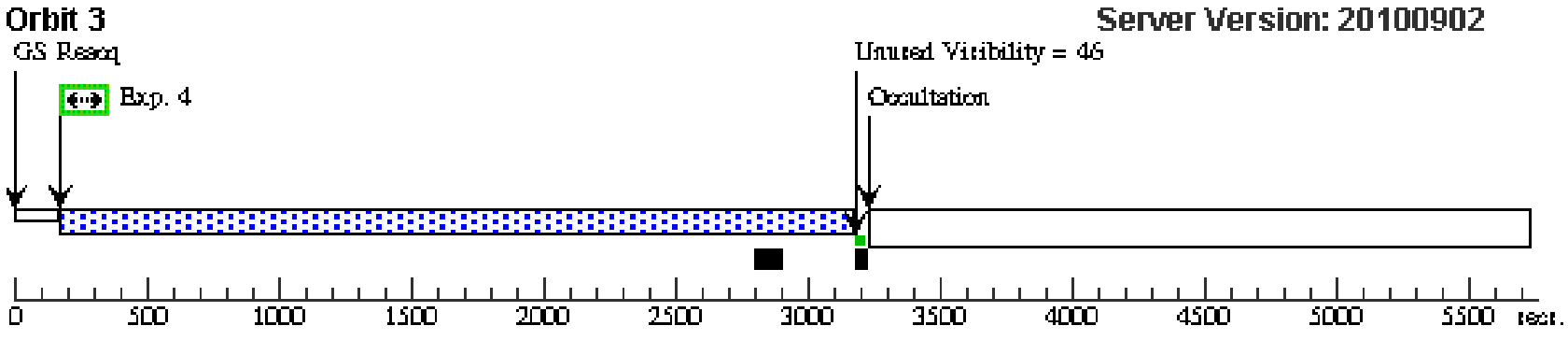
Exposures

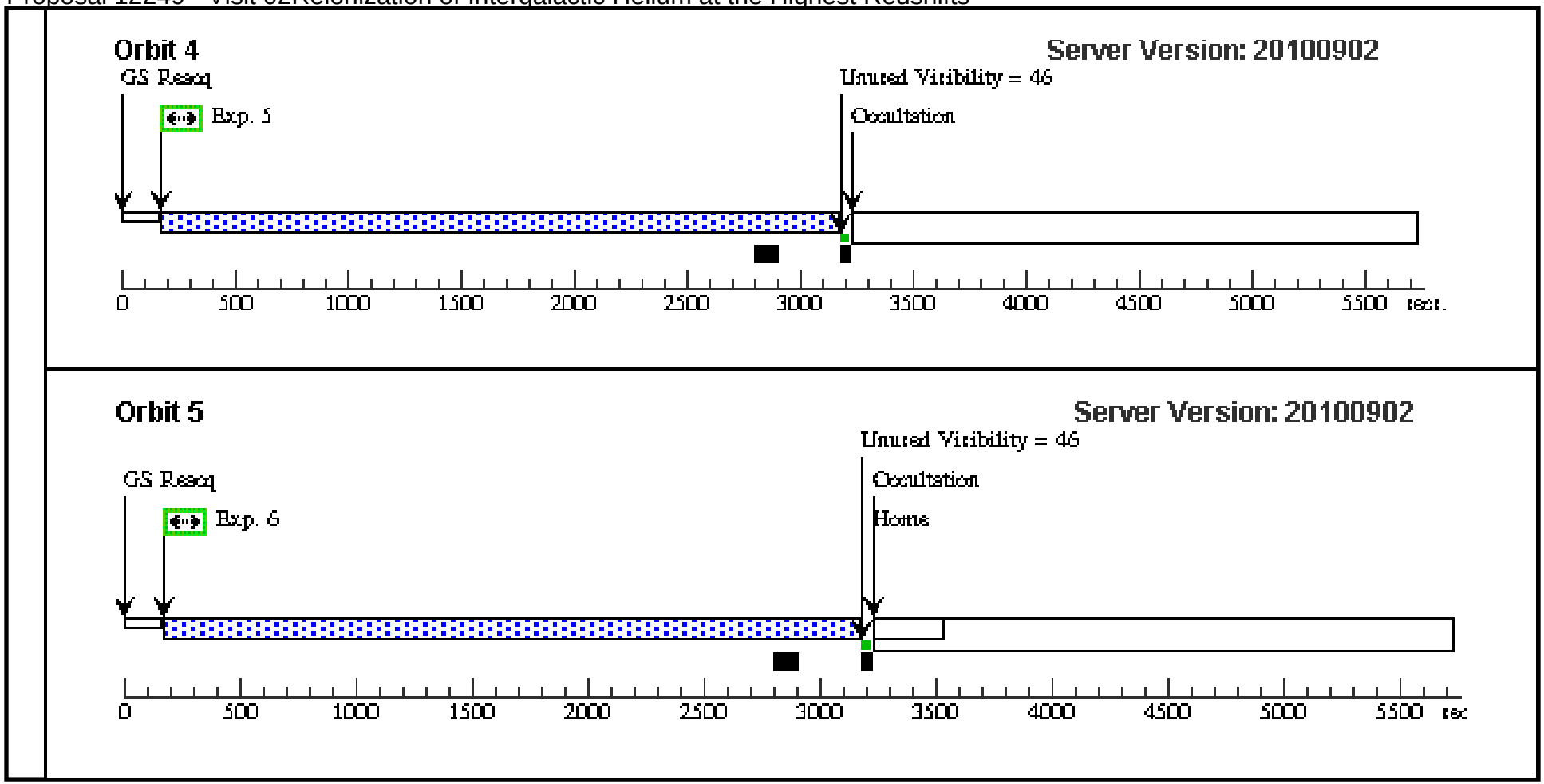
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(3) SDSS2346-0016	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		GS ACQ SCENARIO SINGLE		450 Secs	
								[==>]	***[1]***
2		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			1000 Secs	
				1105 A	BUFFER-TIME=850			*[==>1374.0 Secs]*	***[1]***
3		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[2]***
4		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[3]***
5		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[4]***
6		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L	FP-POS=4;			2900 Secs	
				1105 A	BUFFER-TIME=2600			*[==>2948.0 Secs]*	***[5]***

Orbit Structure








Orbit 4
Server Version: 20100902
GS Reacq
Exp. 5
Unused Visibility = 46
Occultation
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 5
Server Version: 20100902
Unused Visibility = 46
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12249, Visit D1, scheduling Thu Dec 23 03:00:25 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

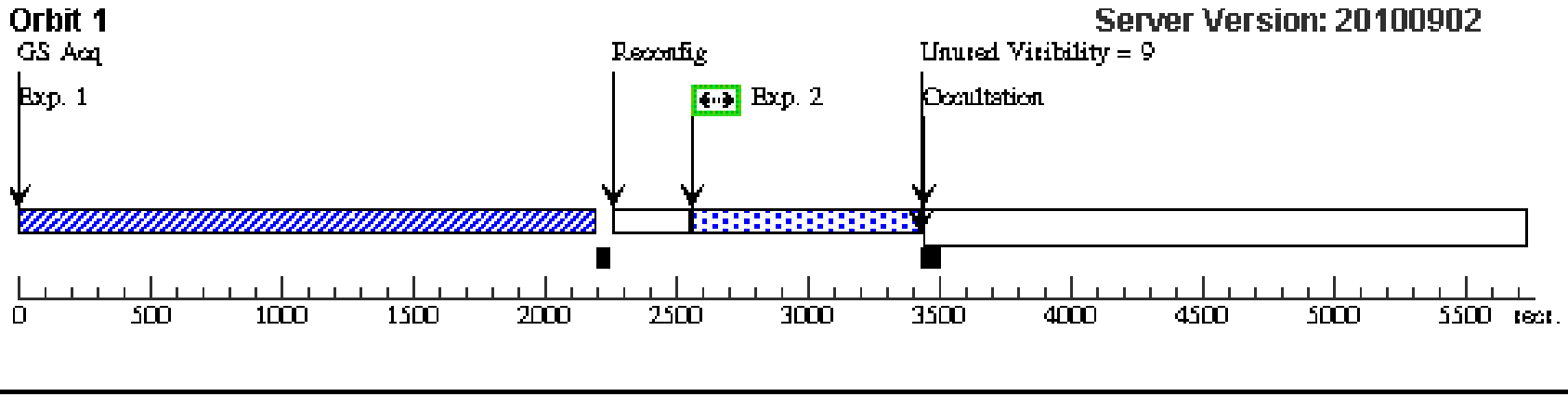
Fixed Targets

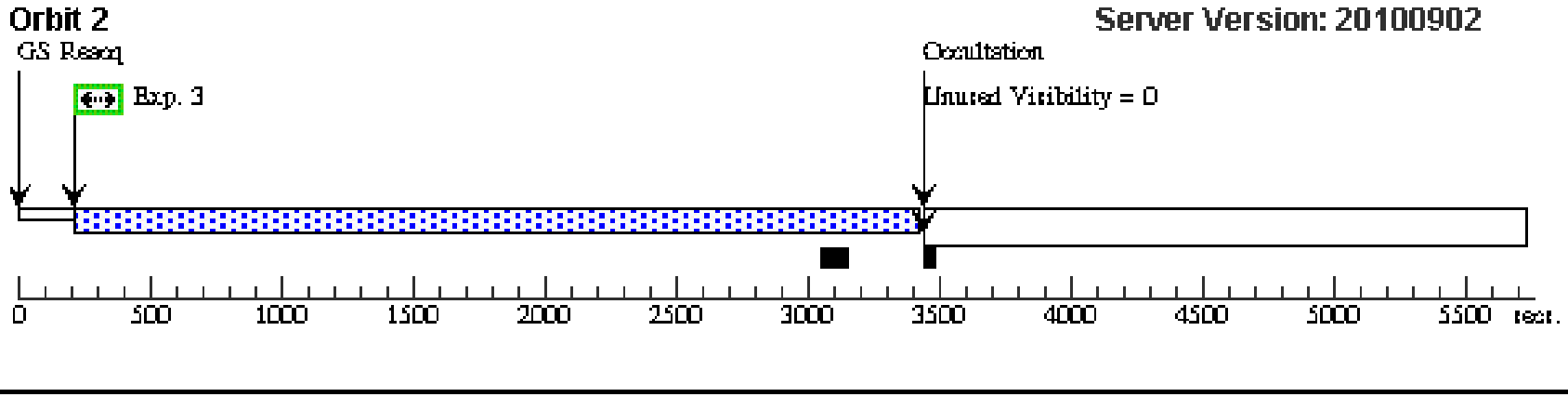
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSS1319+5202	RA: 13 19 14.2051 (199.8091879d) Dec: +52 02 0.11 (52.03336d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=17.8+/-0.2 2.8E-17 ergs/s/cm2/A at 1600A	Reference Frame: ICRS

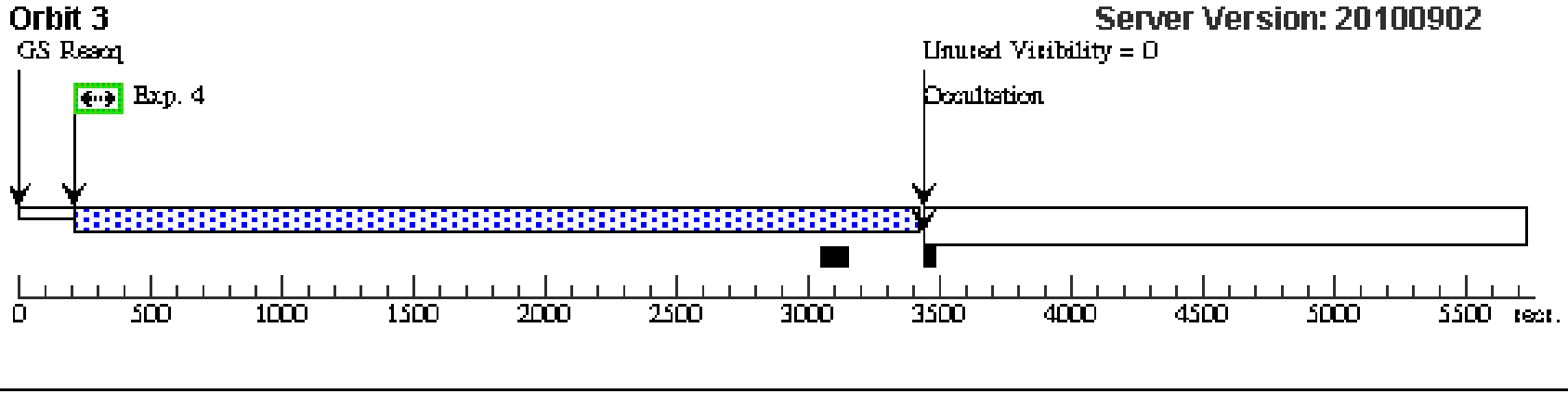
Exposures

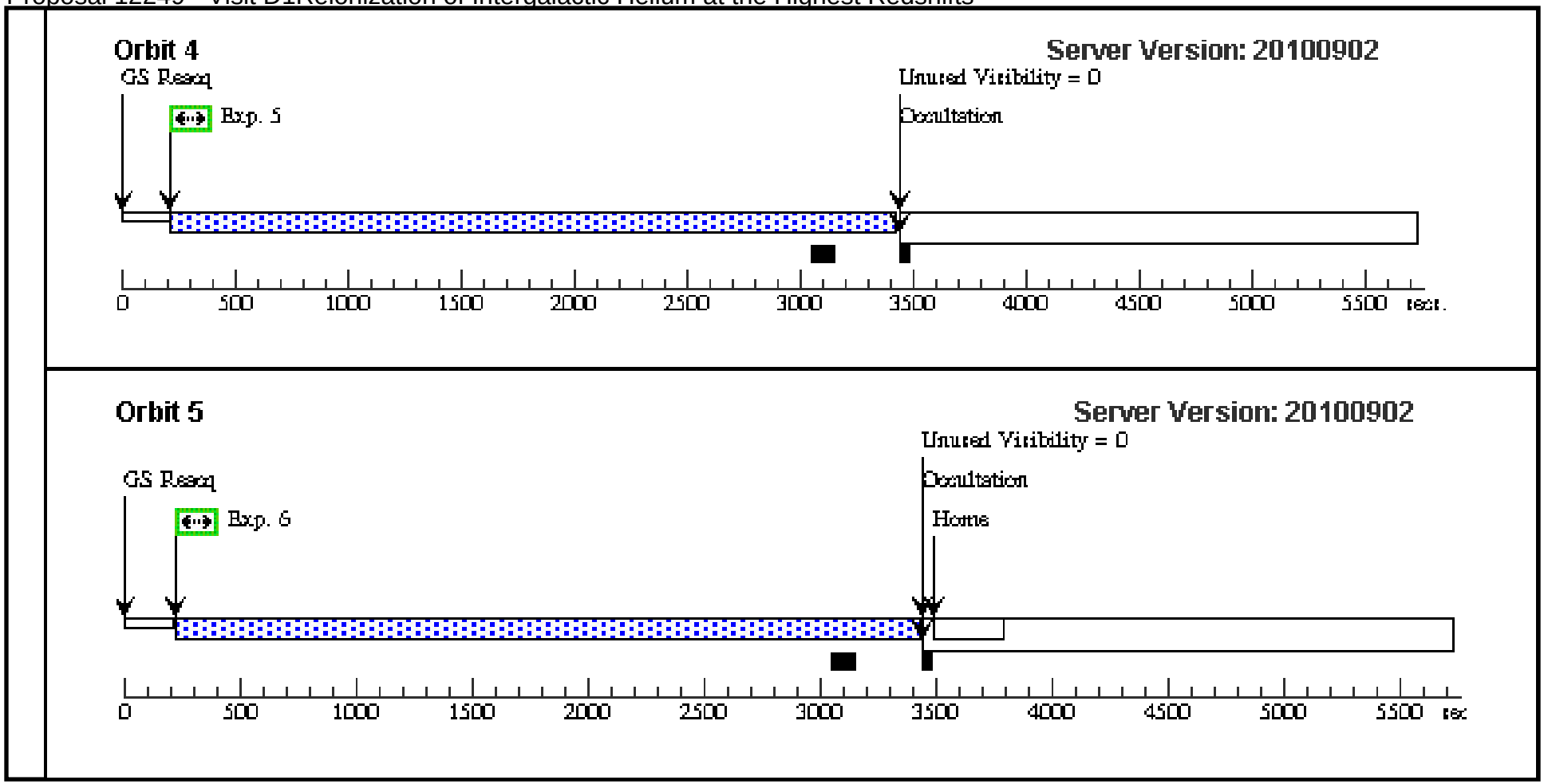
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(4) SDSS1319+5202	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				900 Secs *[==>]*	*[1]*
2		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=1; BUFFER-TIME=1200			1500 Secs *[==>685.0 Secs]*	*[1]*
3		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=2; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[2]*
4		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=3; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[3]*
5		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=4; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[4]*
6		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=4; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[5]*

Orbit Structure








Orbit 4
Server Version: 20100902
GS Reacq
Exp. 5
Unused Visibility = 0
Occultation
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 5
Server Version: 20100902
Unused Visibility = 0
GS Reacq
Occultation
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12249, Visit D2, scheduling Thu Dec 23 03:00:26 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

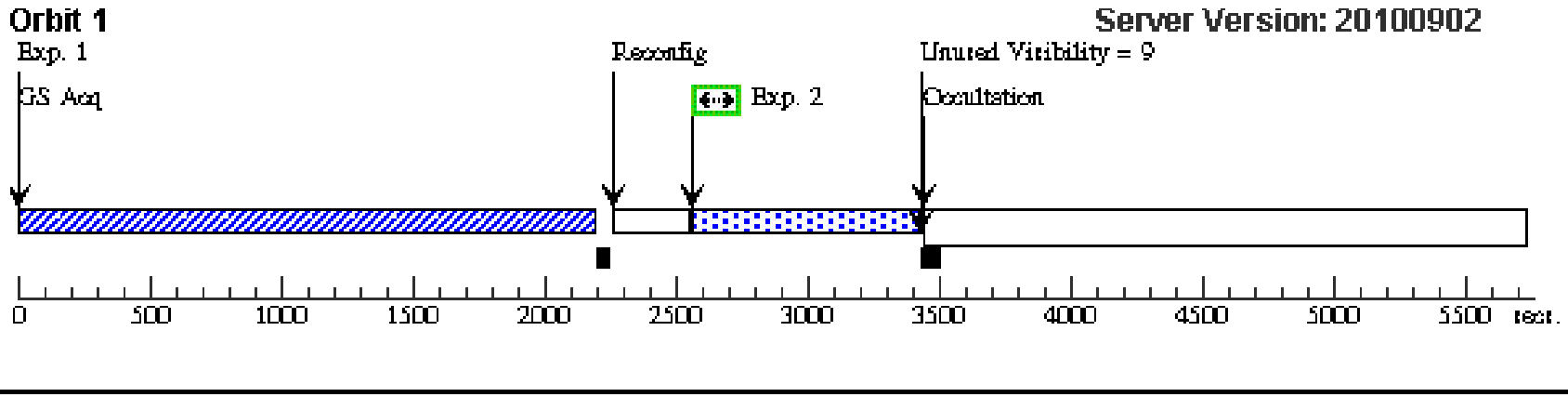
Fixed Targets

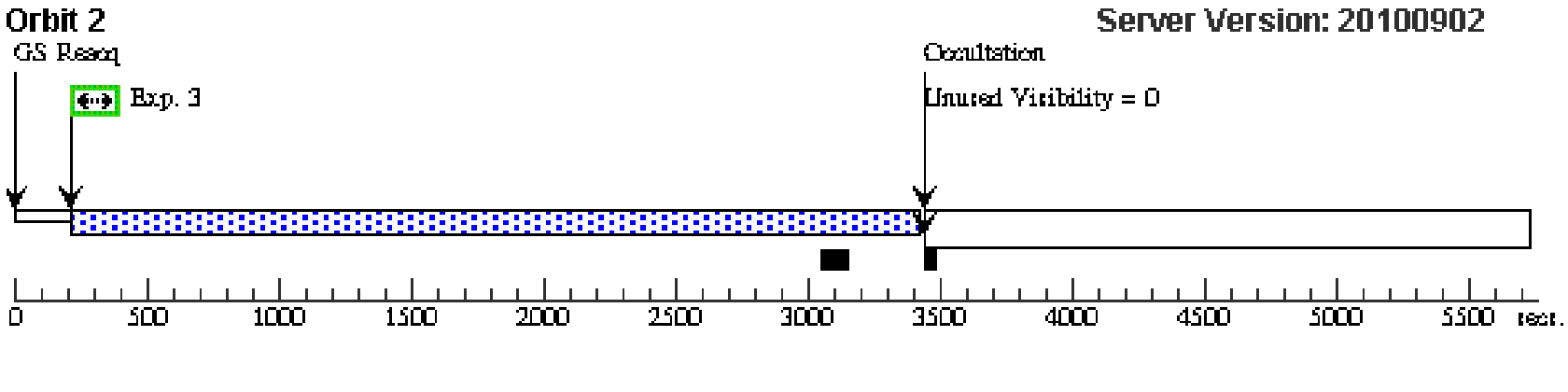
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	SDSS1319+5202	RA: 13 19 14.2051 (199.8091879d) Dec: +52 02 0.11 (52.03336d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=17.8+/-0.2 2.8E-17 ergs/s/cm2/A at 1600A	Reference Frame: ICRS

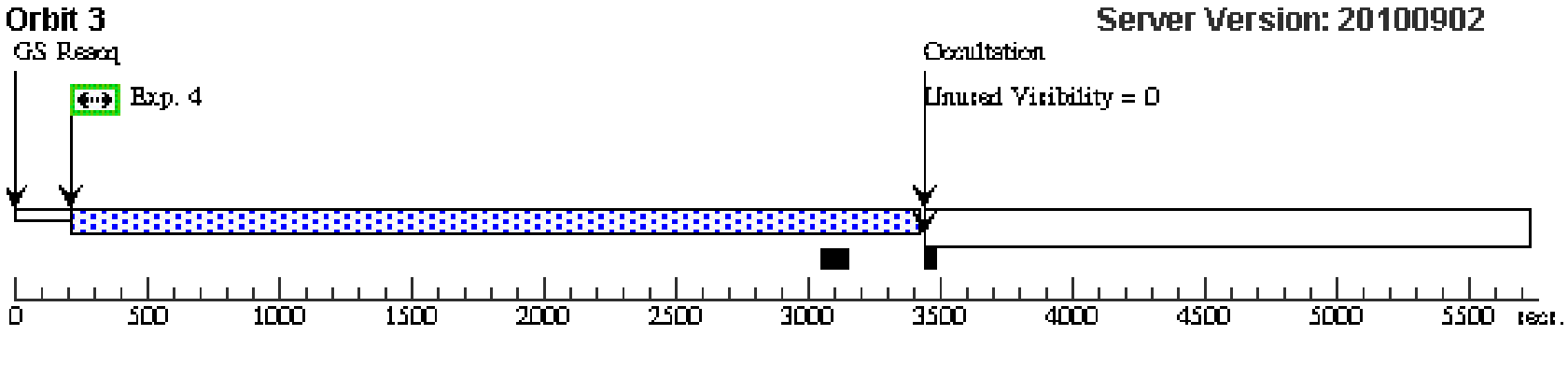
Exposures

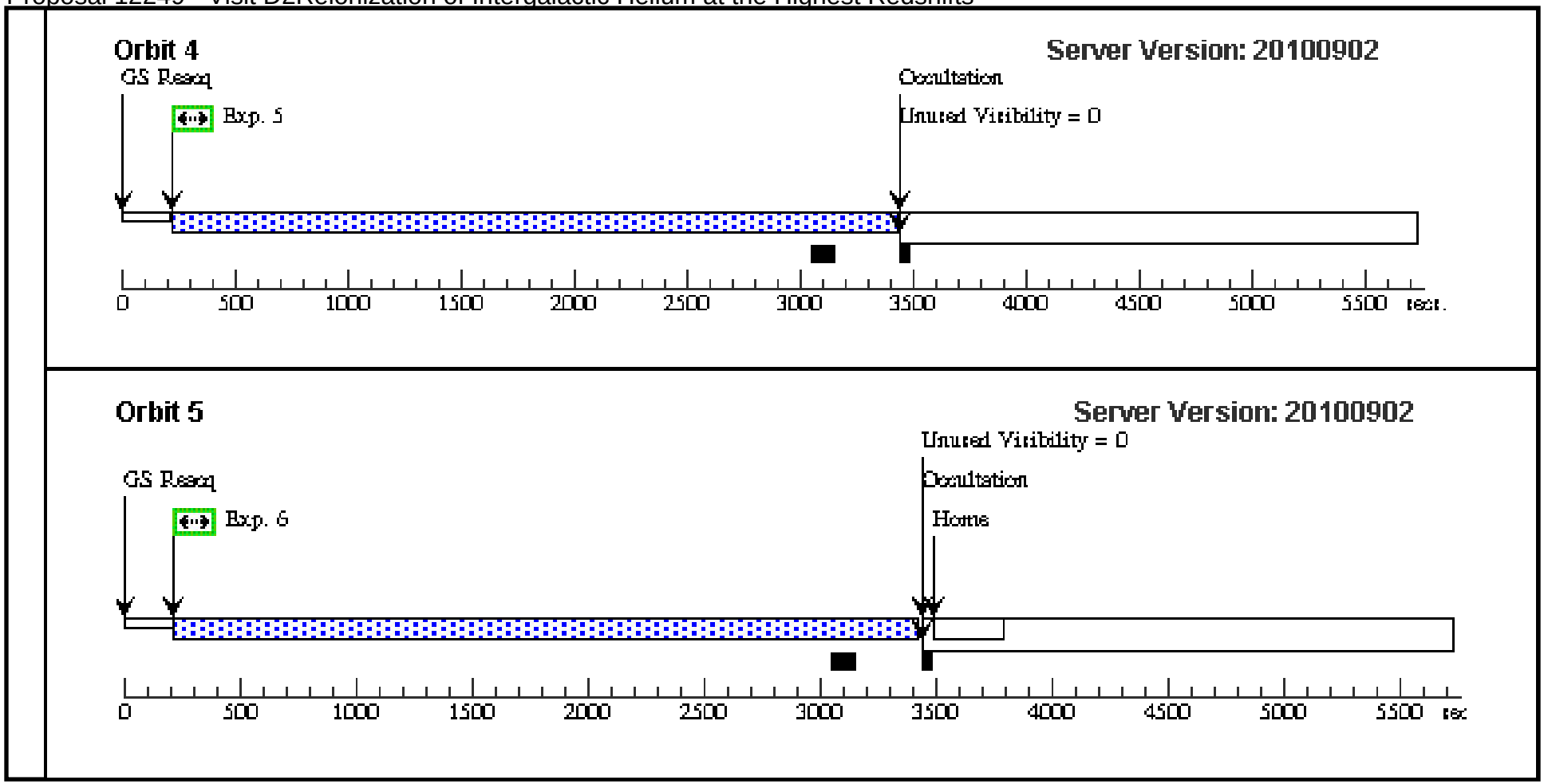
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(4) SDSS1319+5202	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				900 Secs *[==>]*	*[1]*
2		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=1; BUFFER-TIME=1200			1500 Secs *[==>685.0 Secs]*	*[1]*
3		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=2; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[2]*
4		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=3; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[3]*
5		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=3; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[4]*
6		(4) SDSS1319+5202	COS/FUV, TIME-TAG, PSA	G140L 1105 A	FP-POS=4; BUFFER-TIME=2800			3100 Secs *[==>3159.0 Secs]*	*[5]*

Orbit Structure








Orbit 4
Server Version: 20100902
GS Reacq
Exp. 5
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 5
Server Version: 20100902
Unused Visibility = 0
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12249, Visit E1 Thu Dec 23 03:00:27 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

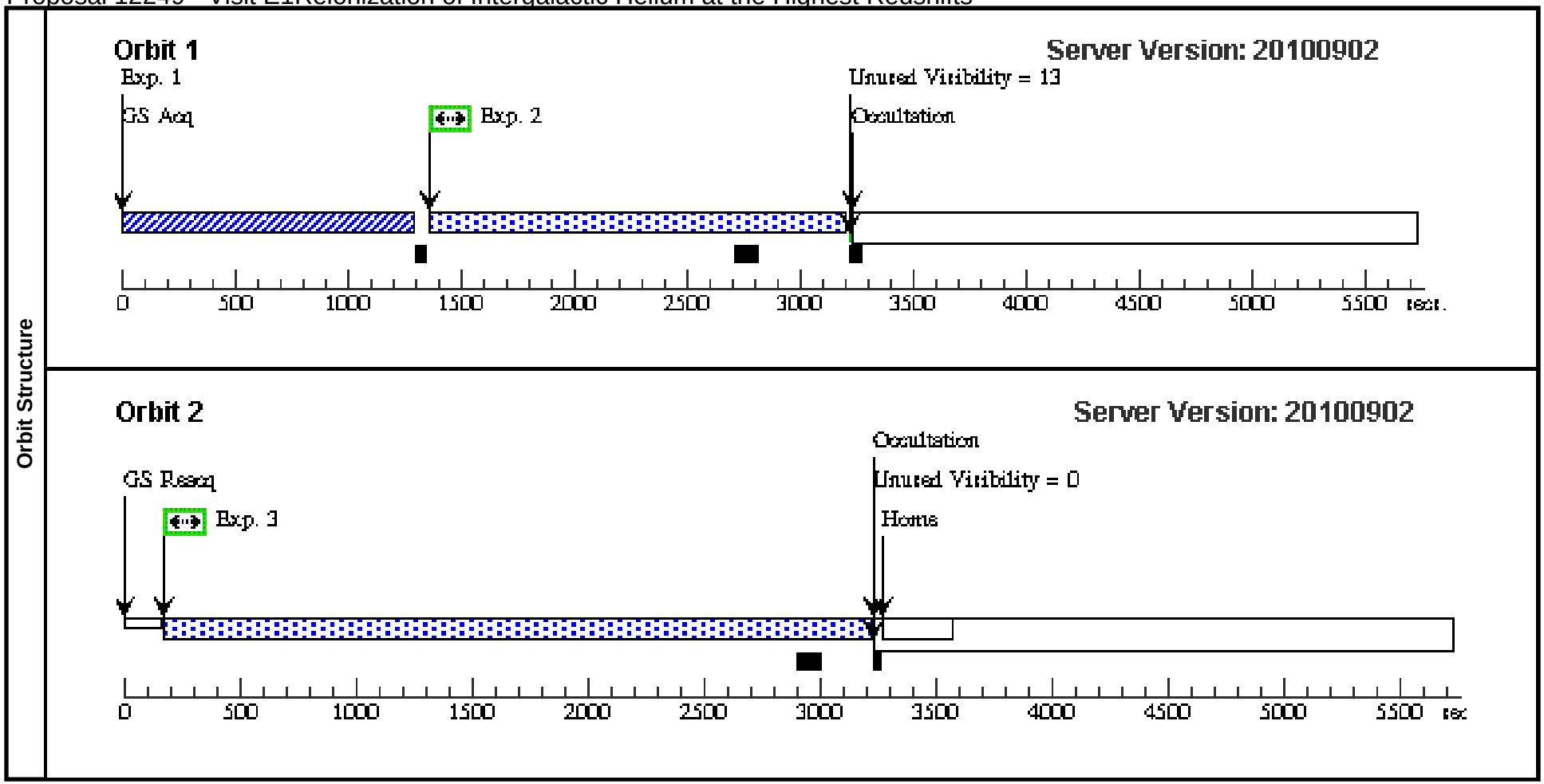
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	SDSS2346-0016	RA: 23 46 25.6616 (356.6069233d) Dec: -00 16 0.47 (-.26680d) Equinox: J2000	Proper Motion RA: null Proper Motion Dec: null Epoch of Position:	V=17.8+/-0.2 3.7E-17 ergs/cm2/s/A at 1400A	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACQ	(3) SDSS2346-0016	COS/NUV, ACQ/IMAGE, PSA	MIRRORA		GS ACQ SCENARIO SINGLE		450 Secs *[==>]*	*[1]*
2		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=1; BUFFER-TIME=1200			1670 Secs *[==>]*	*[1]*
3		(3) SDSS2346-0016	COS/FUV, TIME-TAG, PSA	G140L 1280 A	FP-POS=2; BUFFER-TIME=2700			2980 Secs *[==>2994.0 Secs]*	*[2]*


Orbit Structure
Orbit 1
Server Version: 20100902
Exp. 1
GS Acq
Exp. 2
Unused Visibility = 13
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20100902
Occultation
GS Reacq
Unused Visibility = 0
Exp. 3
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec