



13778 - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line Systems

Cycle: 22, 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) AZV18	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2015 08:34:04.0	yes
02	(2) AZV26	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2015 08:34:05.0	yes
03	(3) AZV47	STIS/CCD STIS/NUV-MAMA	2	17-Jun-2015 08:34:07.0	yes
04	(4) HD5045	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	17-Jun-2015 08:34:10.0	yes
05	(5) AZV80	STIS/CCD STIS/NUV-MAMA	2	17-Jun-2015 08:34:12.0	yes

Proposal 13778 (STScI Edit Number: 1, Created: Wednesday, June 17, 2015 7:34:41 AM EST) - Overview

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
06	(6) AZV95	STIS/CCD STIS/NUV-MAMA	3	17-Jun-2015 08:34:14.0	yes
07	(7) AZV207	STIS/CCD STIS/NUV-MAMA	4	17-Jun-2015 08:34:16.0	yes
08	(8) AZV242	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	17-Jun-2015 08:34:19.0	yes
09	(9) AZV321	STIS/CCD STIS/NUV-MAMA	3	17-Jun-2015 08:34:21.0	yes
10	(9) AZV321	STIS/CCD STIS/FUV-MAMA	3	17-Jun-2015 08:34:23.0	yes
11	(10) AZV388	STIS/CCD STIS/NUV-MAMA	3	17-Jun-2015 08:34:25.0	yes
12	(10) AZV388	STIS/CCD STIS/FUV-MAMA	3	17-Jun-2015 08:34:27.0	yes
13	(11) AZV456	STIS/CCD STIS/NUV-MAMA	5	17-Jun-2015 08:34:30.0	yes
14	(12) AZV476	STIS/CCD STIS/NUV-MAMA	3	17-Jun-2015 08:34:33.0	yes
15	(12) AZV476	STIS/CCD STIS/NUV-MAMA	4	17-Jun-2015 08:34:35.0	yes
16	(13) SK190	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	3	17-Jun-2015 08:34:37.0	yes
17	(14) SK191	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2015 08:34:38.0	yes
18	(2) AZV26	STIS/CCD STIS/NUV-MAMA	1	17-Jun-2015 08:34:39.0	yes

47 Total Orbits Used

ABSTRACT

The availability of 10-m class telescopes with high resolution echelle spectrographs has enabled astronomers to measure accurately the gas-phase abundances of various elements in QSO absorption line systems at high redshifts. These systems offer insights on the chemical evolution of galaxies (and their nearby environments) in their early stages of development. However, in order to obtain total abundances the observations need to be corrected for the depletions caused by the formation of dust, and traditionally people have done so by using the depletion patterns seen in our own Galaxy. There is now evidence that indicates that such patterns in low-metallicity systems differ from those of our Galaxy and thus the corrections may be misleading. The aim of our proposed HST observations is to measure the gas-phase abundances toward stars in the Small Magellanic Cloud, which is a low-metallicity dwarf galaxy where there exist good measurements of stellar comparison abundances. We plan to record ISM absorption features from STIS medium-resolution echelle spectra for 14 stars in the SMC that are known to have varying levels of depletion, so that we can derive the gas-phase abundance patterns of the elements Ni, Fe, Cr, Mn, Si, Mg, Ge, Kr, Zn, and perhaps P.

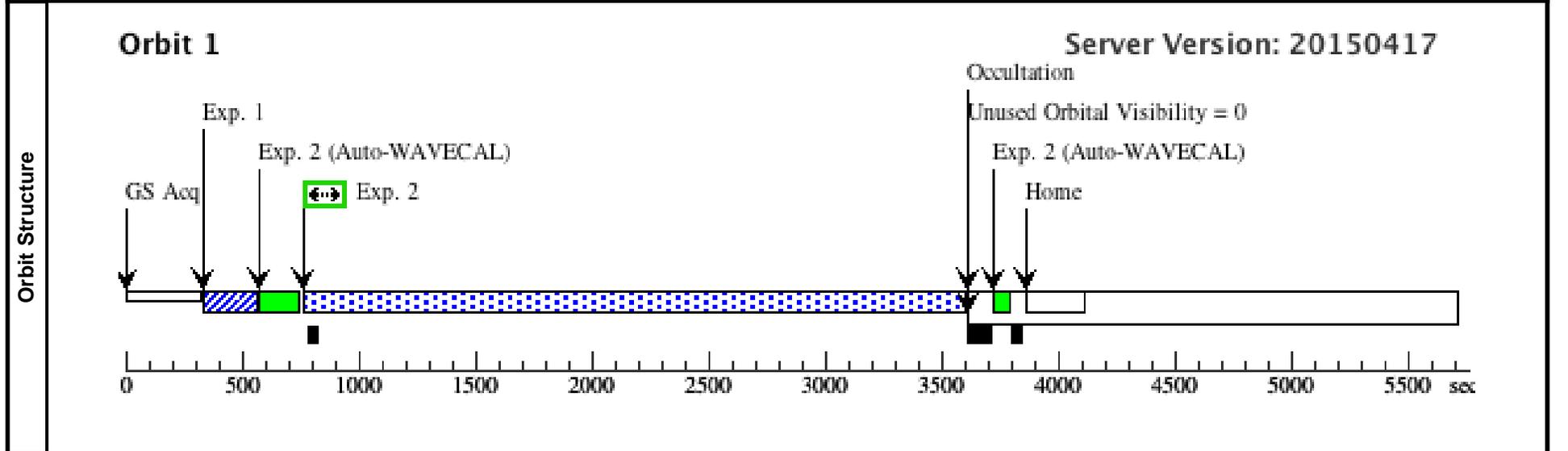
Proposal 13778 - AZV18 (01) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line ...

Wed Jun 17 12:34:41 GMT 2015

Visit	Proposal 13778, AZV18 (01), completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: STIS/CCD, STIS/NUV-MAMA				
	Special Requirements: (none)				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	AZV18	RA: 00 47 12.1680 (11.8007000d) Dec: -73 06 32.68 (-73.10908d) Equinox: J2000	Epoch of Position: 1989.89	V=12.44+/-0.1 B-V = 0.03; F(1240) = 5.00E-14; F(1980) = 1.40E-13; F(2270) = 1.40E-13	Reference Frame: ICRS
<i>Comments: GSC2 catalog shows another point source that is 5.5 arc sec away from the target. It is fainter in K by 1.9 mag, and it is fainter in J by 2.17 mag. This should not perturb the acquisition.</i>						

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQforAZ V18 (STIS.ta.619 438)	(1) AZV18	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) [==>]	[1]
	2	AZV18cenw ave2269 (STIS.sp.61 9348)	(1) AZV18	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs (2824 Secs) [==>2824.0 Secs]	[1]
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 25.3</i>										

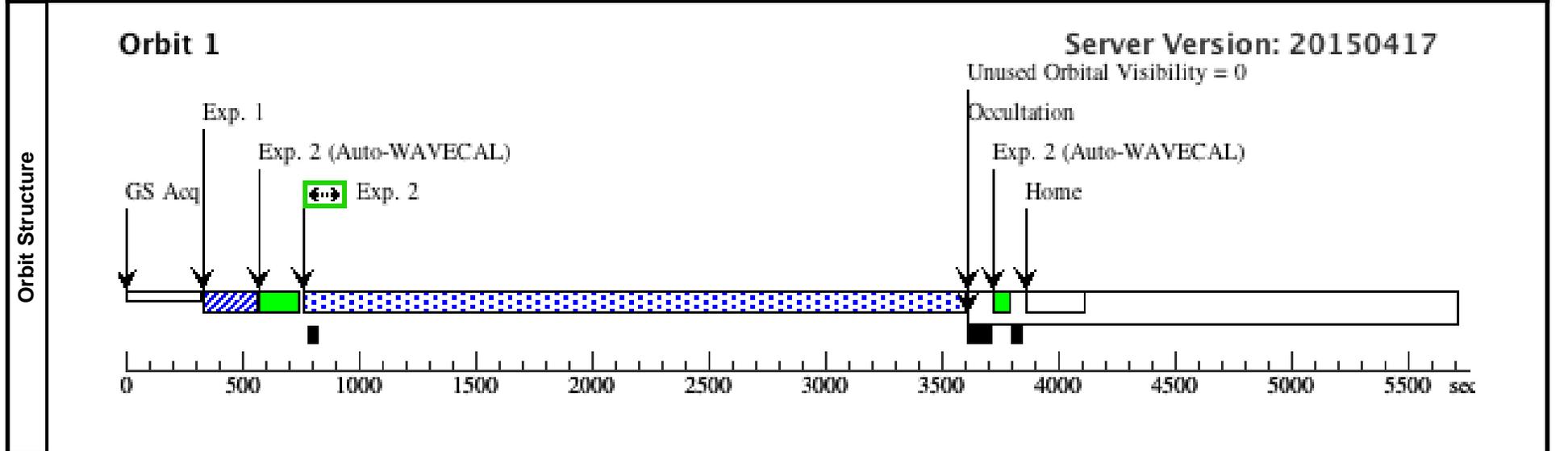


Visit	Proposal 13778, AZV26 (02), failed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: STIS/CCD, STIS/NUV-MAMA				
	Special Requirements: (none)				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	AZV26	RA: 00 47 50.0600 (11.9585833d) Dec: -73 08 21.17 (-73.13921d) Equinox: J2000		V=12.46+/-0.1 B-V = -0.17; F(1240) = 6.00E-13; F(1980) = 5.20E-13; F(2270) = 3.50E-13	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	ACQforAZ V26 (STIS.ta.619 487)	(2) AZV26	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) [==>]	[1]
	2	AZV26cenw ave2269 (STIS.sp.61 9491)	(2) AZV26	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				670 Secs (2824 Secs) [==>2824.0 Secs]	[1]

Comments: S/N in ETC rescaled by $\sqrt{\text{actual time}/\text{ETC time}} = 41.2$

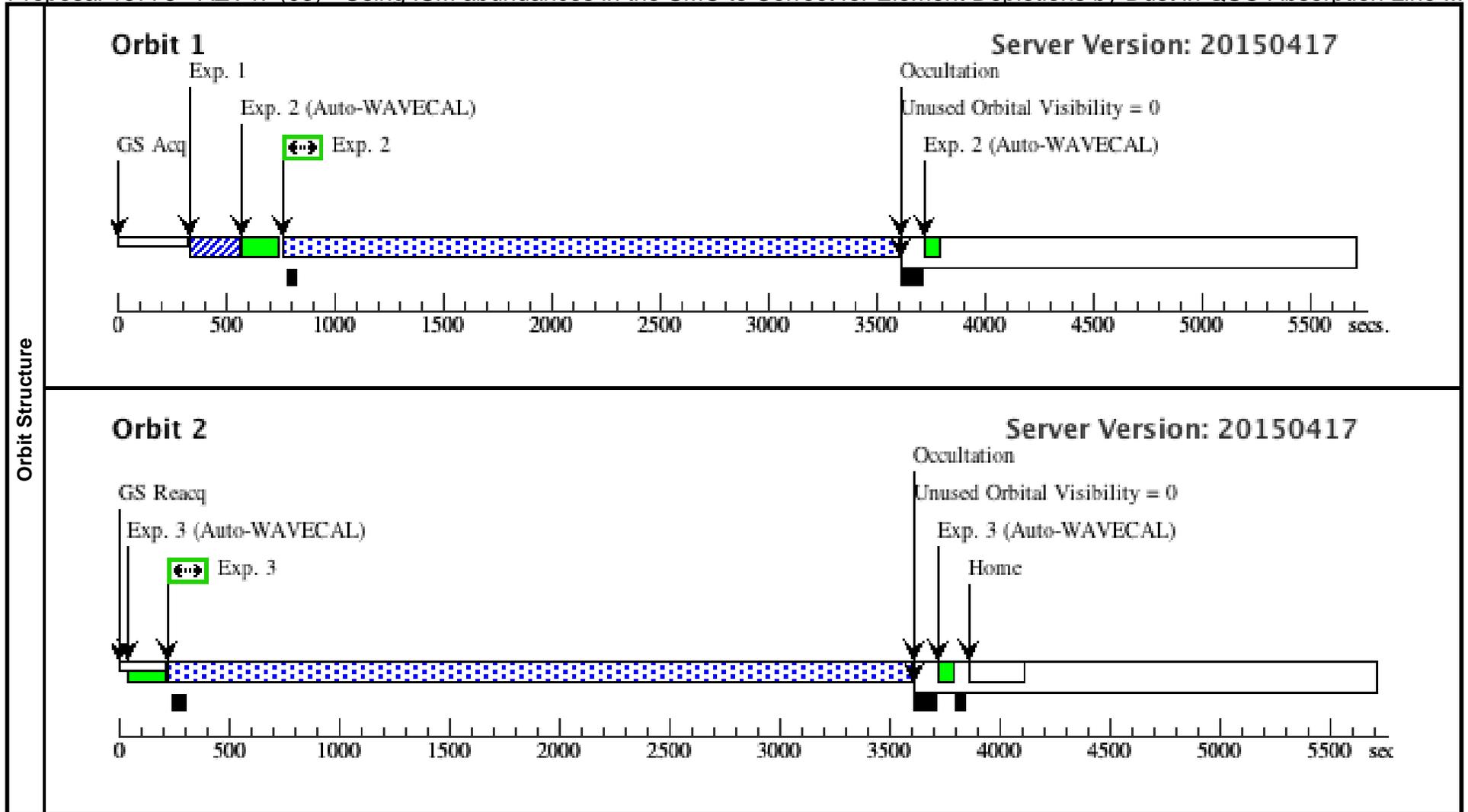


Proposal 13778 - AZV47 (03) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line ...

Wed Jun 17 12:34:41 GMT 2015

Fixed Targets	#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
		(3)	AZV47	RA: 00 48 51.4160 (12.2142333d) Dec: -73 25 58.38 (-73.43288d) Equinox: J2000		V=13.44+/-0.1 B-V = -0.18; F(1240) = 6.00E-13; F(1980) = 2.70E-13; F(2270) = 1.70E-13	Reference Frame: ICRS

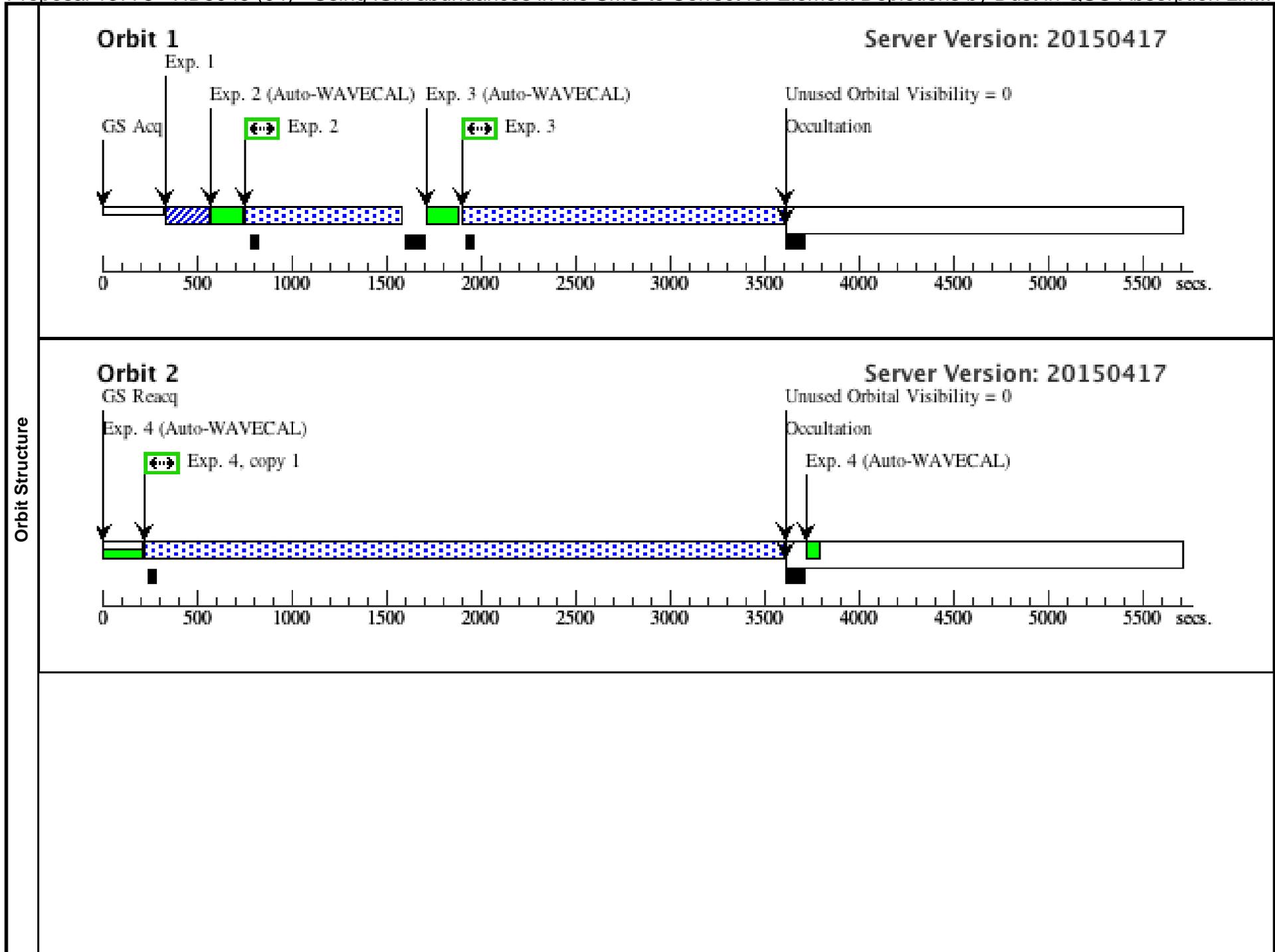
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQforAZ V47 (STIS.ta.619 592)	(3) AZV47	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) [==>]	[1]
	2	AZV47cenw ave2269 (STIS.sp.61 9597)	(3) AZV47	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs (2824 Secs) [==>2824.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 28.1</i>									
3	AZV47cenw ave1978 (STIS.sp.61 9610)	(3) AZV47	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				2880 Secs (3362 Secs) [==>3362.0 Secs]	[2]	
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 23.9</i>										

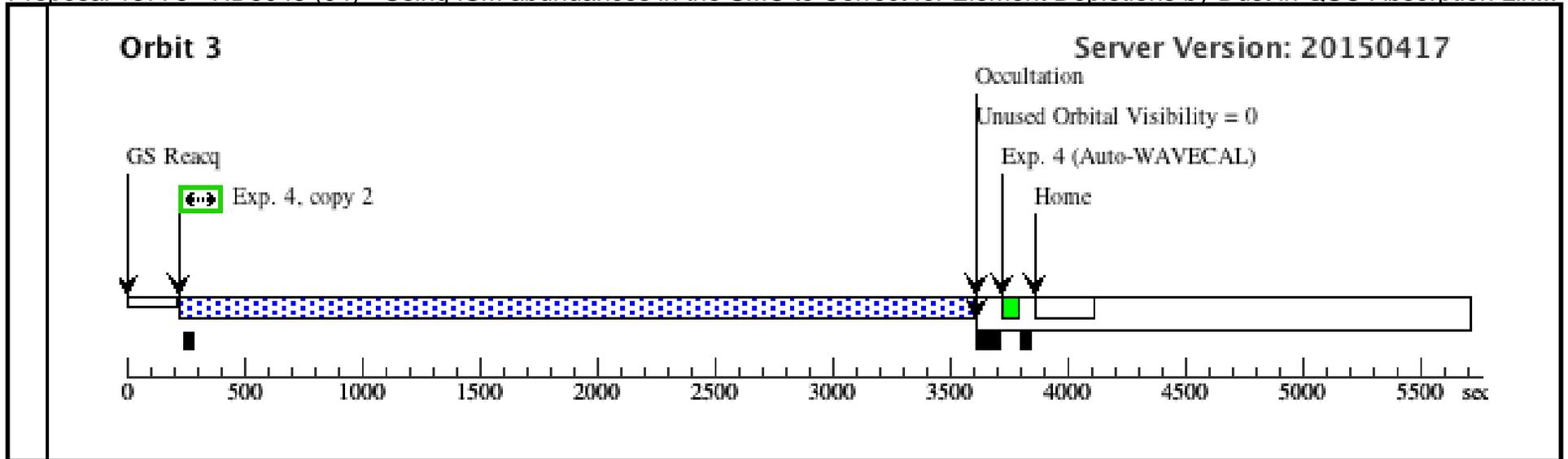


Proposal 13778 - HD5045 (04) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Lin...

Wed Jun 17 12:34:41 GMT 2015

Visit	Proposal 13778, HD5045 (04), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(4)	HD5045 Alt Name1: AZV78	RA: 00 50 38.3970 (12.6599875d) Dec: -73 28 18.27 (-73.47174d) Equinox: J2000		V=11.05+/-0.1 B-V = -0.05; F(1240) = 5.00E-13; F(1980) = 8.00E-13; F(2270) = 8.00E-13	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	ACQforHD 5045 (STIS.ta.619 615)	(4) HD5045	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.3 Secs (0.3 Secs) [==>]	[1]
	2	HD5045cen wave2269 (STIS.sp.61 9617)	(4) HD5045	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				557 Secs (819 Secs) [==>819.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 33.8</i>									
	3	HD5045cen wave1978 (STIS.sp.61 9618)	(4) HD5045	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				1422 Secs (1684 Secs) [==>1684.0 Secs]	[1]
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 30.2</i>										
4	HD5045cen wave1425(2) (STIS.sp.61 9619)	(4) HD5045	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				2880 Secs X 2 (6724 Secs) [==>3362.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[2] [3]	
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 22.1</i>										

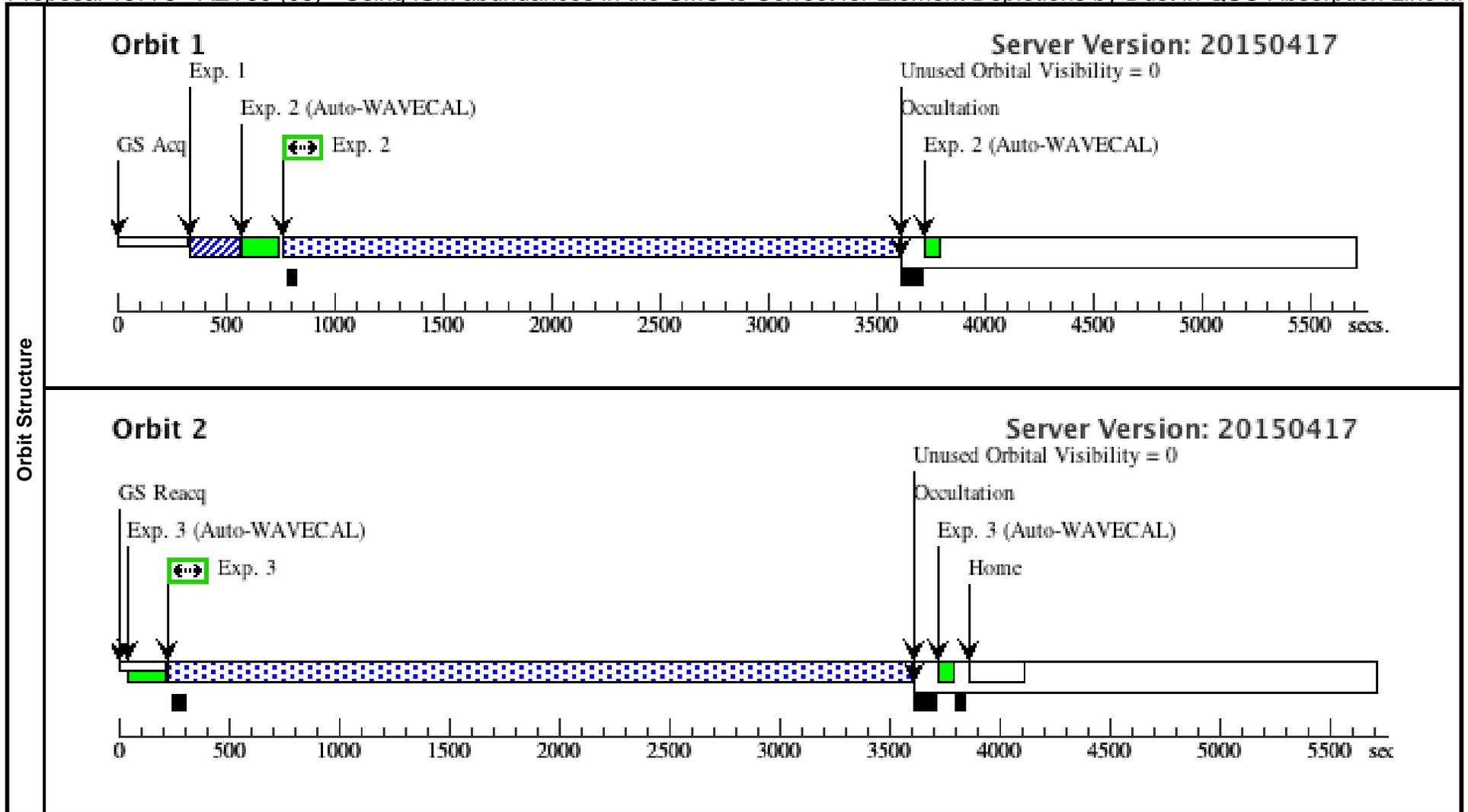




Proposal 13778 - AZV80 (05) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line ...

Wed Jun 17 12:34:42 GMT 2015

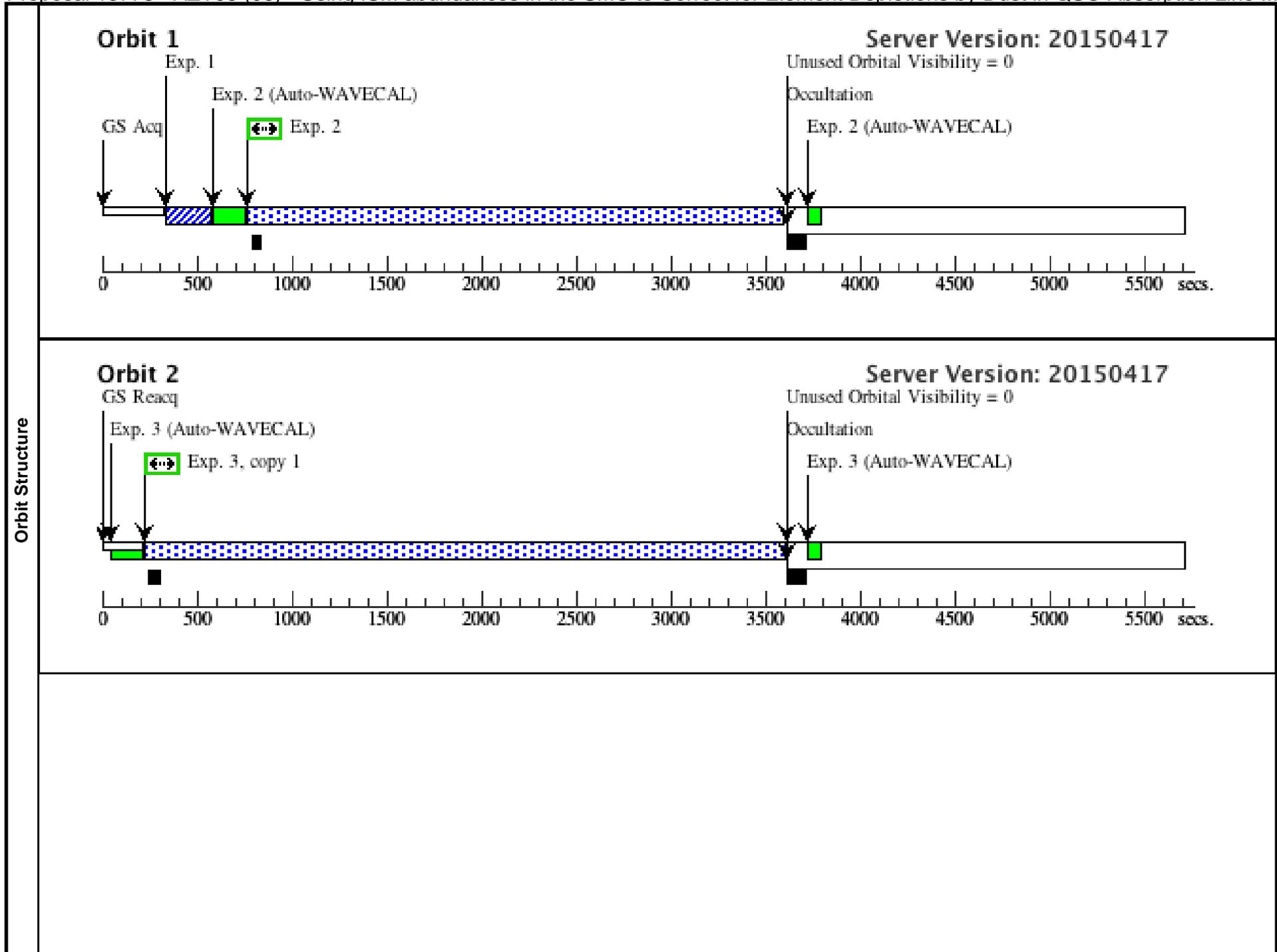
Visit	Proposal 13778, AZV80 (05), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(5)	AZV80	RA: 00 50 43.7880 (12.6824500d) Dec: -72 47 41.50 (-72.79486d) Equinox: J2000		V=13.32+/-0.1 B-V = -0.13; F(1240) = 3.50E-13; F(1700) = 3.00e-13	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	ACQforAZ V80 (STIS.ta.619 621)	(5) AZV80	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) [==>]	[1]
	2	AZV80cenw ave2269 (STIS.sp.61 9623)	(5) AZV80	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs (2824 Secs) [==>2824.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 33.4</i>									
3	AZV80cenw ave1978 (STIS.sp.61 9624)	(5) AZV80	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A					2880 Secs (3362 Secs) [==>3362.0 Secs]	[2]
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 37.7</i>										

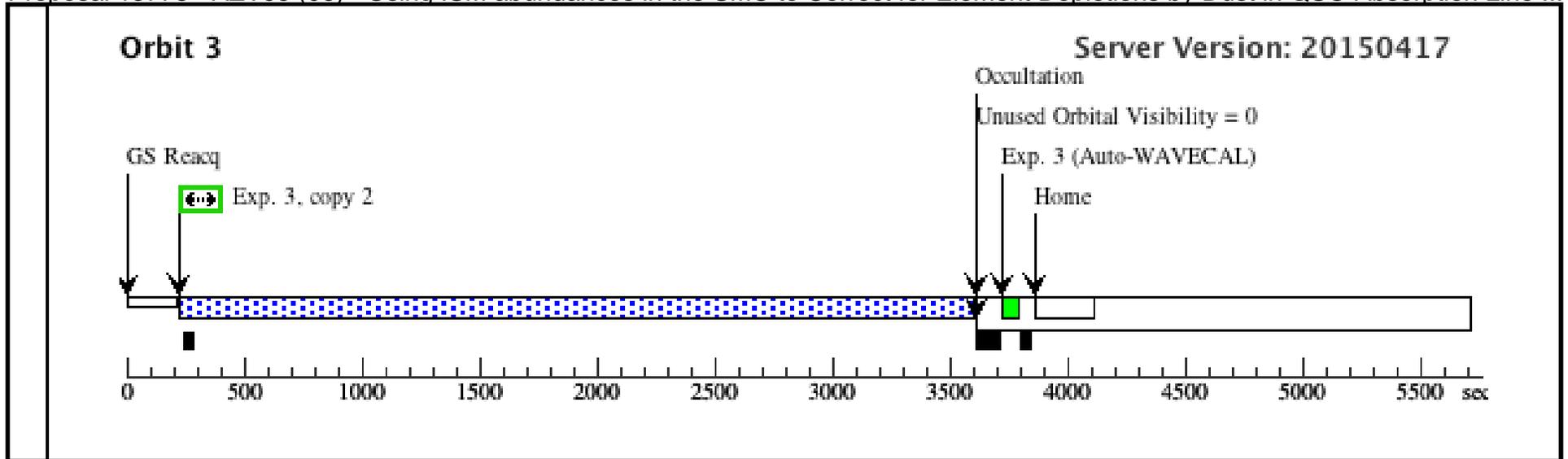


Proposal 13778 - AZV95 (06) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line ...

Wed Jun 17 12:34:42 GMT 2015

Visit	Proposal 13778, AZV95 (06), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord.	Corrections	Fluxes	Miscellaneous		
	(6)	AZV95	RA: 00 51 21.5780 (12.8399083d) Dec: -72 44 14.90 (-72.73747d) Equinox: J2000			V=13.78+/-0.1 B-V = -0.18; F(1240) = 4.00E-13; F(1980) = 1.70E-13; F(2270) = 1.20E-13	Reference Frame: ICRS			
	<i>Comments: Another point source (called 2MINGR31 in the GSC23 catalog) that has a K mag only 0.17 mag fainter is located at 3.37 arc sec away (toward the south-west), according to the GSC23 catalog query. It's fainter by 0.39 mag in J, U, B, V and R magnitudes are unknown. An inspection of existing WFC f606w and f814w images shows that this object is not as bright as the target. Hence, it approaches the target's brightness only at IR wavelengths longward of the response curve of the unfiltered CCD.</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQforAZ V95 (STIS.ta.619 625)	(6) AZV95	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			3 Secs (3 Secs)	
									[==>]	[1]
	2	AZV95cenw ave2269 (STIS.sp.61 9626)	(6) AZV95	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs (2816 Secs)	
									[==>2816.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 23.2</i>									
	3	AZV95cenw ave1978(2) (STIS.sp.61 9627)	(6) AZV95	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				2880 Secs X 2 (6724 Secs)	
								[==>3362.0 Secs (Copy 1)]	[2]	
								[==>3362.0 Secs (Copy 2)]	[3]	
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 34.9</i>									

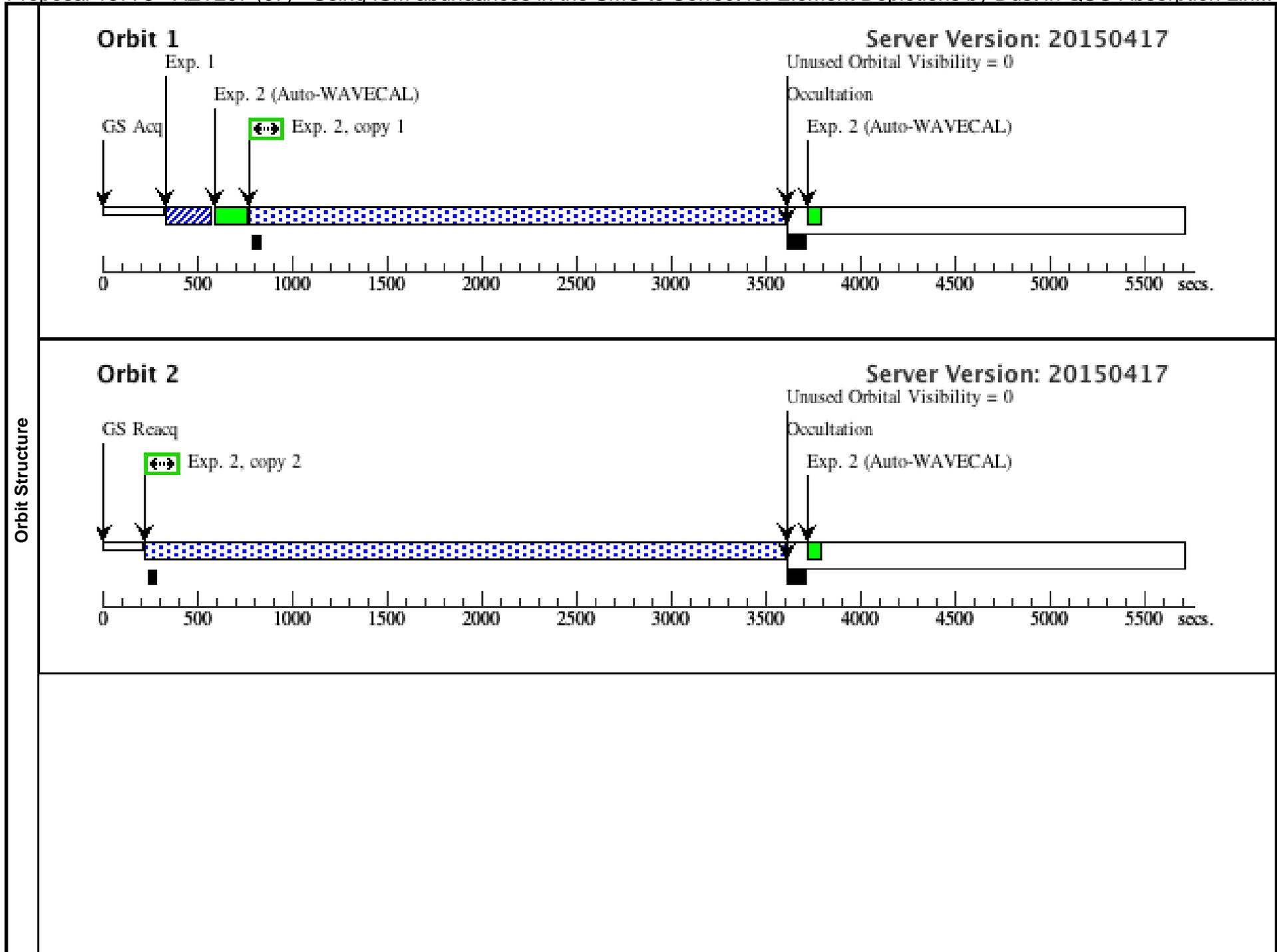


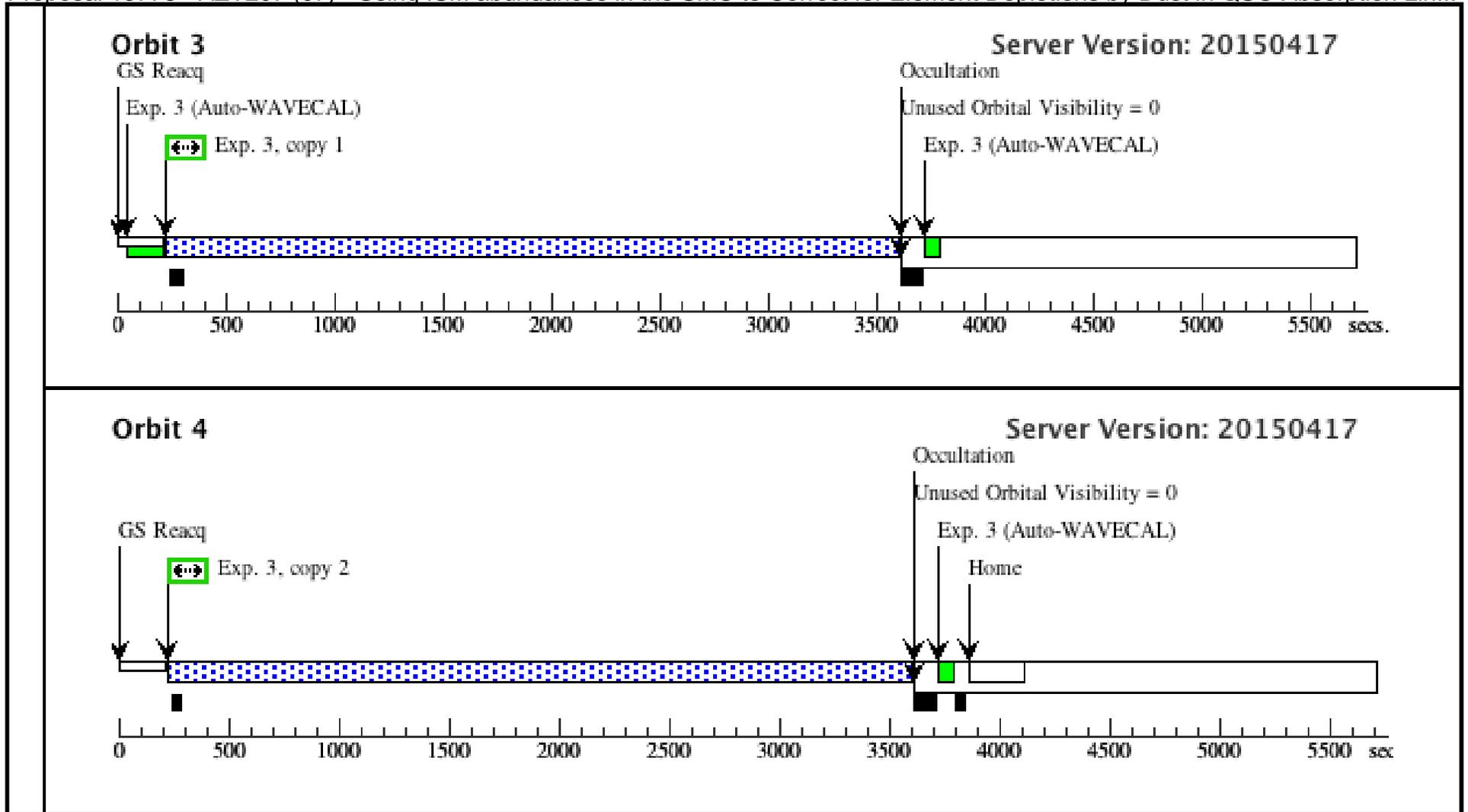


Proposal 13778 - AZV207 (07) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Lin...

Wed Jun 17 12:34:42 GMT 2015

Visit	Proposal 13778, AZV207 (07), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(7)	AZV207	RA: 00 58 33.2230 (14.6384292d) Dec: -71 55 46.49 (-71.92958d) Equinox: J2000		V=14.25+/-0.1 B-V = -0.20; F(1240) = 2.00E-13; F(1980) = 1.20E-13; F(2270) = 8.00E-14	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	ACQforAZ V207 (STIS.ta.619 990)	(7) AZV207	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			4 Secs (4 Secs) [==>]	[1]
	2	AZV207cen wave2269(2) (STIS.sp.61 9991)	(7) AZV207	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs X 2 (6174 Secs) [==>2812.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[1] [2]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 27.4</i>									
	3	AZV207cen wave1978(2) (STIS.sp.61 9992)	(7) AZV207	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				2460 Secs X 2 (6724 Secs) [==>3362.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[3] [4]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 28.4</i>									

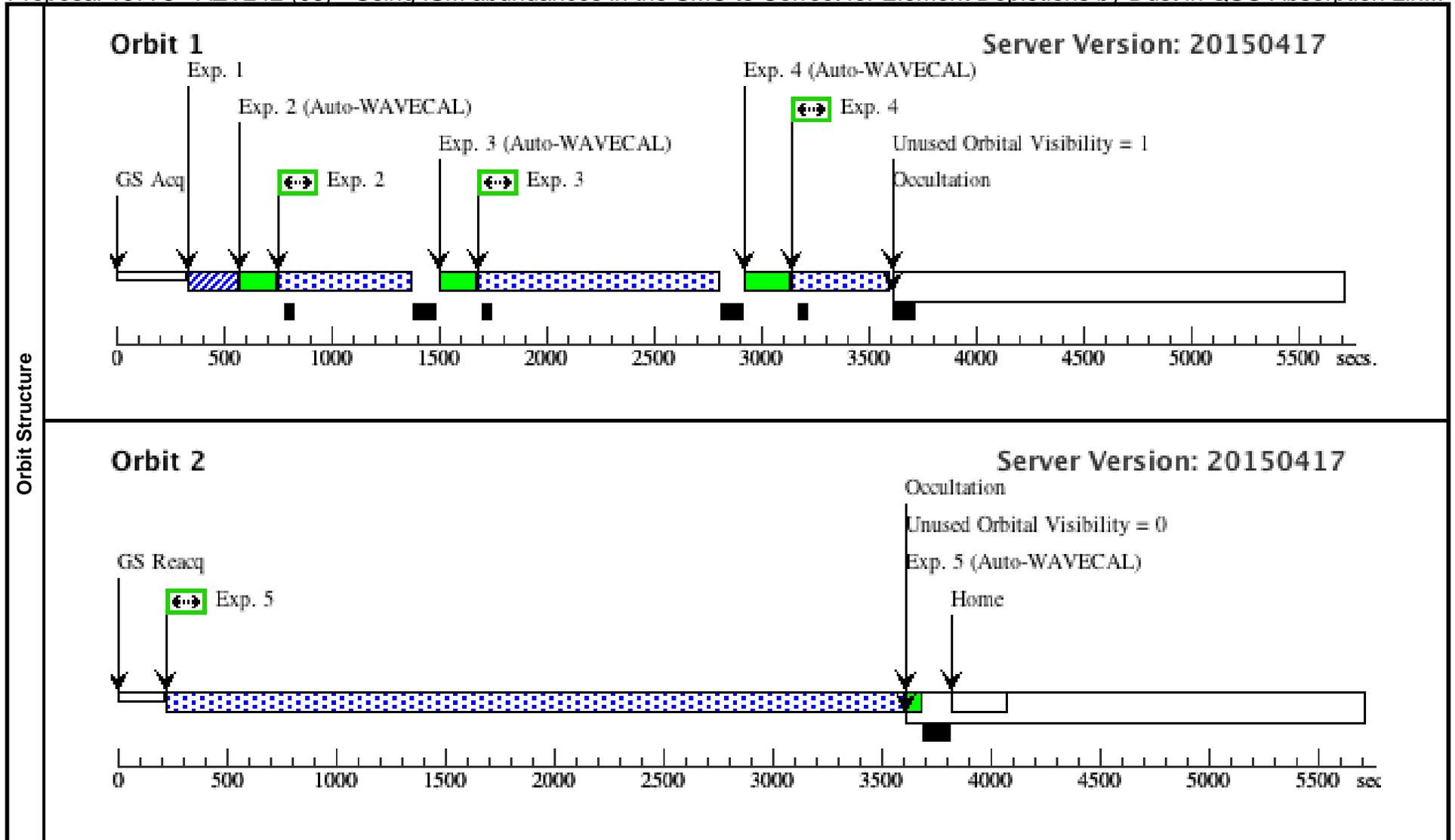




Proposal 13778 - AZV242 (08) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Lin...

Wed Jun 17 12:34:42 GMT 2015

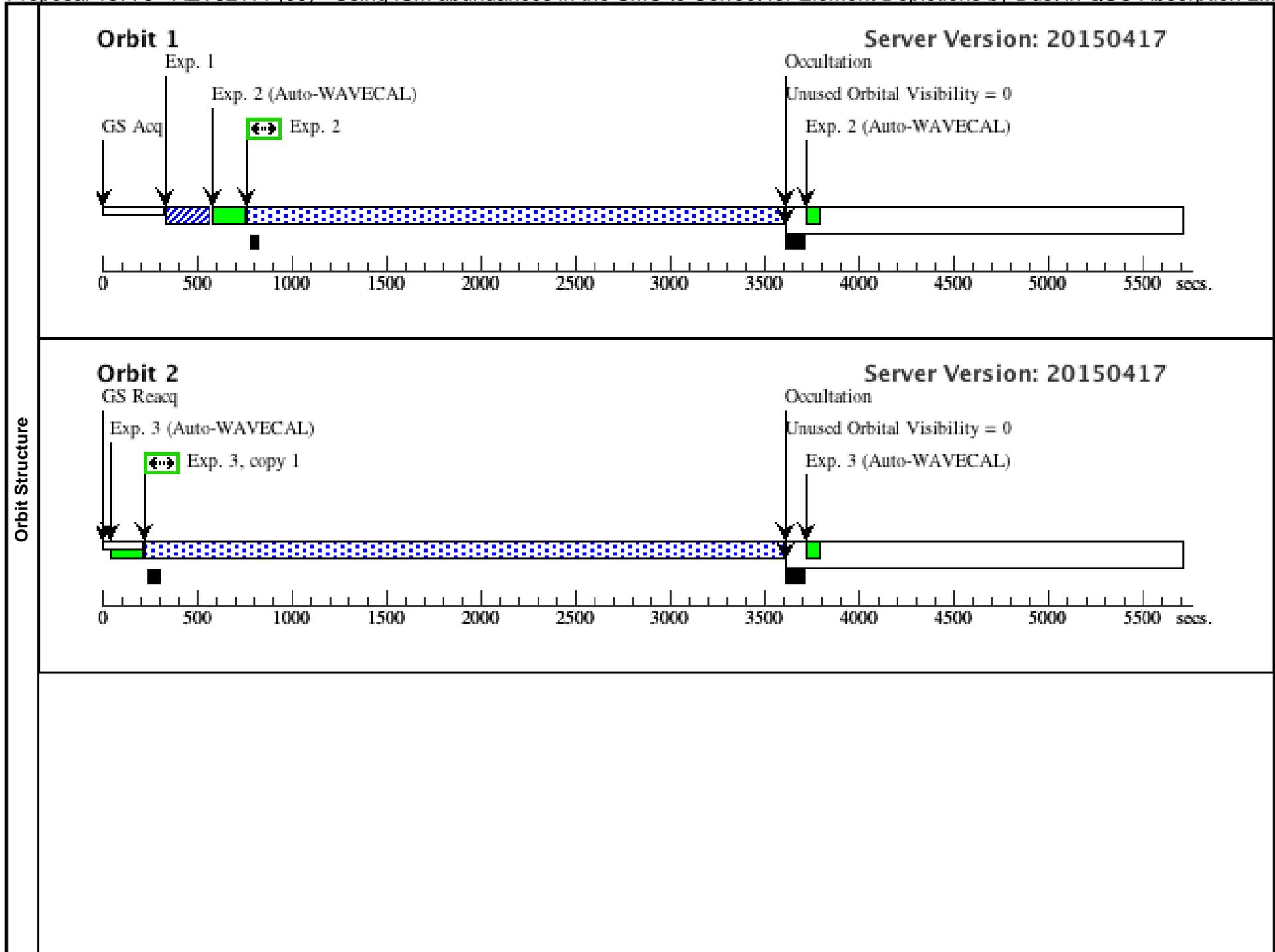
Visit	Proposal 13778, AZV242 (08), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA, STIS/NUV-MAMA Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	AZV242	RA: 01 00 6.8628 (15.0285950d) Dec: -72 13 57.52 (-72.23264d) Equinox: J2000		V=12.07+/-0.1 B-V = -0.12; F(1240) = 8.50E-13; F(1980) = 5.50E-13; F(2270) = 4.00E-13	Reference Frame: ICRS				
	<i>Comments: Target confirmation plate looks a little messy around the target, but extraneous objects are considerably fainter and approximately 6" away. Another object of comparable brightness to that of the target is listed in the GSC23 catalog, located about 0.35 arc-sec away (but with an error of 0.3 arc-sec). This is likely to be the target identified on an earlier sky survey plate, but with a small position offset.</i>									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQforAZ V242 (STIS.ta.619 997)	(8) AZV242	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			0.5 Secs (0.5 Secs) [==>]	[1]
	2	AZV242cen wave2269 (STIS.sp.61 9998)	(8) AZV242	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				600 Secs (600 Secs) [==>]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 20.3</i>									
	3	AZV242cen wave1978 (STIS.sp.62 0007)	(8) AZV242	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				1100 Secs (1100 Secs) [==>]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 20.0</i>									
	4	AZV242cen wave1425 (STIS.sp.62 0008)	(8) AZV242	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				435 Secs (435 Secs) [==>]	[1]
	5	AZV242cen wave1425 (STIS.sp.62 0008)	(8) AZV242	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				2880 Secs (3362 Secs) [==>3362.0 Secs]	[2]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 21.7</i>									

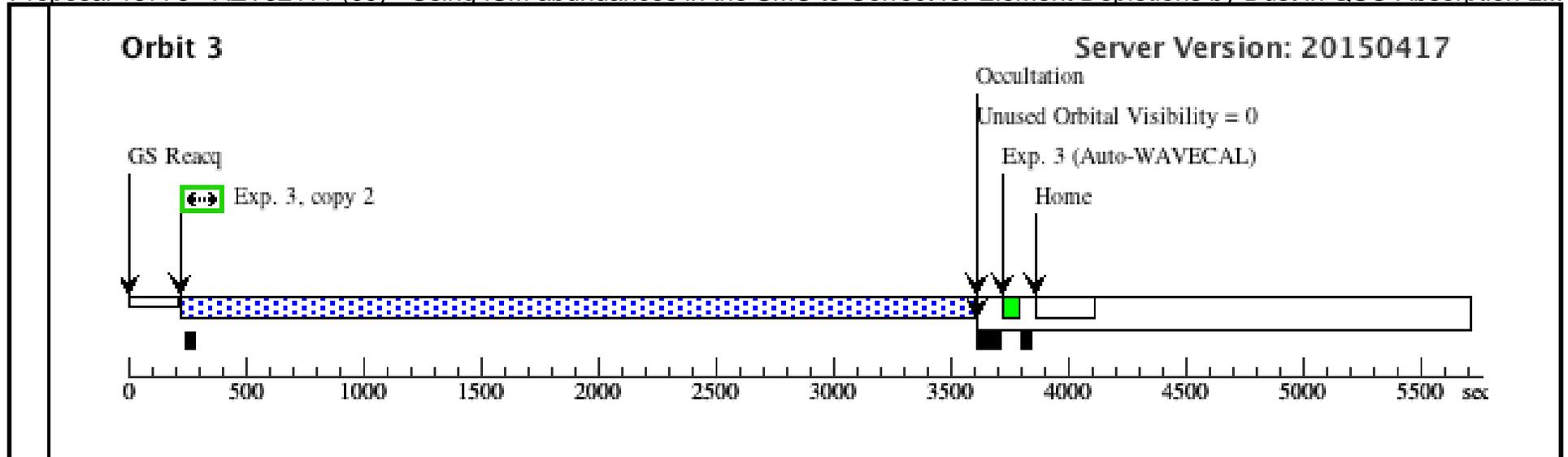


Proposal 13778 - AZV321v1 (09) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption L...

Wed Jun 17 12:34:43 GMT 2015

Visit	Proposal 13778, AZV321v1 (09), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(9)	AZV321	RA: 01 02 57.0568 (15.7377367d) Dec: -72 08 8.86 (-72.13579d) Equinox: J2000		V=13.76+/-0.1 B-V = -0.19; F(1240) = 4.00E-13; F(1980) = 1.80E-13; F(2270) = 1.20E-13	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	ACQforAZ V321v1 (STIS.ta.620005)	(9) AZV321	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV321cen wave2269 (STIS.sp.620006)	(9) AZV321	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs (2820 Secs) [==>2820.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 23.3</i>									
	3	AZV321cen wave1978(2) (STIS.sp.620009)	(9) AZV321	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				2880 Secs X 2 (6724 Secs) [==>3362.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[2] [3]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 27.0</i>									

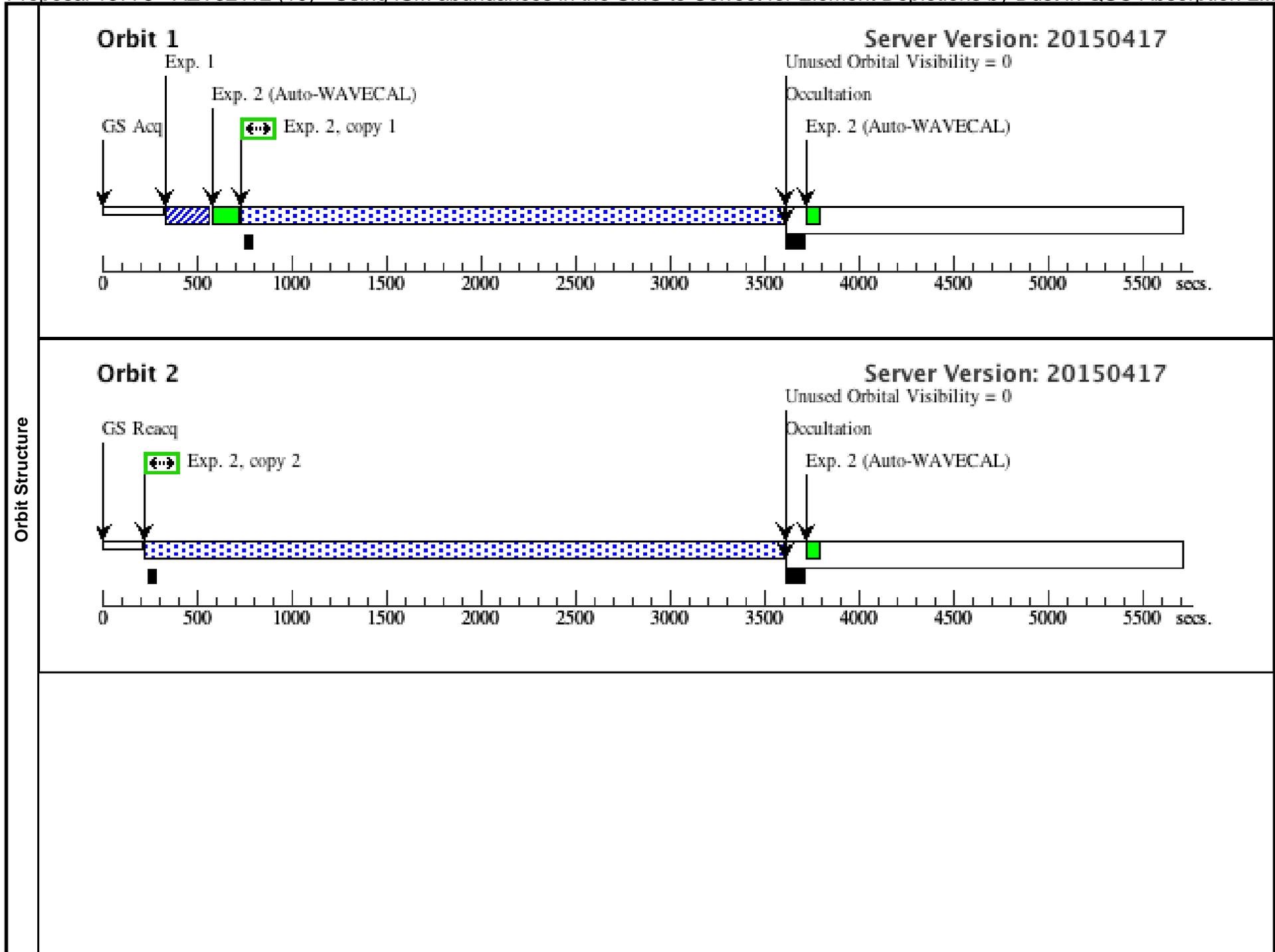


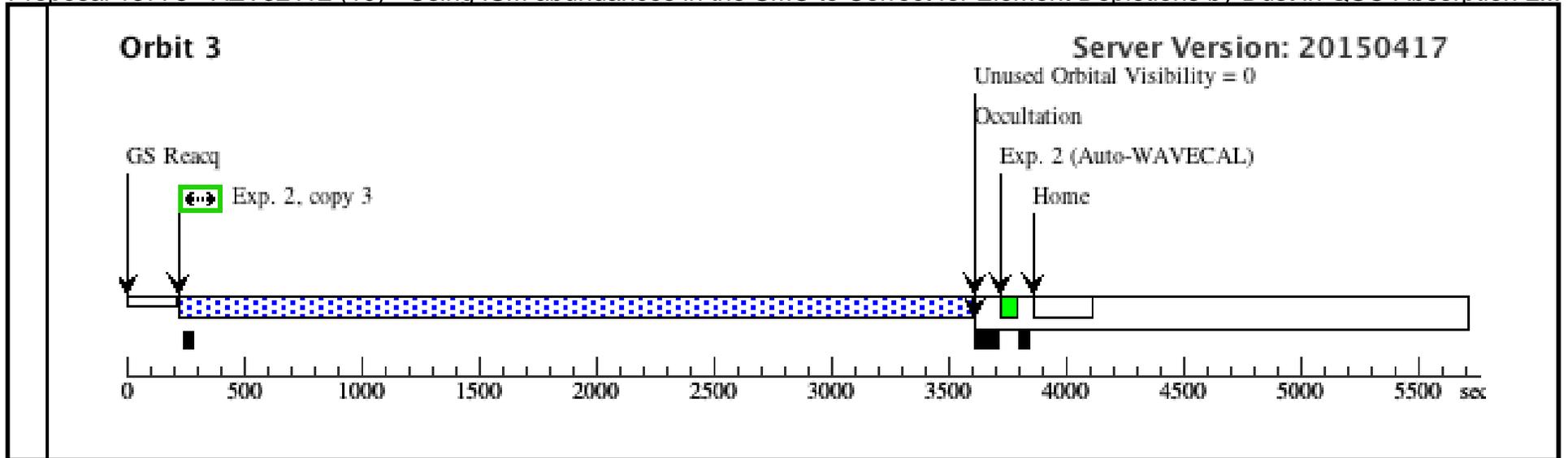


Proposal 13778 - AZV321v2 (10) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption L...

Wed Jun 17 12:34:43 GMT 2015

Visit	Proposal 13778, AZV321v2 (10), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(9)	AZV321	RA: 01 02 57.0568 (15.7377367d) Dec: -72 08 8.86 (-72.13579d) Equinox: J2000		V=13.76+/-0.1 B-V = -0.19; F(1240) = 4.00E-13; F(1980) = 1.80E-13; F(2270) = 1.20E-13	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	ACQforAZ V321v2 (STIS.ta.620005)	(9) AZV321	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV321cen wave1425(3)	(9) AZV321	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				2460 Secs X 3 (9574 Secs) [==>2850.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)] [==>3362.0 Secs (Copy 3)]	[1] [2] [3]
	Comments: S/N in ETC rescaled by $\sqrt{\text{actual time}/\text{ETC time}} = 23.5$									

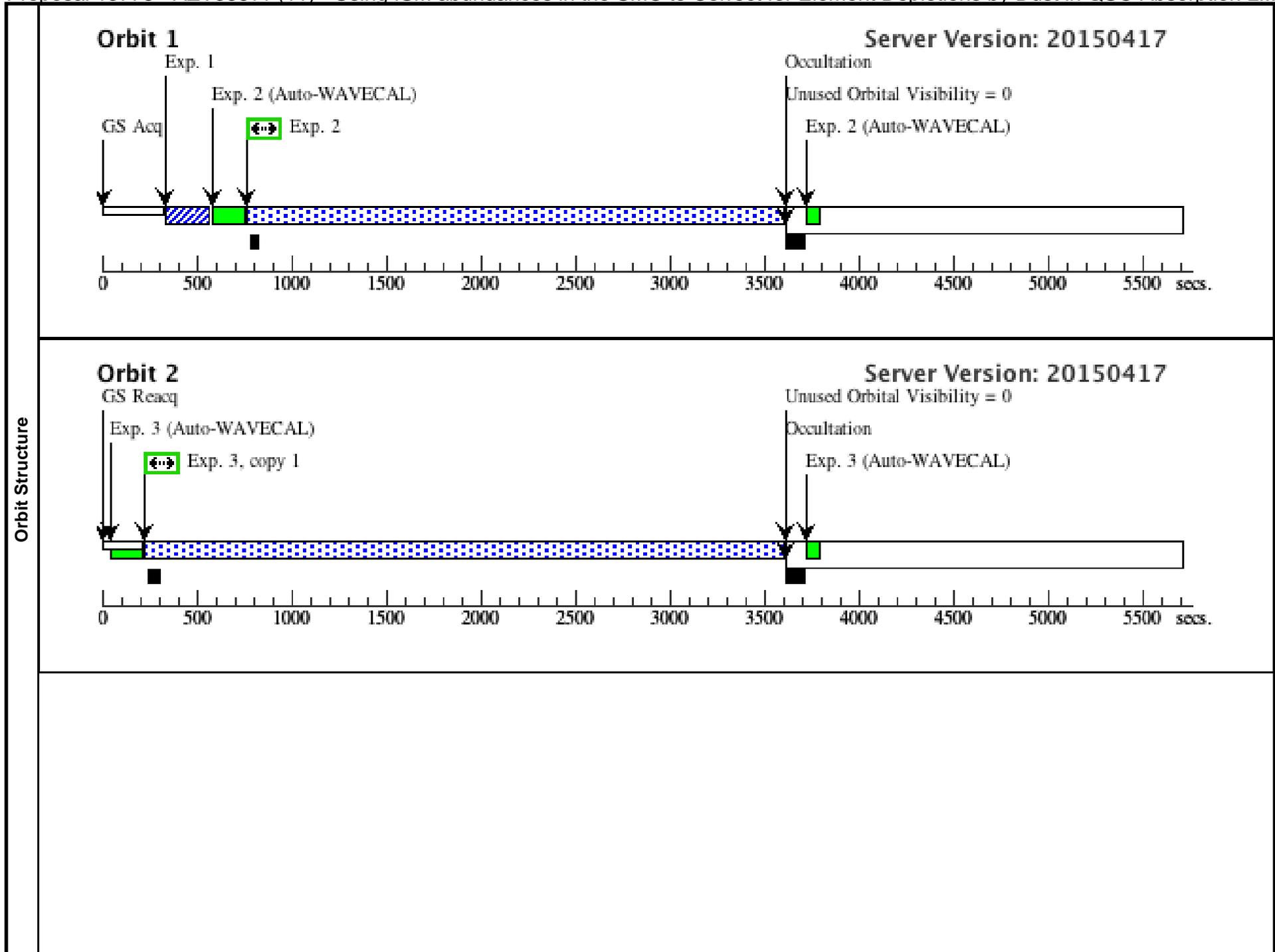


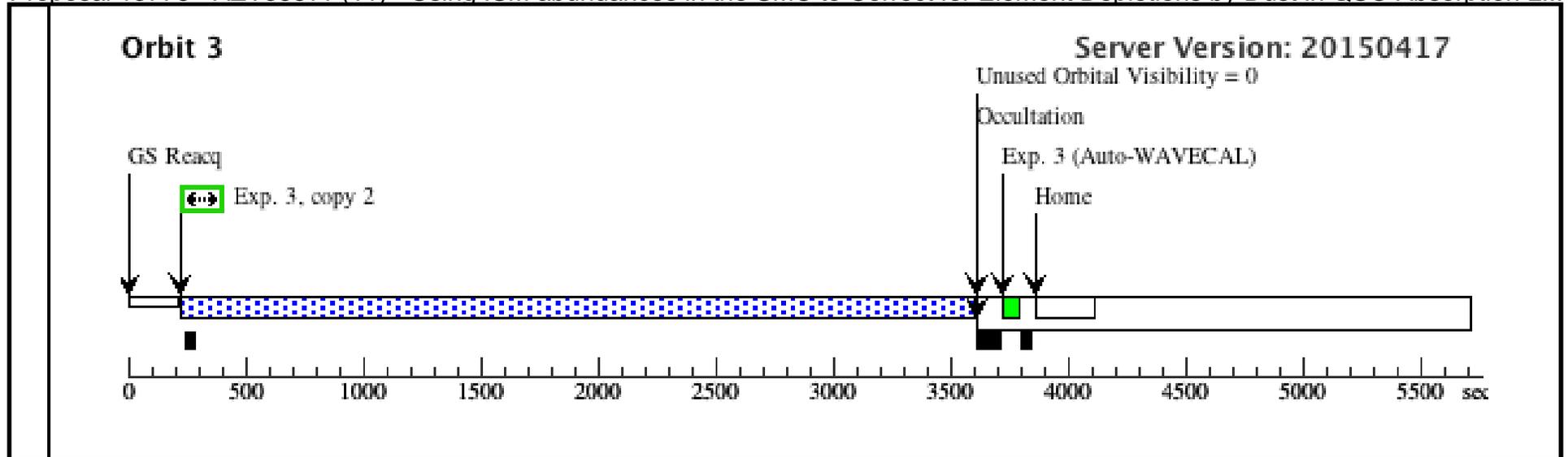


Proposal 13778 - AZV388v1 (11) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption L...

Wed Jun 17 12:34:43 GMT 2015

Visit	Proposal 13778, AZV388v1 (11), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	AZV388	RA: 01 05 39.5550 (16.4148125d) Dec: -72 29 27.21 (-72.49089d) Equinox: J2000		V=14.09+/-0.1 B-V = -0.21 ;F(1240) = 3.50E-13; F(1980) = 1.70E-13; F(2270) = 1.10E-13	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	ACQforAZ V388v1 (STIS.ta.620 021)	(10) AZV388	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV388cen wave2269 (STIS.sp.62 0022)	(10) AZV388	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs (2820 Secs) [==>2820.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 22.2</i>									
	3	AZV388cen wave1978(2) (STIS.sp.62 0023)	(10) AZV388	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				2880 Secs X 2 (6724 Secs) [==>3362.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[2] [3]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 26.1</i>									

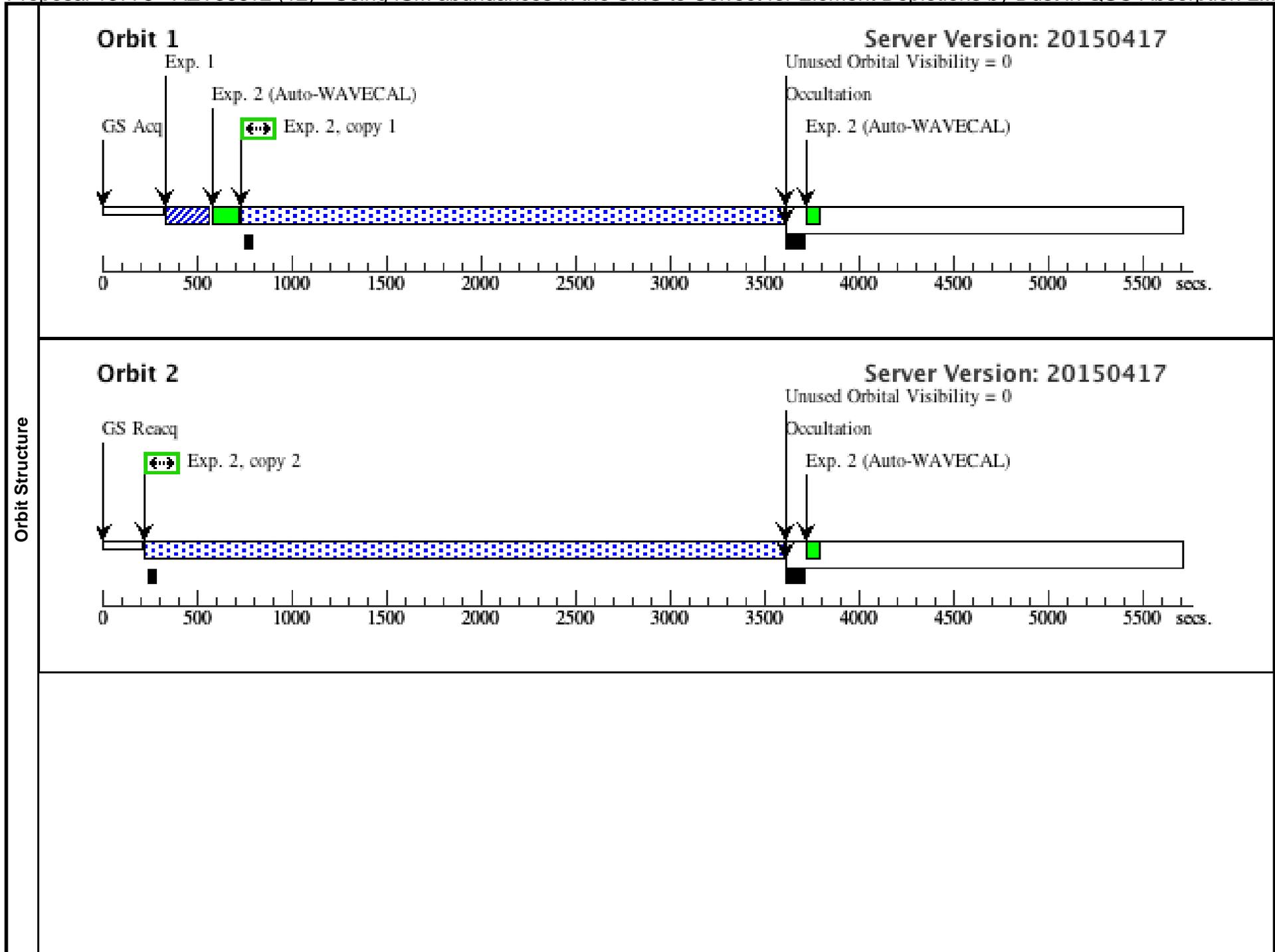


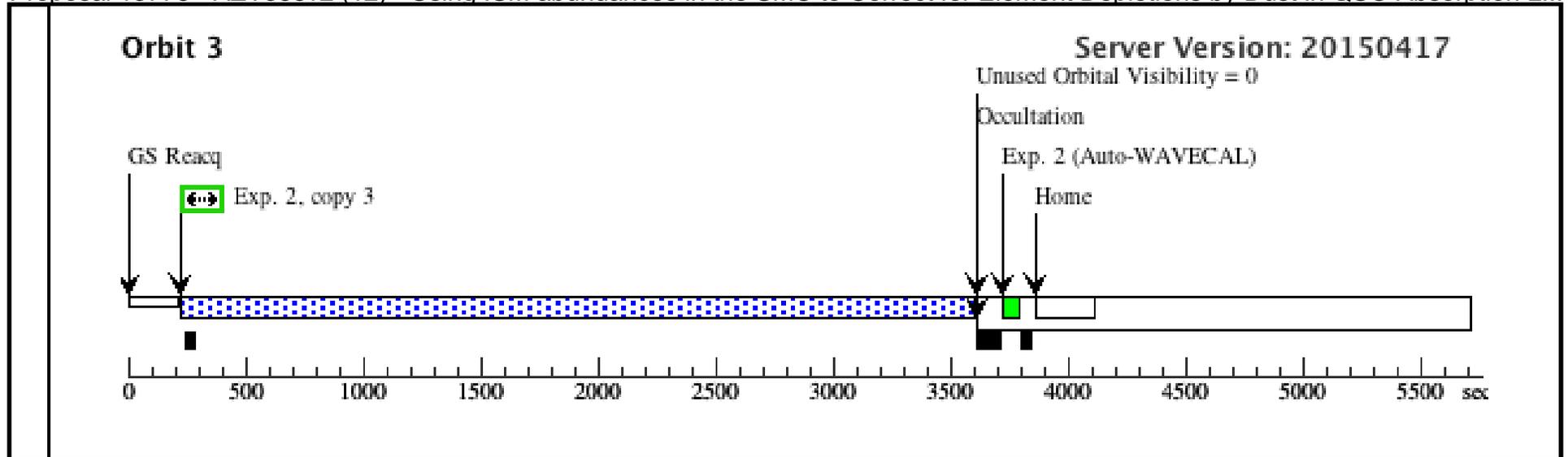


Proposal 13778 - AZV388v2 (12) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption L...

Wed Jun 17 12:34:44 GMT 2015

Visit	Proposal 13778, AZV388v2 (12), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(10)	AZV388	RA: 01 05 39.5550 (16.4148125d) Dec: -72 29 27.21 (-72.49089d) Equinox: J2000		V=14.09+/-0.1 B-V = -0.21 ;F(1240) = 3.50E-13; F(1980) = 1.70E-13; F(2270) = 1.10E-13	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	ACQforAZ V388v2 (STIS.ta.620 021)	(10) AZV388	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV388cen wave1425(3) (STIS.sp.62 0025)	(10) AZV388	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				2460 Secs X 3 (9574 Secs) [==>2850.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)] [==>3362.0 Secs (Copy 3)]	[1] [2] [3]
	Comments: S/N in ETC rescaled by $\sqrt{\text{actual time}/\text{ETC time}} = 22.0$									

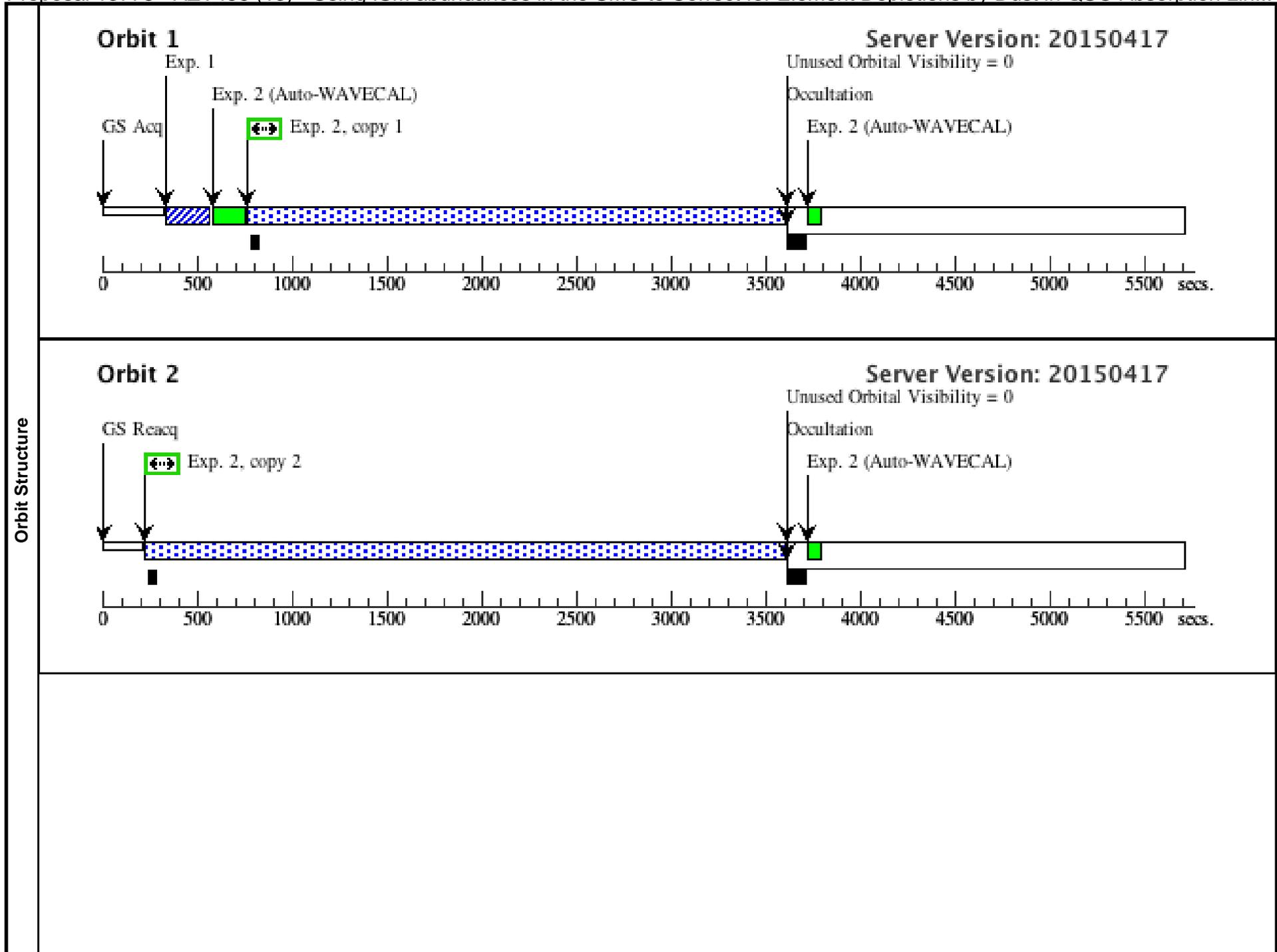




Proposal 13778 - AZV456 (13) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Lin...

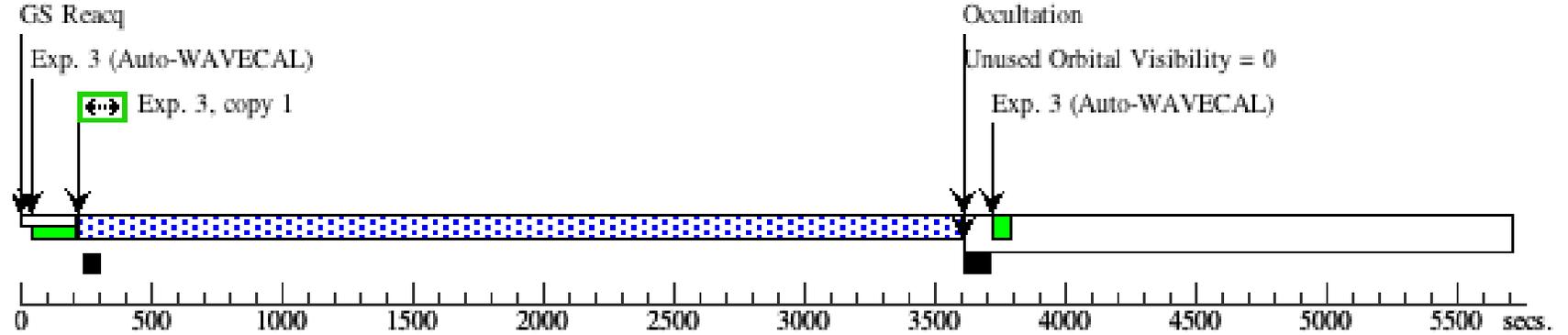
Wed Jun 17 12:34:44 GMT 2015

Visit	Proposal 13778, AZV456 (13), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(11)	AZV456	RA: 01 10 55.7550 (17.7323125d) Dec: -72 42 56.02 (-72.71556d) Equinox: J2000		V=12.83+/-0.1 B-V = 0.10; F(1240) = 9.00E-14; F(1980) = 8.50E-14; F(2270) = 6.00E-14	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	ACQforAZ V456 (STIS.ta.620 026)	(11) AZV456	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV456cen wave2269(2) (STIS.sp.62 0027)	(11) AZV456	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A			2460 Secs X 2 (6182 Secs) [==>2820.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[1] [2]	
	Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 23.2									
	3	AZV456cen wave1978(3) (STIS.sp.62 0028)	(11) AZV456	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A			2880 Secs X 3 (10086 Secs) [==>3362.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)] [==>3362.0 Secs (Copy 3)]	[3] [4] [5]	
	Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 21.1									



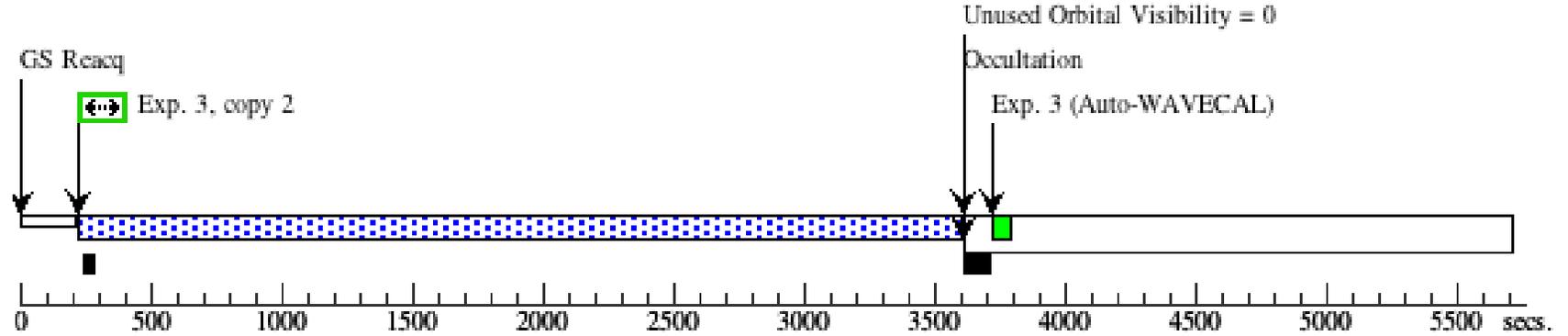
Orbit 3

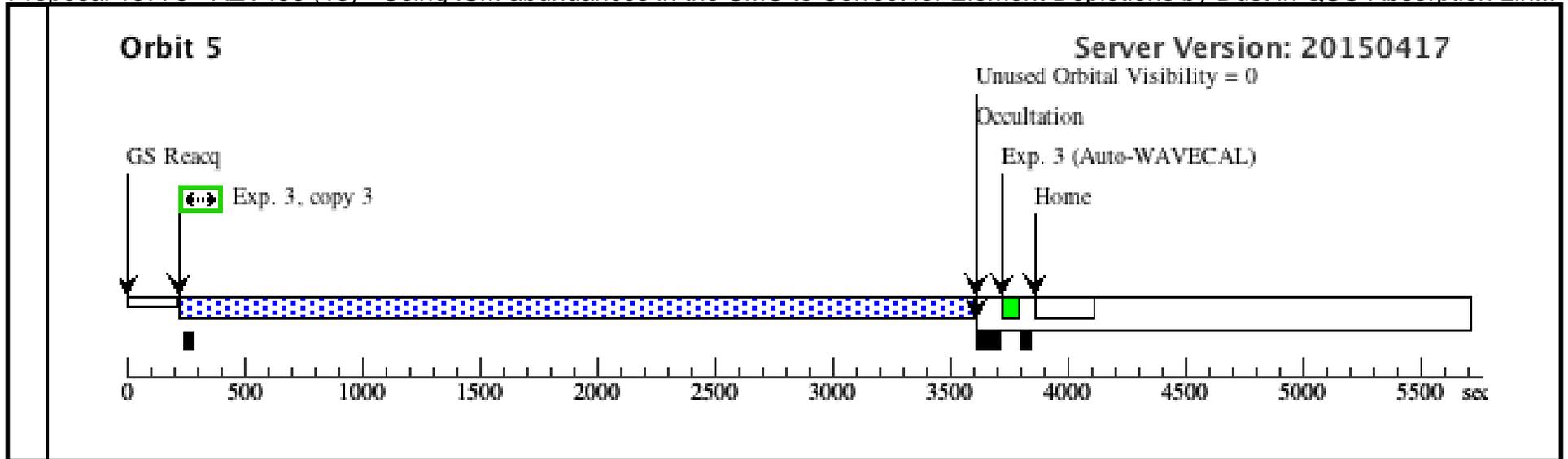
Server Version: 20150417



Orbit 4

Server Version: 20150417

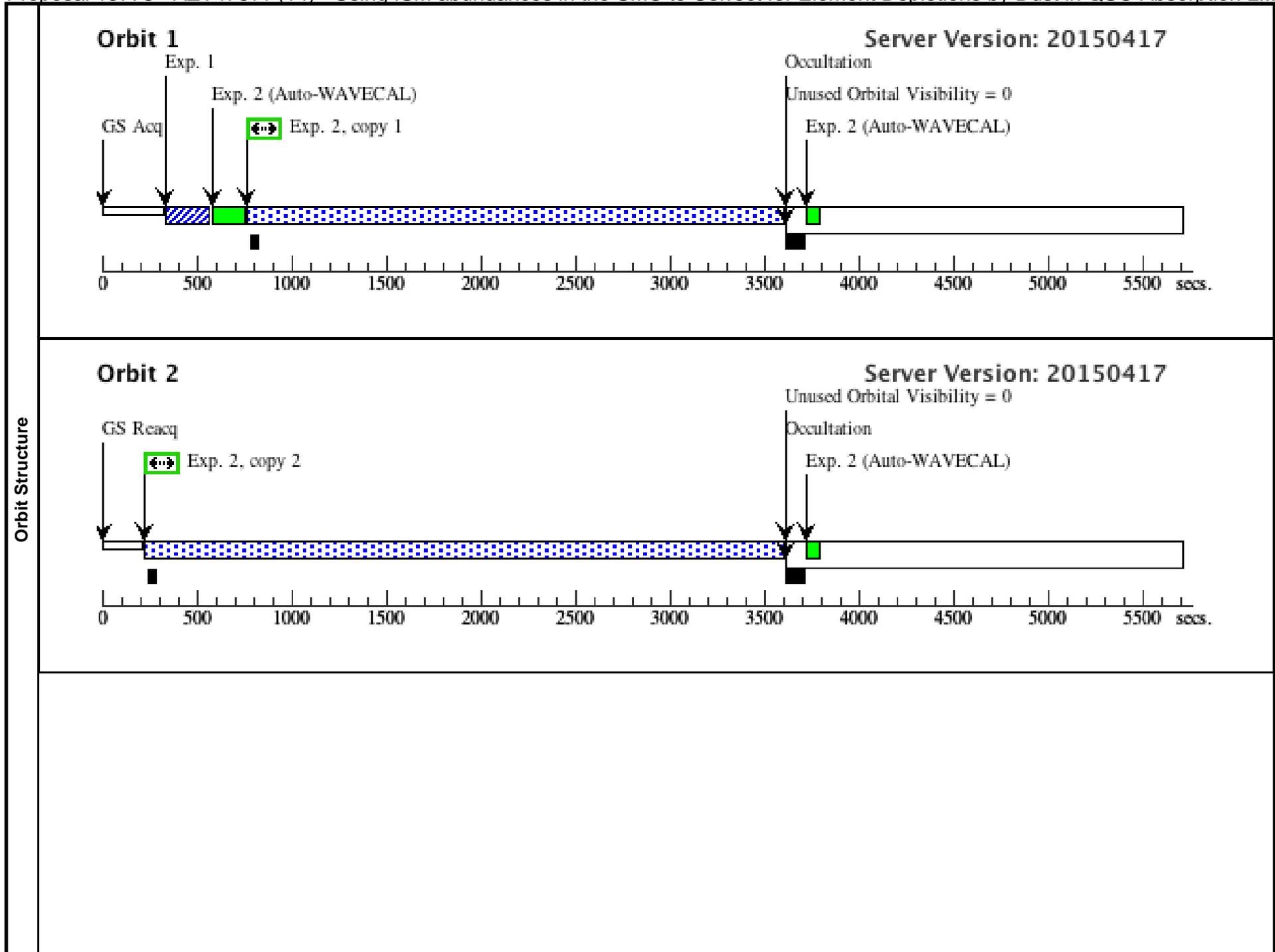


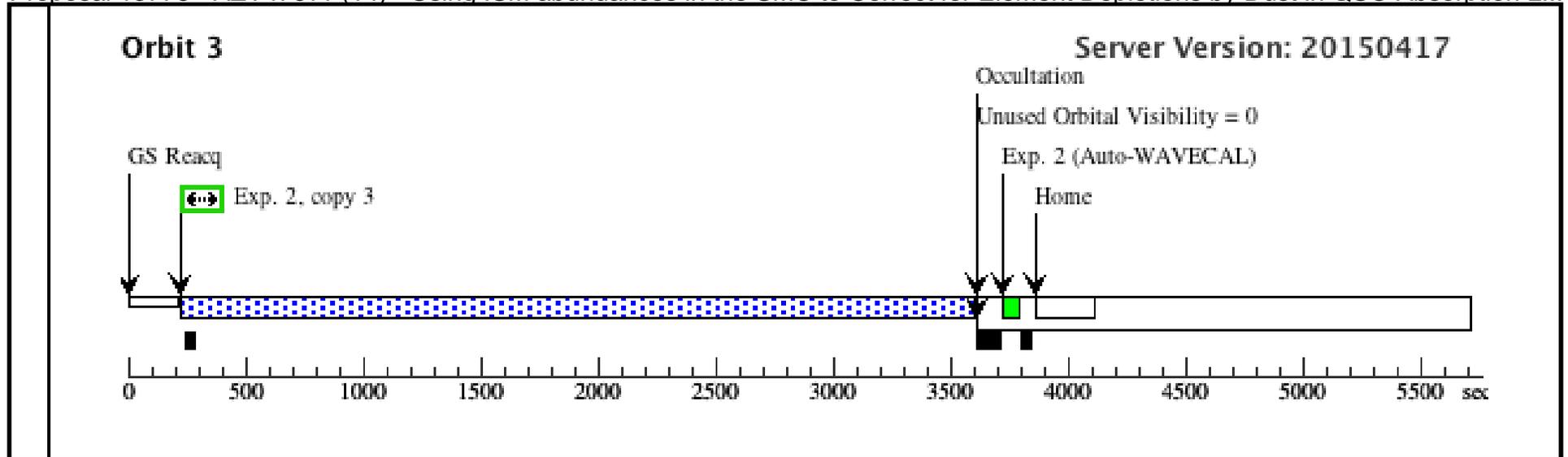


Proposal 13778 - AZV476v1 (14) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption L...

Wed Jun 17 12:34:44 GMT 2015

Visit	Proposal 13778, AZV476v1 (14), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(12)	AZV476	RA: 01 13 42.4380 (18.4268250d) Dec: -73 17 29.61 (-73.29156d) Equinox: J2000		V=13.52+/-0.1 B-V = -0.09; F(1240) = 1.20E-1 3; F(1700) = 1.40e-13	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	ACQforAZ V476 (STIS.ta.620 029)	(12) AZV476	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV476cen wave2269(3) (STIS.sp.62 0031)	(12) AZV476	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				2460 Secs X 3 (9544 Secs) [==>2820.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)] [==>3362.0 Secs (Copy 3)]	[1] [2] [3]
	Comments: S/N in ETC rescaled by $\sqrt{\text{actual time}/\text{ETC time}} = 24.1$									

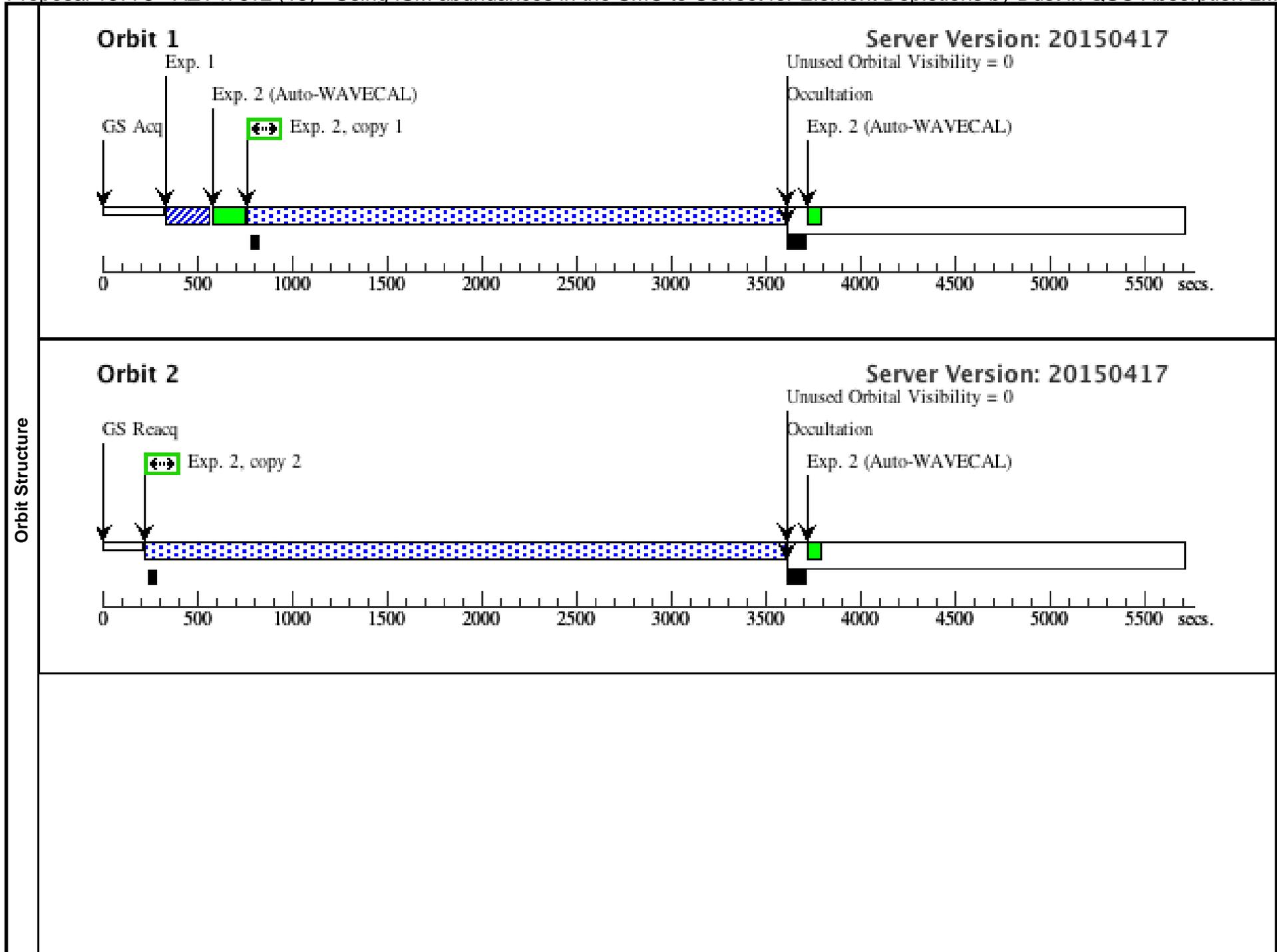




Proposal 13778 - AZV476v2 (15) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption L...

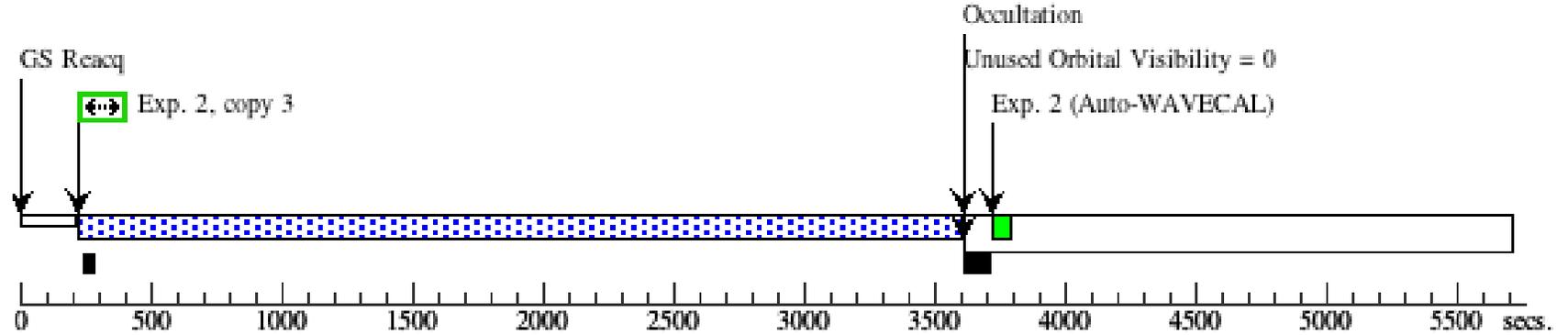
Wed Jun 17 12:34:44 GMT 2015

Visit	Proposal 13778, AZV476v2 (15), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none)									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(12)	AZV476	RA: 01 13 42.4380 (18.4268250d) Dec: -73 17 29.61 (-73.29156d) Equinox: J2000		V=13.52+/-0.1 B-V = -0.09; F(1240) = 1.20E-13; F(1700) = 1.40e-13	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	ACQforAZ V476 (STIS.ta.620 029)	(12) AZV476	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]	[1]
	2	AZV476cen wave1978(4) (STIS.sp.62 0032)	(12) AZV476	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				2460 Secs X 4 (12906 Secs) [==>2820.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)] [==>3362.0 Secs (Copy 3)] [==>3362.0 Secs (Copy 4)]	[1] [2] [3] [4]
	Comments: S/N in ETC rescaled by $\sqrt{\text{actual time}/\text{ETC time}} = 22.2$									



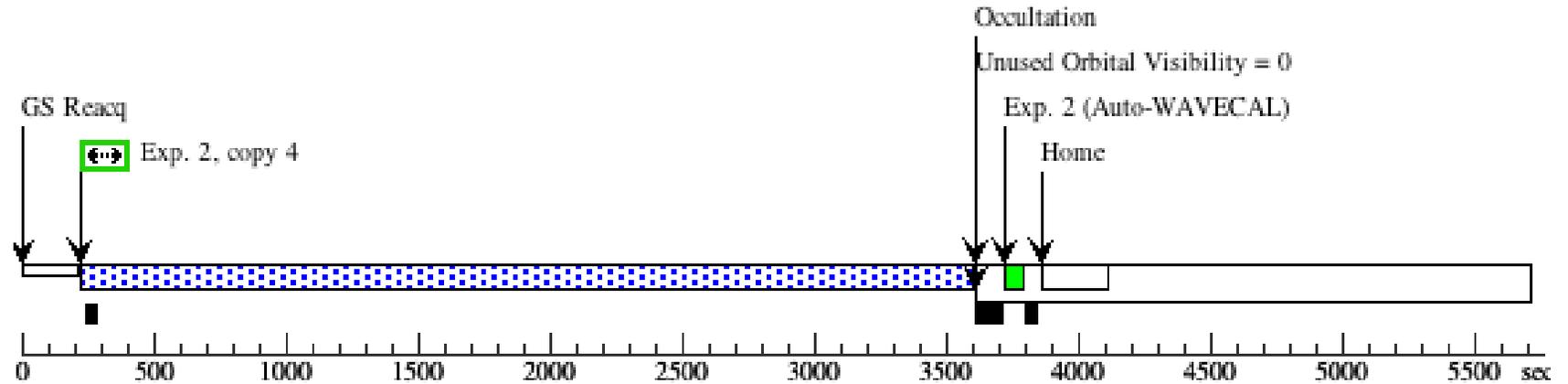
Orbit 3

Server Version: 20150417



Orbit 4

Server Version: 20150417

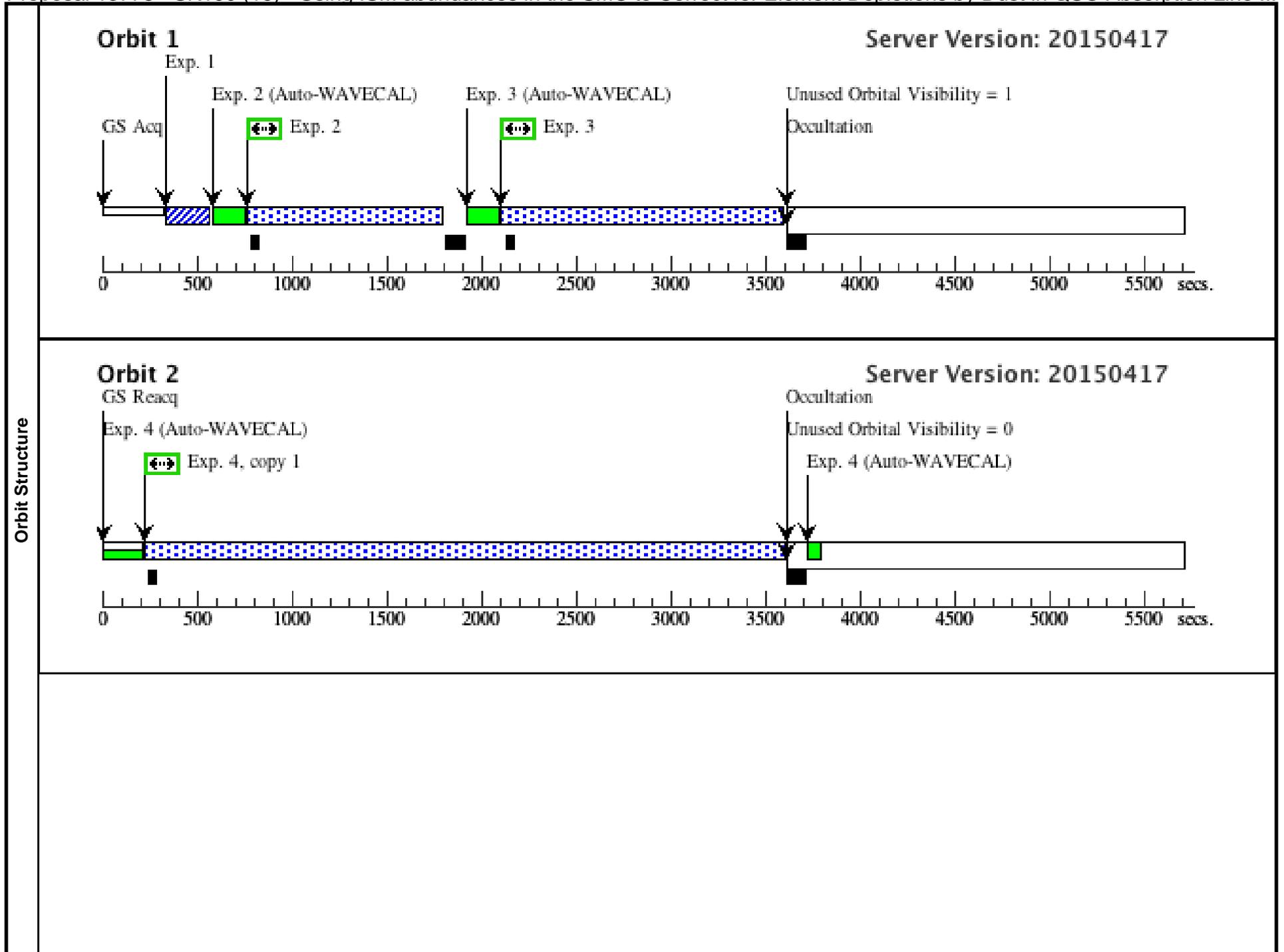


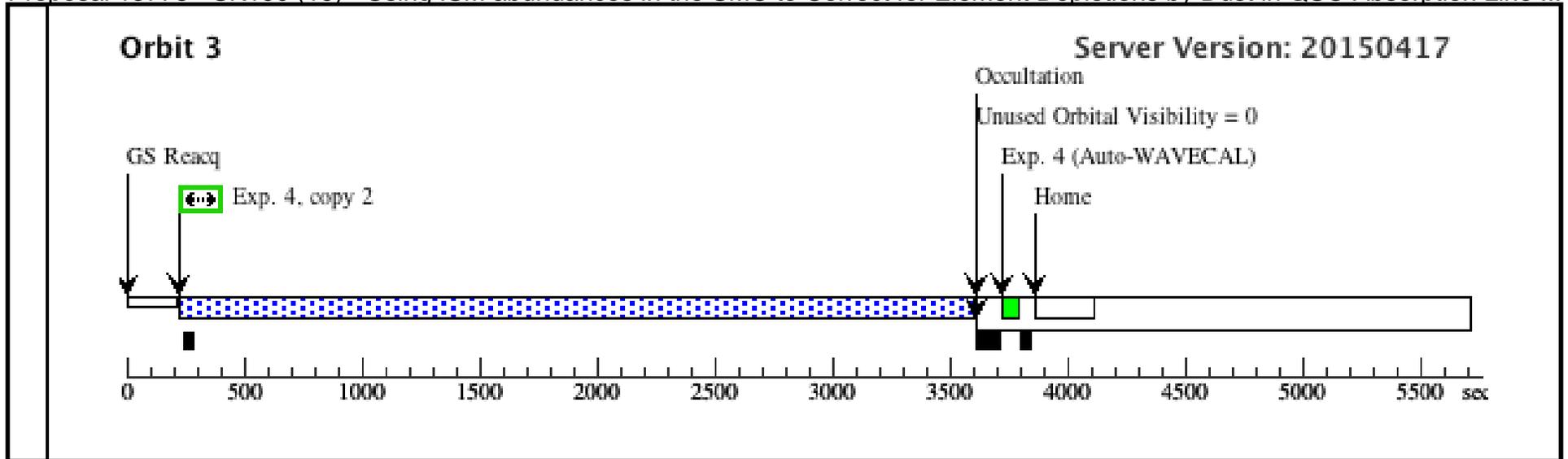
Proposal 13778 - SK190 (16) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line ...

Wed Jun 17 12:34:44 GMT 2015

Fixed Targets	#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
		(13)	SK190	RA: 01 31 27.9580 (22.8664917d) Dec: -73 22 14.23 (-73.37062d) Equinox: J2000		V=13.54+/-0.1 B-V = -0.18; F(1180) = 7e-13	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	ACQforSK190 (STIS.ta.620033)	(13) SK190	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			2 Secs (2 Secs) [==>]
	2	SK190cenw ave2269 (STIS.sp.620034)	(13) SK190	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				1000 Secs (1017 Secs) [==>1017.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 18.8</i>									
	3	SK190cenw ave1978 (STIS.sp.620035)	(13) SK190	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 1978 A				1460 Secs (1477 Secs) [==>1477.0 Secs]	[1]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 19.8</i>									
	4	SK190cenw ave1425(2) (STIS.sp.620036)	(13) SK190	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				2880 Secs X 2 (6724 Secs) [==>3362.0 Secs (Copy 1)] [==>3362.0 Secs (Copy 2)]	[2] [3]
	<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 26.3</i>									





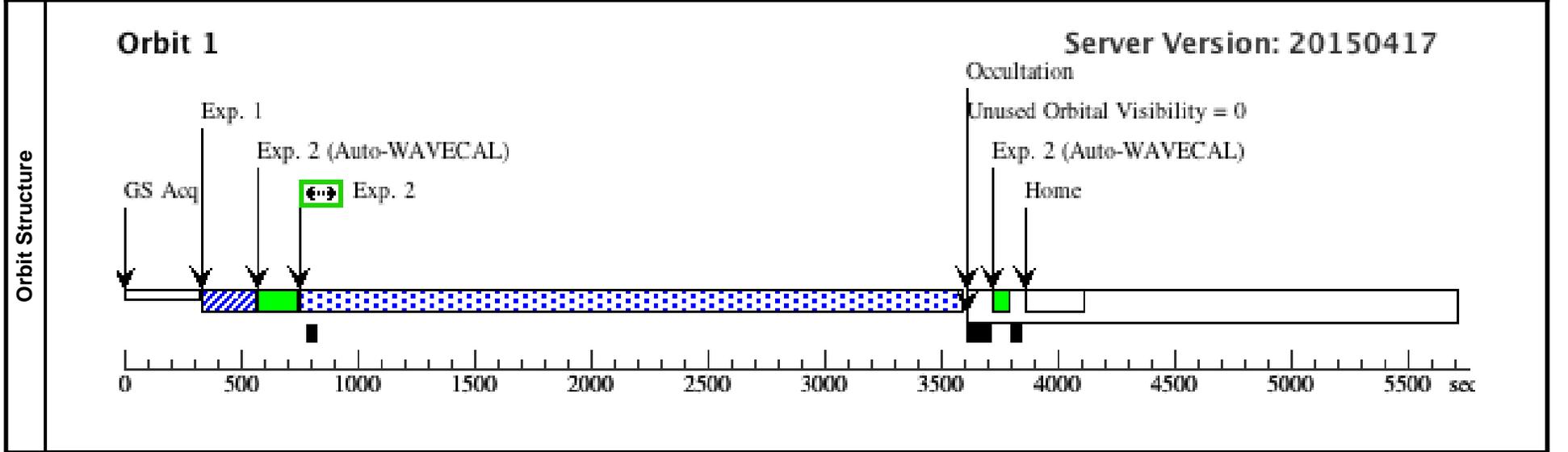
Proposal 13778 - SK191 (17) - Using ISM abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption Line ...

Wed Jun 17 12:34:44 GMT 2015

Visit	Proposal 13778, SK191 (17), completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: STIS/CCD, STIS/NUV-MAMA				
	Special Requirements: (none)				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(14)	SK191	RA: 01 41 42.0540 (25.4252250d) Dec: -73 50 38.16 (-73.84393d) Equinox: J2000		V=11.85+/-0.1 B-V = -0.04; F(1240) = 3.50E-13; F(1980) = 3.50E-13; F(2270) = 3.30E-13	Reference Frame: ICRS
<i>Comments: BOT identifies the target but lists it as "unknown" presumably because neither photographic nor photometric magnitudes appear when the details are called up. However the GSC23 catalog lists BMag = 11.835 and VMag = 12.01, so the object should be safe.</i>						

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACQforSK1 91 (STIS.ta.620 037)	(14) SK191	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			.5 Secs (0.5 Secs) [==>]	[1]
	2	SK191cenw ave2269 (STIS.sp.62 0038)	(14) SK191	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				1000 Secs (2826 Secs) [==>2826.0 Secs]	[1]
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 39.8</i>										



Visit	Proposal 13778, AZV26 (18) Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none) <i>Comments: This is a repeat of failed visit 02.</i>									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	AZV26	RA: 00 47 50.0600 (11.9585833d) Dec: -73 08 21.17 (-73.13921d) Equinox: J2000		V=12.46+/-0.1 B-V = -0.17; F(1240) = 6.00E-13; F(1980) = 5.20E-13; F(2270) = 3.50E-13	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	ACQforAZ V26 (STIS.ta.619 487)	(2) AZV26	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) [==>]	[1]
	2	AZV26cenw ave2269 (STIS.sp.61 9491)	(2) AZV26	STIS/NUV-MAMA, ACCUM, 0.2X0.2	E230M 2269 A				670 Secs (2824 Secs) [==>2824.0 Secs]	[1]
<i>Comments: S/N in ETC rescaled by sqrt(actual time/ETC time) = 41.2</i>										
Orbit Structure	Orbit 1 Server Version: 20150417 Unused Orbital Visibility = 0 									
	The diagram shows a horizontal timeline from 0 to 5500 seconds. - At ~100s: GS Acq (blue diagonal lines) - At ~400s: Exp. 1 (green) - At ~600s: Exp. 2 (Auto-WAVECAL) (green) - At ~750s: Exp. 2 (green) - From ~750s to ~3600s: Blue checkered pattern - At ~3600s: Occultation (black bar) - At ~3700s: Exp. 2 (Auto-WAVECAL) (green) - At ~3800s: Home (white box) - From ~3800s to ~5500s: White background									