



13656 - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

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) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:35.0	yes
02	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:38.0	yes
03	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:39.0	yes
04	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:41.0	yes
05	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:43.0	yes
06	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:44.0	yes
07	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:46.0	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>
08	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:48.0	yes
21	(1) SDSSJ115630.62+500822.1	ACS/SBC	2	22-May-2015 21:00:50.0	yes
22	(1) SDSSJ115630.62+500822.1	ACS/SBC	1	22-May-2015 21:00:51.0	yes
30	(1) SDSSJ115630.62+500822.1	WFC3/UVIS	1	22-May-2015 21:00:52.0	yes
40	(1) SDSSJ115630.62+500822.1	ACS/WFC	1	22-May-2015 21:00:54.0	yes
50	(1) SDSSJ115630.62+500822.1	COS/FUV COS/NUV	1	22-May-2015 21:00:55.0	yes

22 Total Orbits Used

ABSTRACT

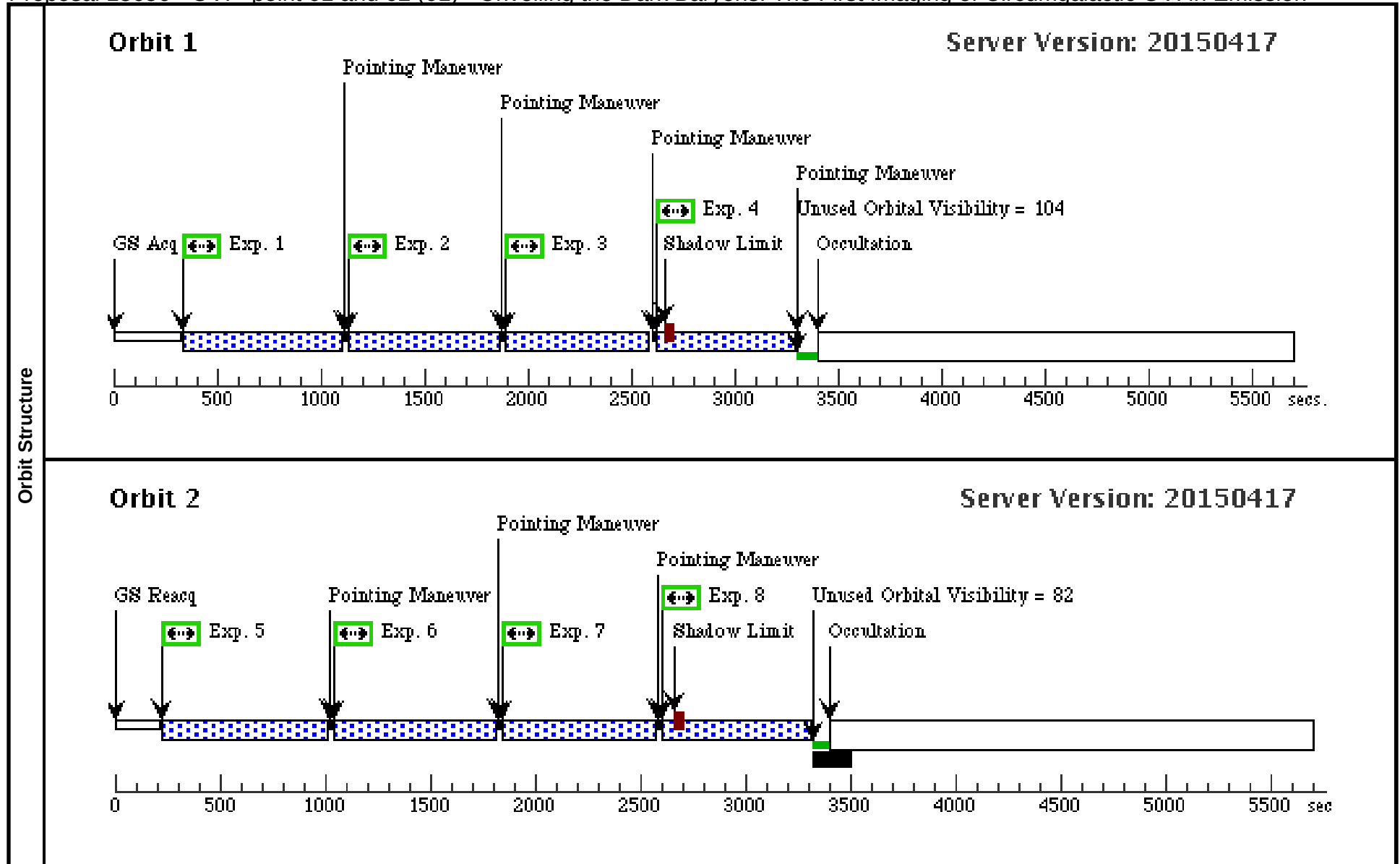
Hot gas outflows through the extended circumgalactic medium of galaxies are likely responsible for regulating star formation, shaping the galaxy luminosity function and mass-metallicity relation, and enriching the IGM. Over a wide temperature range of 10^5 K to 10^6 K, the cooling of this hot CGM flow is dominated by OVI ($\lambda=1032, 1038$ Å) emission. Thus OVI plays a vital role in driving, cooling, and generally probing galaxy outflows. The difficulty is that OVI gas is typically only observed in absorption against bright QSOs: consequently spatial information for a single galaxy has never been available, rendering it impossible to estimate the mass of (missing) baryons in this phase and its impact on braking galaxy superwinds/enriching the IGM.

We have devised a method of using ACS/SBC filters to observe and map emission lines in the far UV, which has been tried and tested many times with Lyman alpha. We will now turn the method to image OVI emission from a more redshifted ($z=0.23$) extreme starbursting galaxy. The observations will map OVI in emission for the first time. From this we will calculate the allowed ranges of gas density, temperature, and metallicity that can give rise to the observed emission and provide the first estimate the OVI mass from resolved information. New constraints on galactic wind models and input for cosmological simulations may be expected.

This work is exploratory, but the possible scientific return is extremely high. Results will be used to guide subsequent HST observations and the next generations of UV-capable satellites, and thus it is truly in the spirit of the UV initiative.

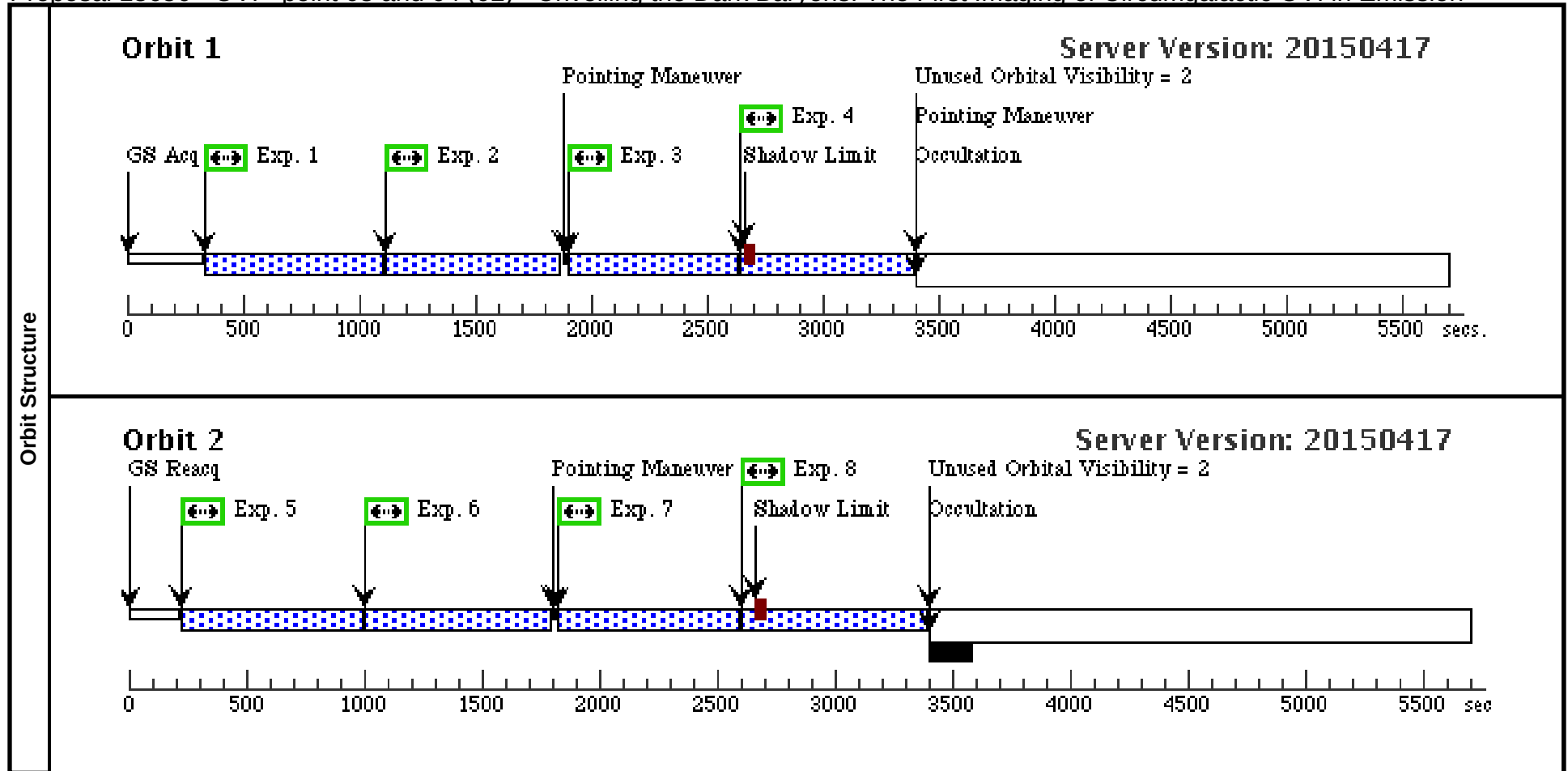
Proposal 13656 - OVI - point 01 and 02 (01) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 01 and 02 (01), completed Sat May 23 01:00:56 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: (none)									
Diagnostics	(OVI - point 01 and 02 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
	(OVI - point 01 and 02 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 4.500,-4.500; GS ACQ SCENARIO BASE1B3		702 Secs (702 Secs) [==>]	[1]
	2	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		642 Secs (642 Secs) [==>]	[1]
	4	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 4.585,-4.245; SHADOW		642 Secs (642 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 4.500,-1.500		740 Secs (740 Secs) [==>]	[2]
	6	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 8		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		680 Secs (680 Secs) [==>]	[2]
	8	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 4.585,-1.245; SHADOW		680 Secs (680 Secs) [==>]	[2]



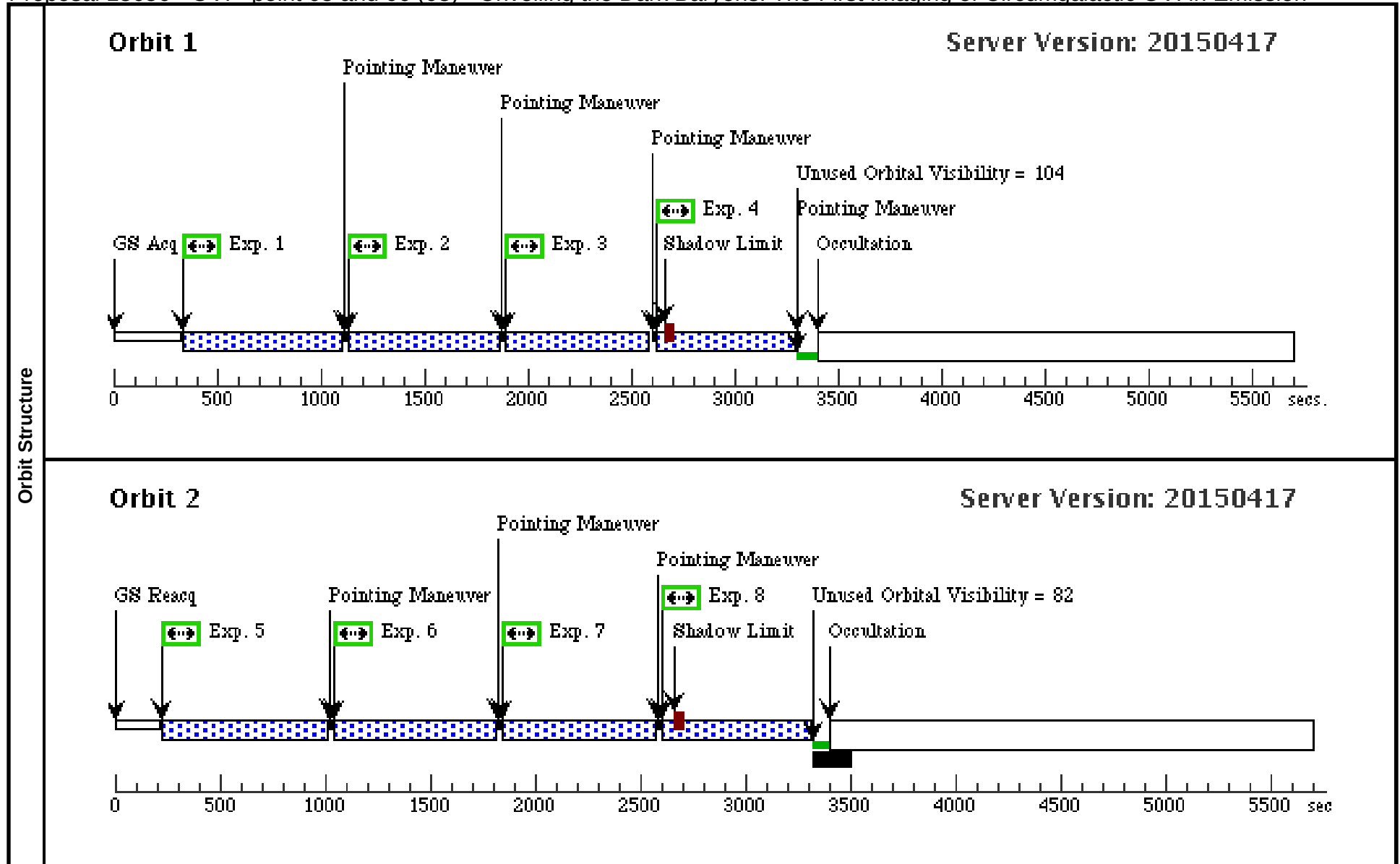
Proposal 13656 - OVI - point 03 and 04 (02) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 03 and 04 (02), completed Sat May 23 01:00:57 GMT 2015									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 4.500,1.500		702 Secs (702 Secs) [==>]	[1]
	2	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 4.585,1.755; SHADOW		702 Secs (702 Secs) [==>]	[1]
	4	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 3		702 Secs (702 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 4.500,4.500		740 Secs (740 Secs) [==>]	[2]
	6	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 4.585,4.755; SHADOW		740 Secs (740 Secs) [==>]	[2]
	8	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 7		740 Secs (740 Secs) [==>]	[2]



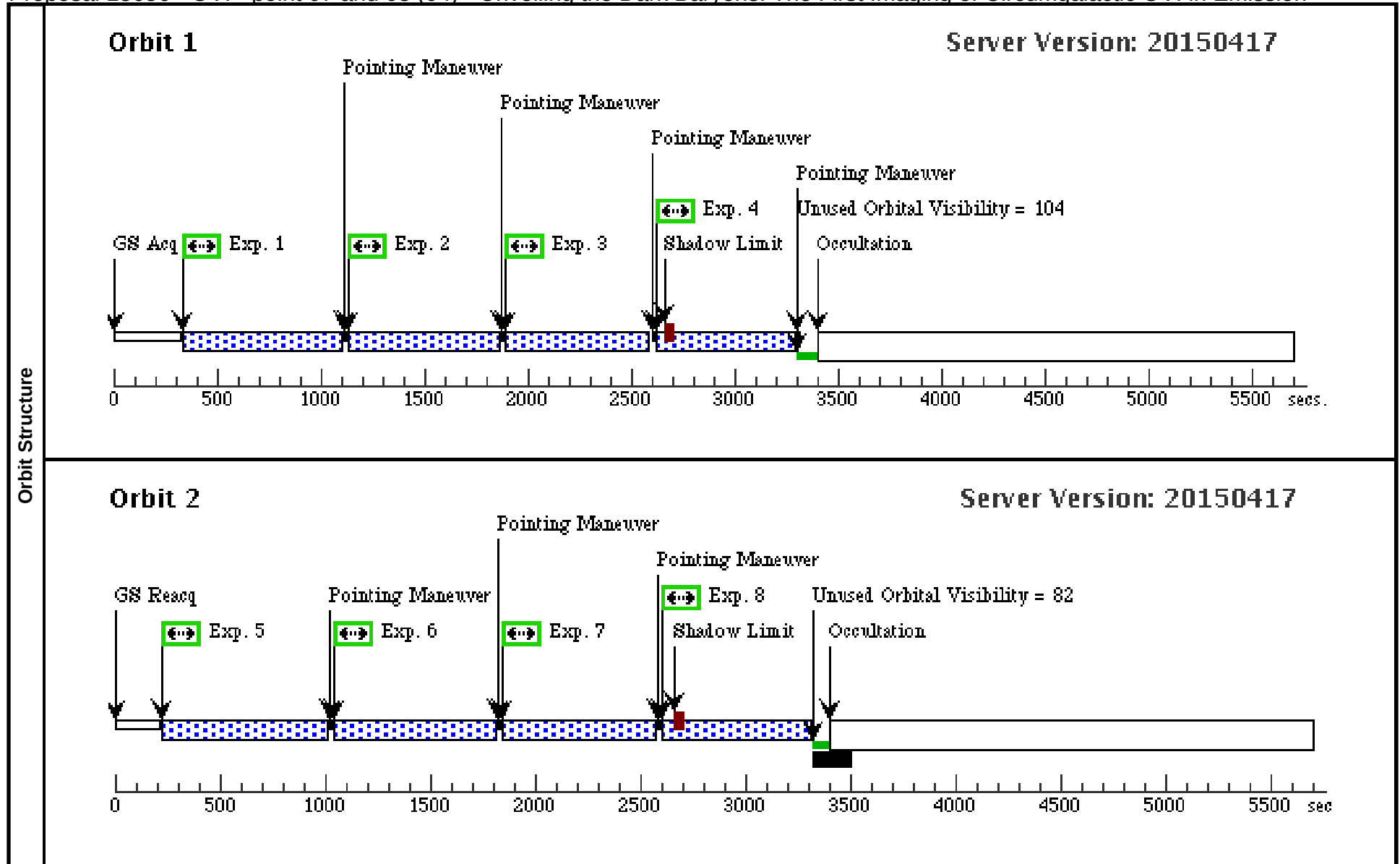
Proposal 13656 - OVI - point 05 and 06 (03) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 05 and 06 (03), completed Sat May 23 01:00:57 GMT 2015									
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Diagnostics	(OVI - point 05 and 06 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
	(OVI - point 05 and 06 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 1.500,-4.500; GS ACQ SCENARIO BASE1B3		702 Secs (702 Secs) [==>]	[1]
	2	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		642 Secs (642 Secs) [==>]	[1]
	4	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 1.585,-4.245; SHADOW		642 Secs (642 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 1.500,-1.500		740 Secs (740 Secs) [==>]	[2]
	6	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 8		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		680 Secs (680 Secs) [==>]	[2]
	8	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 1.585,-1.245; SHADOW		680 Secs (680 Secs) [==>]	[2]



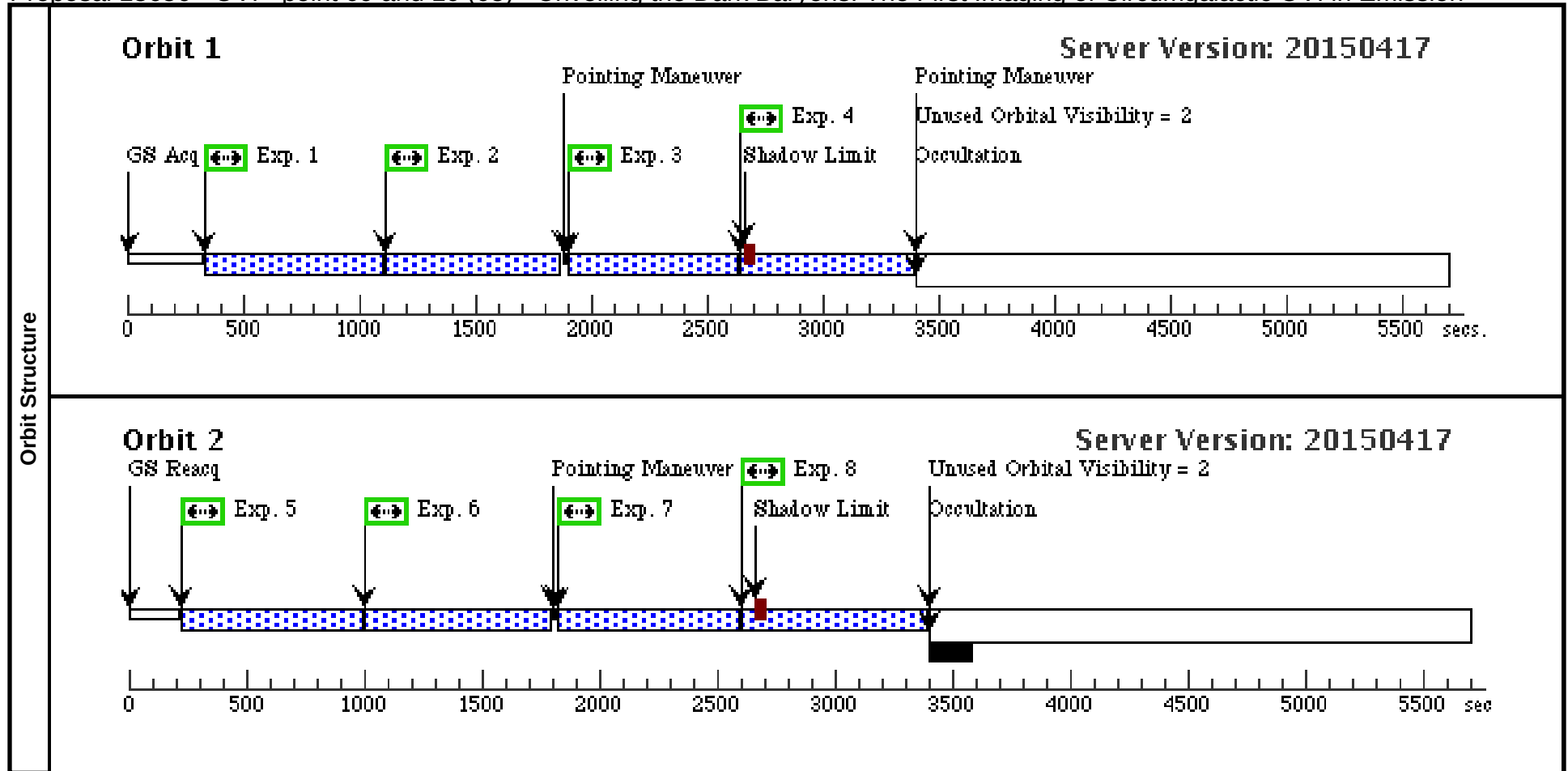
Proposal 13656 - OVI - point 07 and 08 (04) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 07 and 08 (04), completed Sat May 23 01:00:57 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: (none)									
Diagnostics	(OVI - point 07 and 08 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
	(OVI - point 07 and 08 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 1.500,1.500; GS ACQ SCENARI O BASE1B3		702 Secs (702 Secs) [==>]	[1]
	2	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		642 Secs (642 Secs) [==>]	[1]
	4	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 1.585,1.755; SHADOW		642 Secs (642 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG 1.500,4.500		740 Secs (740 Secs) [==>]	[2]
	6	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 8		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		680 Secs (680 Secs) [==>]	[2]
	8	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG 1.585,4.755; SHADOW		680 Secs (680 Secs) [==>]	[2]



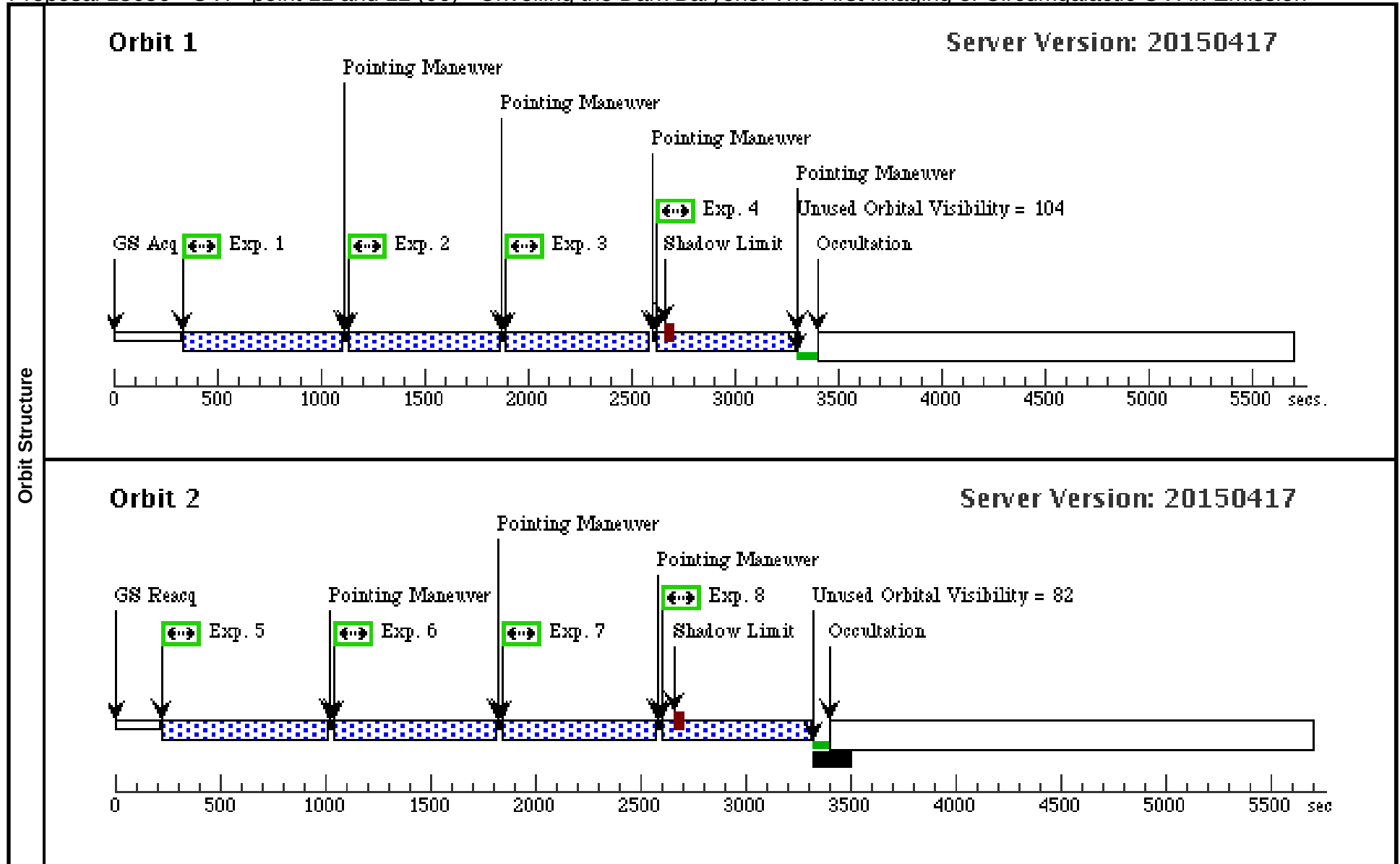
Proposal 13656 - OVI - point 09 and 10 (05) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 09 and 10 (05), completed Sat May 23 01:00:57 GMT 2015									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -1.500,-4.500		702 Secs (702 Secs) [==>]	[1]
	2	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -1.585,-4.245; SHADOW		702 Secs (702 Secs) [==>]	[1]
	4	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 3		702 Secs (702 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -1.500,-1.500		740 Secs (740 Secs) [==>]	[2]
	6	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -1.585,-1.245; SHADOW		740 Secs (740 Secs) [==>]	[2]
	8	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 7		740 Secs (740 Secs) [==>]	[2]



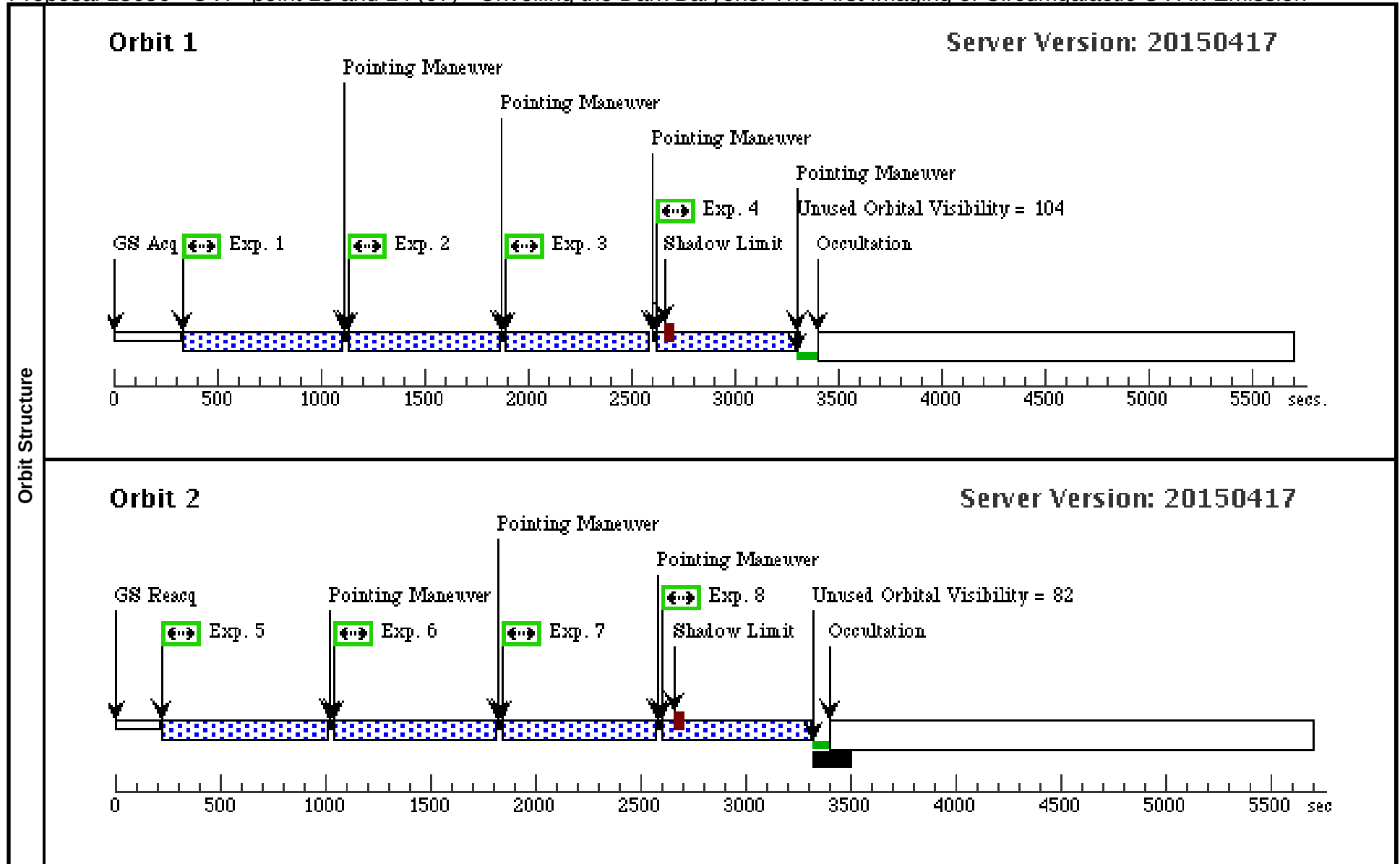
Proposal 13656 - OVI - point 11 and 12 (06) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 11 and 12 (06), scheduled Sat May 23 01:00:58 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: (none)									
Diagnostics	(OVI - point 11 and 12 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
	(OVI - point 11 and 12 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -1.500,1.500; GS ACQ SCENARIO BASE1B3		702 Secs (702 Secs) [==>]	[1]
	2	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		642 Secs (642 Secs) [==>]	[1]
	4	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -1.585,1.755; SHADOW		642 Secs (642 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -1.500,4.500		740 Secs (740 Secs) [==>]	[2]
	6	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 8		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		680 Secs (680 Secs) [==>]	[2]
	8	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -1.585,4.755; SHADOW		680 Secs (680 Secs) [==>]	[2]



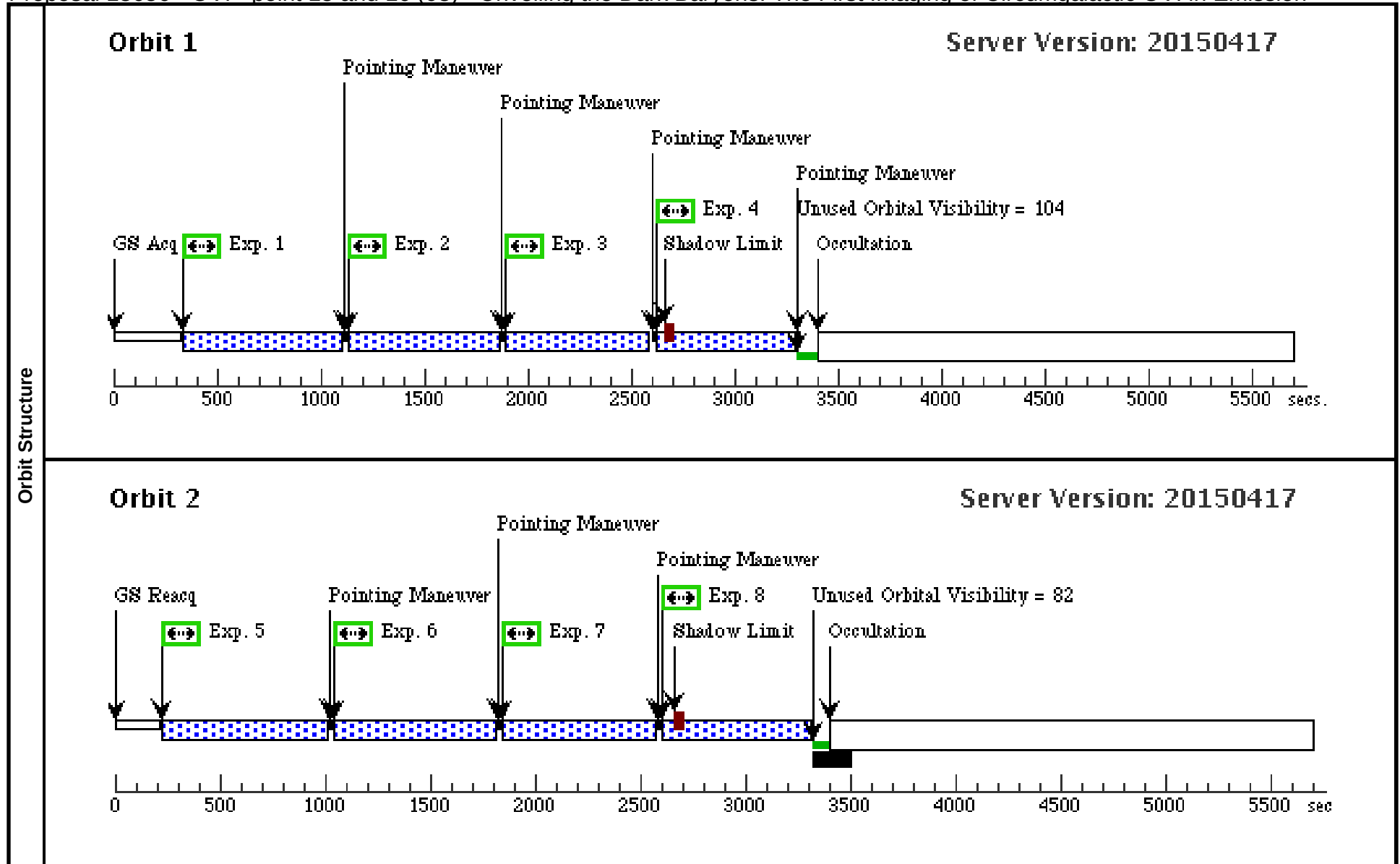
Proposal 13656 - OVI - point 13 and 14 (07) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 13 and 14 (07), scheduled Sat May 23 01:00:58 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: (none)									
Diagnostics	(OVI - point 13 and 14 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
	(OVI - point 13 and 14 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -4.500,-4.500; GS ACQ SCENARI O BASE1B3		702 Secs (702 Secs) [==>]	[1]
	2	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		642 Secs (642 Secs) [==>]	[1]
	4	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -4.585,-4.245; SHADOW		642 Secs (642 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -4.500,-1.500		740 Secs (740 Secs) [==>]	[2]
	6	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 8		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		680 Secs (680 Secs) [==>]	[2]
	8	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -4.585,-1.245; SHADOW		680 Secs (680 Secs) [==>]	[2]



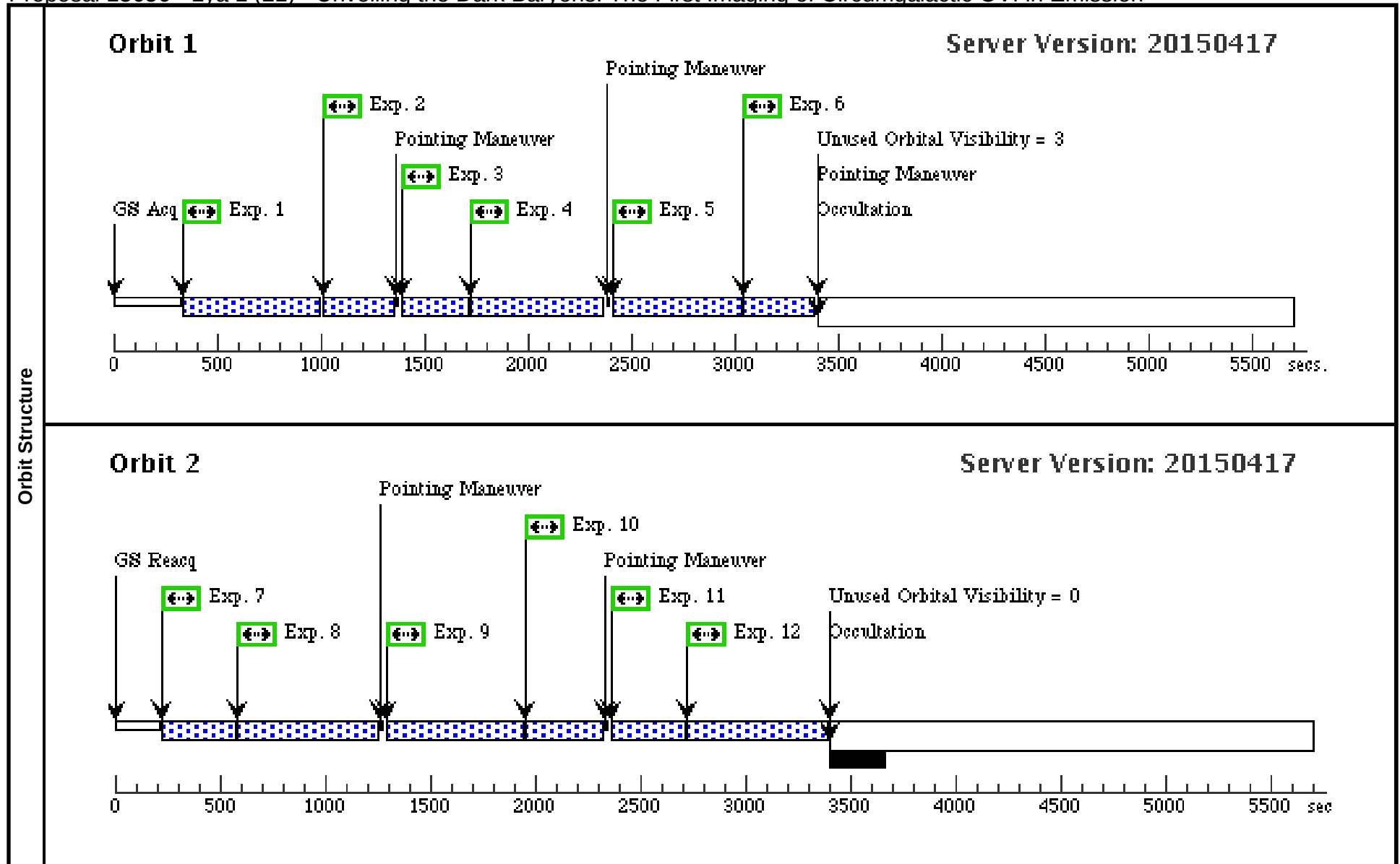
Proposal 13656 - OVI - point 15 and 16 (08) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, OVI - point 15 and 16 (08), scheduled Sat May 23 01:00:58 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: (none)									
Diagnostics	(OVI - point 15 and 16 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
	(OVI - point 15 and 16 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -4.500,1.500; GS ACQ SCENARIO BASE1B3		702 Secs (702 Secs) [==>]	[1]
	2	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 4		702 Secs (702 Secs) [==>]	[1]
	3	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 1; SHADOW		642 Secs (642 Secs) [==>]	[1]
	4	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -4.585,1.755; SHADOW		642 Secs (642 Secs) [==>]	[1]
	5	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		POS TARG -4.500,4.500		740 Secs (740 Secs) [==>]	[2]
	6	(615779)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F140LP		SAME POS AS 8		740 Secs (740 Secs) [==>]	[2]
	7	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		SAME POS AS 5; SHADOW		680 Secs (680 Secs) [==>]	[2]
	8	(615778)	(1) SDSSJ115630.62+500822.1	ACS/SBC, ACCUM, SBC-FIX	F125LP		POS TARG -4.585,4.755; SHADOW		680 Secs (680 Secs) [==>]	[2]



Proposal 13656 - Lya 1 (21) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, Lya 1 (21), scheduling										Sat May 23 01:00:58 GMT 2015
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: ACS/SBC										
	Special Requirements: (none)										
	Comments: SBC. Lyman alpha + continuum. 2 orbits										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Fluxes		Miscellaneous		
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000				V=18.6+/-0.05 FUV magnitude 18.8 AB		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	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		POS TARG -3.000,-3.000		596 Secs (596 Secs)		
									[==>]		[1]
	2	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		SAME POS AS 1		296 Secs (296 Secs)		
									[==>]		[1]
	3	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 0.168 ,-2.938		296 Secs (296 Secs)		
									[==>]		[1]
	4	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 3		596 Secs (596 Secs)		
									[==>]		[1]
	5	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		POS TARG 3.084,-2.857		596 Secs (596 Secs)		
									[==>]		[1]
	6	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		SAME POS AS 5		296 Secs (296 Secs)		
									[==>]		[1]
	7	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG 2.916,0.082		322 Secs (322 Secs)		
								[==>]		[2]	
8	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 7		622 Secs (622 Secs)			
								[==>]		[2]	
9	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		POS TARG 0.000,0.000		622 Secs (622 Secs)			
								[==>]		[2]	
10	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		SAME POS AS 9		322 Secs (322 Secs)			
								[==>]		[2]	
11	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG -2.832,0.062		322 Secs (322 Secs)			
								[==>]		[2]	
12	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 11		622 Secs (622 Secs)			
								[==>]		[2]	

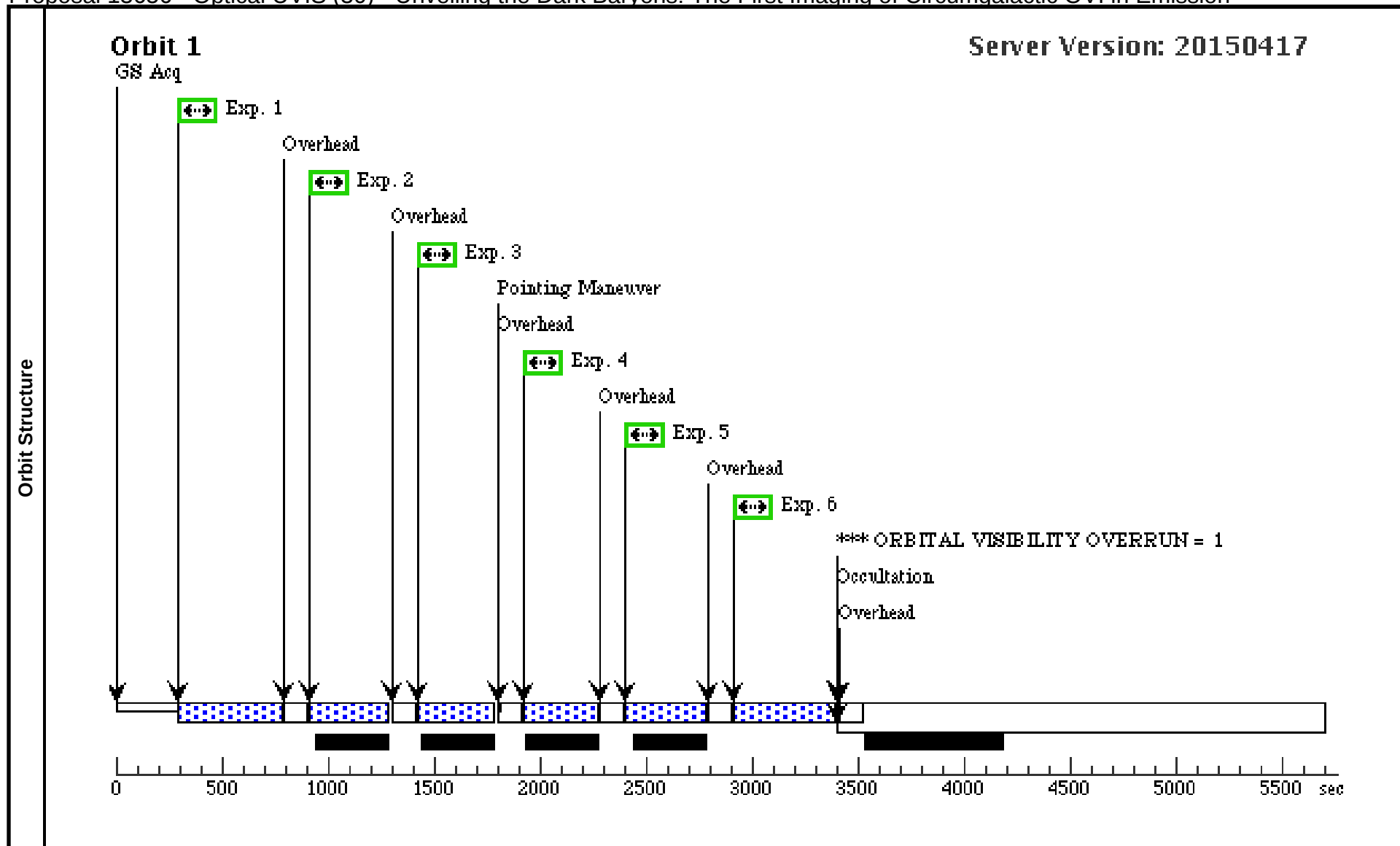


Proposal 13656 - Lya 2 (22) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, Lya 2 (22), scheduling										Sat May 23 01:00:58 GMT 2015
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: ACS/SBC										
	Special Requirements: (none)										
	Comments: SBC. Lyman alpha + continuum. 1 orbit.										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000				V=18.6+/-0.05 FUV magnitude 18.8 AB		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	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		POS TARG -2.916,3 .143		596 Secs (596 Secs) [==>]		[1]
	2	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		SAME POS AS 1		296 Secs (296 Secs) [==>]		[1]
	3	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		POS TARG -0.084,3 .082		296 Secs (296 Secs) [==>]		[1]
	4	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		SAME POS AS 3		596 Secs (596 Secs) [==>]		[1]
	5	(ACS.im.61 8134)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F165LP		POS TARG 3.000,3.000		596 Secs (596 Secs) [==>]		[1]
	6	(ACS.im.61 8133)	(1) SDSSJ115630.62 +500822.1	ACS/SBC, ACCUM, SBC-FIX	F150LP		SAME POS AS 5		296 Secs (296 Secs) [==>]		[1]
Orbit Structure	Orbit 1 Server Version: 20150417 05001000150020002500300035004000450050005500 sec										

Proposal 13656 - Optical UVIS (30) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, Optical UVIS (30), completed Sat May 23 01:00:58 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Diagnostics	(Optical UVIS (30)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000		V=18.6+/-0.05 FUV magnitude 18.8 AB	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SDSSJ115630.62+500822.1	WFC3/UVIS, ACCUM, UVIS2	F390W	FLASH=7			456 Secs (456 Secs)	
									[==>]	[1]
	2		(1) SDSSJ115630.62+500822.1	WFC3/UVIS, ACCUM, UVIS2	F475W	FLASH=3			350 Secs (350 Secs)	
									[==>]	[1]
	3		(1) SDSSJ115630.62+500822.1	WFC3/UVIS, ACCUM, UVIS2	F850LP	FLASH=8			350 Secs (350 Secs)	
									[==>]	[1]
	4		(1) SDSSJ115630.62+500822.1	WFC3/UVIS, ACCUM, UVIS2	F850LP	FLASH=8	POS TARG 0.158,0.070		350 Secs (350 Secs)	
									[==>]	[1]
	5		(1) SDSSJ115630.62+500822.1	WFC3/UVIS, ACCUM, UVIS2	F475W	FLASH=3	POS TARG 0.158,0.070		350 Secs (350 Secs)	
									[==>]	[1]
	6		(1) SDSSJ115630.62+500822.1	WFC3/UVIS, ACCUM, UVIS2	F390W	FLASH=7	POS TARG 0.158,0.070		456 Secs (456 Secs)	
									[==>]	[1]



Proposal 13656 - Ha Hb - ACS (40) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Visit	Proposal 13656, Ha Hb - ACS (40), scheduled Sat May 23 01:00:58 GMT 2015									
	Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: (none)									
Diagnostics	(Exposure 3 (Ha Hb - ACS (40))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.									
	(Exposure 4 (Ha Hb - ACS (40))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.									
	(Exposure 5 (Ha Hb - ACS (40))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp or WFC3 quad filters as central wavelengths & transmission efficiencies vary within the apertures.									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000			V=18.6+/-0.05 FUV magnitude 18.8 AB		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SDSSJ115630.62+500822.1	ACS/WFC, ACCUM, WFC2-ORAMP	FR782N 8114 A	FLASH=16			350 Secs (350 Secs)	
									[==>]	[1]
	2		(1) SDSSJ115630.62+500822.1	ACS/WFC, ACCUM, WFC2-ORAMP	FR601N 6010 A	FLASH=15			473 Secs (473 Secs)	
									[==>]	[1]
	3		(1) SDSSJ115630.62+500822.1	ACS/WFC, ACCUM, WFC2-ORAMP	FR601N 6010 A	FLASH=15	POS TARG 0.247,0.094		473 Secs (473 Secs)	
									[==>]	[1]
	4		(1) SDSSJ115630.62+500822.1	ACS/WFC, ACCUM, WFC2-ORAMP	FR782N 8114 A	FLASH=16	POS TARG 0.247,0.094		350 Secs (350 Secs)	
									[==>]	[1]
	5		(1) SDSSJ115630.62+500822.1	ACS/WFC, ACCUM, WFC2-ORAMP	FR601N 6010 A	FLASH=15	POS TARG 0.124,0.232		473 Secs (473 Secs)	
									[==>]	[1]
Orbit Structure	Orbit 1 Server Version: 20150417									

Proposal 13656 - COS (50) - Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission

Sat May 23 01:00:58 GMT 2015

Visit	Proposal 13656, COS (50), implementation										Sat May 23 01:00:58 GMT 2015
	Diagnostic Status: Warning										
	Scientific Instruments: COS/NUV, COS/FUV										
	Special Requirements: (none)										
	Comments: Photometry that guides target acquisition and integration times is done with HST data from visits 1 and 30 from this program. Flux was measured on the brightest UV source in 0.2 arcsec (acquisition) and 1.25 arcsec (spectroscopic observation) apertures, using the F140LP and F390W filters. Then we interpolated (power-law) between the two, to lambda=2300 AA. Fluxes are quoted below. These numbers (and the beta slope) were entered into the acquisition and spectroscopic ETCs.										
	HST Imaging Datasets for Photometry: F140LP : JCME01010 F390W : ICME30010 F140LP full = 45.660 adu/sec = 1.2387e-15 cgs/AA F140LP ACQ = 27.489 adu/sec = 7.4575e-16 cgs/AA F390W full = 335.631 adu/sec = 1.7145e-16 cgs/AA F390W ACQ = 227.063 adu/sec = 1.1599e-16 cgs/AA COS/NUV full = 6.5052e-16 cgs/AA COS/NUV ACQ = 4.068e-16 cgs/AA										
Diagnosics	(COS (50)) 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			
	(1)	SDSSJ115630.62+500822.1	RA: 11 56 30.6305 (179.1276271d) Dec: +50 08 22.18 (50.13949d) Equinox: J2000				V=18.6+/-0.05 FUV magnitude 18.8 AB	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	(COS.ta.708 853)	(1) SDSSJ115630.62 +500822.1	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				20 Secs (20 Secs)		
									[==>]	[1]	
	2	(COS.sp.618 205)	(1) SDSSJ115630.62 +500822.1	COS/FUV, TIME-TAG, PSA	G130M 1318 A	FP-POS=ALL; BUFFER-TIME=36 54; FLASH=YES			590 Secs (2360 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]	

