



12660 - Long term observations of Saturn's northern auroras

Cycle: 19, Proposal Category: GO

(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>
I1	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:48.0	yes
I2	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:50.0	yes
I3	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:52.0	yes
I4	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:54.0	yes
I5	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:56.0	yes
I6	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:57.0	yes
I7	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:05:59.0	yes
I8	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:06:01.0	yes
I9	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:06:02.0	yes
IA	(1) SATURN	ACS/SBC	1	03-Feb-2016 21:06:04.0	yes

10 Total Orbits Used

ABSTRACT

Auroral emissions are a vital tool in diagnosing the dynamics of planetary magnetospheres. While Saturn's southern UV auroras have been observed with high-sensitivity cameras onboard the Hubble Space Telescope (HST), the northern auroras have only been observed at very oblique angles. Our understanding of Saturn's auroral emissions is thus only half complete. However, Saturn has now passed equinox and is moving toward summer in the northern hemisphere, such that the northern auroras are now visible from Earth, and recent results from HST have indicated that Saturn's northern auroras are not simply mirror images of the southern. The changing seasons are also expected to result in significant changes in magnetospheric phenomena related to the auroras. Observing these changes is a specific goal of the Cassini Solstice Mission (CSM) and, since joint HST-Cassini observations have repeatedly proved to be invaluable, CSM operations are currently being planned specifically with joint HST observations in mind. The observations proposed here will thus execute over Cycles 18-20, and will address the following science questions:

What is the morphology of Saturn's northern auroras?

Do Saturn's auroras change with the planet's season?

How are the auroral emissions of different wavelengths related?

The importance of long term HST observations of Saturn's northern auroras are highlighted by the fact that recent key discoveries would have been

missed without the multiyear archive of observations of the planet's southern auroras. The opportunity to obtain HST images while Cassini makes specifically-tailored supporting observations is an extremely valuable opportunity, and HST is the only instrument capable of providing sustained, high time resolution observations of Saturn's auroral emission.

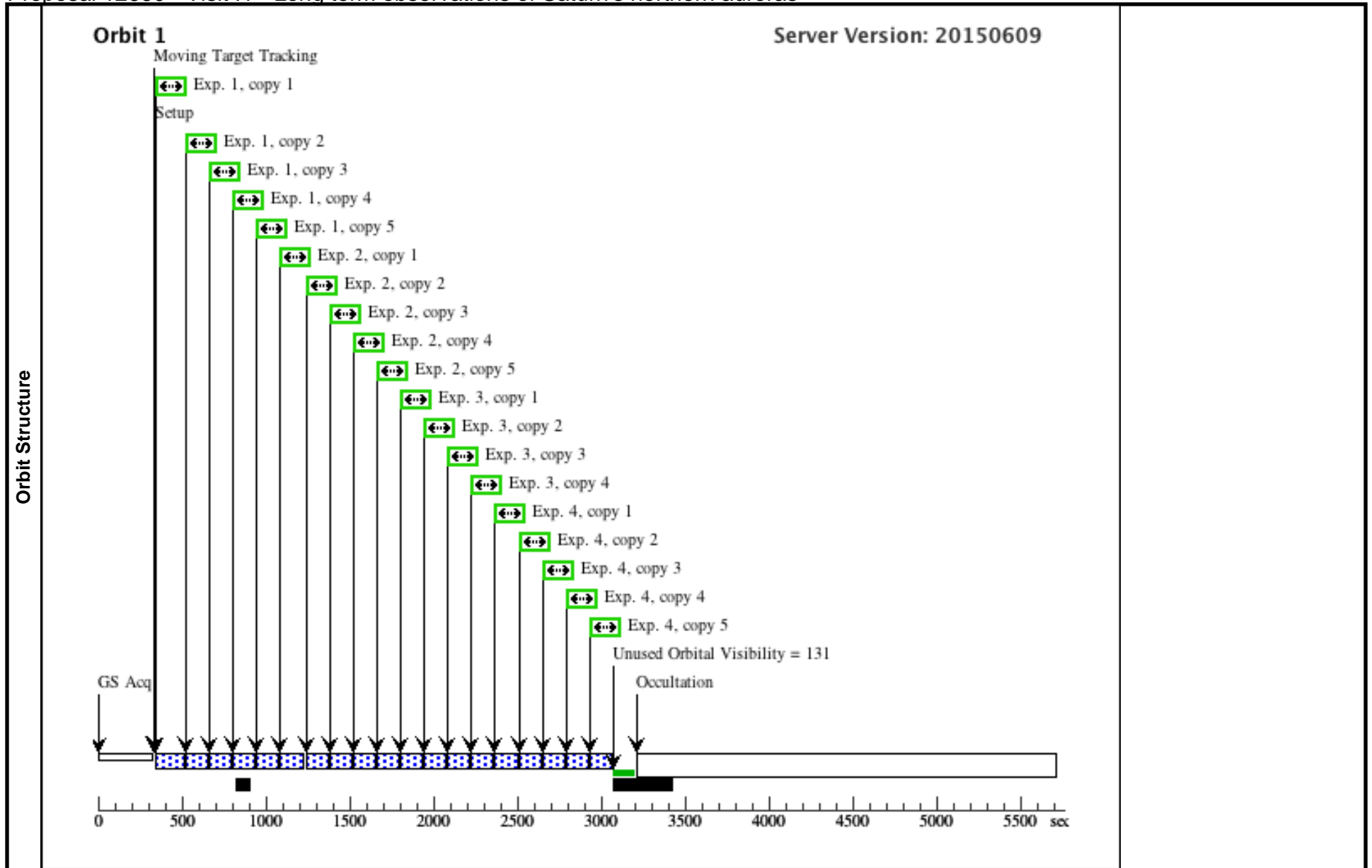
OBSERVING DESCRIPTION

These observations will be obtained with the Solar Blind Channel (SBC) of the ACS. The field of view of the ACS/SBC is large enough to encompass the whole disc of the planet plus a significant portion of the rings. The observations could, however, also be obtained with the STIS/FUV-MAMA instrument if the ACS is not functioning, but in practice we prefer to use the ACS, since the sensitivity using e.g. the F125LP filter is 1.5×10^3 counts pixel⁻¹ s⁻¹ for 1 kiloRayleigh of H₂ plus Lyman- α emission, versus 0.5×10^3 counts pixel⁻¹ s⁻¹ for the STIS using the equivalent F25-SrF2 filter. Higher count rates are desirable since planetary rotation introduces $1/100$ s of blurring of features near the central meridian longitude. Previously measured count rates are $\sim 25,000$ counts s⁻¹, well below the limit of 200,000 counts s⁻¹. We will use the F115LP filter during the Low Sky portion of the orbit and the F125LP filter outside of this in order to reduce the Ly- α background contamination from the geocorona. For each set of observations, we will also obtain a set of images using the F140LP filter in order to provide the background reflected sunlight for subtraction. We will obtain 100 s exposures, a length experience shows is sufficient to obtain a good signal-to-noise ratio. We request 30 orbits over 3 cycles divided as follows: 5 orbits in Cycle 18, 10 orbits in Cycle 19 and 15 orbits in Cycle 20. This increasing number of orbits per year reflects the increasing view of the northern auroral region as shown in Fig. 1. Observations will be obtained near opposition each year, with pre-opposition providing the best viewing angles due to the Earth's orbital motion. In the past, Saturn observations have been successfully obtained in both 2-gyro and 3-gyro mode.

Proposal 12660 - Visit I1 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

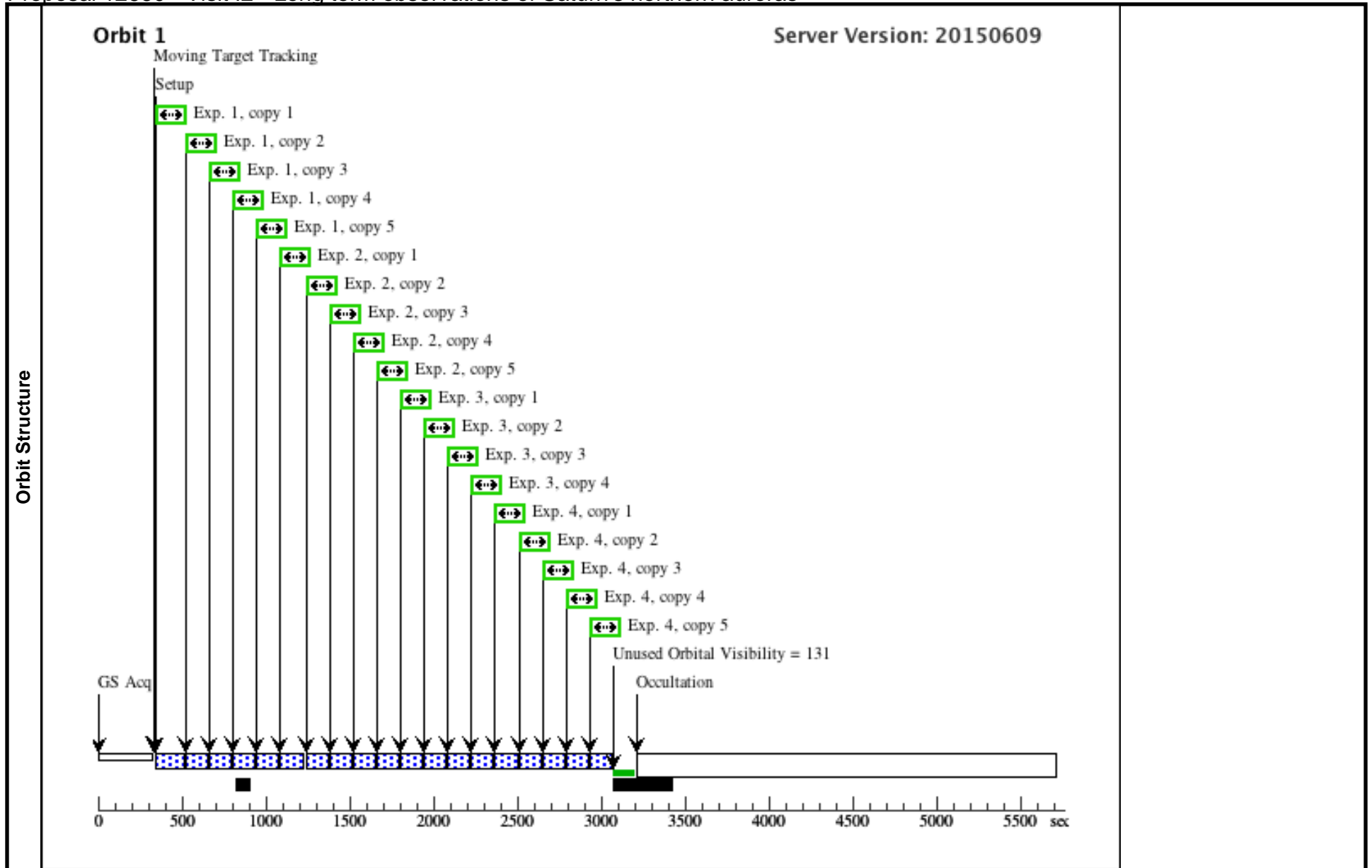
Visit	Proposal 12660, Visit II, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 28-MAR-2012:00:00:00 AND 29-MAR-2012:00:00:00 <i>Comments: This visit initiates the sequence of observations as the Cassini spacecraft proceeds toward peripis on the dayside.</i>									
	Diagnosics (Exposure 1 (Visit I1)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I1)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I1)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I1)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	SATURN	STD=SATURN			SEP OF SATURN RHEA FROM EARTH GT 10.0", SEP OF SATURN TITAN FROM EARTH GT 10.0"	EARTH			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP		GS ACQ SCENARI O BASE1B3		100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I2 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

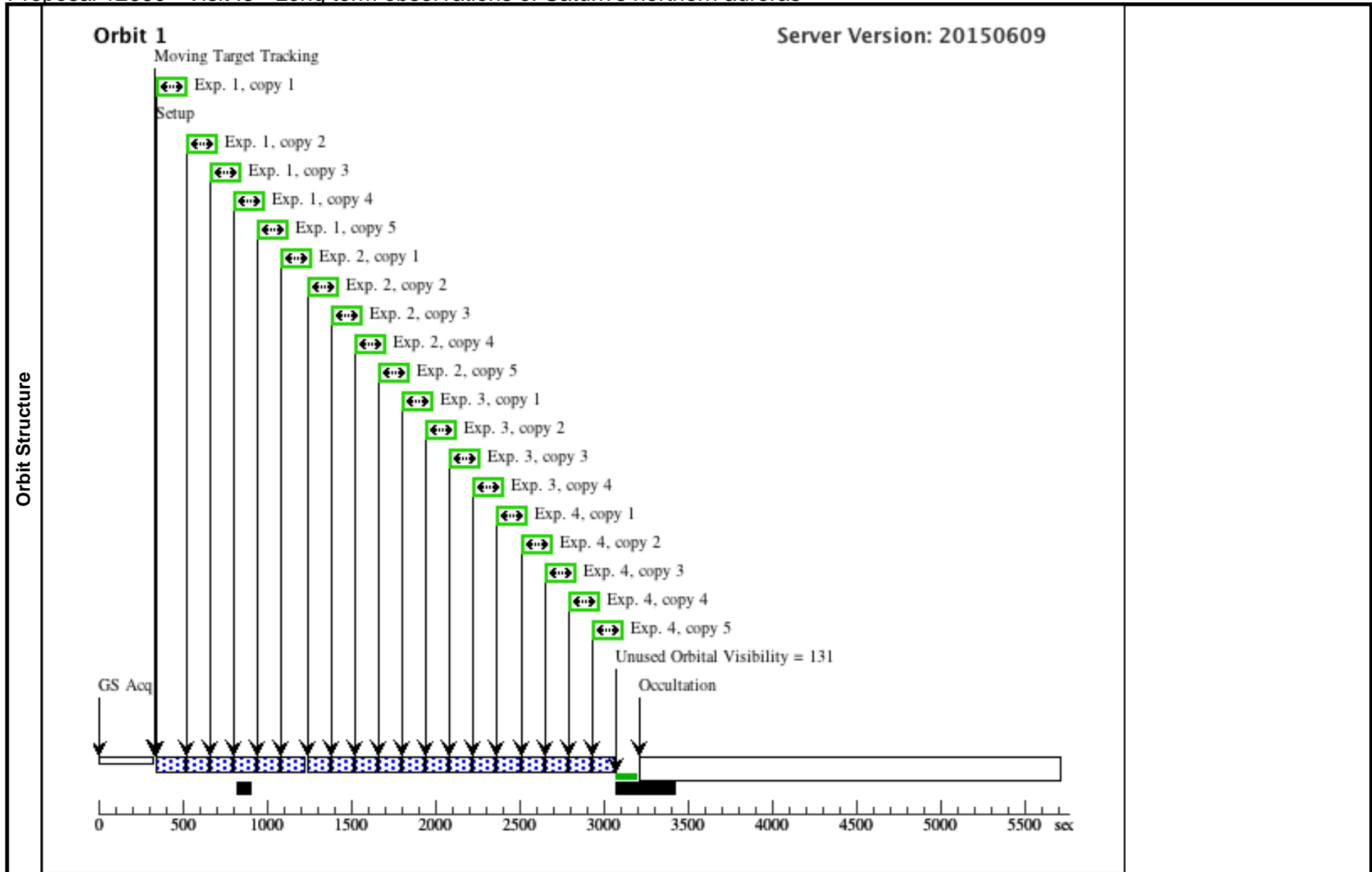
Visit	Proposal 12660, Visit I2, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 29-MAR-2012:00:00:00 AND 30-MAR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I1</i>									
	Diagnosics (Exposure 1 (Visit I2)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I2)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I2)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I2)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	SATURN	STD=SATURN			SEP OF SATURN RHEA FROM EARTH GT 10.0", SEP OF SATURN TITAN FROM EARTH GT 10.0"	EARTH			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I3 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

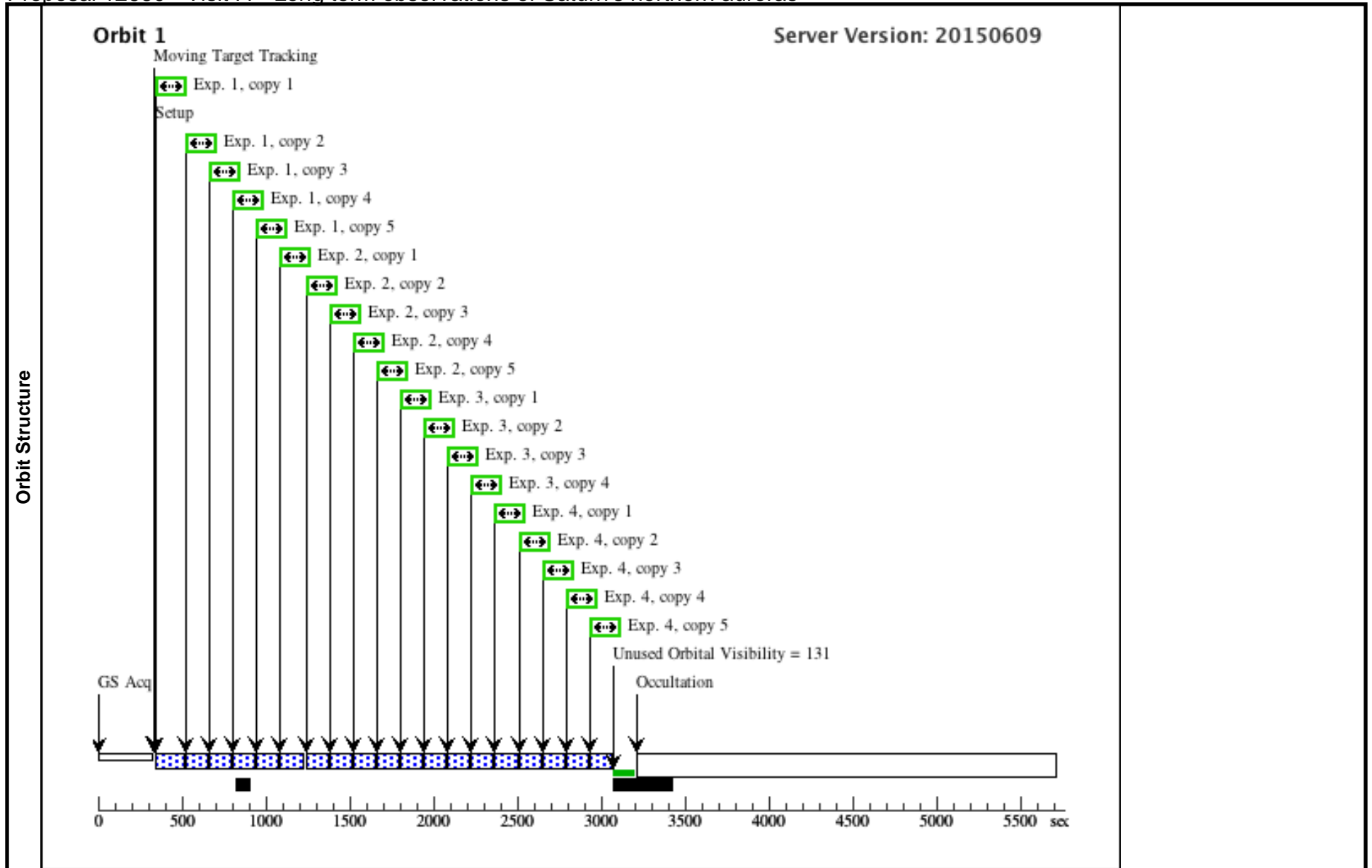
Visit	Proposal 12660, Visit I3, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 30-MAR-2012:00:00:00 AND 31-MAR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I2</i>									
	Diagnosics (Exposure 1 (Visit I3)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I3)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I3)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I3)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
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Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP		GS ACQ SCENARI O BASE1B3		100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I4 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

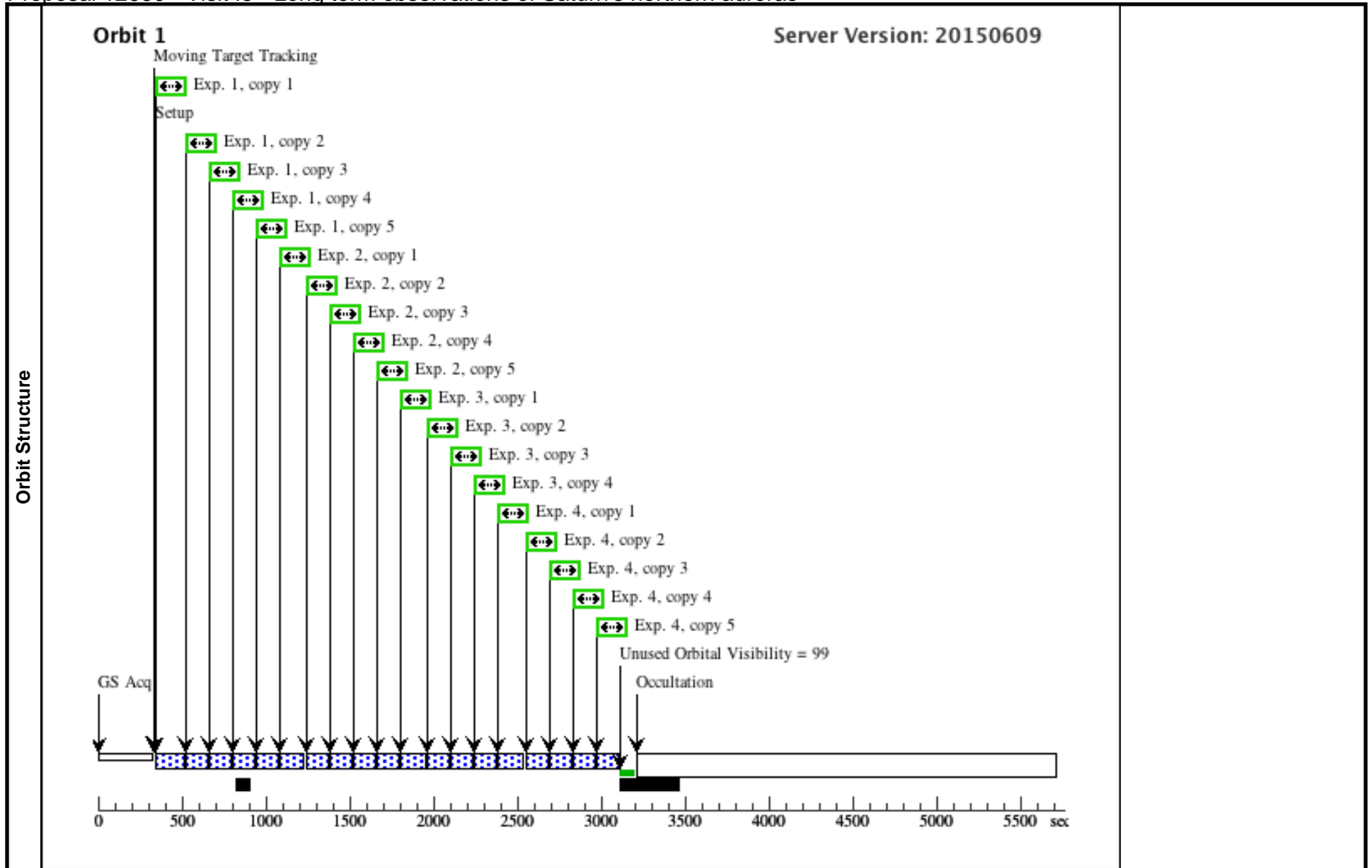
Visit	Proposal 12660, Visit I4, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 31-MAR-2012:00:00:00 AND 01-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I3</i>									
	Diagnosics (Exposure 1 (Visit I4)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I4)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I4)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I4)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	SATURN	STD=SATURN			SEP OF SATURN RHEA FROM EARTH GT 10.0", SEP OF SATURN TITAN FROM EARTH GT 10.0"	EARTH			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I5 - Long term observations of Saturn's northern auroras

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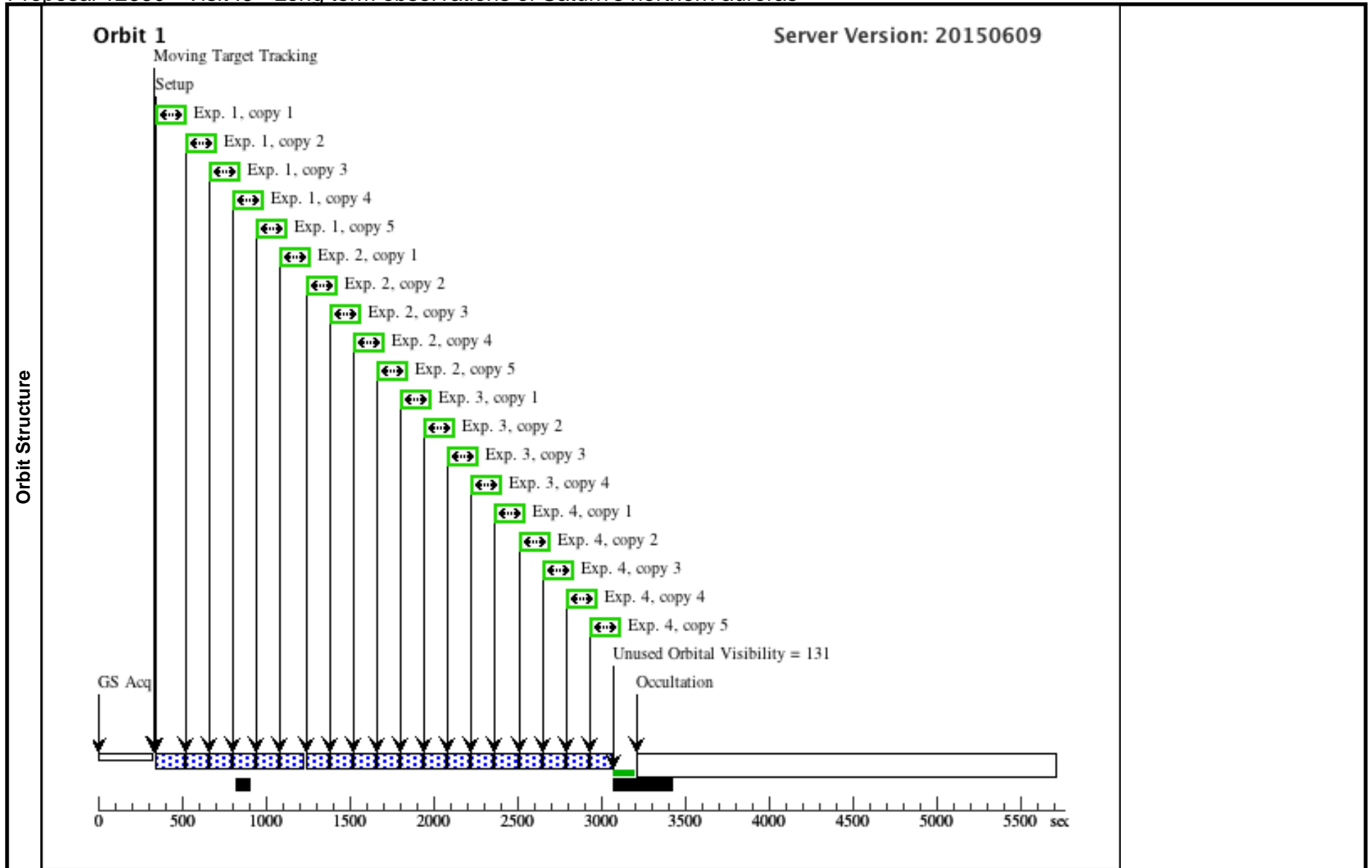
Visit	Proposal 12660, Visit I5, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 01-APR-2012:00:00:00 AND 02-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I4. This visit contains the set of F140 images for this Cycle.</i>									
	Diagnosics (Exposure 1 (Visit I5)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I5)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I5)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I5)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	SATURN	STD=SATURN			SEP OF SATURN RHEA FROM EARTH GT 10.0", SEP OF SATURN TITAN FROM EARTH GT 10.0"	EARTH			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
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Proposal 12660 - Visit I6 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

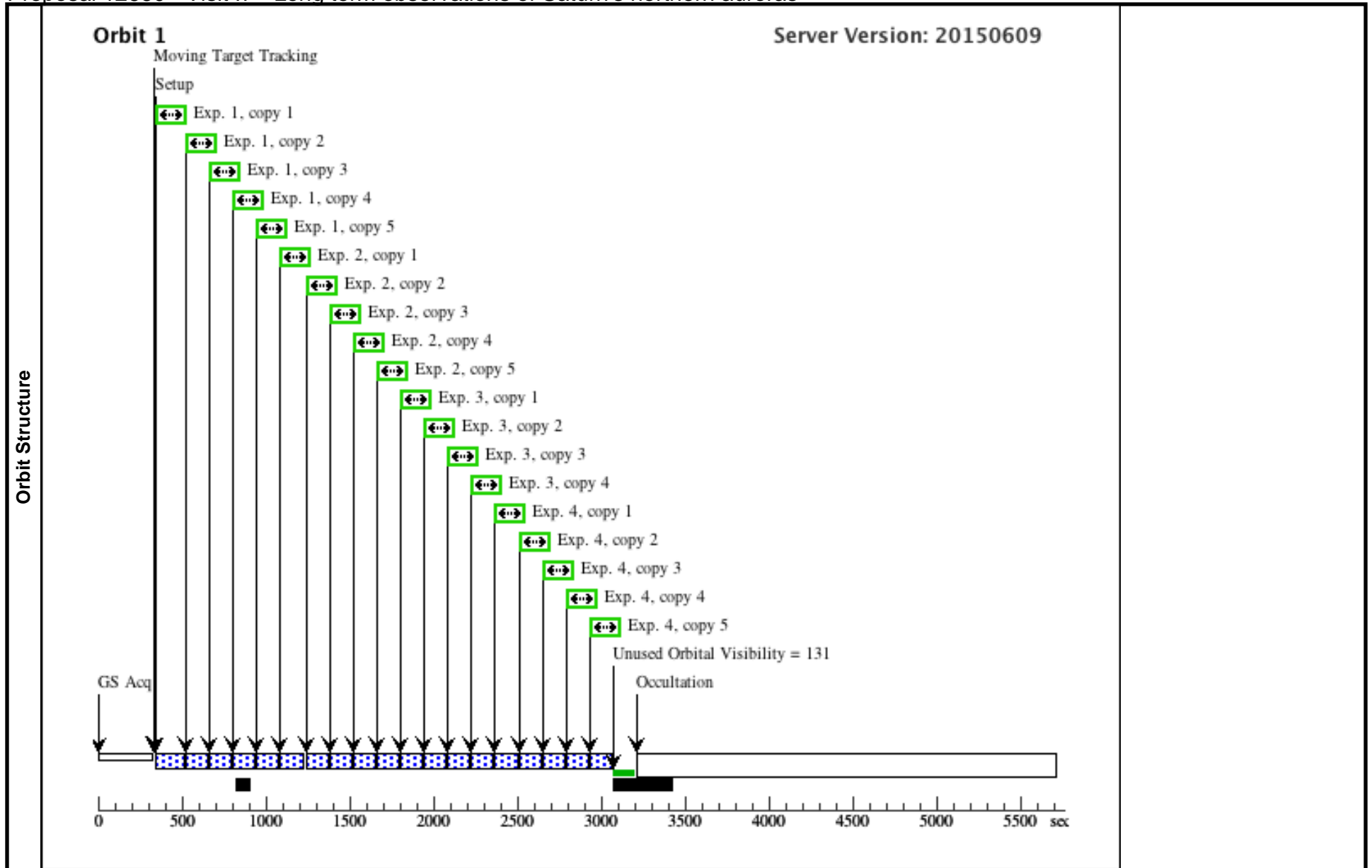
Visit	Proposal 12660, Visit I6, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 02-APR-2012:00:00:00 AND 03-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I5</i>									
	Diagnosics (Exposure 1 (Visit I6)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I6)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I6)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I6)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
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Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP		GS ACQ SCENARI O BASE1B3		100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I7 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

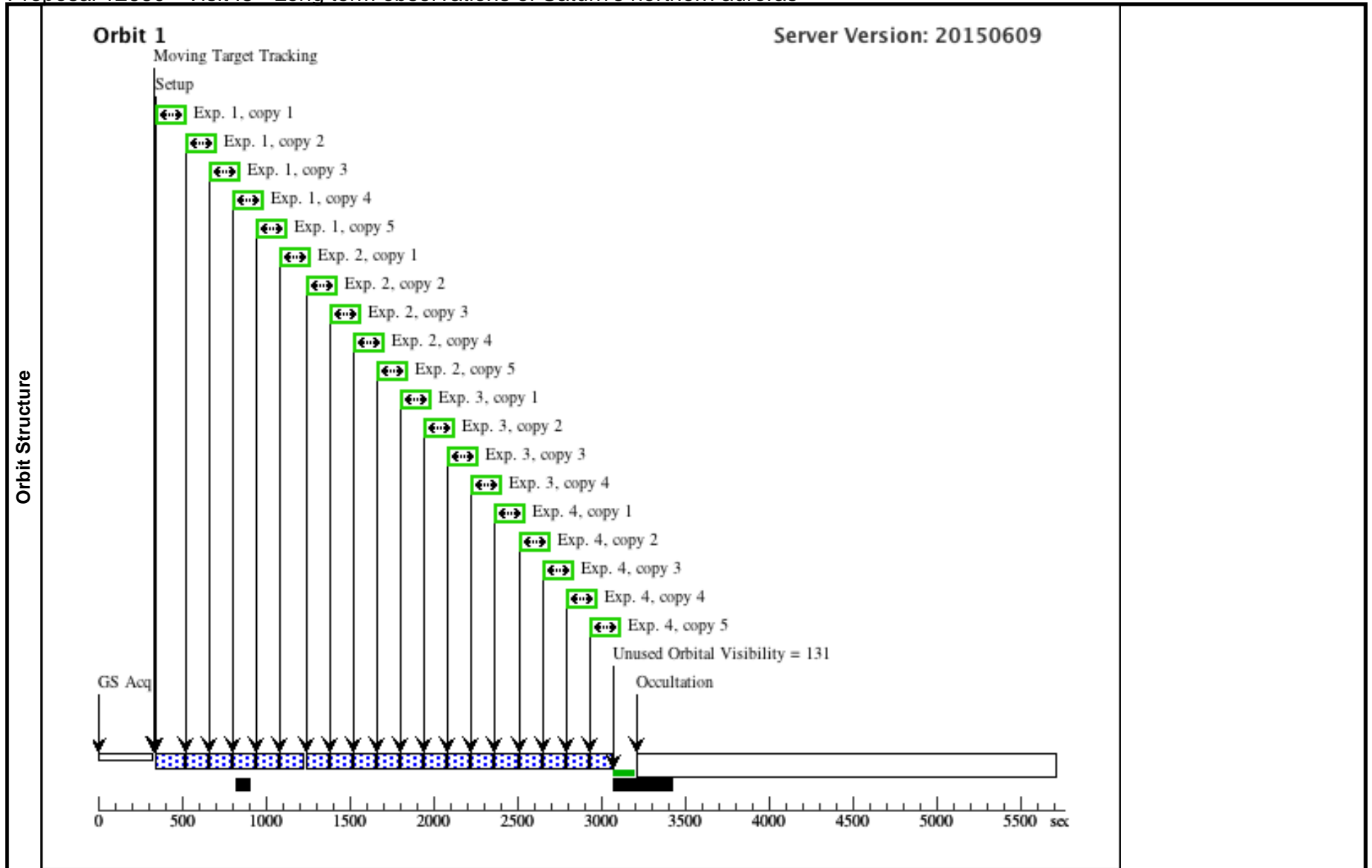
Visit	Proposal 12660, Visit I7, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 03-APR-2012:00:00:00 AND 04-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I6</i>									
	Diagnosics (Exposure 1 (Visit I7)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I7)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I7)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I7)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
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Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
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	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I8 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

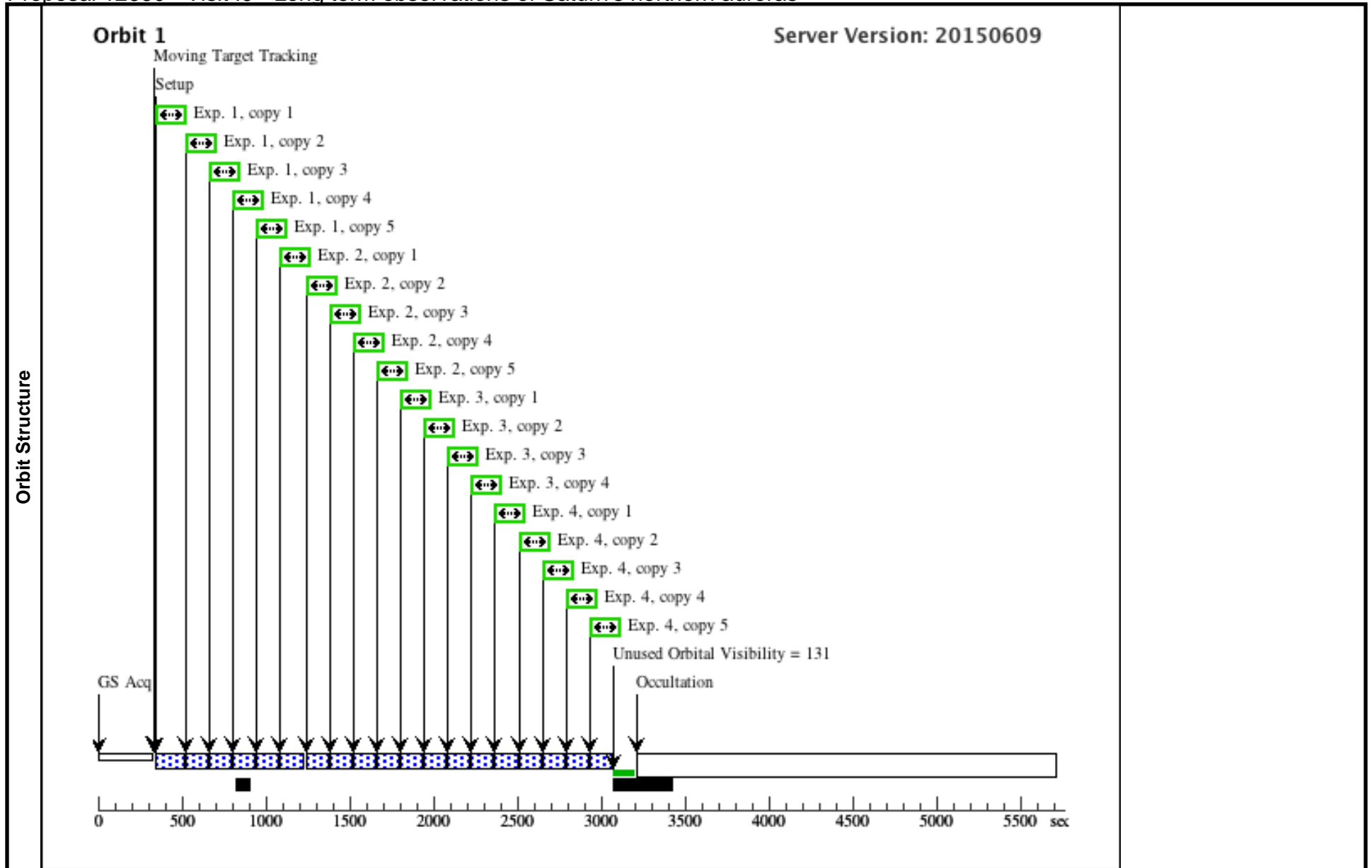
Visit	Proposal 12660, Visit I8, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 04-APR-2012:00:00:00 AND 05-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I7</i>									
	Diagnosics (Exposure 1 (Visit I8)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I8)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I8)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I8)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
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Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP		GS ACQ SCENARI O BASE1B3		100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit I9 - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

Visit	Proposal 12660, Visit I9, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 05-APR-2012:00:00:00 AND 06-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I8</i>									
	Diagnosics (Exposure 1 (Visit I9)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit I9)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit I9)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit I9)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	SATURN	STD=SATURN			SEP OF SATURN RHEA FROM EARTH GT 10.0", SEP OF SATURN TITAN FROM EARTH GT 10.0"	EARTH			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]



Proposal 12660 - Visit IA - Long term observations of Saturn's northern auroras

Thu Feb 04 02:06:06 GMT 2016

Visit	Proposal 12660, Visit IA, completed Diagnostic Status: Warning Scientific Instruments: ACS/SBC Special Requirements: BETWEEN 06-APR-2012:00:00:00 AND 07-APR-2012:00:00:00 <i>Comments: This visit is timed to occur ~1 day after visit I9</i>									
	(Exposure 1 (Visit IA)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 2 (Visit IA)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 3 (Visit IA)) Warning (Form): Sensitive exposures should have an ETC run number provided. (Exposure 4 (Visit IA)) Warning (Form): Sensitive exposures should have an ETC run number provided.									
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
	(1)	SATURN	STD=SATURN			SEP OF SATURN RHEA FROM EARTH GT 10.0", SEP OF SATURN TITAN FROM EARTH GT 10.0"	EARTH			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	2		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F115LP				100 Secs X 4 (400 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4		(1) SATURN	ACS/SBC, ACCUM, SBC-FIX	F125LP				100 Secs X 5 (500 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]

