12883 - Unraveling electron acceleration mechanisms in Ganymede's space environment through N-S conjugate imagery of Jupiter's aurora

Cycle: 20, 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?*
01	(1) JUP-S-1 (2) JUP-N-1 (3) JUP-S-2	STIS/FUV-MAMA	1	08-Nov-2013 21:01:29.0	yes
02	(13) JUP-S-1-VISIT2 (14) JUP-N-1-VISIT2 (15) JUP-S-2-VISIT2	STIS/FUV-MAMA	1	08-Nov-2013 21:01:40.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
03	(16) JUP-S-1-VISIT3 (17) JUP-N-1-VISIT3 (18) JUP-S-2-VISIT3	STIS/FUV-MAMA	1	08-Nov-2013 21:01:49.0	yes
04	(9) JUP-S-1-VISIT4 (10) JUP-N-1-VISIT4 (11) JUP-S-2-VISIT4	STIS/FUV-MAMA	1	08-Nov-2013 21:01:58.0	yes
05	(19) JUP-S-1-VISIT5 (20) JUP-N-1-VISIT5 (21) JUP-S-2-VISIT5	STIS/FUV-MAMA	1	08-Nov-2013 21:02:06.0	yes
06	(6) JUP-S-1-VISIT6 (7) JUP-N-1-VISIT6	STIS/FUV-MAMA	1	08-Nov-2013 21:02:13.0	yes
07	(22) JUP-S-1-VISIT7 (23) JUP-N-1-VISIT7	STIS/FUV-MAMA	1	08-Nov-2013 21:02:20.0	yes
08	(5) JUP-N-SPECTRO-VISIT8	STIS/FUV-MAMA	1	08-Nov-2013 21:02:29.0	yes
09	(12) JUP-N-SPECTRO-VISIT9	STIS/FUV-MAMA	1	08-Nov-2013 21:02:38.0	yes

9 Total Orbits Used

ABSTRACT

There is strong scientific interest in Ganymede (Jupiter's third Galilean moon) and its surrounding environment, which stems from the likely presence of a liquid water ocean underneath its icy crust and from its internally driven magnetic field. The interaction of the latter with Jupiter's magnetospheric plasma and its magnetic field gives rise to a unique situation in our solar system implying a mini-magnetosphere embedded within a giant-magnetosphere. This interaction generates Ganymede's ultraviolet auroral footprint in Jupiter's atmosphere. We propose to investigate the strong auroral connection between Jupiter and Ganymede and the variable characteristics of Ganymede's magnetosphere with an innovative approach, taking advantage of the large scale north-south asymmetries of Jupiter's magnetic field. The results obtained for Ganymede will be compared with the case of small injected hot plasma bubbles observed by the Galileo spacecraft and whose size and location are similar to those of Ganymede's magnetosphere. HST is currently the sole instrument capable of obtaining this information which pins down the proposed mechanisms linking the source and sink regions of auroral particles in the giant planets' magnetospheres.

OBSERVING DESCRIPTION

We use 9 HST orbits to observe Jupiter's northern and southern auroral UV emissions with the time tag mode of the STIS UV-MAMA Ly-alpha free (F25SRF2 filter). The visibility of Ganymede's footprint principally depends on its orbital phase angle. Accordingly, the proposed scheduling will ensure that GFP is always visible from HST for each orbit.

Each individual orbit is designed as follows: a first uninterrupted time tagged image (~700s) of the southern hemisphere followed by a time tag image (~700s) of the north; this set is then repeated once in order to get a S-N-S-N sequence during a single orbit. The first image is obtained when the CML is lowest, which favors viewing of the southern hemisphere, while at the end of the orbit the larger CML will favor the northern hemisphere. This orbit design is executed 9 times at least two Jovian rotations apart (2*10hrs, ~1 day) in order to sample different magnetospheric conditions and increase the chances to observe injection signatures. As a result, the 9 orbits may be considered independent orbits.

Short Time-tag sequences with the F25SRF2 filter have been acquired several times in previous programs without any risk for the FUV MAMA detector. In several sequences, gaps occurred as a consequence of buffer overflows. These only occur when too large a fraction of the Jovian disk appears on the image. However, past experience (GO-11649) shows that the count rate is lowered down to less than 16,000 counts per second (cps) using appropriate pointing such that only the polar region is in the field of view. Since the count rate can be kept below 20,000 cps, sequences as long as 2700s can be acquired without data gaps while we request sequences of ~700s.

Visit

Proposal 12883, im orbit 01 (01), completed Sat Nov 09 02:02:49 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-OCT-2012:00:00:00 AND 01-FEB-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUP-S-1	STD=JUPITER	TYPE=POS_ANGLE,RAD=28,ANG=170,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 110, OLG OF GANYMEDE BETWEEN 110 200	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	JUP-N-1	STD=JUPITER	TYPE=POS_ANGLE,RAD=26,ANG=0,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 120, OLG OF GANYMEDE BETWEEN 110 210	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	JUP-S-2	STD=JUPITER	TYPE=POS_ANGLE,RAD=28,ANG=170,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 130, OLG OF GANYMEDE BETWEEN 110 220	EARTH

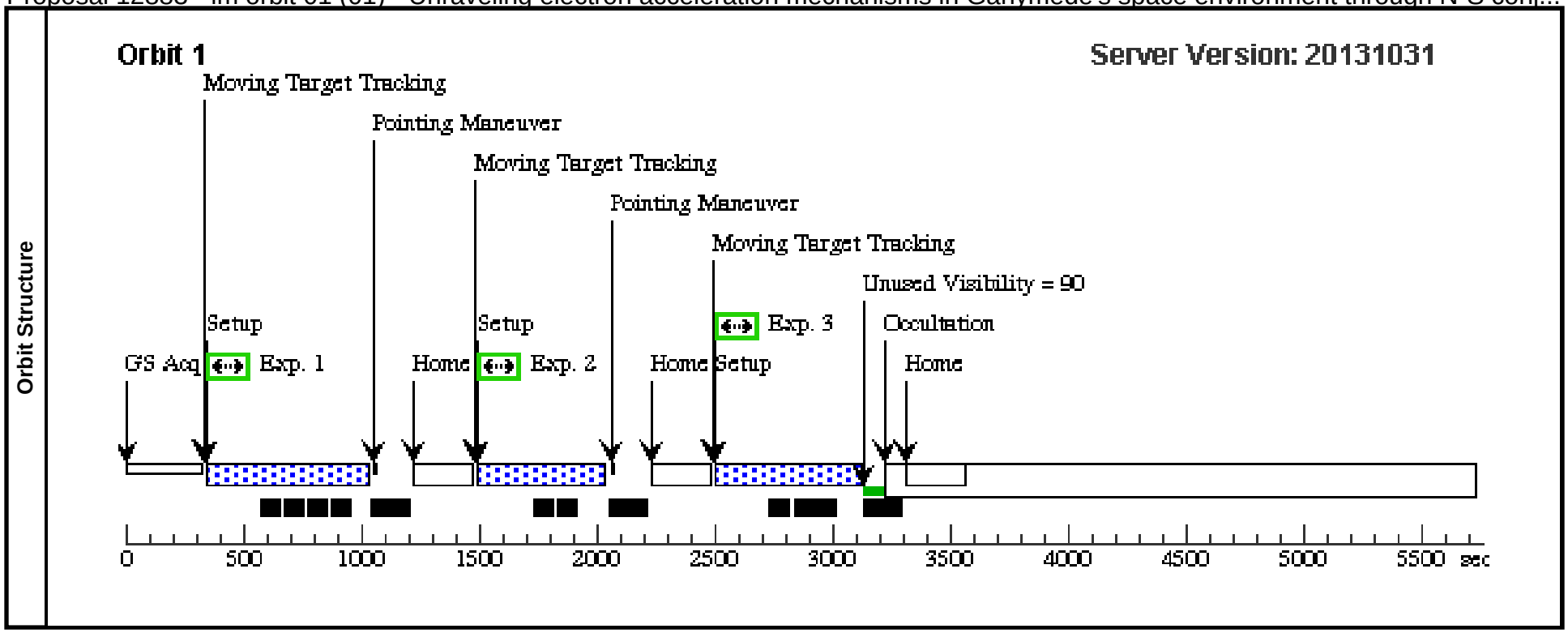
Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(1) JUP-S-1	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		540 Secs (540 Secs) *[==>]*	*[1]*
	Comments: ETC estimated from GO 11649								
2	N1 (STIS.im.414797)	(2) JUP-N-1	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (391 Secs) *[==>391.0 Secs]*	*[1]*
	Comments: ETC estimated from GO 11649								
3	S2 (STIS.im.414797)	(3) JUP-S-2	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		470 Secs (470 Secs) *[==>]*	*[1]*
	Comments: ETC estimated from GO 11649								


Orbit Structure
Orbit 1
Server Version: 20131031
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 90
Setup
Setup
Exp. 3
Occultation
GS Acq
Exp. 1
Home
Exp. 2
Home
Setup
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12883, im orbit 02 (02), completed Sat Nov 09 02:02:51 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-JAN-2013:00:00:00 AND 01-MAR-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(13)	JUP-S-1-VISIT2	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 110, OLG OF GANYMEDE BETWEEN 110 200	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(14)	JUP-N-1-VISIT2	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.0,ANG=6,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(15)	JUP-S-2-VISIT2	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(13) JUP-S-1-VISIT2	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***

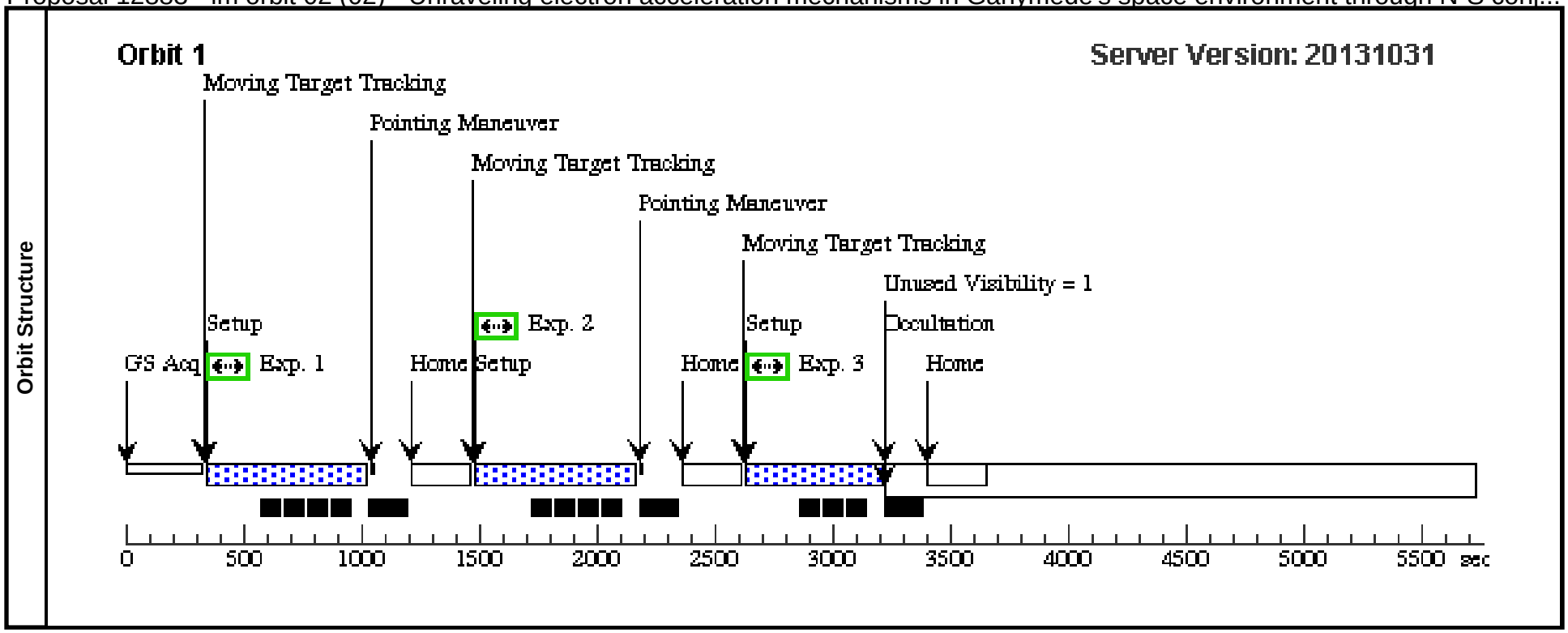
Comments: ETC estimated from GO 11649

2	N1 (STIS.im.414797)	(14) JUP-N-1-VISIT2	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649

3	S2 (STIS.im.414797)	(15) JUP-S-2-VISIT2	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		500 Secs (430 Secs) *[==>430.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649


Orbit Structure
Orbit 1
Server Version: 20131031
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 1
Setup
Exp. 2
Setup
Occultation
GS Acq
Exp. 1
Home
Setup
Home
Exp. 3
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12883, im orbit 03 (03), completed Sat Nov 09 02:02:52 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-JAN-2013:00:00:00 AND 01-MAR-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(16)	JUP-S-1-VISIT3	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 110, OLG OF GANYMEDE BETWEEN 110 200	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(17)	JUP-N-1-VISIT3	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.0,ANG=6,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(18)	JUP-S-2-VISIT3	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(16) JUP-S-1-VISIT3	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		500 Secs (500 Secs) *[==>]*	 ***[1]***

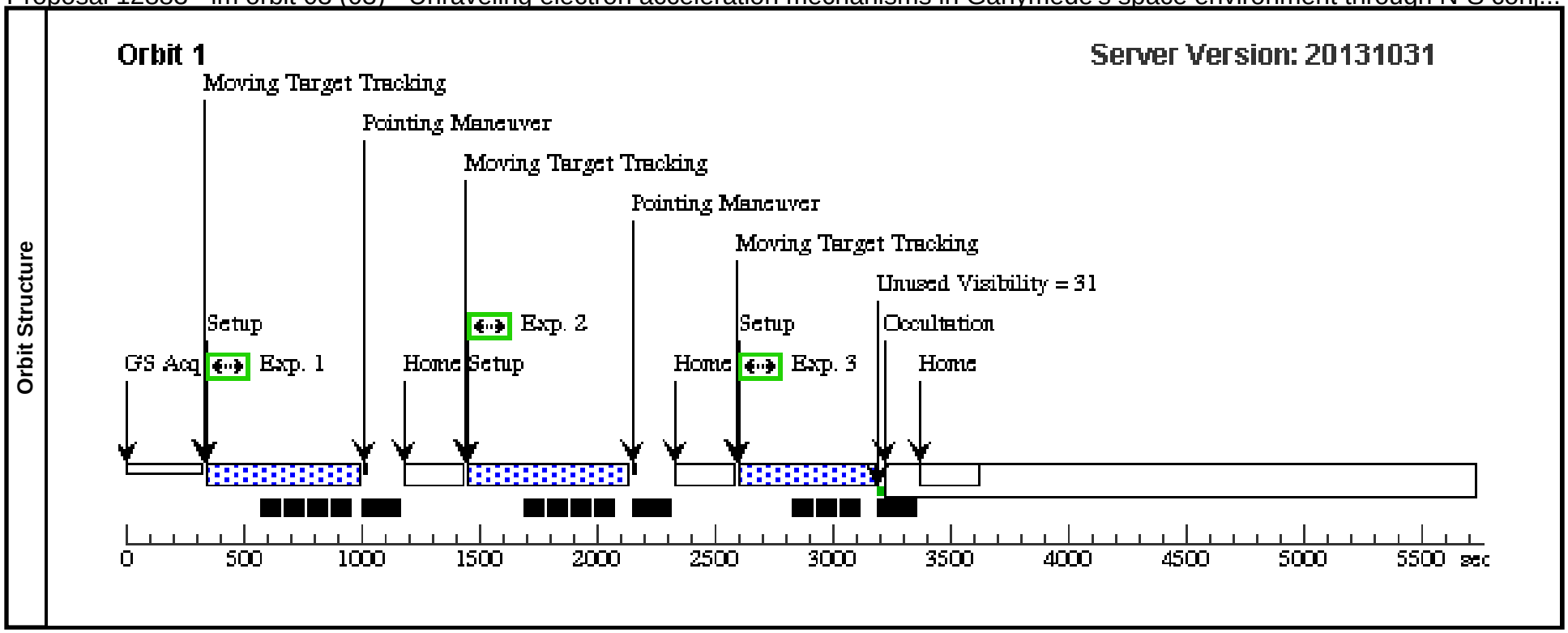
Comments: ETC estimated from GO 11649

2	N1 (STIS.im.414797)	(17) JUP-N-1-VISIT3	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649

3	S2 (STIS.im.414797)	(18) JUP-S-2-VISIT3	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		500 Secs (430 Secs) *[==>430.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649


Orbit 1
Server Version: 20131031
Orbit Structure
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 31
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Exp. 2
Setup
Occultation
GS Acq
Exp. 1
Home
Setup
Home
Exp. 3
Home
0
500
1000
1500
2000
2500
3000
3500
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4500
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sec

Visit

Proposal 12883, im orbit 04 (04), completed Sat Nov 09 02:02:53 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-OCT-2012:00:00:00 AND 01-FEB-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(9)	JUP-S-1-VISIT4	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 110, OLG OF GANYMEDE BETWEEN 110 200	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(10)	JUP-N-1-VISIT4	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.0,ANG=6,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(11)	JUP-S-2-VISIT4	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(9) JUP-S-1-VISIT4	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***

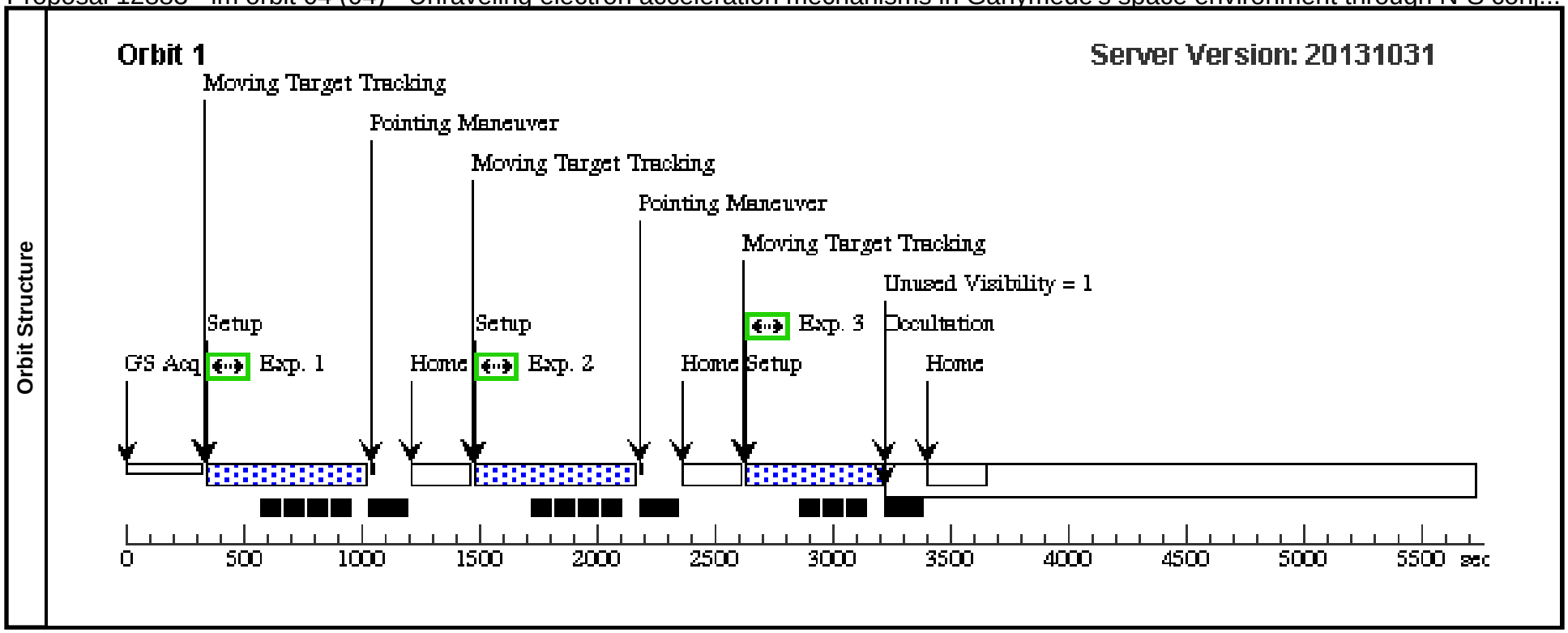
Comments: ETC estimated from GO 11649

2	N1 (STIS.im.414797)	(10) JUP-N-1-VISIT4	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649

3	S2 (STIS.im.414797)	(11) JUP-S-2-VISIT4	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		500 Secs (430 Secs) *[==>430.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649


Orbit Structure
Orbit 1
Server Version: 20131031
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 1
Setup
Setup
Exp. 3
Occultation
GS Acq
Exp. 1
Home
Exp. 2
Home
Setup
Home
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Visit

Proposal 12883, im orbit 05 (05), completed Sat Nov 09 02:02:54 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-OCT-2012:00:00:00 AND 01-APR-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

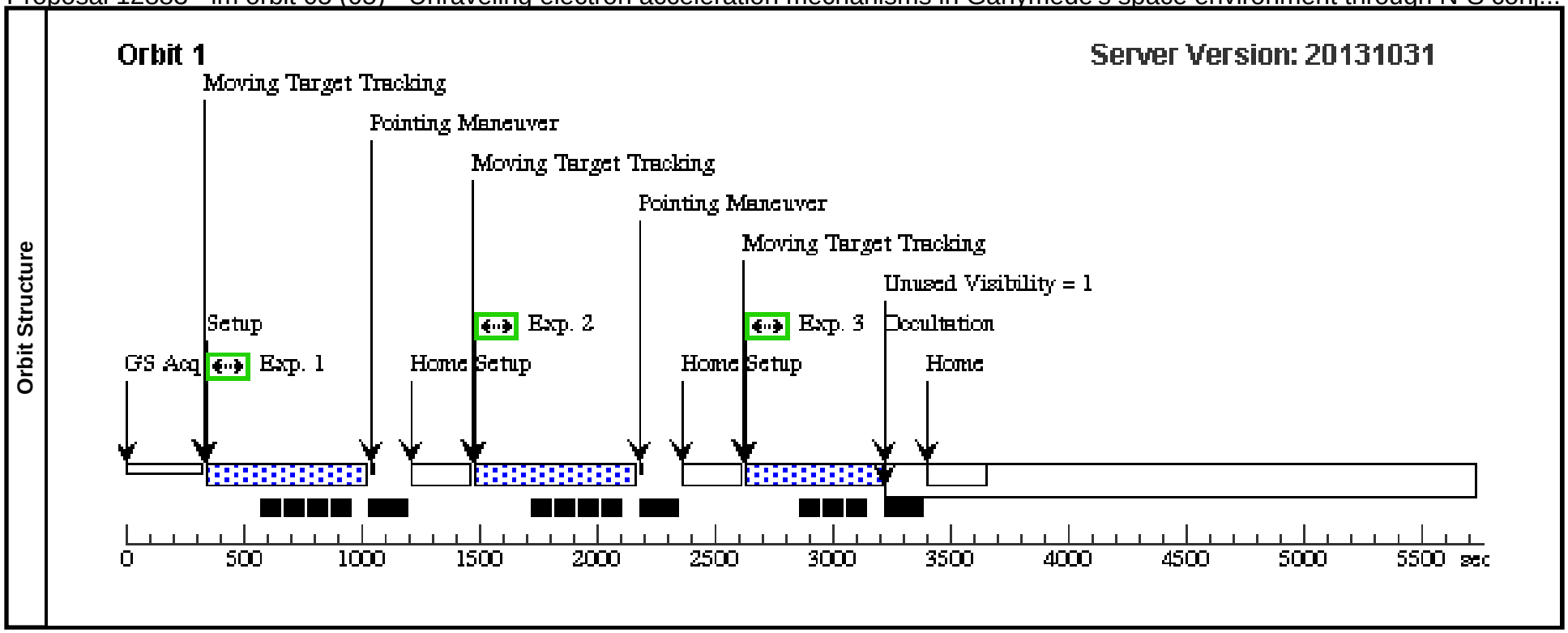
For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(19)	JUP-S-1-VISIT5	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 80 110, OLG OF GANYMEDE BETWEEN 110 200	EARTH
Comments: Constraints on CML and OLG may be relaxed by +/-10°						
POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.						
Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.						
(20)	JUP-N-1-VISIT5	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.0,ANG=6,REF=NORTH			EARTH
Comments: Constraints on CML and OLG may be relaxed by +/-10°						
POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.						
Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.						
(21)	JUP-S-2-VISIT5	STD=JUPITER	TYPE=POS_ANGLE,RAD=20.7,ANG=171,REF=NORTH			EARTH
Comments: Constraints on CML and OLG may be relaxed by +/-10°						
POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.						
Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.						

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(19) JUP-S-1-VISIT5	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***
Comments: ETC estimated from GO 11649									
2	N1 (STIS.im.414797)	(20) JUP-N-1-VISIT5	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (530 Secs) *[==>530.0 Secs]*	 ***[1]***
Comments: ETC estimated from GO 11649									
3	S2 (STIS.im.414797)	(21) JUP-S-2-VISIT5	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		500 Secs (430 Secs) *[==>430.0 Secs]*	 ***[1]***
Comments: ETC estimated from GO 11649									


Orbit Structure
Orbit 1
Server Version: 20131031
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 1
Setup
Exp. 2
Exp. 3
Occultation
GS Acq
Exp. 1
Home
Setup
Home
Setup
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12883, im orbit 06 (06), implementation Sat Nov 09 02:02:55 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-DEC-2013:00:00:00 AND 28-FEB-2014:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(6)	JUP-S-1-VISIT6	STD=JUPITER	TYPE=POS_ANGLE,RAD=26,ANG=190,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 100 130, OLG OF GANYMEDE BETWEEN 110 200	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(7)	JUP-N-1-VISIT6	STD=JUPITER	TYPE=POS_ANGLE,RAD=24,ANG=10,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

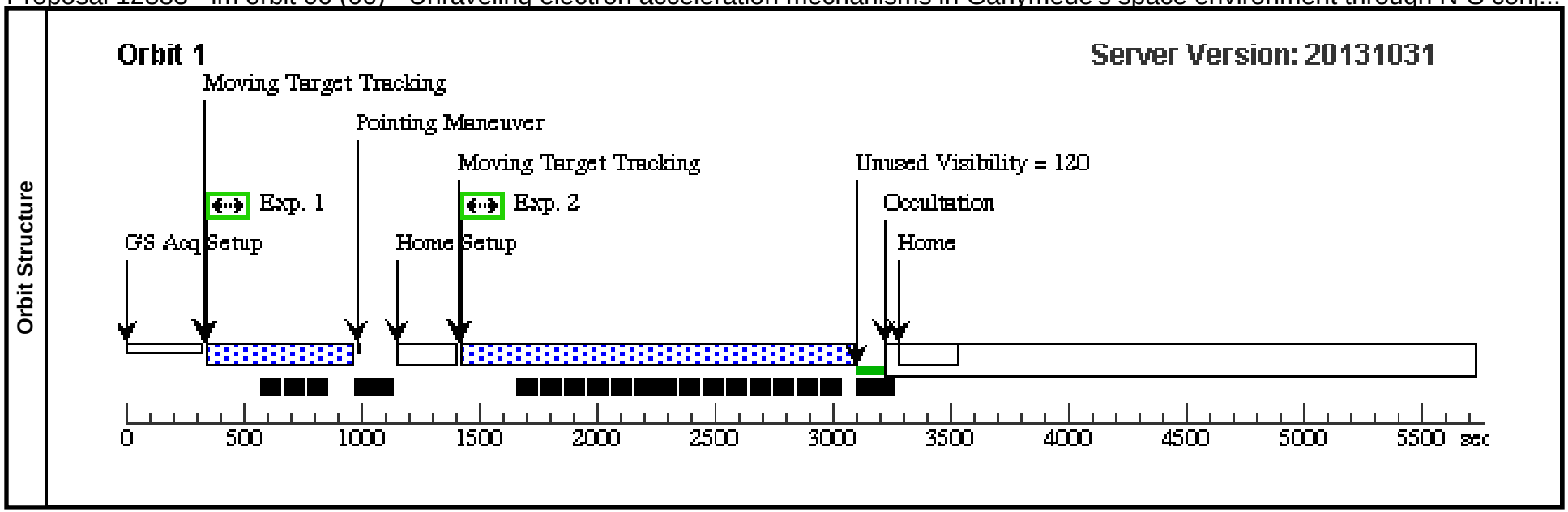
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(6) JUP-S-1-VISIT6	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (470 Secs) *[==>470.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	N1 (STIS.im.414797)	(7) JUP-N-1-VISIT6	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (1516 Secs) *[==>1516.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649


Orbit Structure
Orbit 1
Server Version: 20131031
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 120
Exp. 1
Exp. 2
Occultation
GS Acq Setup
Home Setup
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12883, im orbit 07 (07), implementation Sat Nov 09 02:02:55 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-DEC-2013:00:00:00 AND 28-FEB-2014:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.

For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(22)	JUP-S-1-VISIT7	STD=JUPITER	TYPE=POS_ANGLE,RAD=26,ANG=190,REF=NORTH		CML OF JUPITER FROM EARTH BETWEEN 100 130, OLG OF GANYMEDE BETWEEN 110 200	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

(23)	JUP-N-1-VISIT7	STD=JUPITER	TYPE=POS_ANGLE,RAD=24,ANG=10,REF=NORTH			EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD and ANG are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS repel wire should be ~parallel to the equator in order to prevent it from masking the auroral region of interest.

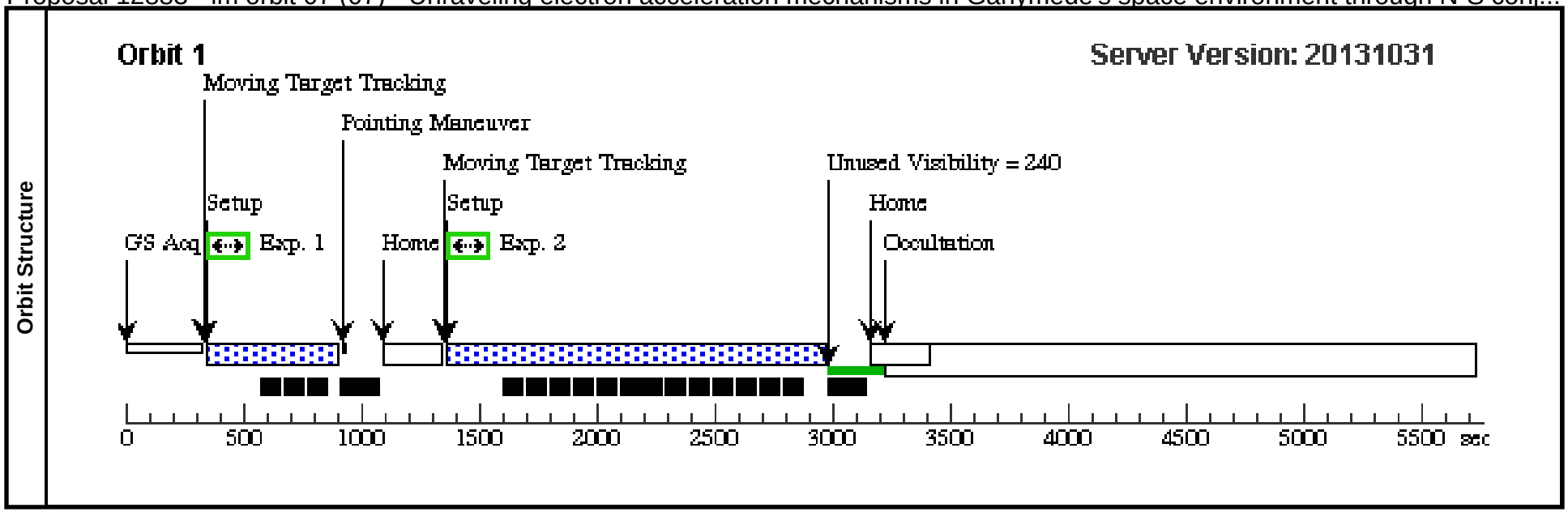
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	S1 (STIS.im.414797)	(22) JUP-S-1-VISIT7	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (410 Secs) *[==>410.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649

2	N1 (STIS.im.414797)	(23) JUP-N-1-VISIT7	STIS/FUV-MAMA, TIME-TAG, F25SRF2	MIRROR	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		600 Secs (1456 Secs) *[==>1456.0 Secs]*	 ***[1]***

Comments: ETC estimated from GO 11649


Orbit Structure
Orbit 1
Server Version: 20131031
Moving Target Tracking
Pointing Maneuver
Moving Target Tracking
Unused Visibility = 240
Setup
Setup
Home
GS Acq
Exp. 1
Home
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12883, sp orbit 01 (08), completed Sat Nov 09 02:02:56 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-OCT-2012:00:00:00 AND 01-FEB-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.
One of the two G140L "sp orbits" should preferentially appear at the beginning of the program.
For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Diagnostics

(sp orbit 01 (08)) Warning (Form): A target acquisition should probably be performed before doing spectroscopy or coronography with STIS or COS.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(5)	JUP-N-SPECTRO-VISIT8	STD=JUPITER	TYPE=POS_ANGLE,RAD=24,ANG=-20,REF=NORTH,R_RAD=-410.0,R_ANG=1709.0,EPOCH=16-JAN-2013:14:05:00,EpochTimeScale=UTC		CML OF JUPITER FROM EARTH BETWEEN 120 180, OLG OF GANYMEDE BETWEEN 100 240	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD, ANG and R_RAD are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

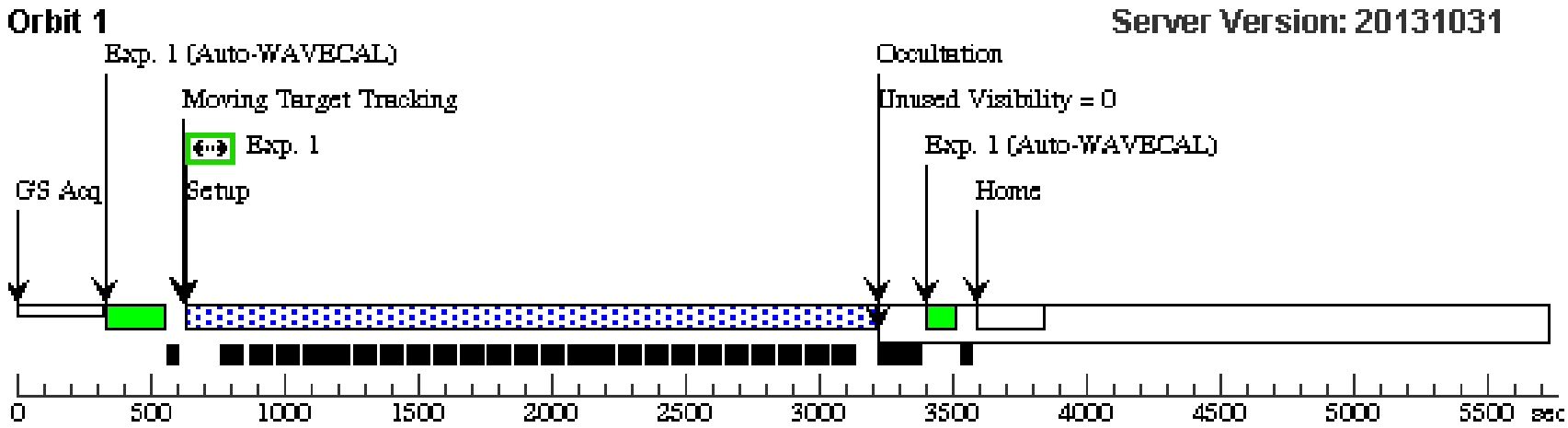
Ideally, STIS spectral slit should be almost parallel (+/-30°) to the equatorial plane

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	SPECTRO1 (STIS.im.414797)	(5) JUP-N-SPECTRO-VISIT8	STIS/FUV-MAMA, TIME-TAG, 52X0.5	G140L 1425 A	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		2528 Secs (2528 Secs) [==>]	[1]

Comments: ETC estimated from GO 11649

Orbit Structure



Visit

Proposal 12883, sp orbit 02 (09), completed Sat Nov 09 02:02:57 GMT 2013

Diagnostic Status: Warning

Scientific Instruments: STIS/FUV-MAMA

Special Requirements: BETWEEN 01-OCT-2012:00:00:00 AND 01-FEB-2013:00:00:00; BETWEEN 28-AUG-2013:00:00:00 AND 30-SEP-2013:00:00:00

Comments: Each orbit may be considered independently. Ideally, each orbit should be executed at least 1 day apart.
One of the two G140L "sp orbits" should preferentially appear at the beginning of the program.
For Timing Requirements, the 1-Oct-2012 1-Feb-2013 window is more favorable than the 28-Aug-2013 30-Sep-2013 window.

Diagnostics

(sp orbit 02 (09)) Warning (Form): A target acquisition should probably be performed before doing spectroscopy or coronography with STIS or COS.

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(12)	JUP-N-SPECTRO-VISIT9	STD=JUPITER	TYPE=POS_ANGLE,RAD=23.2,ANG=-20,REF=NORTH,R_RAD=-400.0,R_ANG=1709.0,EPOCH=2013.024:10:32:00,EpochTimeScale=UTC		CML OF JUPITER FROM EARTH BETWEEN 120 180, OLG OF GANYMEDE BETWEEN 100 240	EARTH

Comments: Constraints on CML and OLG may be relaxed by +/-10°

POS_ANGLE RAD, ANG and R_RAD are date and ROLL dependent. Current values are suitable for 1-DEC-2012 +/- 1 month.

Ideally, STIS spectral slit should be almost parallel (+/-30°) to the equatorial plane

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	SPECTRO1 (STIS.im.414797)	(12) JUP-N-SPECTRO-VISIT9	STIS/FUV-MAMA, TIME-TAG, 52X0.5	G140L 1425 A	BUFFER-TIME=99	GS ACQ SCENARIO BASE1B3		2528 Secs (2528 Secs) *[==>]*	*[1]*

Comments: ETC estimated from GO 11649

Orbit Structure