16266 - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Cycle: 28, Proposal Category: GO/DD

(Availability Mode: AVAILABLE)

INVESTIGATORS

Name	*Institution*	*E-Mail*
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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	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:23.0	yes
02	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:25.0	yes
03	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:26.0	yes
04	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:28.0	yes
05	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:30.0	yes
06	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:31.0	yes
07	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:33.0	yes
08	(3) URANUS-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:35.0	yes
09	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:36.0	yes
10	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:37.0	yes
11	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:38.0	yes
12	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:38.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
13	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:39.0	yes
14	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:40.0	yes
15	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:41.0	yes
16	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:42.0	yes
17	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:43.0	yes
18	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:44.0	yes
19	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:45.0	yes
20	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:46.0	yes
21	(1) JUPITER-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:47.0	yes
22	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:48.0	yes
23	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:49.0	yes
24	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:51.0	yes
25	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:52.0	yes
26	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:53.0	yes
27	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:55.0	yes
28	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:56.0	yes
29	(4) NEPTUNE-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:57.0	yes
30	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:00:59.0	yes
31	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:00.0	yes
32	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:01.0	yes
33	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:03.0	yes
34	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:04.0	yes
35	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:06.0	yes
36	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:07.0	yes
37	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:09.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
38	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:10.0	yes
39	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:12.0	yes
40	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:13.0	yes
41	(2) SATURN-MAPS	WFC3/UVIS	1	01-Sep-2021 14:01:14.0	yes

41 Total Orbits Used

ABSTRACT

Long time base observations of the outer planets are critical in understanding the atmospheric dynamics and evolution of the gas giants. We propose yearly monitoring of each giant planet for the remainder of Hubble's lifetime to provide a lasting legacy of increasingly valuable data for time-domain studies. The Hubble Space Telescope is a unique asset to planetary science, allowing high spatial resolution data with absolute photometric knowledge. For the outer planets, gas/ice giant planets Jupiter, Saturn, Uranus and Neptune, many phenomena happen on timescales of years to decades, and the data we propose are beyond the scope of a typical GO program. Hubble is the only platform that can provide high spatial resolution global studies of cloud coloration, activity, and motion on a consistent time basis to help constrain the underlying mechanics. Here we show the orbits for Cycle 28.

OBSERVING DESCRIPTION

Global mapping for each of the four outer planets. Orbits spaced to allow complete longitude coverage for two rotations. Jupiter and Saturn orbits (when applicable) shuld be contiguous, and small incursions into the SAA may be ok. Uranus and Neptune orbits are spaced to give complete longitude coverage. CC: the PI and Co-I Wong on all correspondence

Visit

Proposal 16266, Uranus_20A (01), completed Wed Sep 01 18:01:15 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 30-SEP-2020:00:00:00 AND 30-NOV-2020:00:00:00

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20A (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20A (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (01.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (01.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (01.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (01.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (01.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (01.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (01.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (01.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (01.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (01.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

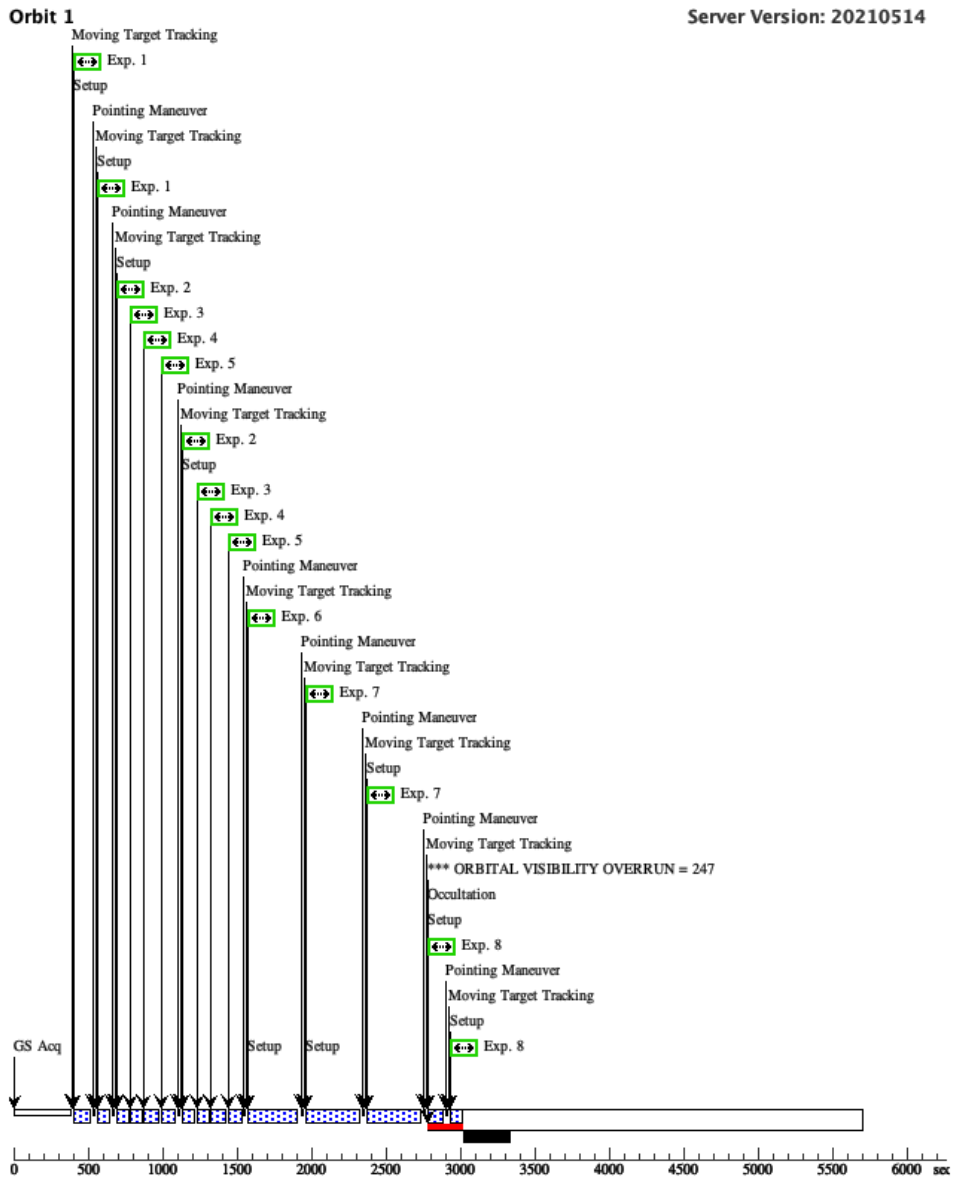
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20A (01) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20A (01) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20A (01) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20A (01) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20A (01) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20A (01)	144 Secs (144 Secs) *[==>]*	 ***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20A (01) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20A (01) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20A (01) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20B (02), completed Wed Sep 01 18:01:15 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 01 BY 1.9 Orbits TO 3.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20B (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20B (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (02.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (02.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (02.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (02.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (02.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (02.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (02.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (02.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (02.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (02.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

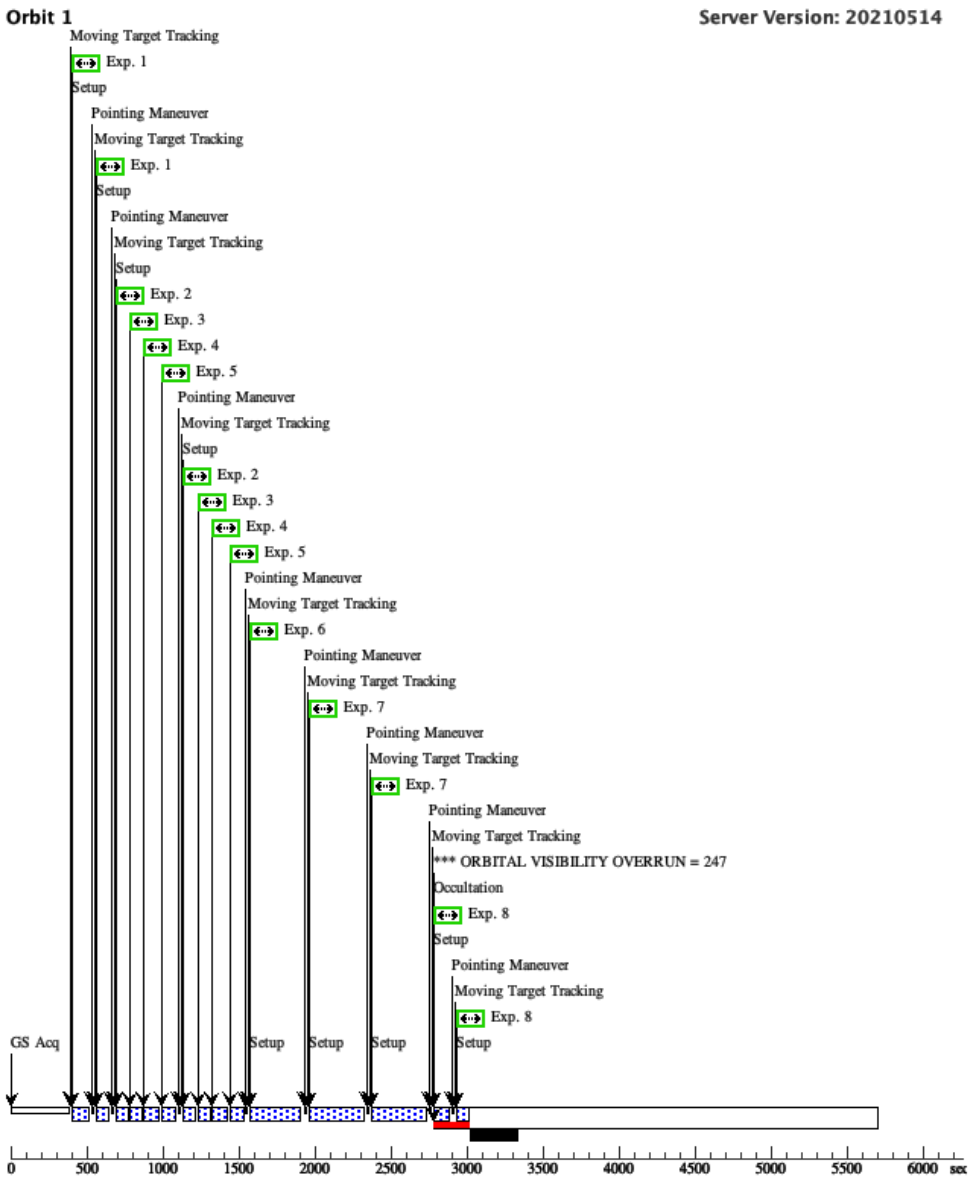
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20B (02) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20B (02) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20B (02) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20B (02) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20B (02) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20B (02)	144 Secs (144 Secs) *[==>]*	***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20B (02) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20B (02) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20B (02) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20C (03), completed Wed Sep 01 18:01:15 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 02 BY 1.9 Orbits TO 3.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20C (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20C (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (03.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (03.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (03.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (03.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (03.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (03.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (03.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (03.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (03.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (03.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

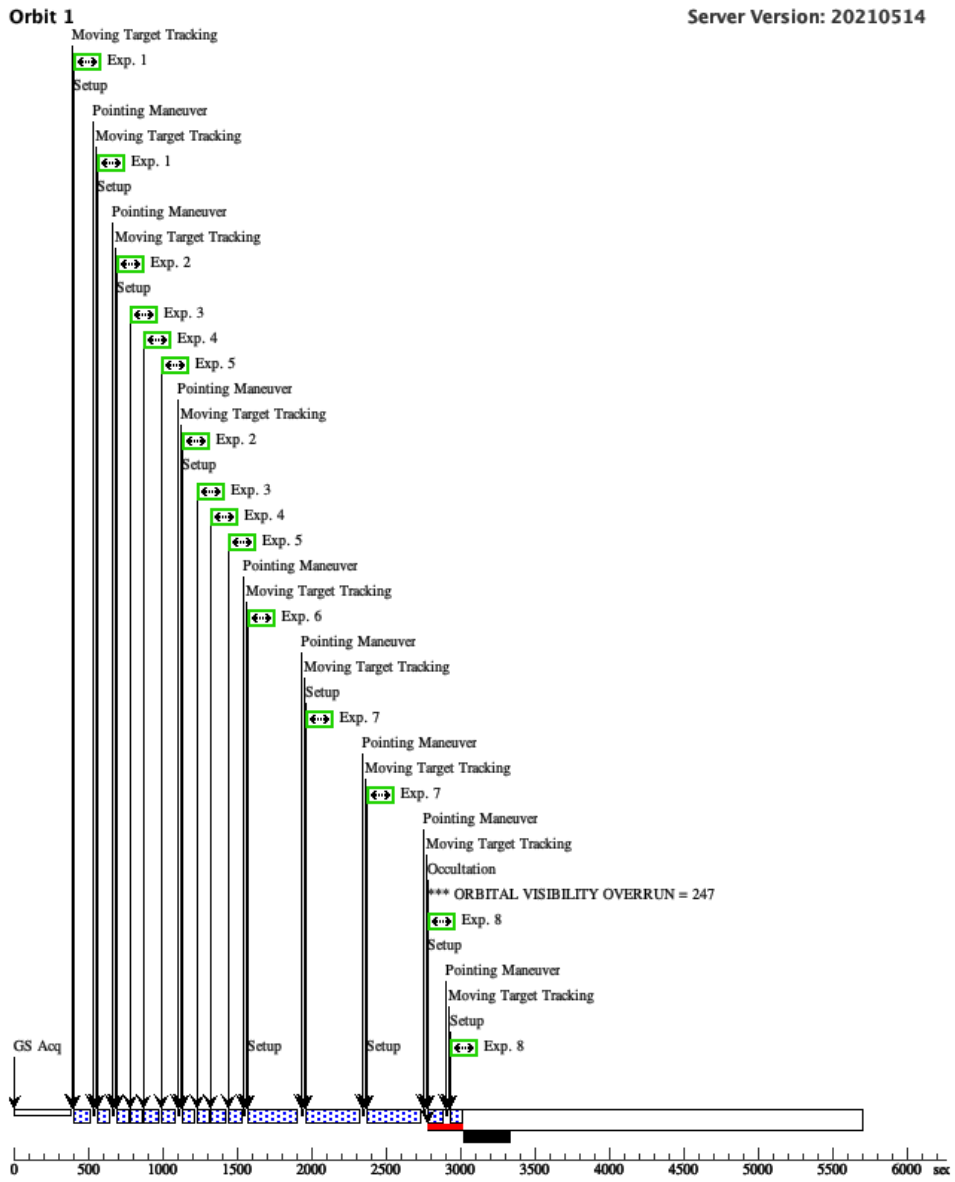
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20C (03) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20C (03) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20C (03) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20C (03) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20C (03) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20C (03)	144 Secs (144 Secs) *[==>]*	***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20C (03) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20C (03) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20C (03) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20D (04), completed Wed Sep 01 18:01:15 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 03 BY 1.9 Orbits TO 3.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20D (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20D (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (04.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (04.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (04.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (04.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (04.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (04.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (04.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (04.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (04.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (04.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

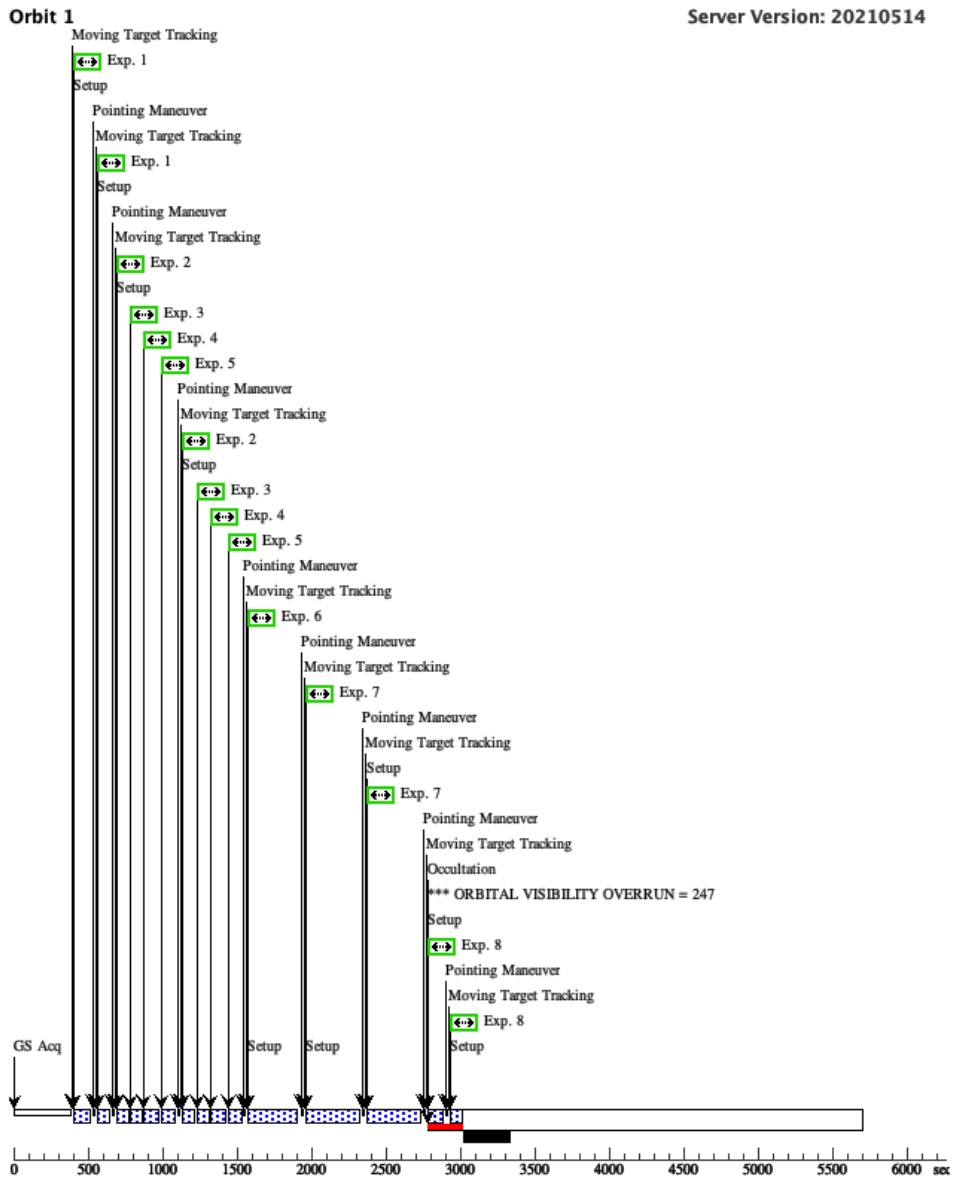
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20D (04) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20D (04) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20D (04) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20D (04) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20D (04) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20D (04)	144 Secs (144 Secs) *[==>]*	***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20D (04) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20D (04) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20D (04) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20E (05), completed Wed Sep 01 18:01:15 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 04 BY 1.9 Orbits TO 3.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20E (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20E (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (05.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (05.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (05.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (05.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (05.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (05.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (05.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (05.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (05.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (05.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

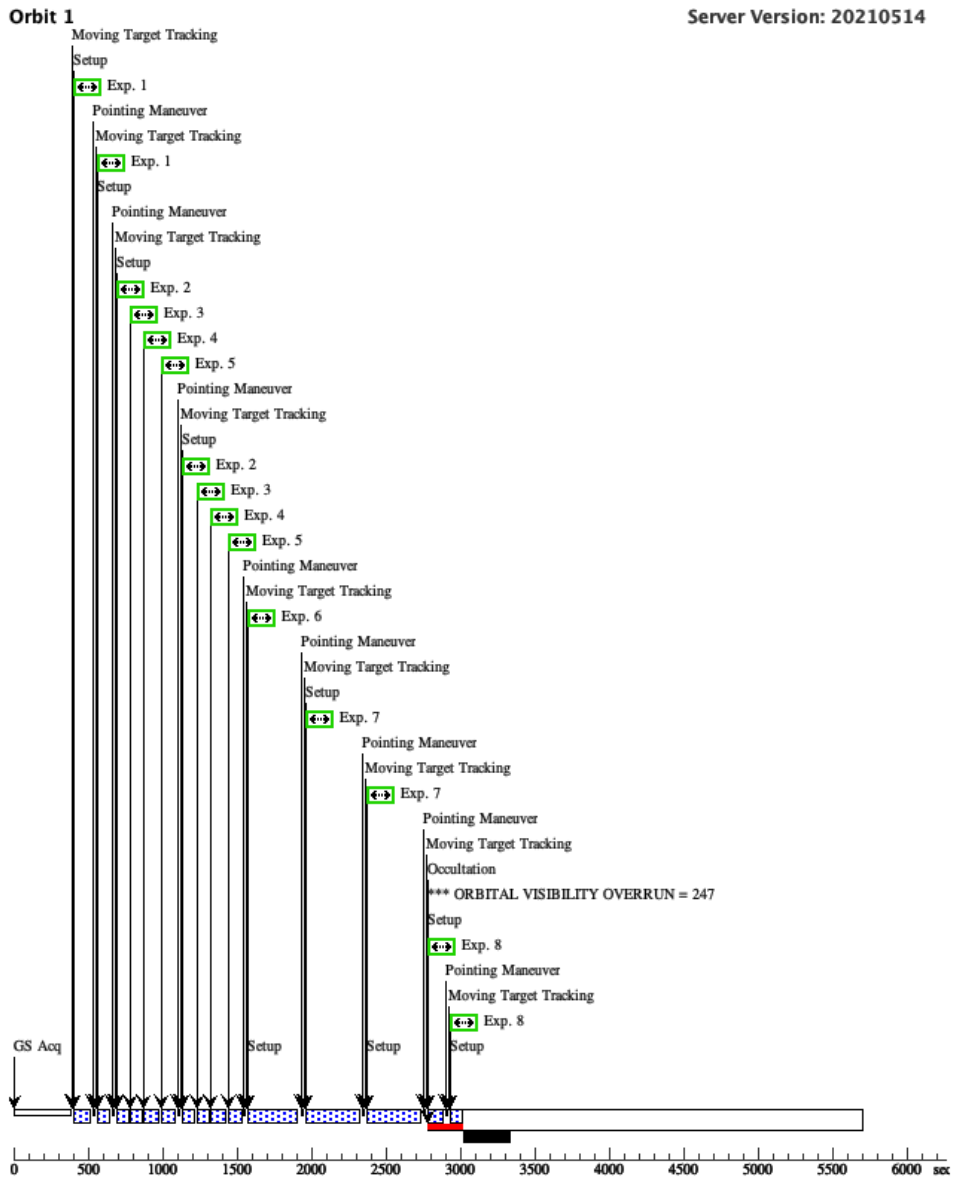
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20E (05) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20E (05) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20E (05) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20E (05) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20E (05) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20E (05)	144 Secs (144 Secs) *[==>]*	 ***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20E (05) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20E (05) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20E (05) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20F (06), completed Wed Sep 01 18:01:15 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 05 BY 1.9 Orbits TO 3.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20F (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20F (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (06.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (06.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (06.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (06.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (06.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (06.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (06.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (06.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (06.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (06.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

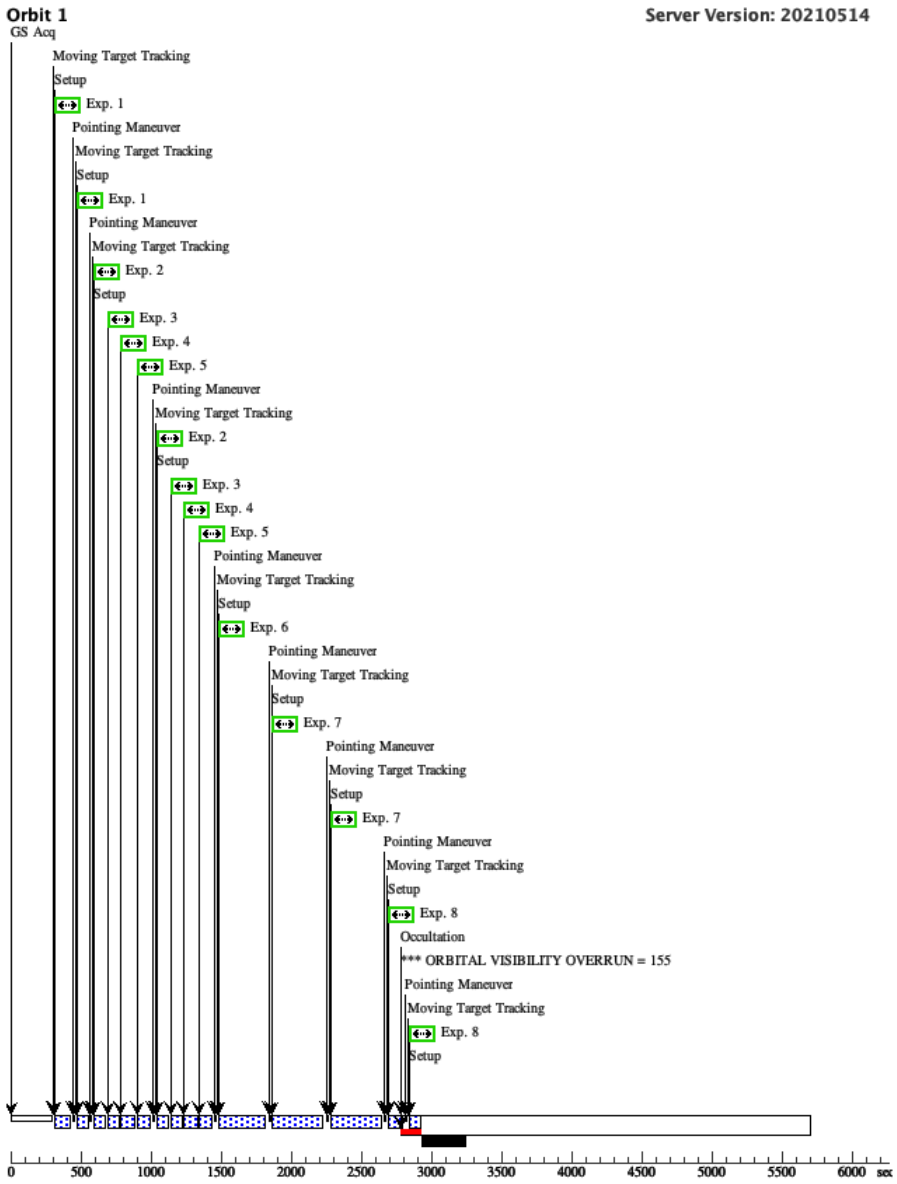
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO	GS ACQ SCENARIO ONEB1BE	Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20F (06) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20F (06) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20F (06) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20F (06) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20F (06) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20F (06)	144 Secs (144 Secs) *[==>]*	 ***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28; SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20F (06) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_20F (06) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20F (06) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20G (07), completed Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 06 BY 1.9 Orbits TO 3.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20G (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20G (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (07.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (07.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (07.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (07.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (07.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (07.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (07.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (07.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (07.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (07.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

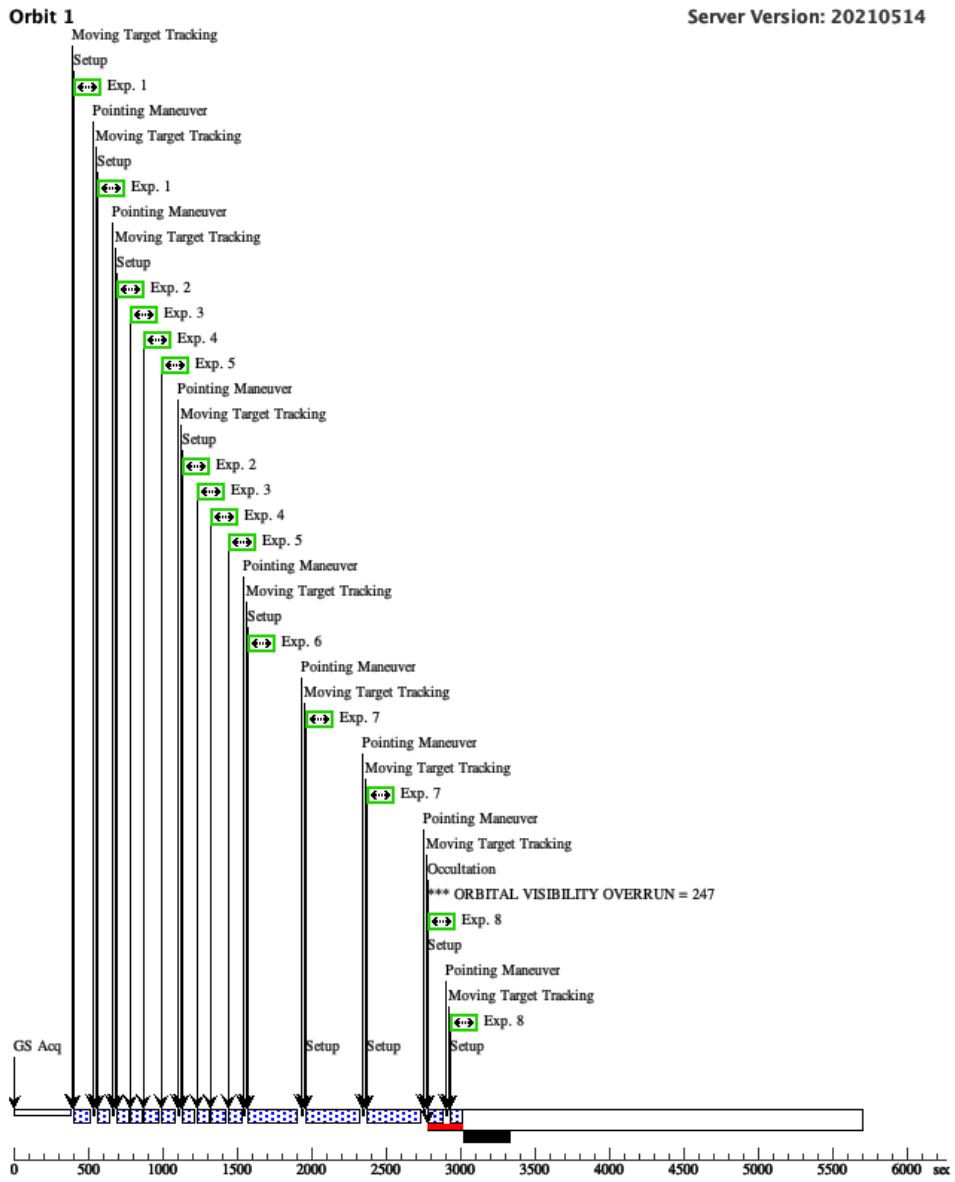
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20G (07) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20G (07) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20G (07) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20G (07) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20G (07) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20G (07)	144 Secs (144 Secs) *[==>]*	***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20G (07) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20G (07) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20G (07) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Uranus_20H (08), completed Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 01 BY 18.9 Orbits TO 19.1 Orbits

Comments: Uranus opposition (2020-OCT-31) +/- 30 days preferred.

8 orbits. Visit 8 after visit 1 by 19 orbits. All visits spaced out as evenly as possible, with either 1-orbit or 2-orbit gaps between then. 3-orbit gaps are too big, consecutive orbits are too tight. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in.

3-gyro mode may be necessary as this is a moving target.

Diagnostics

(Uranus_20H (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(Uranus_20H (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F845M (08.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (08.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (08.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (08.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (08.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (08.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (08.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ727N_quadD (08.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (08.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F845M (08.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2-5), (8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)

Solar System Targets

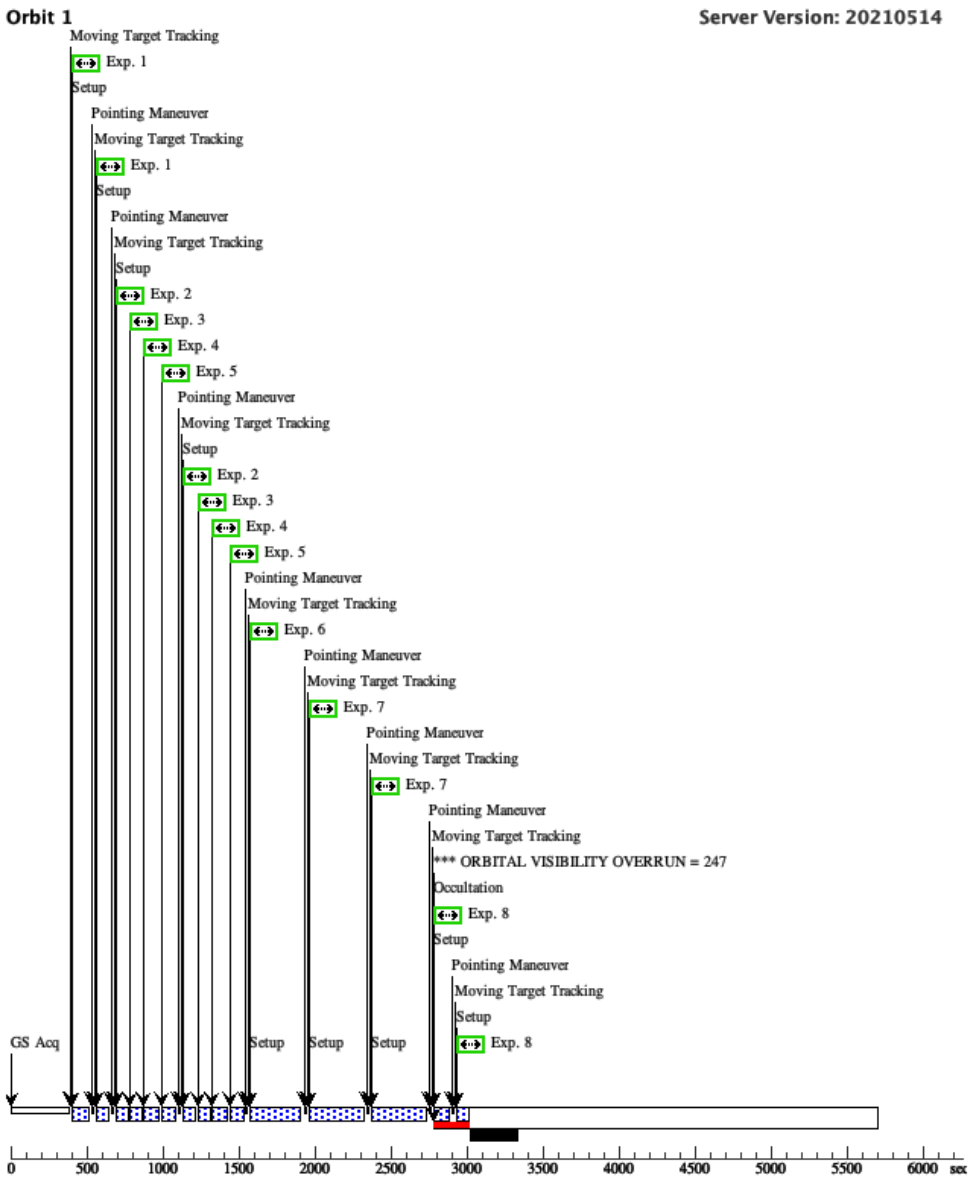
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(3)	URANUS-MAPS	STD=URANUS				EARTH

Comments: Description=Global Uranus maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_20H (08) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20H (08) (2)	14 Secs (28 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20H (08) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20H (08) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_20H (08) (2)	25 Secs (50 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23	Sequence 1-8 Non-Int in Uranus_20H (08)	144 Secs (144 Secs) *[==>]*	 ***[1]***
7	FQ727N_quadD	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -24,+28	Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_20H (08) (3)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***
8	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_20H (08) Pattern 2, Exps 8-8 in Sequence 1-8 Non-Int in Uranus_20H (08) (2)	35 Secs (70 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21A (09), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 20-JUL-2021 AND 18-SEP-2021; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (09.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (09.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (09.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (09.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (09.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (09.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (09.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (09.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (09.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (09.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

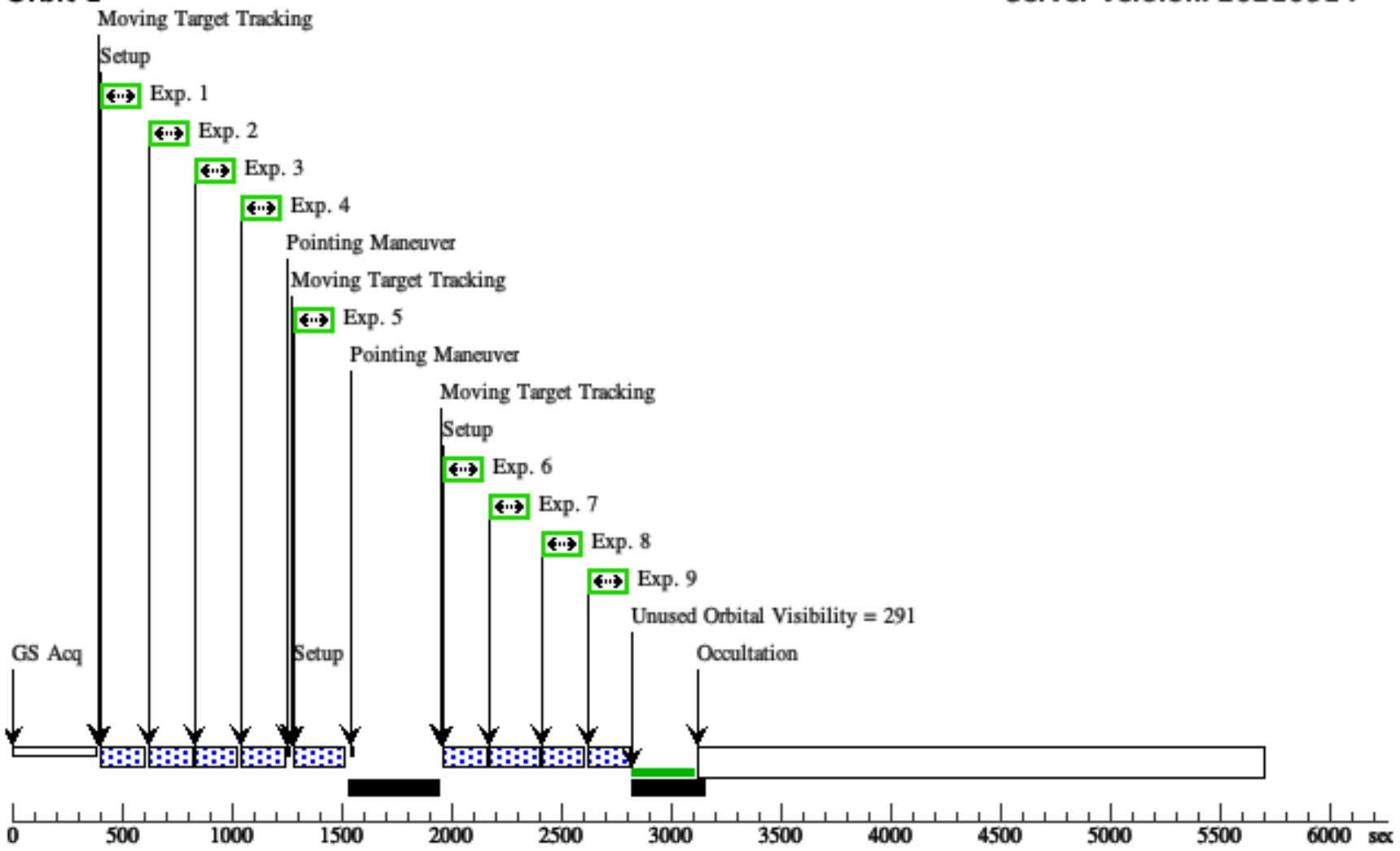
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21A (09)	4 Secs (4 Secs) *[==>]*	 ***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21A (09)	3 Secs (3 Secs) *[==>]*	 ***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21A (09)	10 Secs (10 Secs) *[==>]*	 ***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21A (09)	1.2 Secs (1.2 Secs) *[==>]*	 ***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21A (09)	45 Secs (45 Secs) *[==>]*	 ***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21A (09)	8 Secs (8 Secs) *[==>]*	 ***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21A (09)	30 Secs (30 Secs) *[==>]*	 ***[1]***
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21A (09)	.5 Secs (0.5 Secs) *[==>]*	 ***[1]***
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21A (09)	4 Secs (4 Secs) *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21B (10), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 09 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 46 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (10.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (10.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (10.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (10.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (10.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (10.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (10.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (10.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (10.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

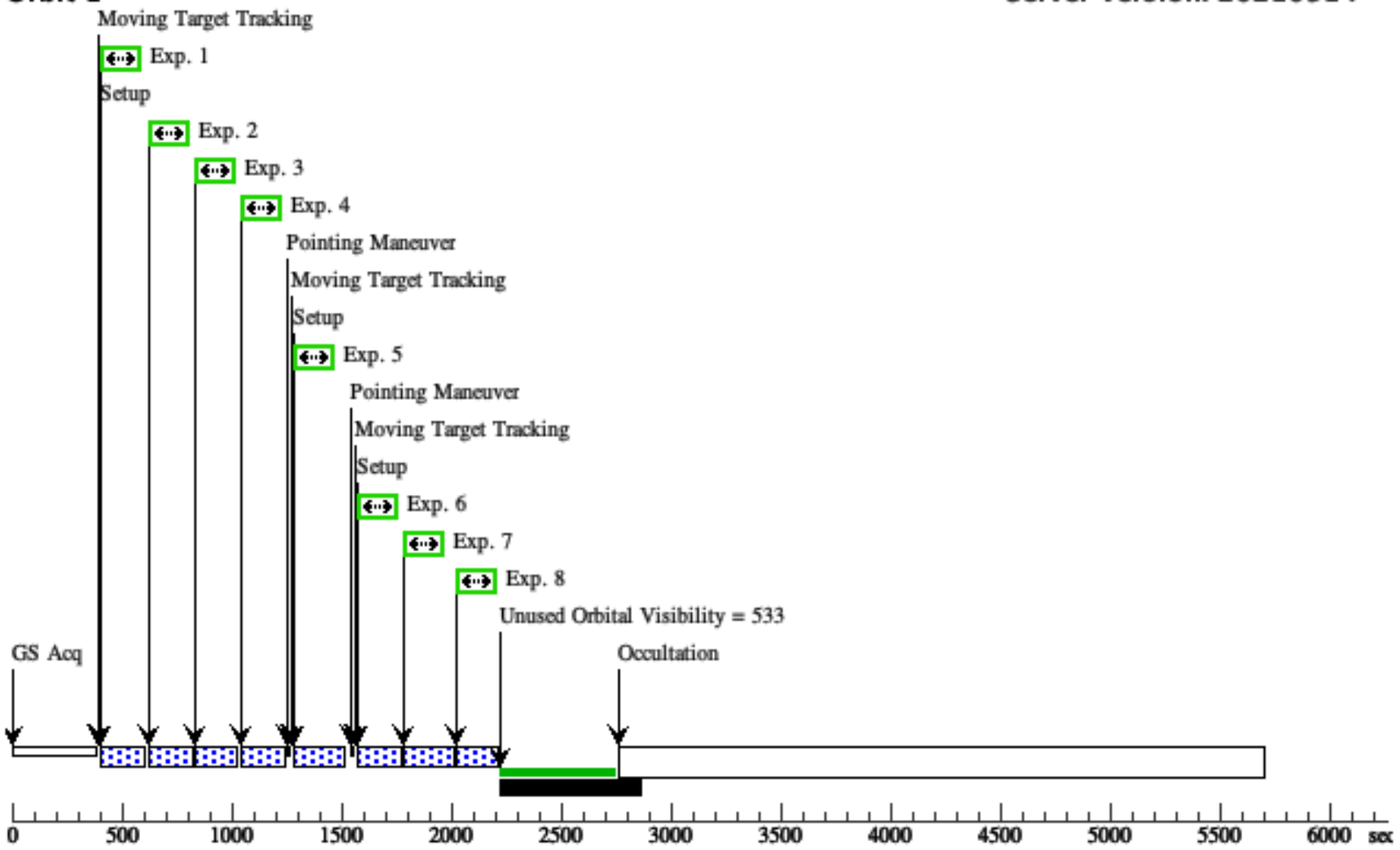
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21B (10)	4 Secs (4 Secs)	
								[==>]	***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21B (10)	3 Secs (3 Secs)	
								[==>]	***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21B (10)	10 Secs (10 Secs)	
								[==>]	***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21B (10)	1.2 Secs (1.2 Secs)	
								[==>]	***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-8 Non-Int in Jupiter_21B (10)	45 Secs (45 Secs)	
								[==>]	***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21B (10)	8 Secs (8 Secs)	
								[==>]	***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21B (10)	30 Secs (30 Secs)	
								[==>]	***[1]***
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21B (10)	.5 Secs (0.5 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21C (11), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 10 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (11.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (11.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (11.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (11.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (11.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (11.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (11.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (11.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (11.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (11.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

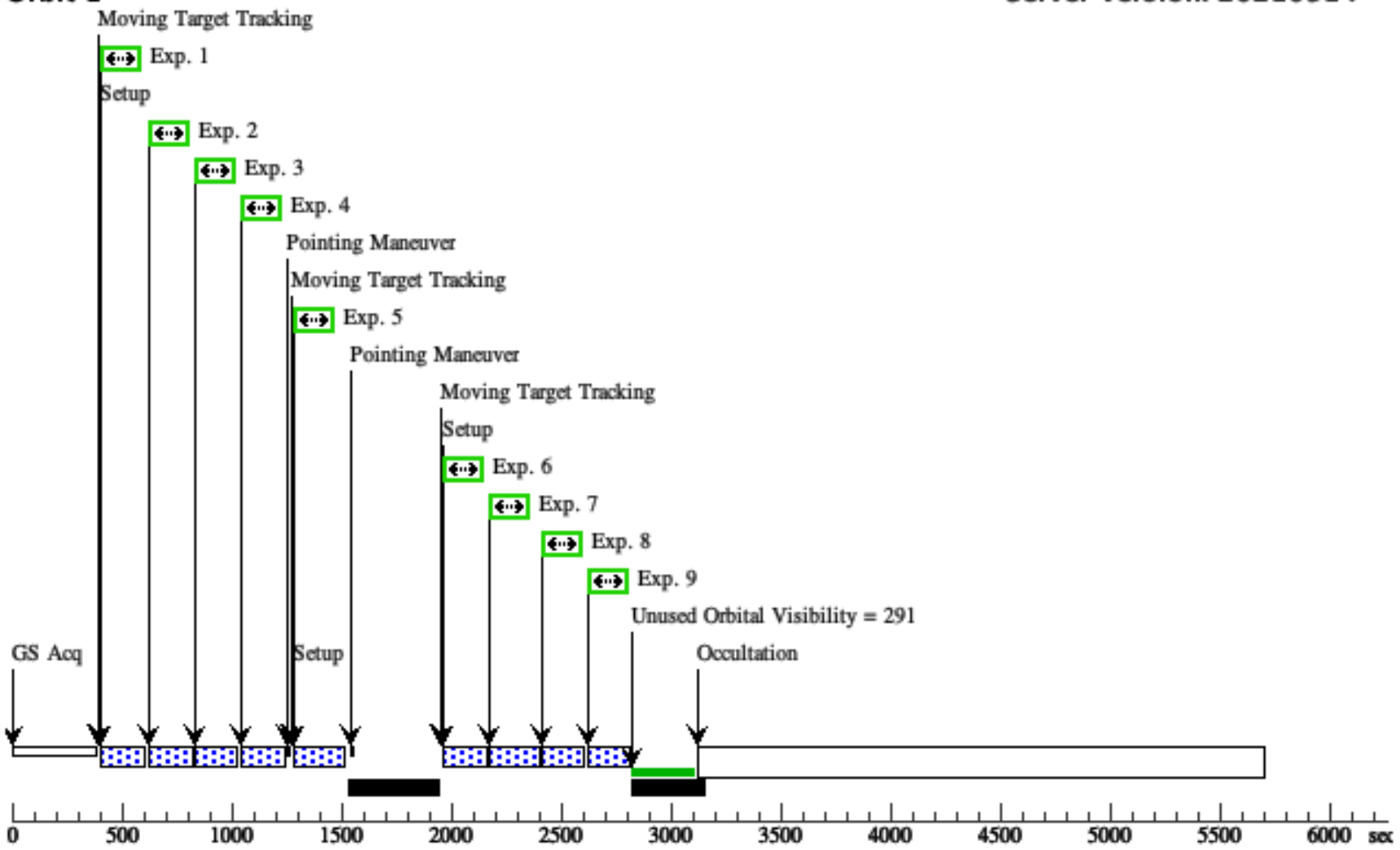
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21C (11)	4 Secs (4 Secs) *[==>]*	*[1]*
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21C (11)	3 Secs (3 Secs) *[==>]*	*[1]*
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21C (11)	10 Secs (10 Secs) *[==>]*	*[1]*
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21C (11)	1.2 Secs (1.2 Secs) *[==>]*	*[1]*
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21C (11)	45 Secs (45 Secs) *[==>]*	*[1]*
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21C (11)	8 Secs (8 Secs) *[==>]*	*[1]*
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21C (11)	30 Secs (30 Secs) *[==>]*	*[1]*
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21C (11)	.5 Secs (0.5 Secs) *[==>]*	*[1]*
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21C (11)	4 Secs (4 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Jupiter_21D (12), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 11 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 46 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (12.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (12.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (12.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (12.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (12.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (12.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (12.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (12.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (12.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

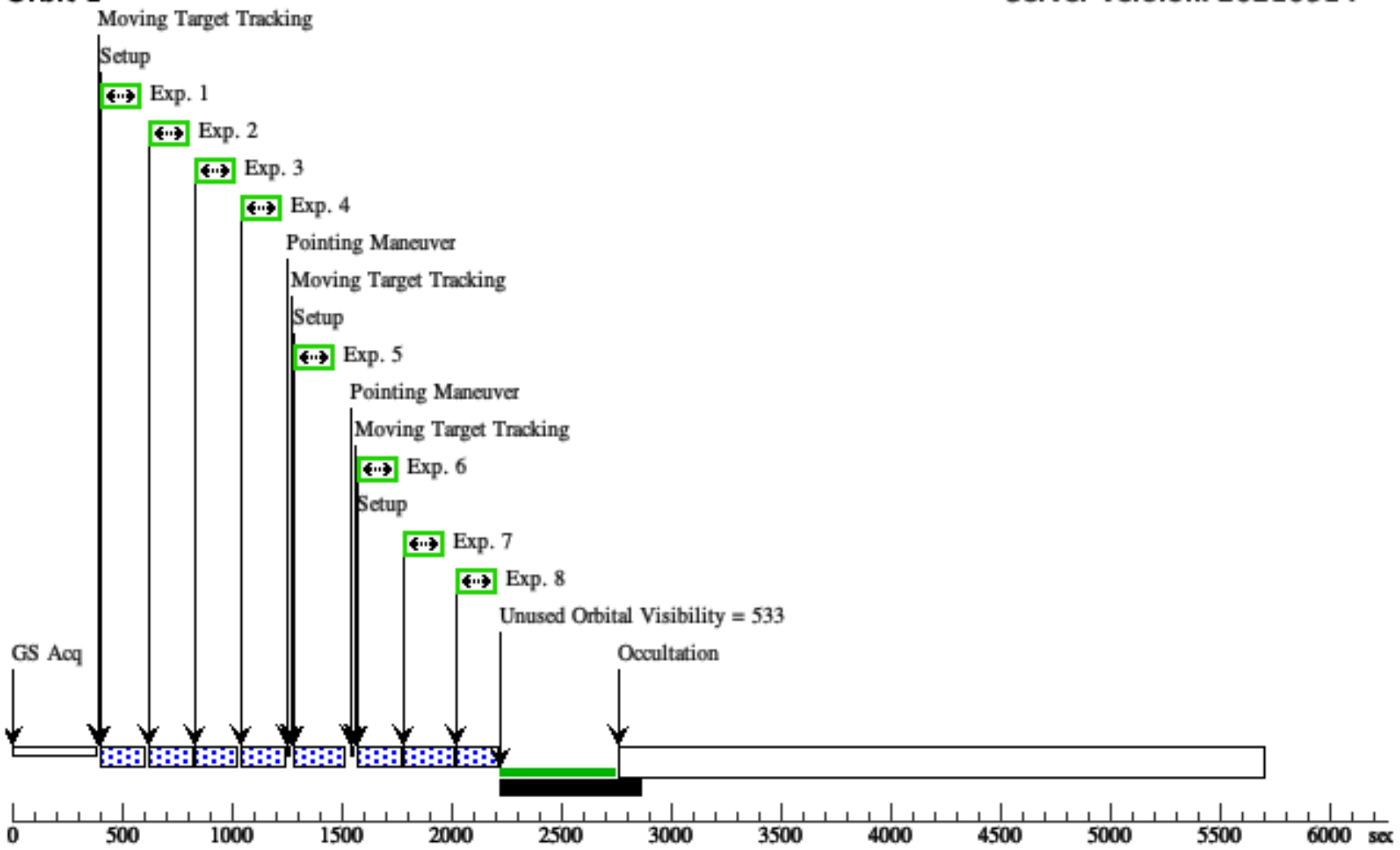
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21D (12)	4 Secs (4 Secs)	
								[==>]	***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21D (12)	3 Secs (3 Secs)	
								[==>]	***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21D (12)	10 Secs (10 Secs)	
								[==>]	***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21D (12)	1.2 Secs (1.2 Secs)	
								[==>]	***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-8 Non-Int in Jupiter_21D (12)	45 Secs (45 Secs)	
								[==>]	***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21D (12)	8 Secs (8 Secs)	
								[==>]	***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21D (12)	30 Secs (30 Secs)	
								[==>]	***[1]***
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21D (12)	.5 Secs (0.5 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21E (13), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 12 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (13.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (13.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (13.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (13.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (13.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (13.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (13.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (13.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (13.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (13.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

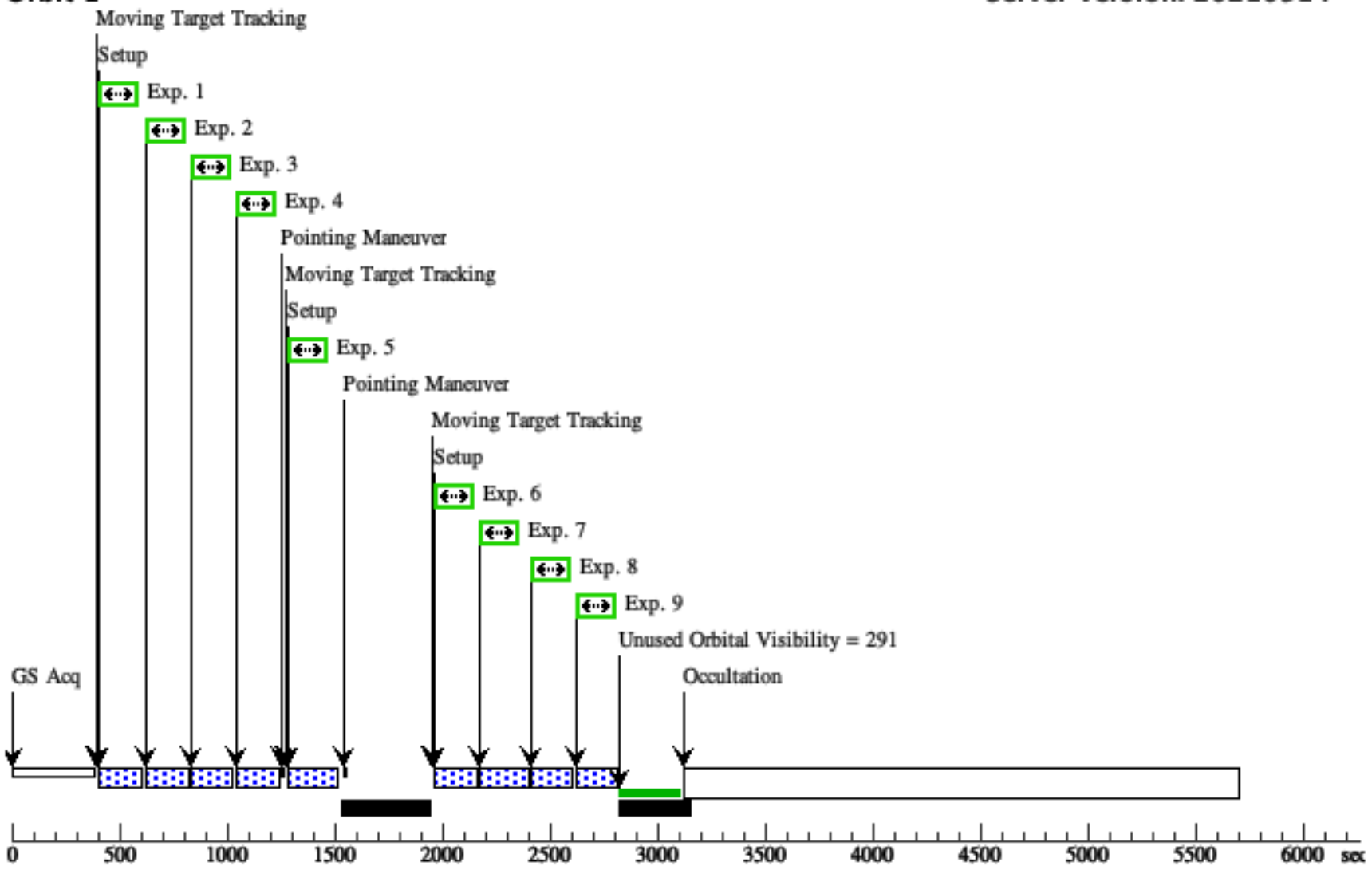
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21E (13)	4 Secs (4 Secs) *[==>]*	*[1]*
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21E (13)	3 Secs (3 Secs) *[==>]*	*[1]*
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21E (13)	10 Secs (10 Secs) *[==>]*	*[1]*
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21E (13)	1.2 Secs (1.2 Secs) *[==>]*	*[1]*
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21E (13)	45 Secs (45 Secs) *[==>]*	*[1]*
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21E (13)	8 Secs (8 Secs) *[==>]*	*[1]*
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21E (13)	30 Secs (30 Secs) *[==>]*	*[1]*
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21E (13)	.5 Secs (0.5 Secs) *[==>]*	*[1]*
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21E (13)	4 Secs (4 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Jupiter_21F (14), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 13 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 46 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (14.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (14.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (14.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (14.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (14.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (14.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (14.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (14.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (14.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

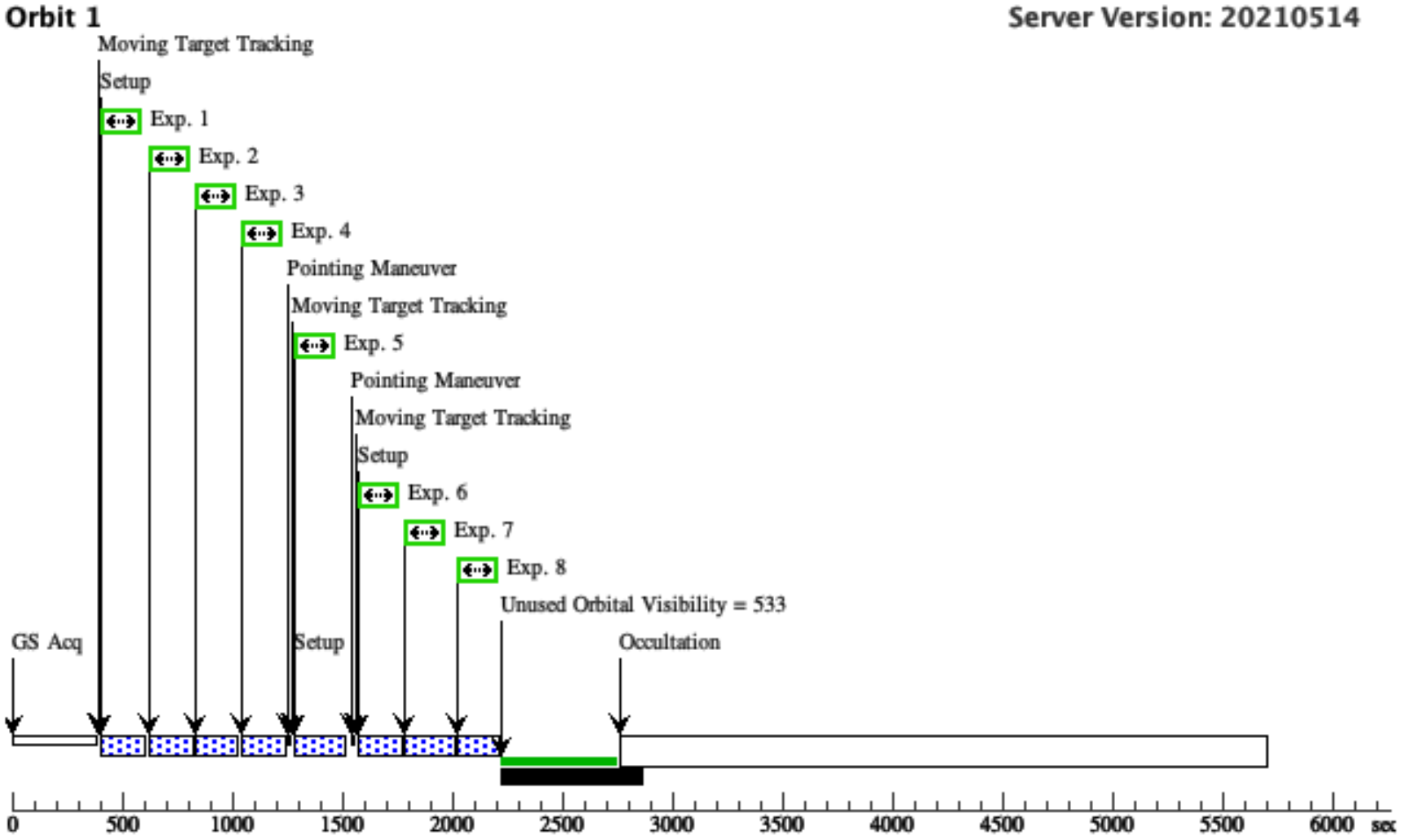
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21F (14)	4 Secs (4 Secs)	
								[==>]	***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21F (14)	3 Secs (3 Secs)	
								[==>]	***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21F (14)	10 Secs (10 Secs)	
								[==>]	***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21F (14)	1.2 Secs (1.2 Secs)	
								[==>]	***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-8 Non-Int in Jupiter_21F (14)	45 Secs (45 Secs)	
								[==>]	***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21F (14)	8 Secs (8 Secs)	
								[==>]	***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21F (14)	30 Secs (30 Secs)	
								[==>]	***[1]***
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21F (14)	.5 Secs (0.5 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21G (15), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 14 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (15.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (15.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (15.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (15.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (15.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (15.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (15.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (15.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (15.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (15.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

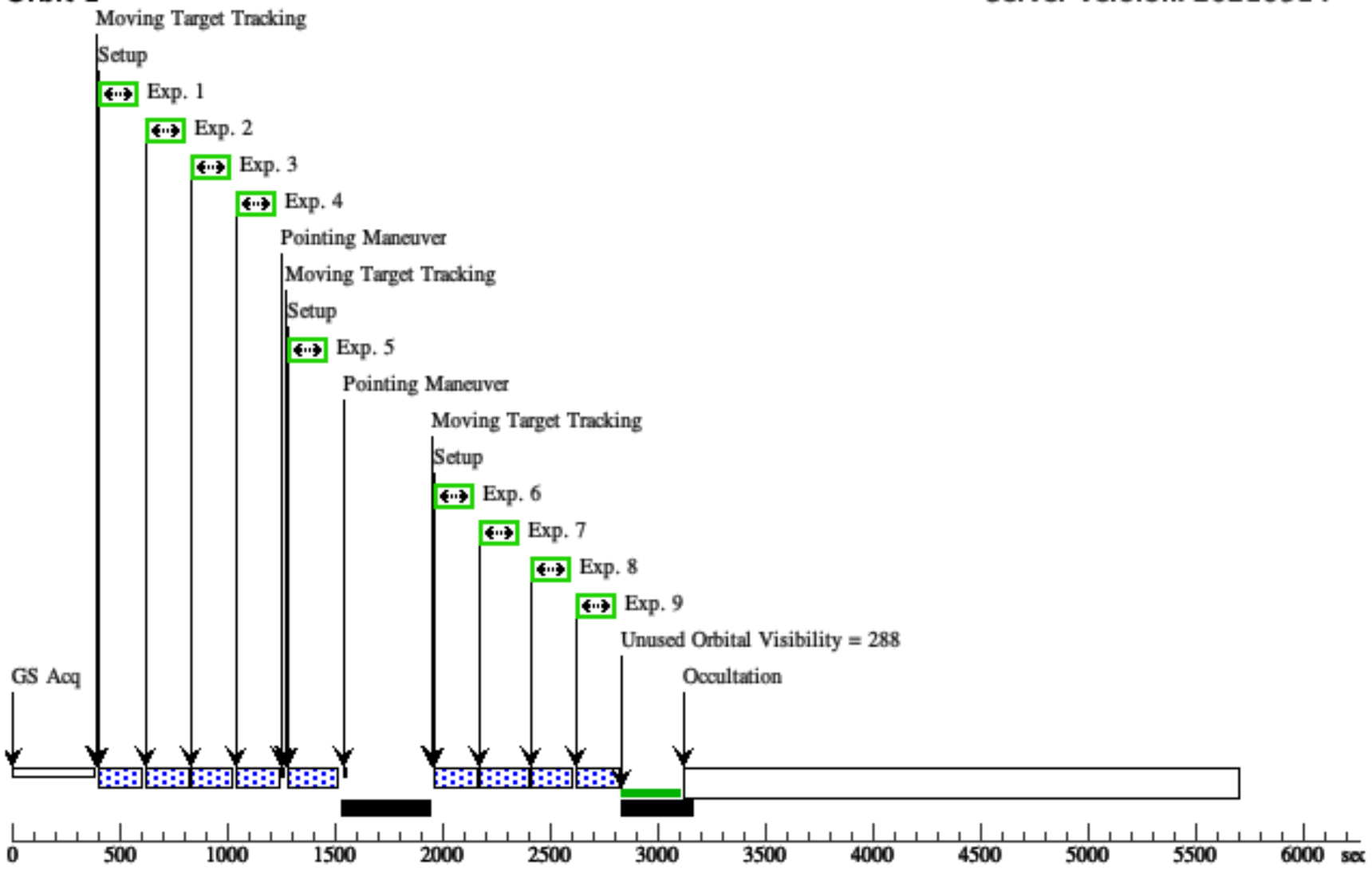
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21G (15)	4 Secs (4 Secs) *[==>]*	*[1]*
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21G (15)	3 Secs (3 Secs) *[==>]*	*[1]*
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21G (15)	10 Secs (10 Secs) *[==>]*	*[1]*
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21G (15)	1.2 Secs (1.2 Secs) *[==>]*	*[1]*
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21G (15)	45 Secs (45 Secs) *[==>]*	*[1]*
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21G (15)	8 Secs (8 Secs) *[==>]*	*[1]*
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21G (15)	30 Secs (30 Secs) *[==>]*	*[1]*
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21G (15)	6 Secs (6 Secs) *[==>]*	*[1]*
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21G (15)	4 Secs (4 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Jupiter_21H (16), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 15 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 46 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (16.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (16.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (16.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (16.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (16.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (16.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (16.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (16.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (16.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

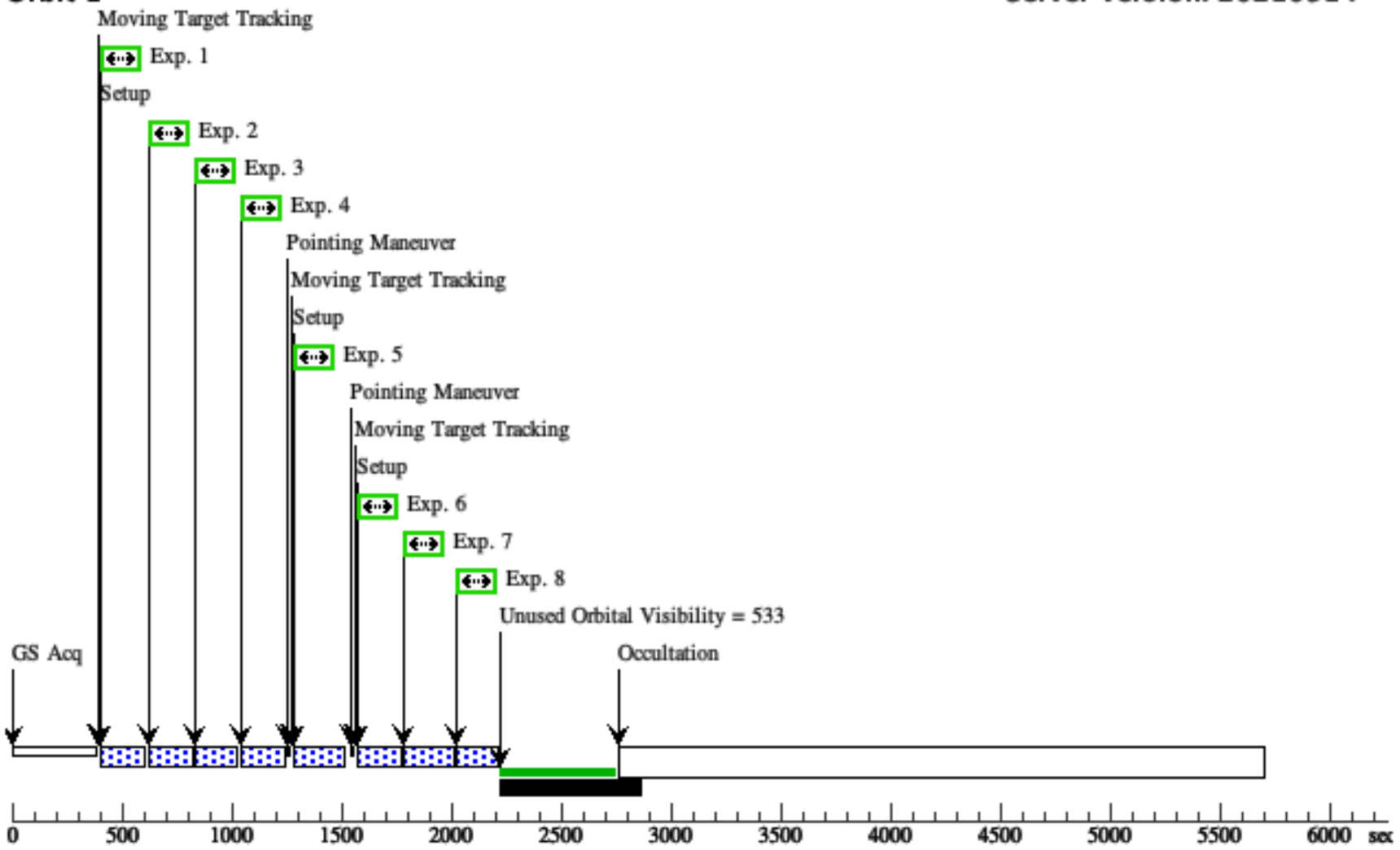
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21H (16)	4 Secs (4 Secs)	
								[==>]	***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21H (16)	3 Secs (3 Secs)	
								[==>]	***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21H (16)	10 Secs (10 Secs)	
								[==>]	***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21H (16)	1.2 Secs (1.2 Secs)	
								[==>]	***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-8 Non-Int in Jupiter_21H (16)	45 Secs (45 Secs)	
								[==>]	***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21H (16)	8 Secs (8 Secs)	
								[==>]	***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21H (16)	30 Secs (30 Secs)	
								[==>]	***[1]***
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21H (16)	6 Secs (6 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21I (17), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 16 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (17.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (17.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (17.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (17.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (17.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (17.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (17.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (17.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (17.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (17.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

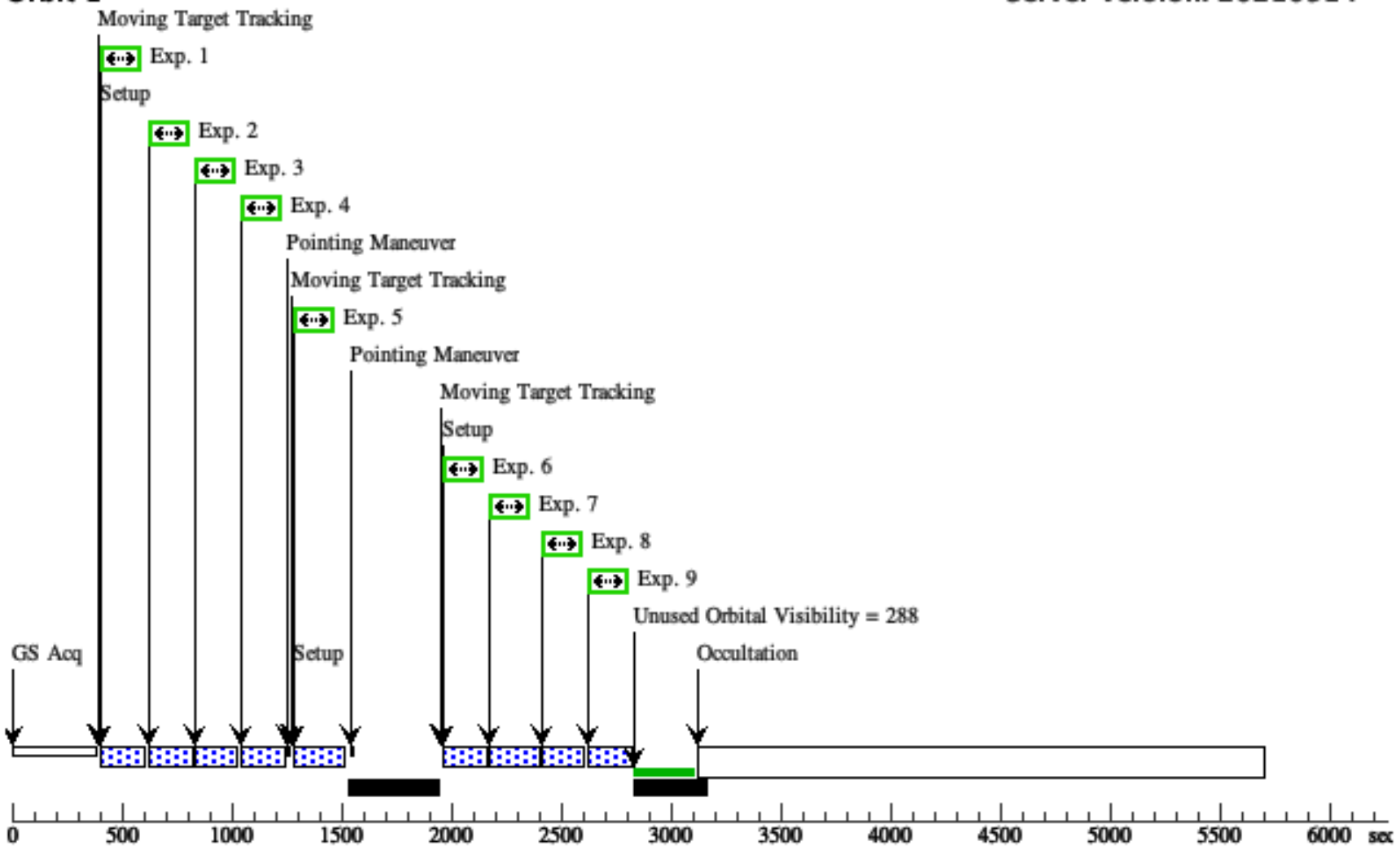
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21I (17)	4 Secs (4 Secs) *[==>]*	 ***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21I (17)	3 Secs (3 Secs) *[==>]*	 ***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21I (17)	10 Secs (10 Secs) *[==>]*	 ***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21I (17)	1.2 Secs (1.2 Secs) *[==>]*	 ***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21I (17)	45 Secs (45 Secs) *[==>]*	 ***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21I (17)	8 Secs (8 Secs) *[==>]*	 ***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21I (17)	30 Secs (30 Secs) *[==>]*	 ***[1]***
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21I (17)	6 Secs (6 Secs) *[==>]*	 ***[1]***
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21I (17)	4 Secs (4 Secs) *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21J (18), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 17 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 46 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (18.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (18.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (18.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (18.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (18.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (18.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (18.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (18.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (18.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

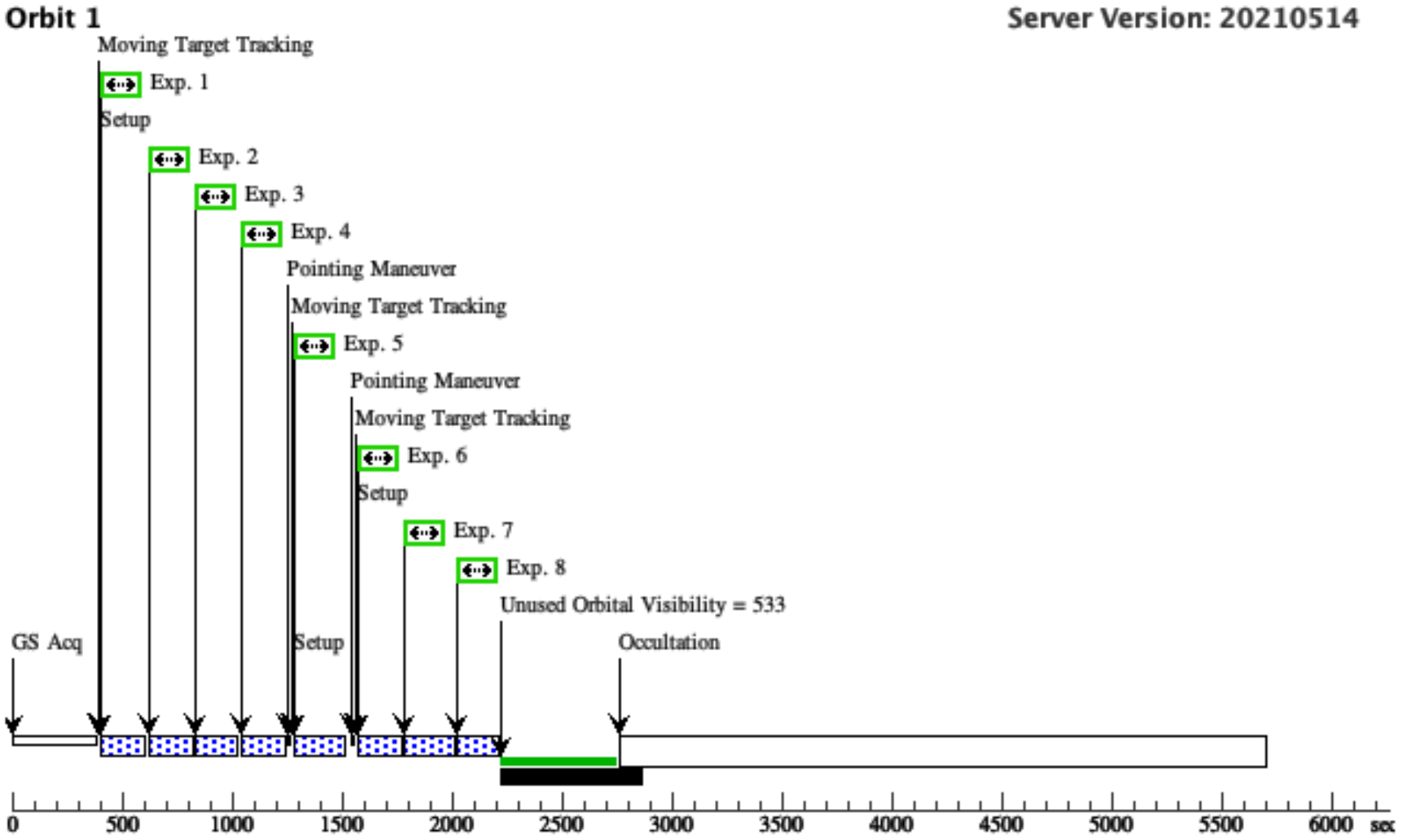
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21J (18)	4 Secs (4 Secs)	
								[==>]	***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21J (18)	3 Secs (3 Secs)	
								[==>]	***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21J (18)	10 Secs (10 Secs)	
								[==>]	***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21J (18)	1.2 Secs (1.2 Secs)	
								[==>]	***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-8 Non-Int in Jupiter_21J (18)	45 Secs (45 Secs)	
								[==>]	***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21J (18)	8 Secs (8 Secs)	
								[==>]	***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21J (18)	30 Secs (30 Secs)	
								[==>]	***[1]***
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21J (18)	6 Secs (6 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21K (19), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 18 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (19.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (19.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (19.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (19.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (19.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (19.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (19.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (19.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (19.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (19.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

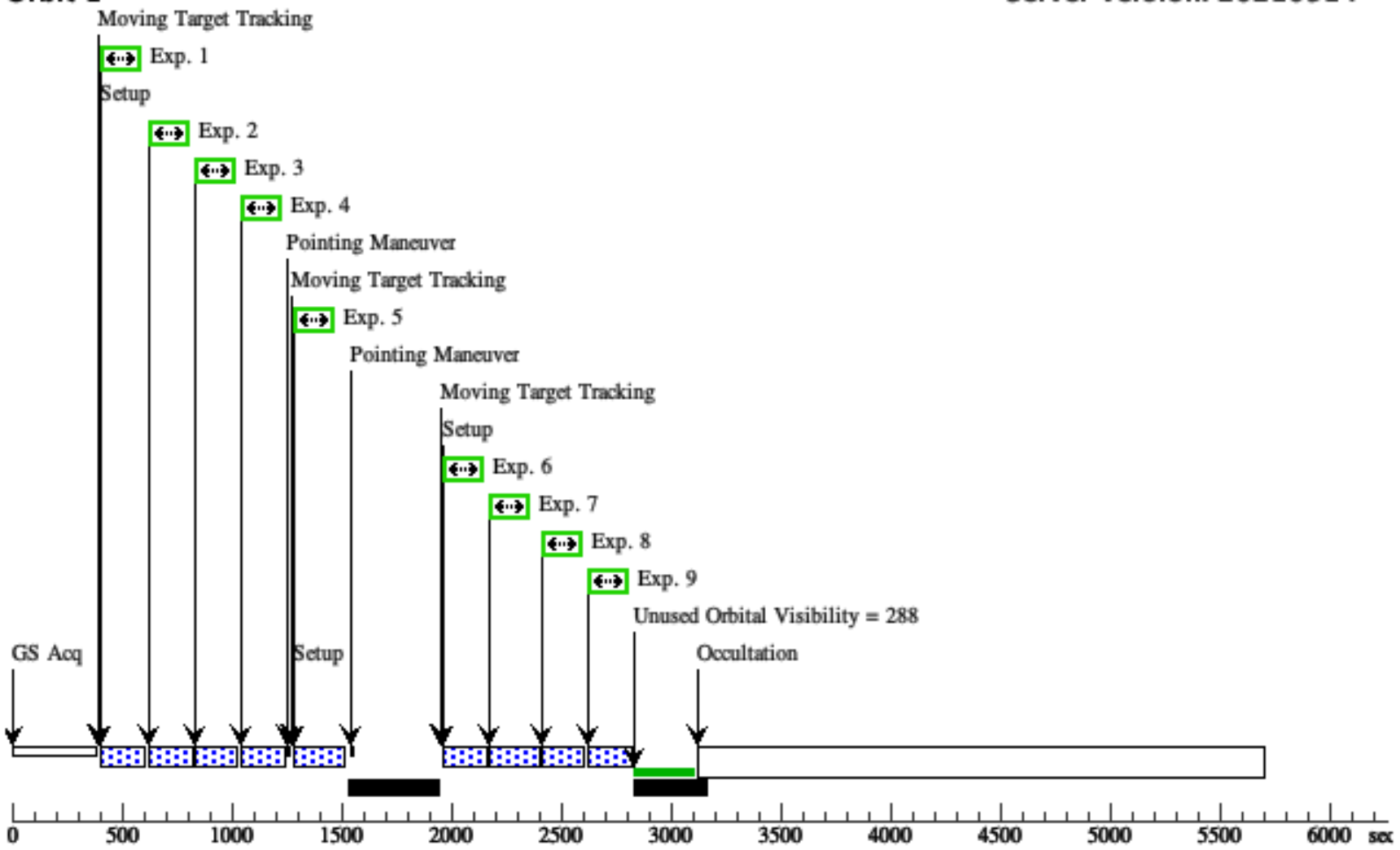
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21K (19)	4 Secs (4 Secs) *[==>]*	 ***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21K (19)	3 Secs (3 Secs) *[==>]*	 ***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21K (19)	10 Secs (10 Secs) *[==>]*	 ***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21K (19)	1.2 Secs (1.2 Secs) *[==>]*	 ***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21K (19)	45 Secs (45 Secs) *[==>]*	 ***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21K (19)	8 Secs (8 Secs) *[==>]*	 ***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21K (19)	30 Secs (30 Secs) *[==>]*	 ***[1]***
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21K (19)	6 Secs (6 Secs) *[==>]*	 ***[1]***
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21K (19)	4 Secs (4 Secs) *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21L (20), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 19 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 46 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (20.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (20.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (20.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (20.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (20.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (20.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (20.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (20.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (20.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

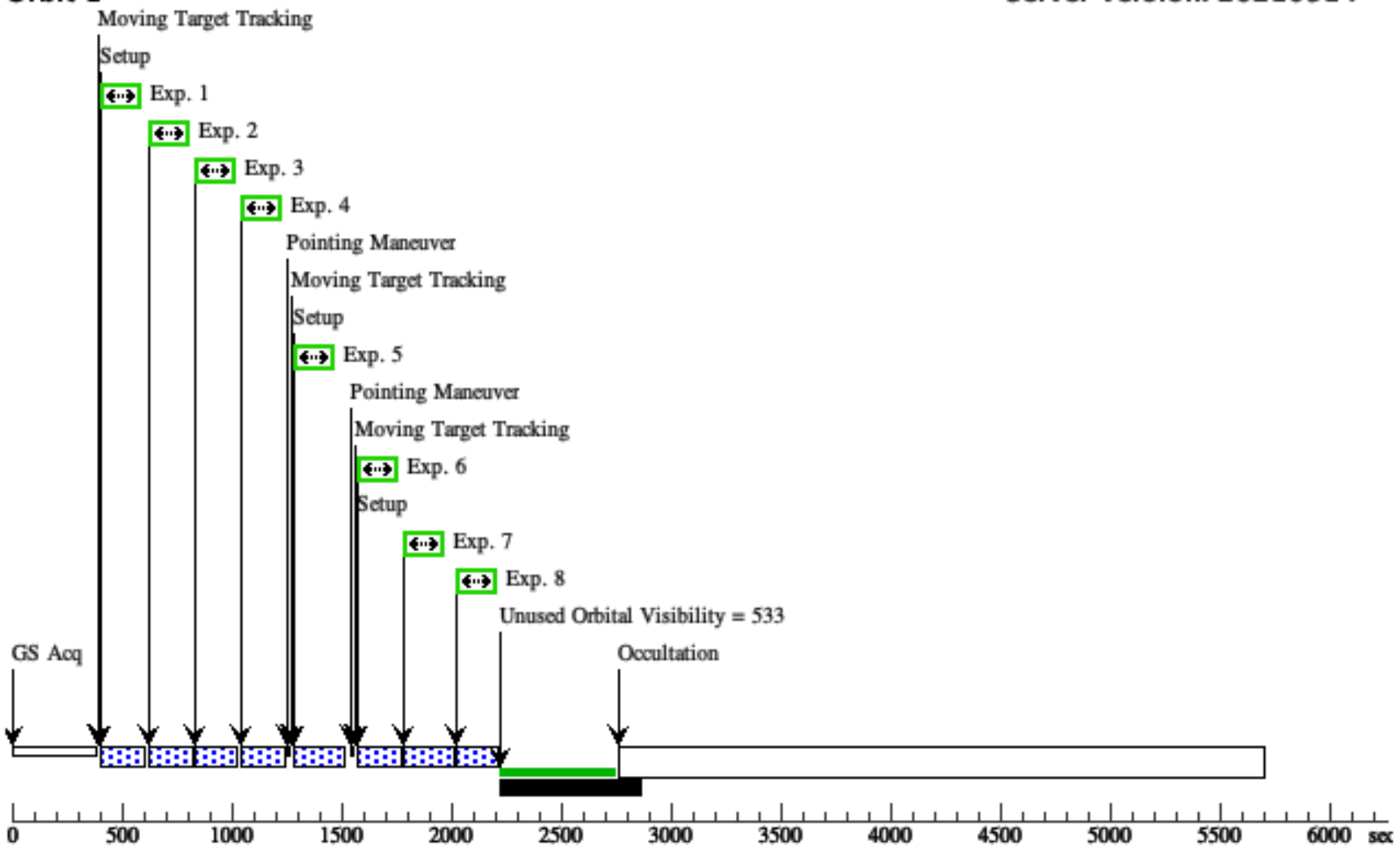
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21L (20)	4 Secs (4 Secs)	
								[==>]	***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21L (20)	3 Secs (3 Secs)	
								[==>]	***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21L (20)	10 Secs (10 Secs)	
								[==>]	***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-8 Non-Int in Jupiter_21L (20)	1.2 Secs (1.2 Secs)	
								[==>]	***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-8 Non-Int in Jupiter_21L (20)	45 Secs (45 Secs)	
								[==>]	***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21L (20)	8 Secs (8 Secs)	
								[==>]	***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21L (20)	30 Secs (30 Secs)	
								[==>]	***[1]***
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-8 Non-Int in Jupiter_21L (20)	6 Secs (6 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 16266, Jupiter_21M (21), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 20 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: 13 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 OR 7 - 8 is acceptable. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Jupiter opposition (2021-AUG-19) +/- 30 days preferred.

Diagnostics

(F631N (21.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N (21.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N (21.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (21.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (21.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (21.005)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F658N (21.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (21.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (21.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (21.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Solar System Targets

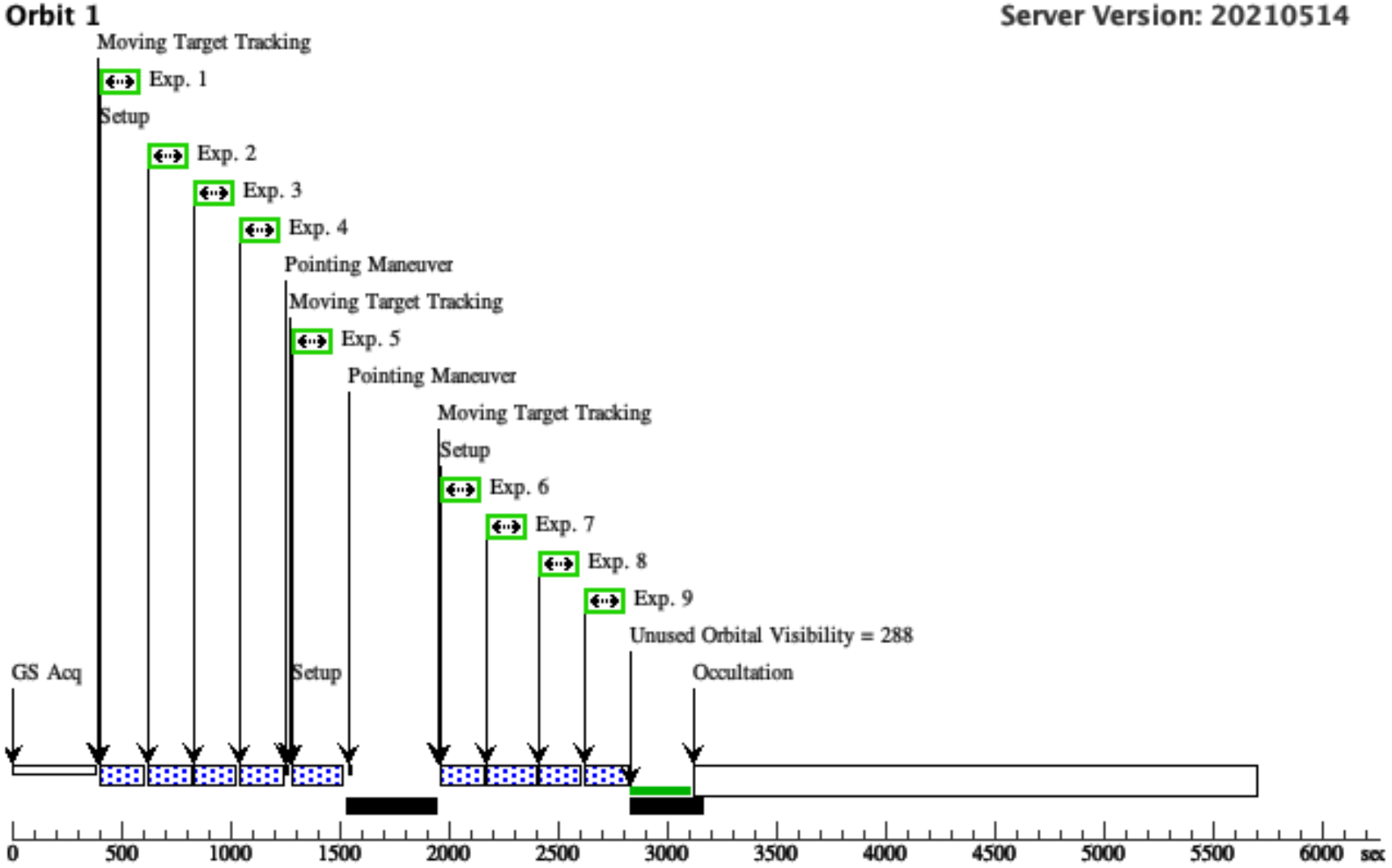
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(1)	JUPITER-MAPS	STD=JUPITER			NOT OCC OF JUPITER BY IO FROM EARTH, NOT OCC OF JUPITER BY EUROPA FROM EARTH, NOT OCC OF JUPITER BY GANYMEDE FROM EARTH, NOT OCC OF JUPITER BY CALLISTO FROM EARTH, SEP OF JUPITER SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Jupiter is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Jupiter series of visits in this program would violate that constraint if they are attempted when Jupiter is >168 degrees from the Sun
Description=Global Jupiter maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21M (21)	4 Secs (4 Secs) *[==>]*	 ***[1]***
2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21M (21)	3 Secs (3 Secs) *[==>]*	 ***[1]***
3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21M (21)	10 Secs (10 Secs) *[==>]*	 ***[1]***
4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21M (21)	1.2 Secs (1.2 Secs) *[==>]*	 ***[1]***
5	FQ889_quadA	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2	Sequence 1-9 Non-Int in Jupiter_21M (21)	45 Secs (45 Secs) *[==>]*	 ***[1]***
6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21M (21)	8 Secs (8 Secs) *[==>]*	 ***[1]***
7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21M (21)	30 Secs (30 Secs) *[==>]*	 ***[1]***
8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Jupiter_21M (21)	6 Secs (6 Secs) *[==>]*	 ***[1]***
9	F631N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_21M (21)	4 Secs (4 Secs) *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21A (22), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 15-AUG-2021:00:00:00 AND 14-OCT-2021:00:00:00; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (22.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (22.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (22.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (22.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (22.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (22.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (22.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (22.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (22.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

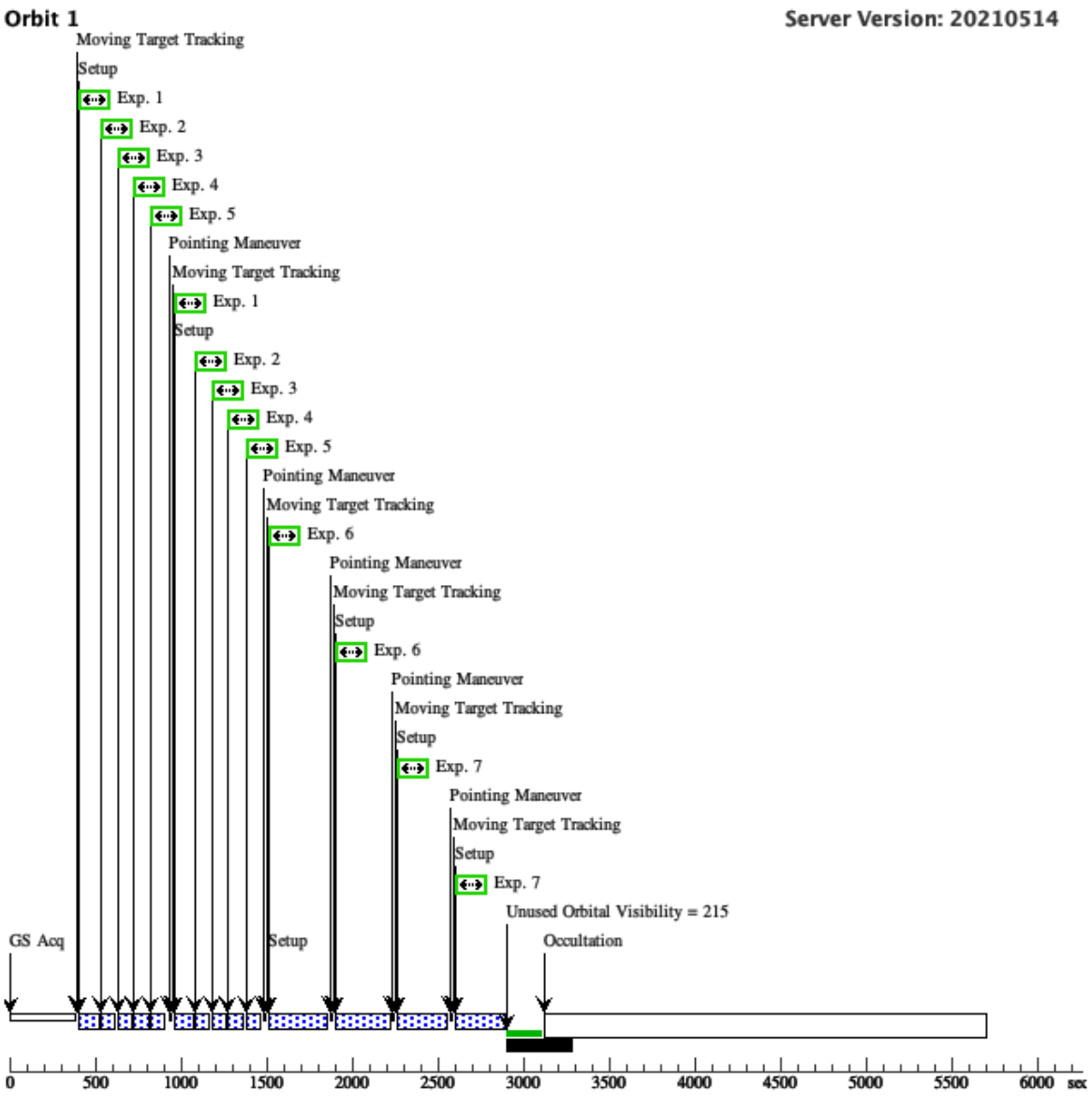
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21A (22) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21A (22) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21A (22) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21A (22) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21A (22) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28; SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21A (22) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24; SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21A (22) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21A (22) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21B (23), scheduled Wed Sep 01 18:01:16 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 22 BY 2.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (23.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (23.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (23.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (23.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (23.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (23.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (23.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (23.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (23.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

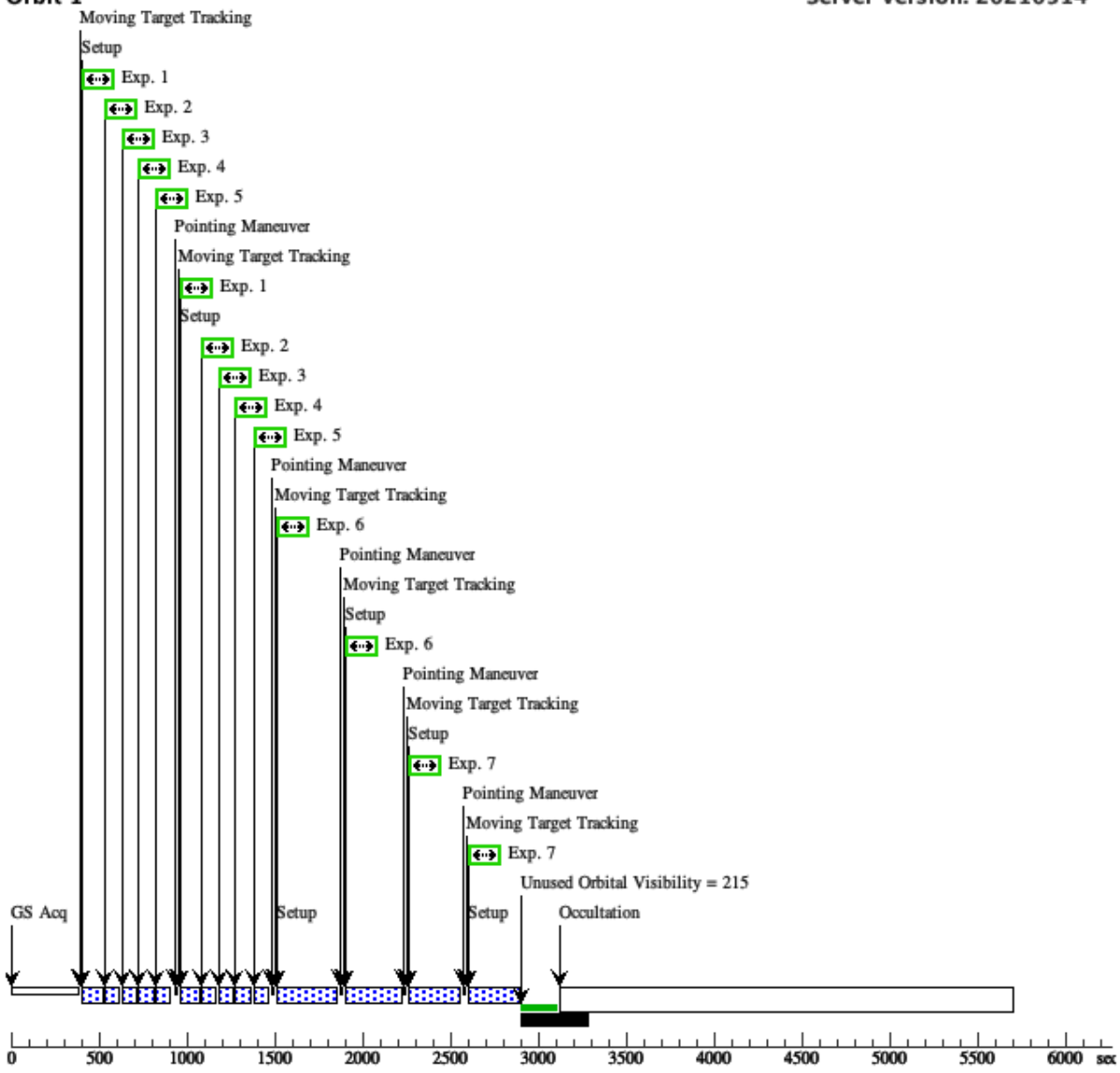
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21B (23) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21B (23) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21B (23) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21B (23) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21B (23) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21B (23) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_21B (23) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21B (23) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21C (24), scheduled Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 23 BY 2.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (24.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (24.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (24.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (24.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (24.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (24.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (24.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (24.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (24.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

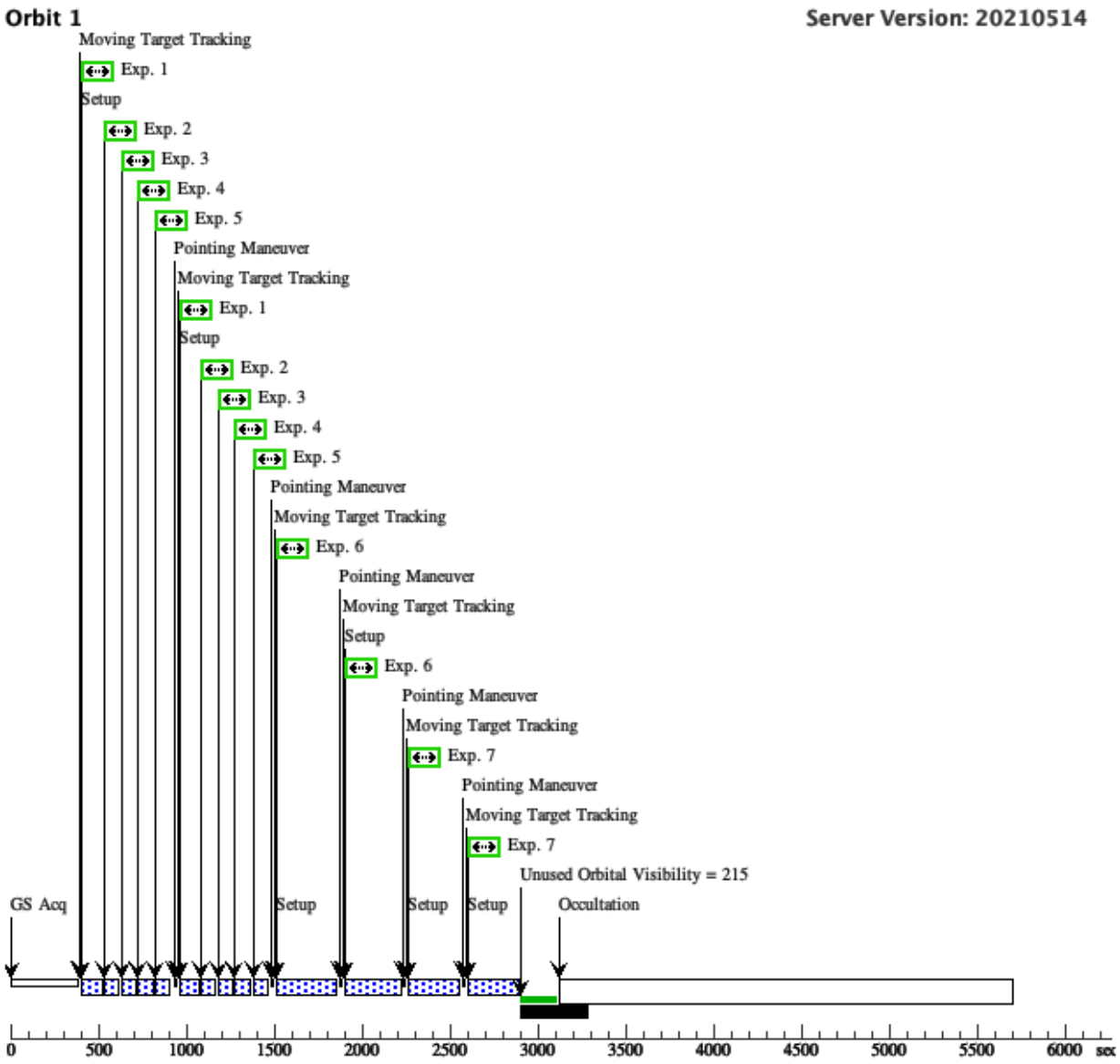
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21C (24) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21C (24) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21C (24) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21C (24) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21C (24) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21C (24) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_21C (24) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21C (24) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21D (25), scheduled Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 24 BY 2.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (25.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (25.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (25.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (25.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (25.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (25.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (25.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (25.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (25.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

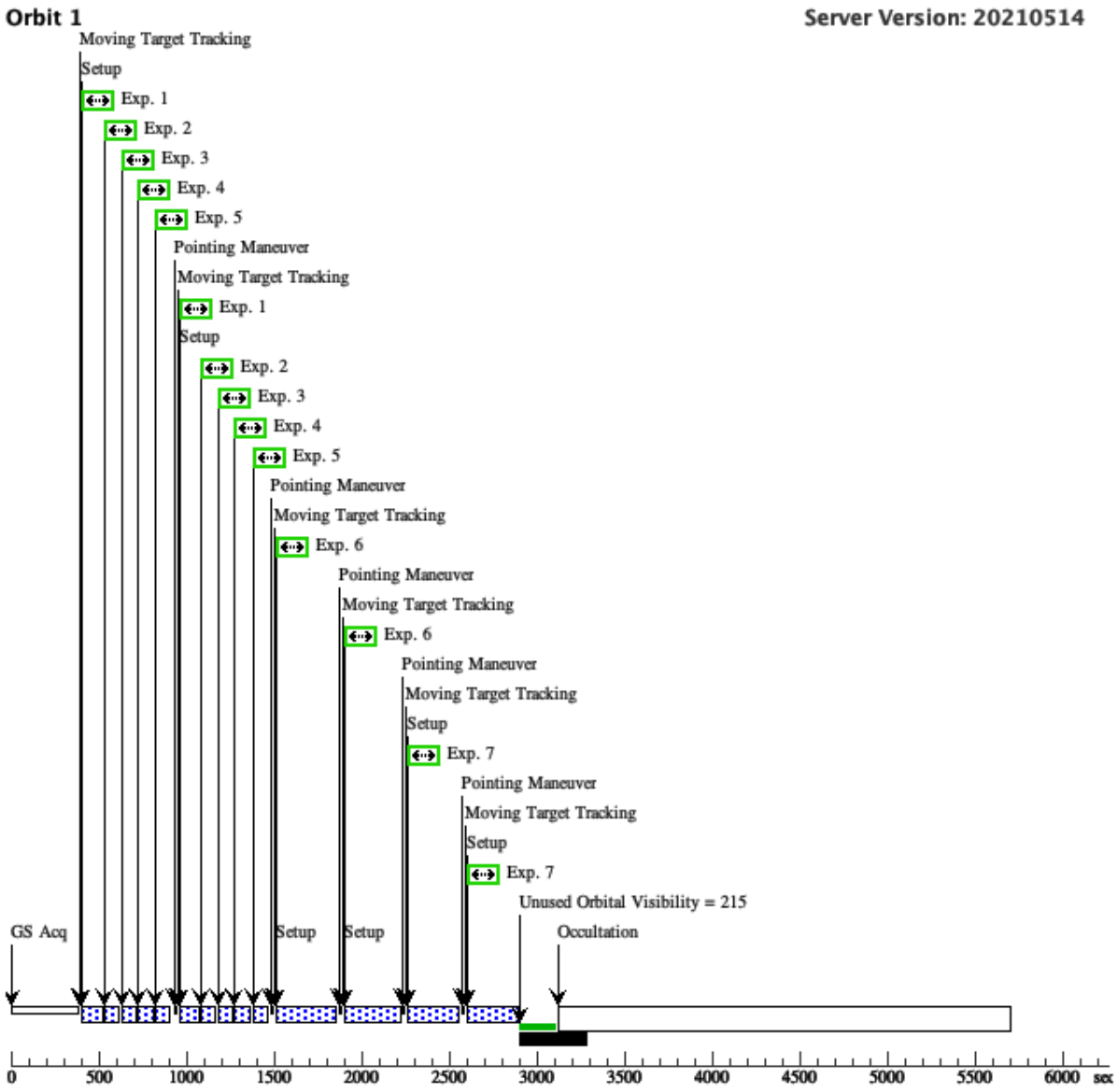
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21D (25) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21D (25) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21D (25) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21D (25) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21D (25) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21D (25) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_21D (25) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21D (25) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21E (26), scheduled Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 25 BY 1.9 Orbits TO 9.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (26.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (26.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (26.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (26.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (26.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (26.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (26.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (26.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (26.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

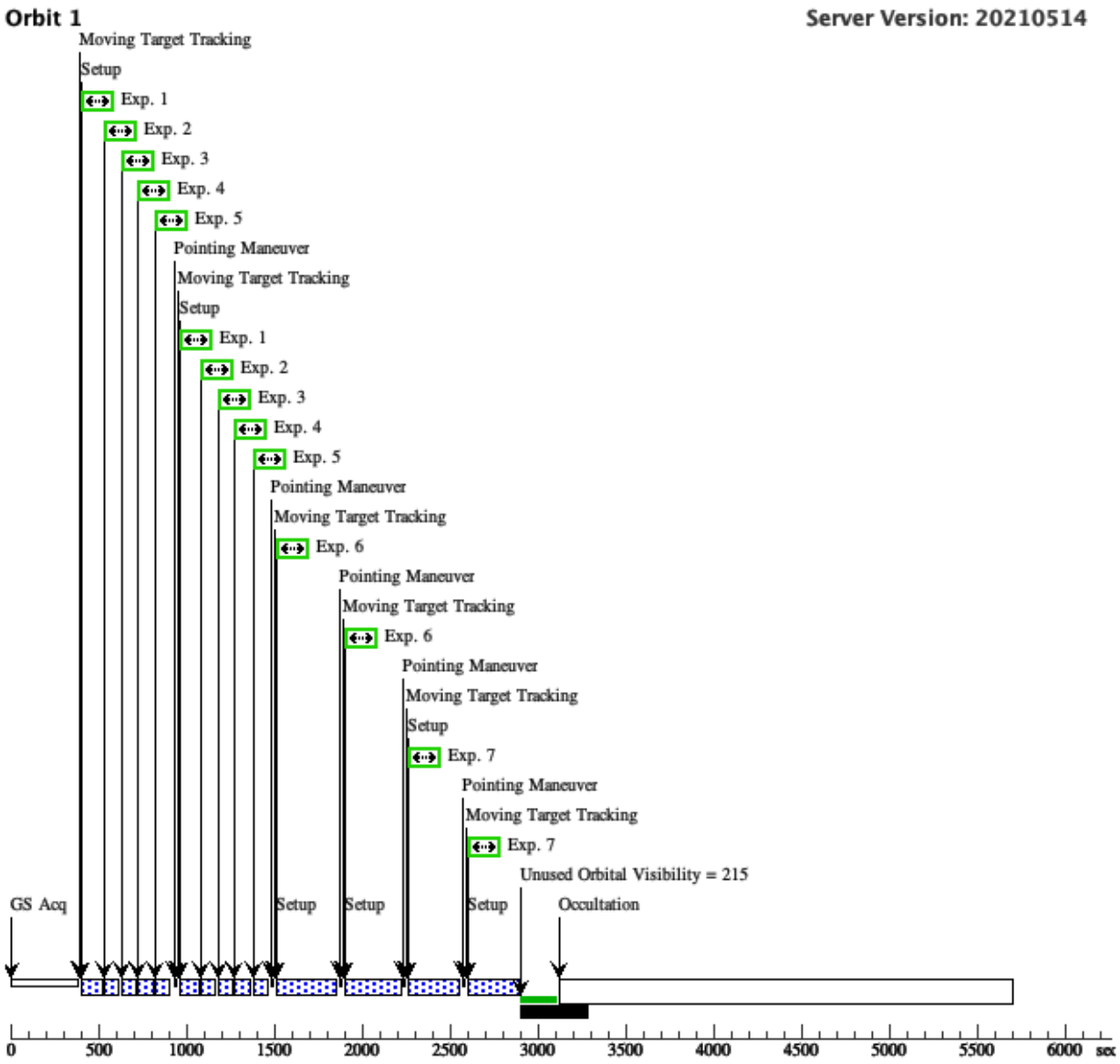
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21E (26) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21E (26) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21E (26) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21E (26) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21E (26) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21E (26) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_21E (26) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21E (26) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21F (27), scheduled Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 26 BY 2.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (27.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (27.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (27.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (27.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (27.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (27.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (27.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (27.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (27.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

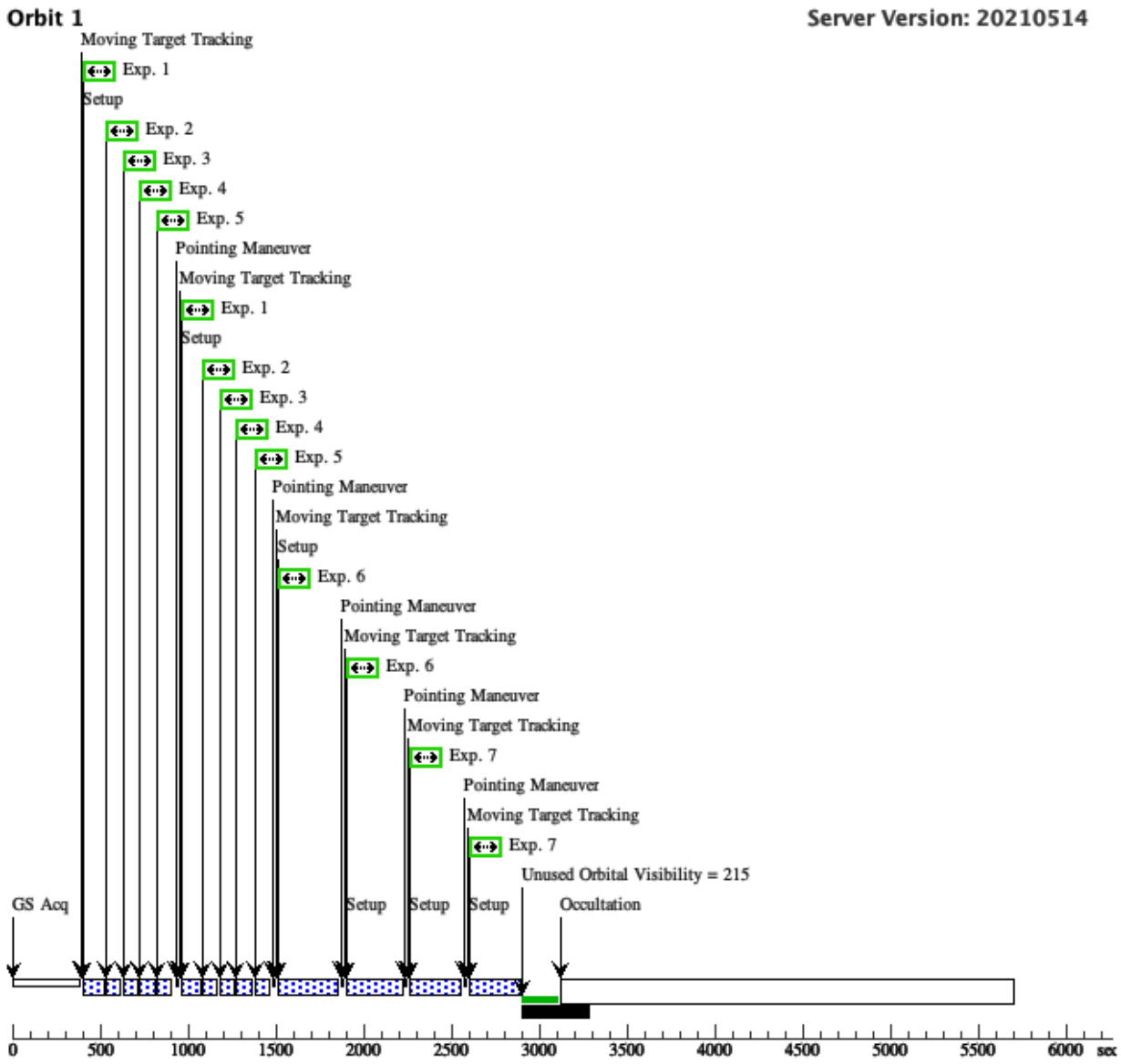
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21F (27) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21F (27) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21F (27) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21F (27) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21F (27) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28; SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21F (27) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24; SAA CONTOUR 02	Sequence 1-7 Non-Int in Neptune_21F (27) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21F (27) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21G (28), scheduled Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 27 BY 2.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (28.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (28.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (28.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (28.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (28.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (28.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (28.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (28.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (28.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

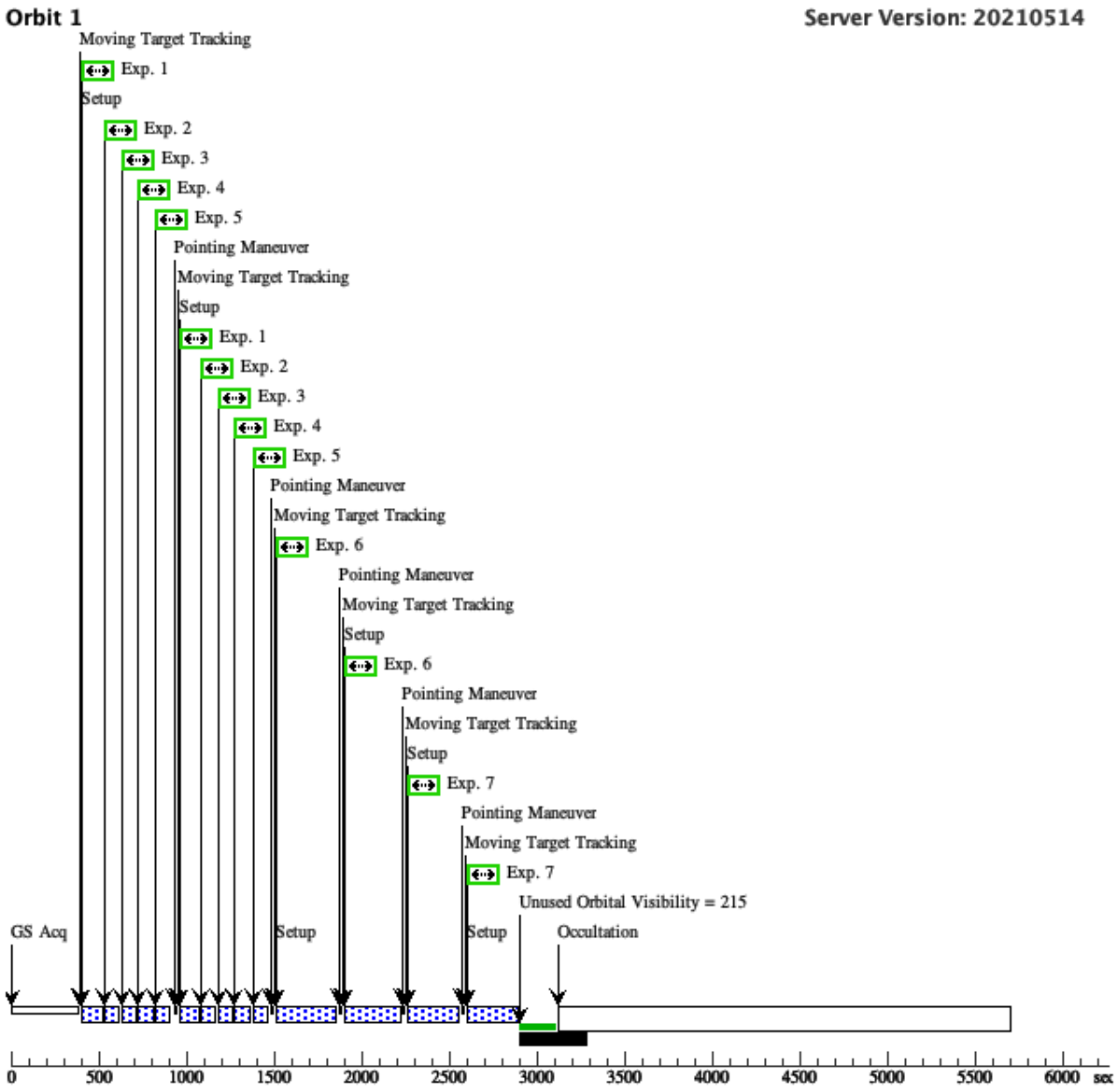
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21G (28) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21G (28) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21G (28) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21G (28) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21G (28) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21G (28) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_21G (28) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21G (28) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Neptune_21H (29), scheduled Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 28 BY 2.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M

Comments: Neptune Opposition (2021-SEP-14) +/- 30 days preferred.

8 orbits, with mostly 2-orbit gaps between most visits (4-6x 2-orbit gaps, 1-3x 1-orbit gaps).
If shifting needed (for SAA avoidance or observatory constraints), can reduce a 3rd gap to 1 orbits (no more than 3 1-orbit gaps overall). We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Diagnostics

(F845M (29.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (29.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F547M (29.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F657N (29.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F763M (29.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (29.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727N_quadD (29.006)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(FQ619N_quadA (29.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ619N_quadA (29.007)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1-5), (7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(6)

Solar System Targets

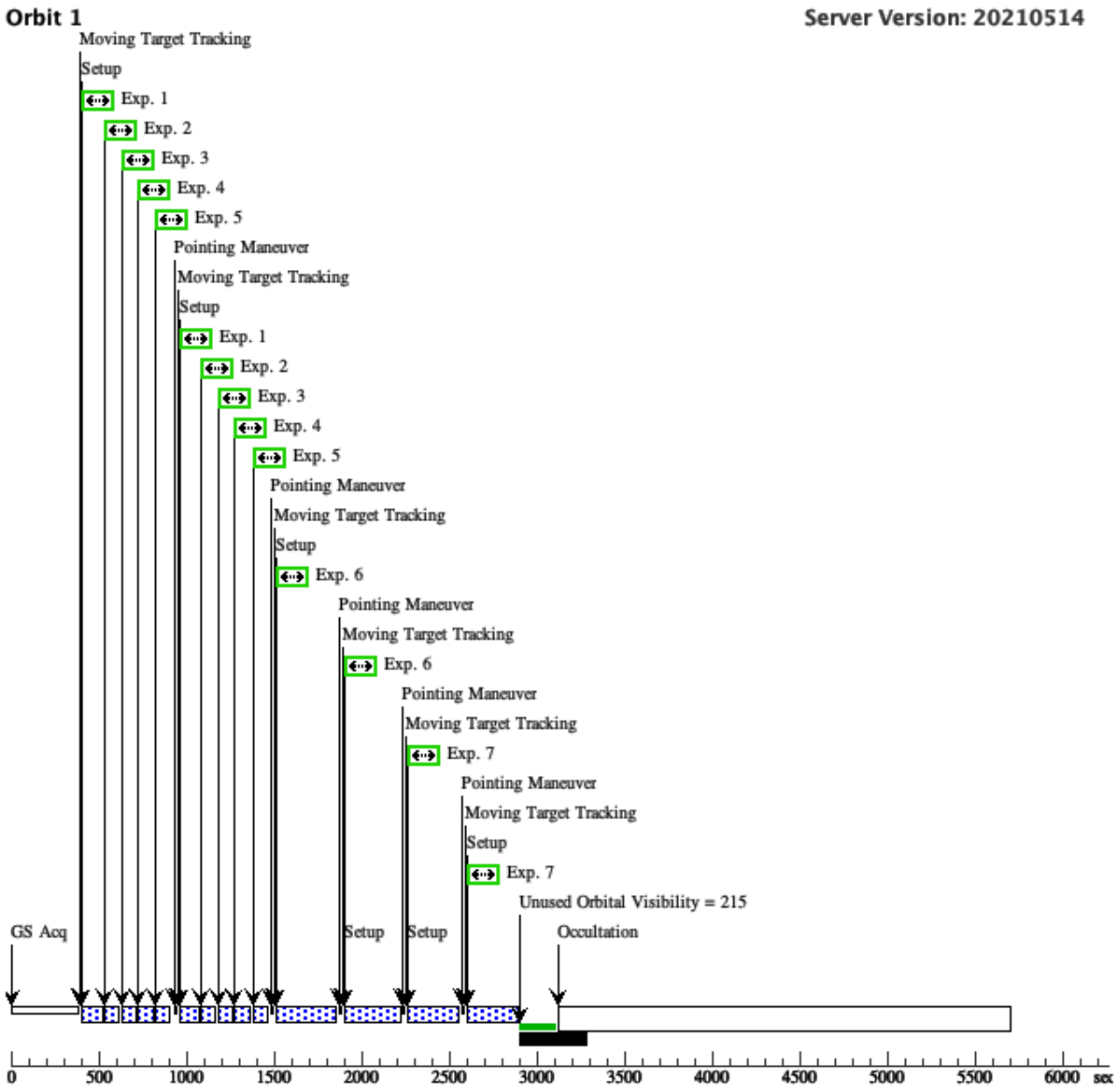
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(4)	NEPTUNE-MAPS	STD=NEPTUNE				EARTH

Comments: Description=Global Neptune Maps

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F845M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21H (29) (2)	40 Secs (80 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
2	F467M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21H (29) (2)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
3	F547M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21H (29) (2)	6 Secs (12 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
4	F657N	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21H (29) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_21H (29) (2)	20 Secs (40 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
6	FQ727N_quadD	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_21H (29) (3)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
7	FQ619N_quadA	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_21H (29) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_21H (29) (2)	120 Secs (240 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Saturn_21A (30), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 03-JUL-2021 AND 01-OCT-2021:00:00:00

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first
IF only a few second are needed, F889N can be trimmed to as short as 30S, but all exposures should be trimmed by the same amount

Diagnostics

(Saturn_21A (30)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F631N_2K (30.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (30.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (30.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (30.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (30.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (30.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (30.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (30.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (30.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (30.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (30.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (30.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

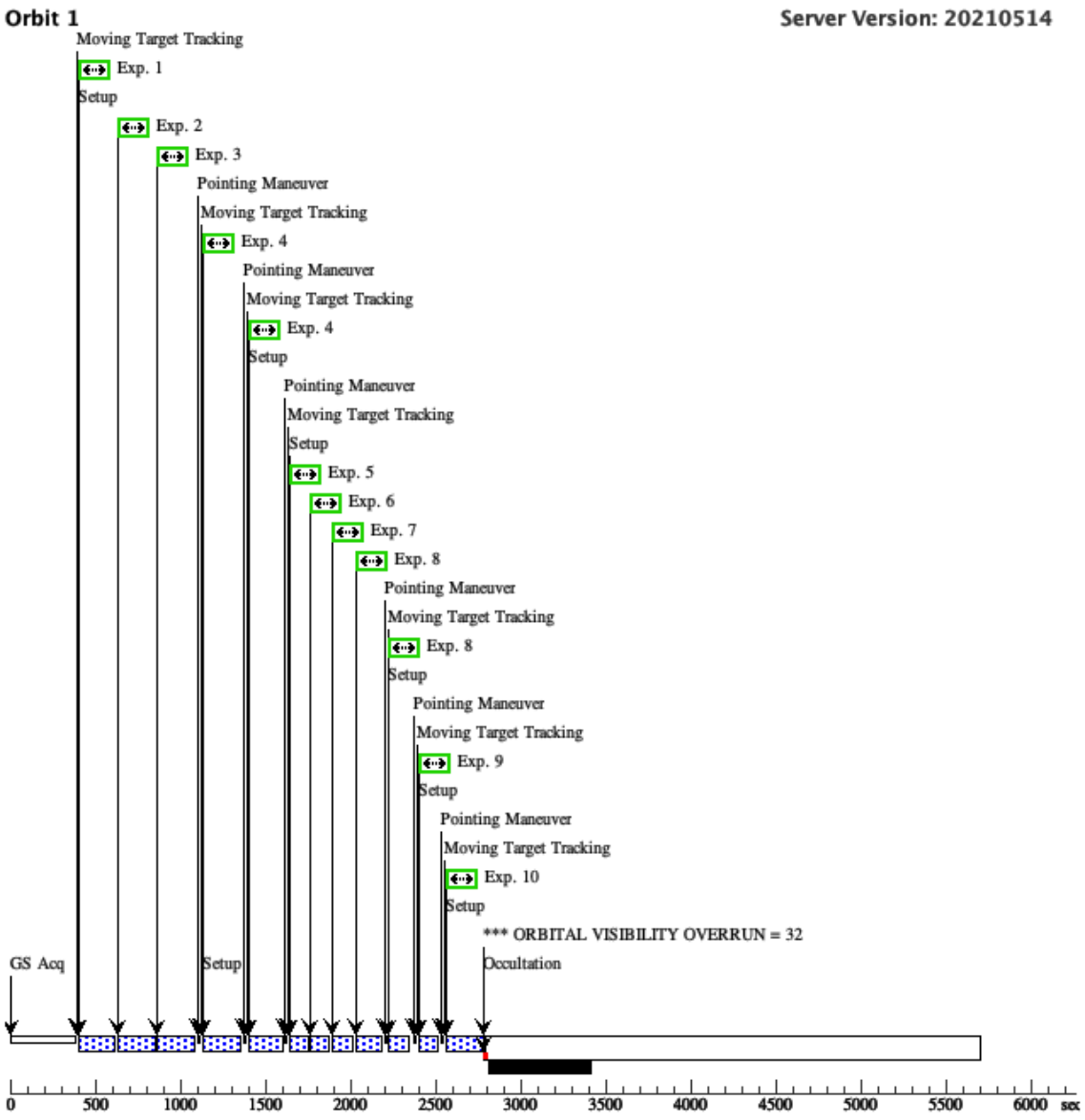
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21A (30)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21A (30)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21A (30)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21A (30) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21A (30) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.100534)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21A (30)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.100533)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21A (30)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F343N (WFC3UVIS.im.100533)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21A (30)	20 Secs (20 Secs) *[==>]*	*[1]*
8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21A (30) Pattern 2, Exps 8-8 in Sequence 1-10 Non-Int in Saturn_21A (30) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-10 Non-Int in Saturn_21A (30)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14; SAA CONTOUR 02	Sequence 1-10 Non-Int in Saturn_21A (30)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21B (31), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 30 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (31.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (31.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (31.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (31.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (31.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (31.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (31.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (31.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (31.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (31.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (31.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (31.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

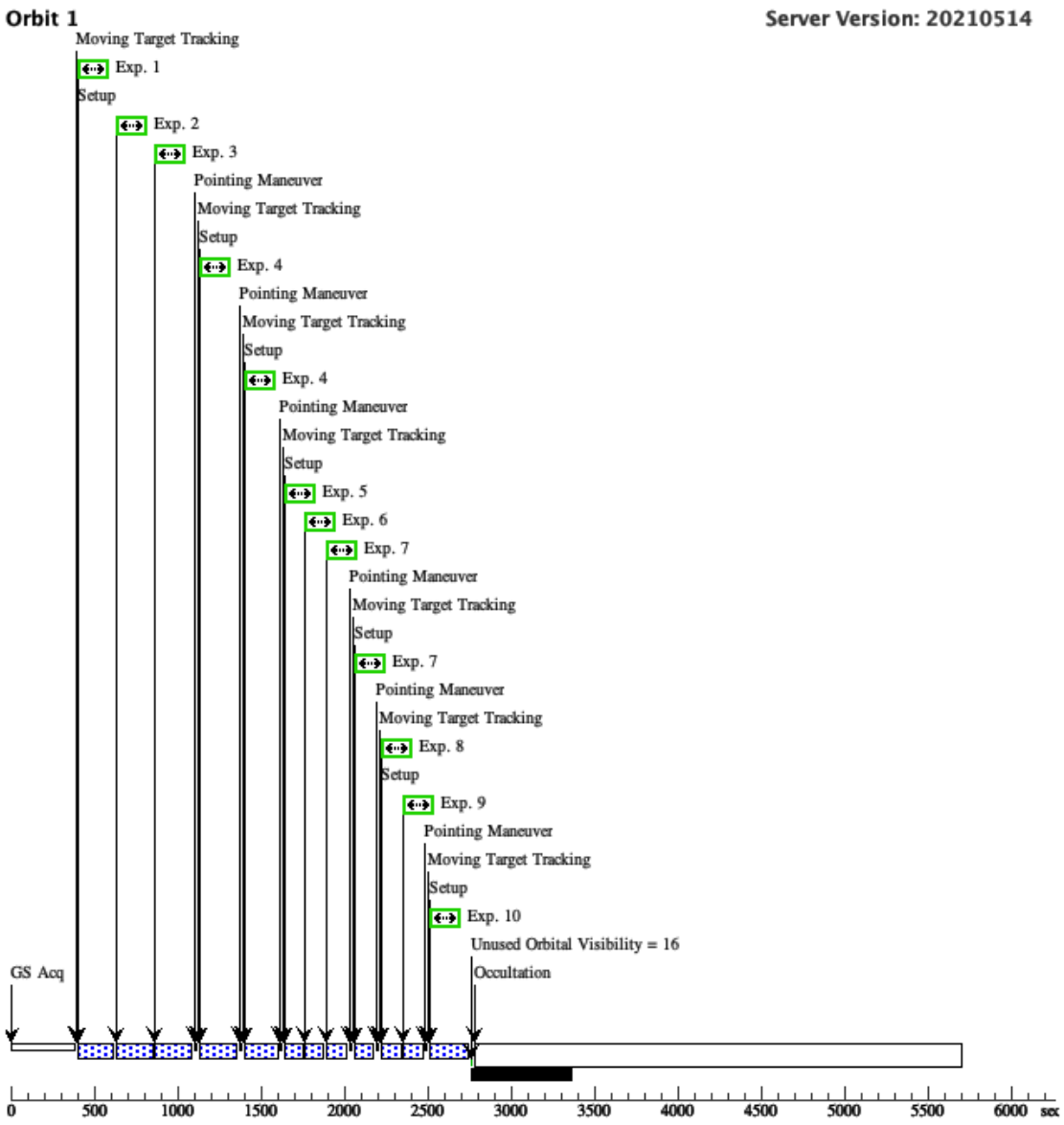
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21B (31) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21B (31) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21B (31)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31) Pattern 2, Exps 7-7 in Sequence 1-10 Non-Int in Saturn_21B (31) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31)	20 Secs (20 Secs) *[==>]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21B (31)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21B (31)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21C (32), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 31 BY 0.9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (32.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (32.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (32.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (32.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (32.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (32.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (32.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (32.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (32.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (32.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (32.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (32.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7), (9)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

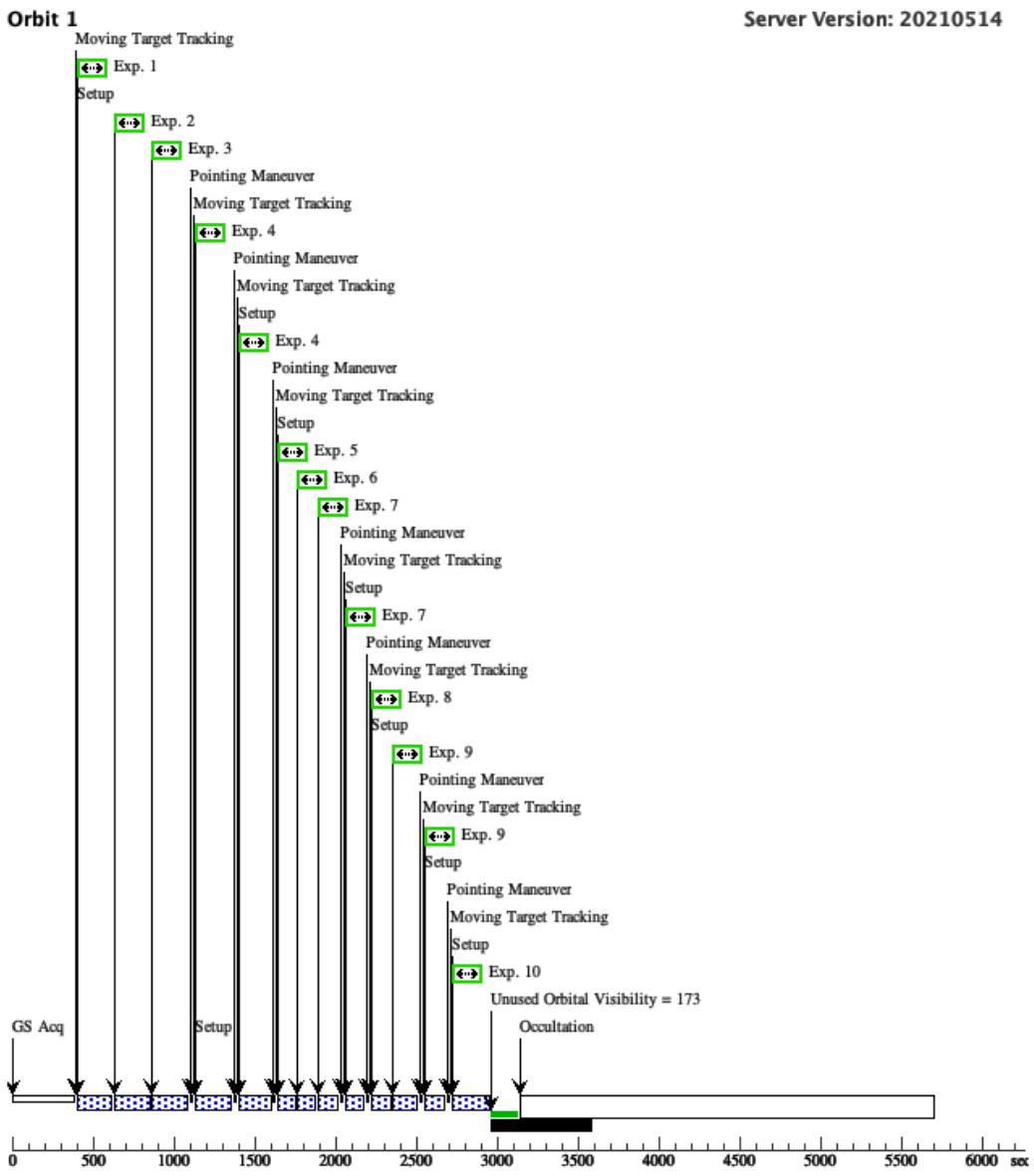
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21C (32) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21C (32) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21C (32)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32) Pattern 2, Exps 7-7 in Sequence 1-10 Non-Int in Saturn_21C (32) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32)	20 Secs (20 Secs) *[==>]*	*[1]*
9	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21C (32) Pattern 2, Exps 9-9 in Sequence 1-10 Non-Int in Saturn_21C (32) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14; SAA CONTOUR 02	Sequence 1-10 Non-Int in Saturn_21C (32)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21D (33), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 32 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (33.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (33.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (33.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (33.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (33.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (33.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (33.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (33.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (33.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (33.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (33.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (33.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

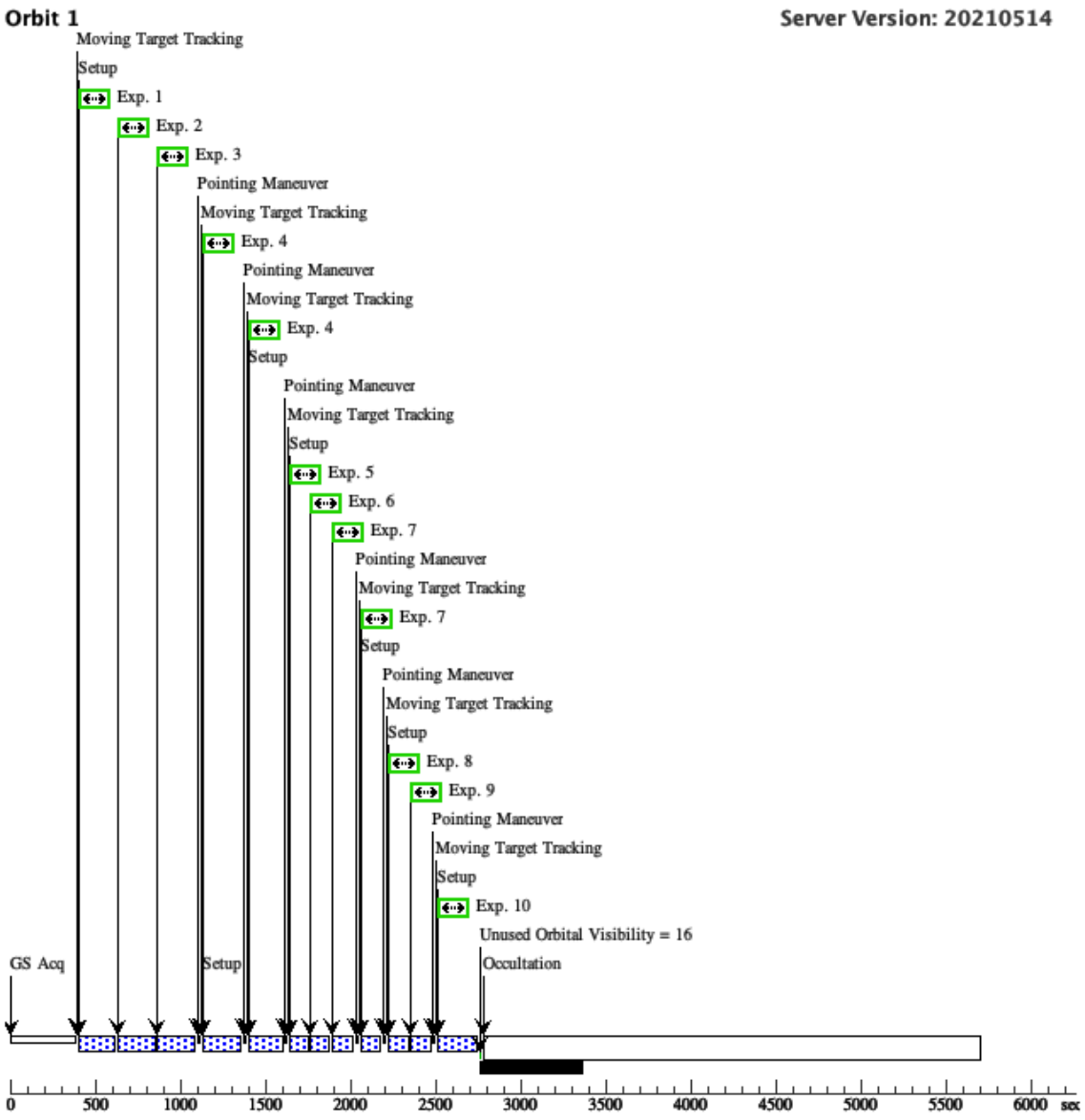
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21D (33) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21D (33) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21D (33)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33) Pattern 2, Exps 7-7 in Sequence 1-10 Non-Int in Saturn_21D (33) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33)	20 Secs (20 Secs) *[==>]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21D (33)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21D (33)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21E (34), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 33 BY 0.9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (34.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (34.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (34.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (34.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (34.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (34.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (34.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (34.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (34.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (34.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (34.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (34.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (34.011)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7), (9)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

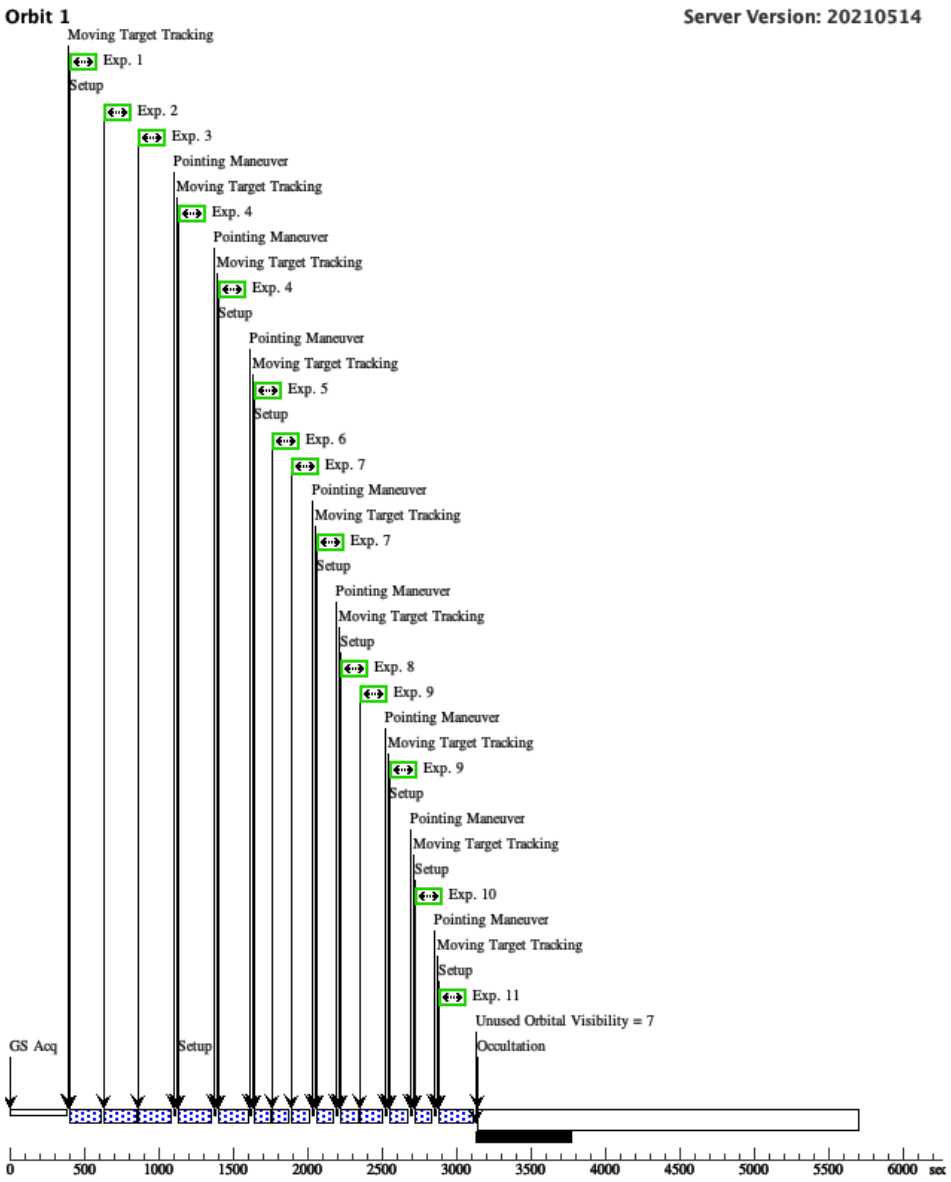
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-11 Non-Int in Saturn_21E (34) Pattern 3, Exps 4-4 in Sequence 1-11 Non-Int in Saturn_21E (34) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-11 Non-Int in Saturn_21E (34)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34) Pattern 2, Exps 7-7 in Sequence 1-11 Non-Int in Saturn_21E (34) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34)	20 Secs (20 Secs) *[==>]*	*[1]*
9	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34) Pattern 2, Exps 9-9 in Sequence 1-11 Non-Int in Saturn_21E (34) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
10	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21E (34)	15 Secs (15 Secs) *[==>]*	*[1]*
11	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-11 Non-Int in Saturn_21E (34)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21F (35), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 34 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (35.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (35.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (35.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (35.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (35.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (35.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (35.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (35.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (35.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (35.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (35.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (35.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

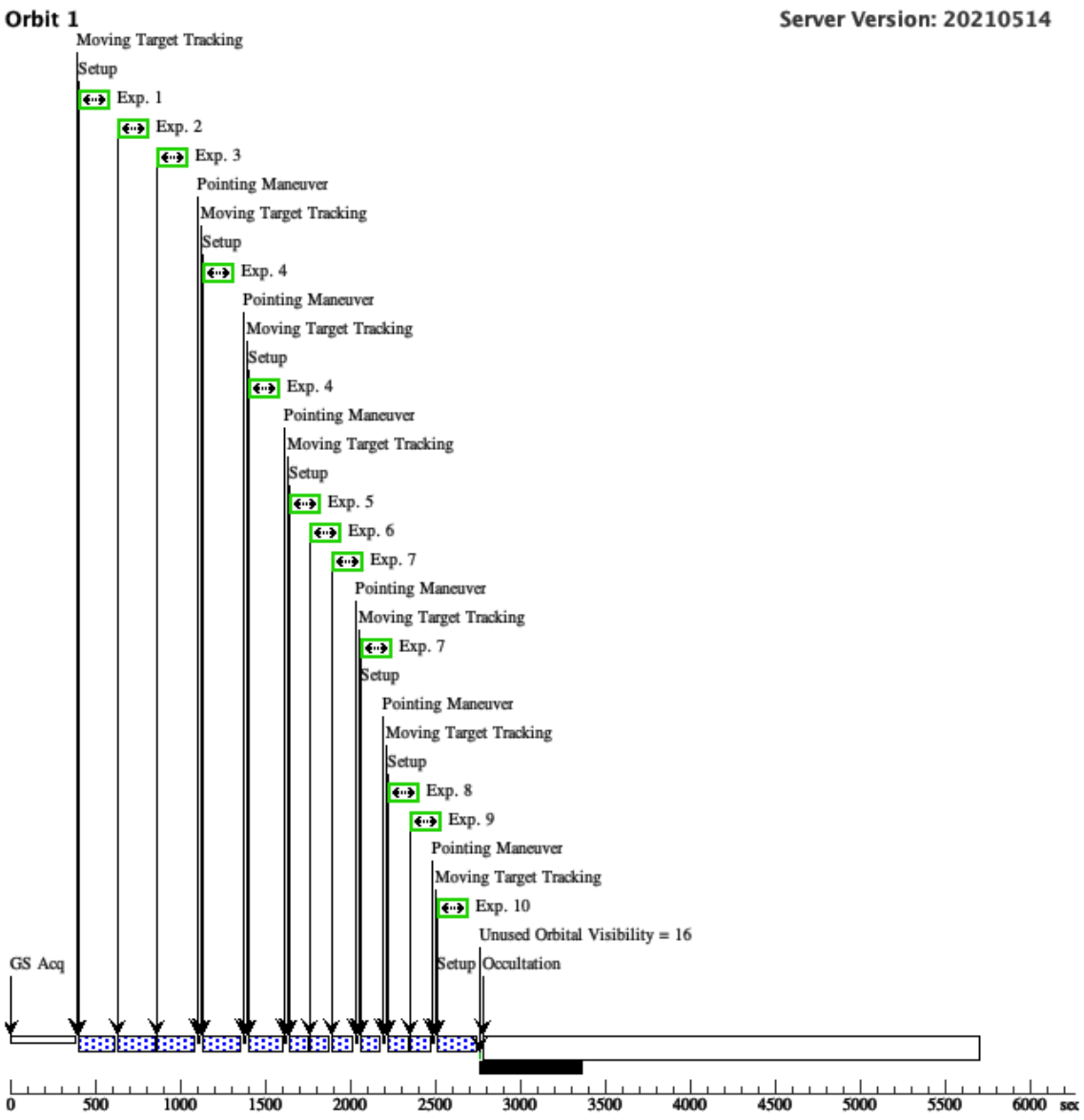
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21F (35) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21F (35) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21F (35)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35) Pattern 2, Exps 7-7 in Sequence 1-10 Non-Int in Saturn_21F (35) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35)	20 Secs (20 Secs) *[==>]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21F (35)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21F (35)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21G (36), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 35 BY 0.9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (36.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (36.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (36.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (36.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (36.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (36.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (36.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (36.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (36.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (36.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (36.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (36.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (36.011)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7), (9)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

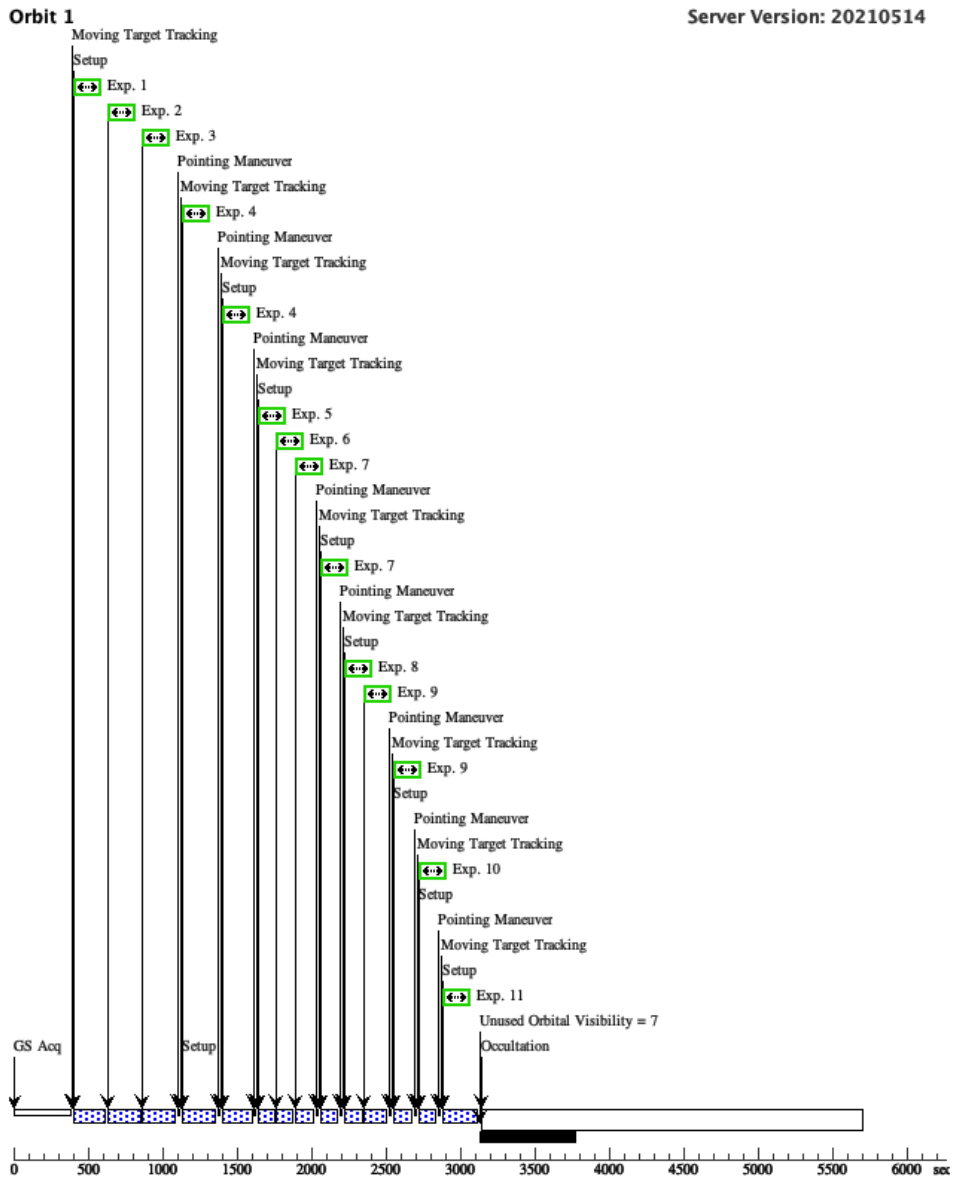
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36)	15 Secs (15 Secs) *[==>]*	***[1]***
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36)	23 Secs (23 Secs) *[==>]*	***[1]***
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36)	40 Secs (40 Secs) *[==>]*	***[1]***
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-11 Non-Int in Saturn_21G (36) Pattern 3, Exps 4-4 in Sequence 1-11 Non-Int in Saturn_21G (36) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-11 Non-Int in Saturn_21G (36)	2 Secs (2 Secs) *[==>]*	***[1]***
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36)	7 Secs (7 Secs) *[==>]*	***[1]***
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36) Pattern 2, Exps 7-7 in Sequence 1-11 Non-Int in Saturn_21G (36) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36)	20 Secs (20 Secs) *[==>]*	***[1]***
9	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36) Pattern 2, Exps 9-9 in Sequence 1-11 Non-Int in Saturn_21G (36) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
10	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21G (36)	15 Secs (15 Secs) *[==>]*	***[1]***
11	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-11 Non-Int in Saturn_21G (36)	45 Secs (45 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Saturn_21H (37), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 36 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(Saturn_21H (37)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F631N_2K (37.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (37.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (37.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (37.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (37.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (37.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (37.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (37.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (37.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (37.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (37.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (37.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

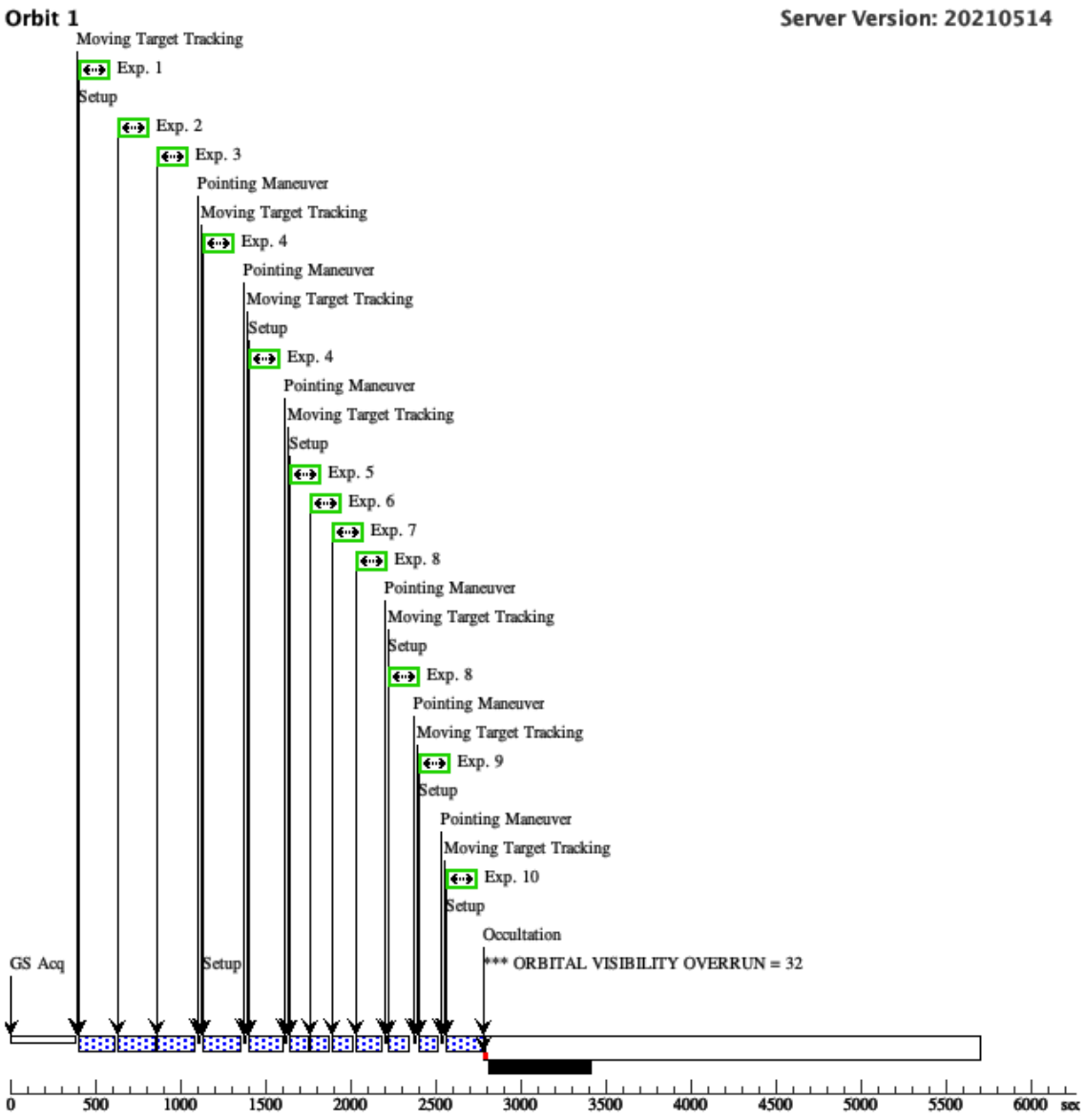
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21H (37) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21H (37) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21H (37)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37)	20 Secs (20 Secs) *[==>]*	*[1]*
8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37) Pattern 2, Exps 8-8 in Sequence 1-10 Non-Int in Saturn_21H (37) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21H (37)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21H (37)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21I (38), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 37 BY 0.9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (38.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (38.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (38.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (38.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (38.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (38.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (38.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (38.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (38.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (38.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (38.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (38.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (38.011)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7), (9)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

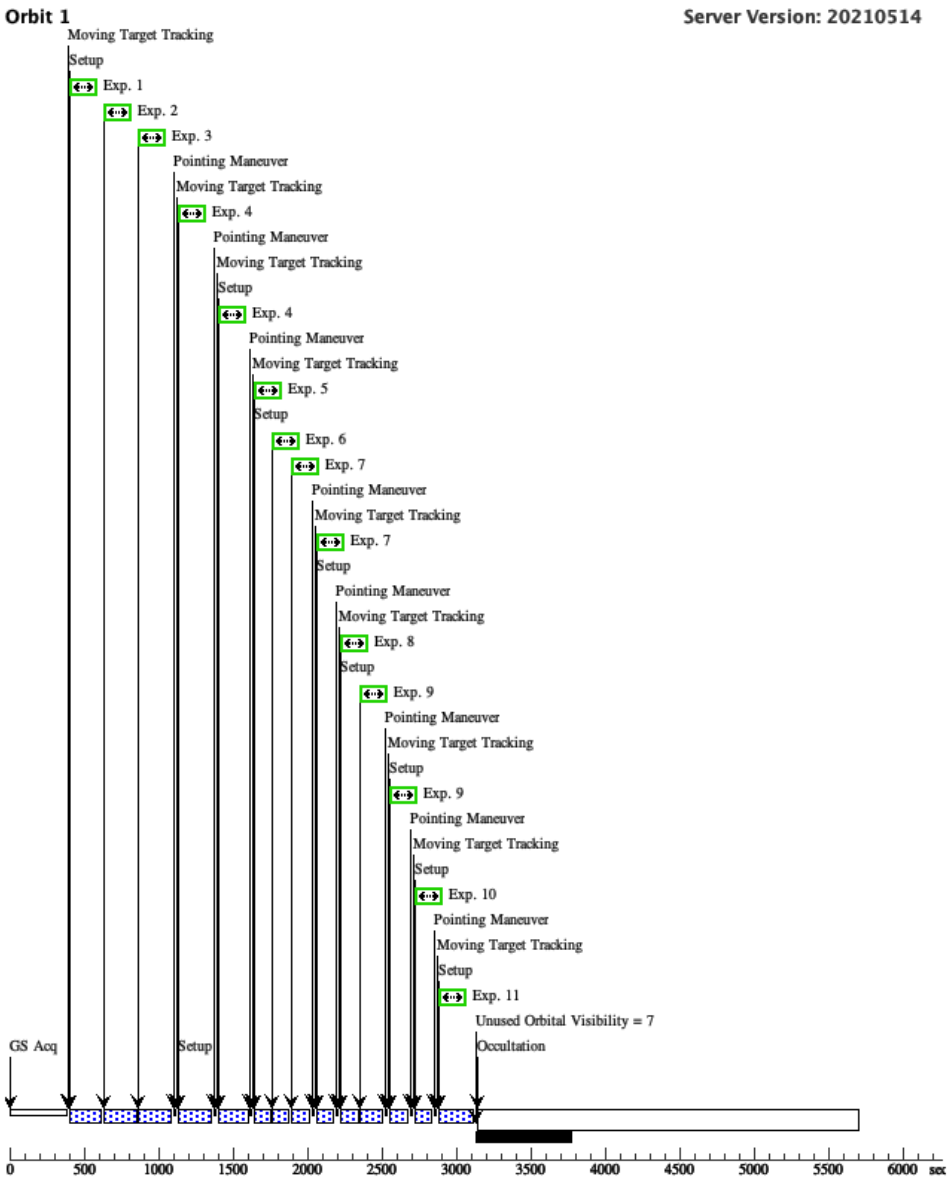
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38)	15 Secs (15 Secs) *[==>]*	***[1]***
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38)	23 Secs (23 Secs) *[==>]*	***[1]***
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38)	40 Secs (40 Secs) *[==>]*	***[1]***
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-11 Non-Int in Saturn_21I (38) Pattern 3, Exps 4-4 in Sequence 1-11 Non-Int in Saturn_21I (38) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-11 Non-Int in Saturn_21I (38)	2 Secs (2 Secs) *[==>]*	***[1]***
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38)	7 Secs (7 Secs) *[==>]*	***[1]***
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38) Pattern 2, Exps 7-7 in Sequence 1-11 Non-Int in Saturn_21I (38) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38)	20 Secs (20 Secs) *[==>]*	***[1]***
9	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38) Pattern 2, Exps 9-9 in Sequence 1-11 Non-Int in Saturn_21I (38) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***
10	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_21I (38)	15 Secs (15 Secs) *[==>]*	***[1]***
11	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-11 Non-Int in Saturn_21I (38)	45 Secs (45 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16266, Saturn_21J (39), scheduling Wed Sep 01 18:01:17 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 38 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(Saturn_21J (39)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(F631N_2K (39.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (39.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (39.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (39.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (39.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (39.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (39.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (39.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (39.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (39.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (39.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (39.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(8)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

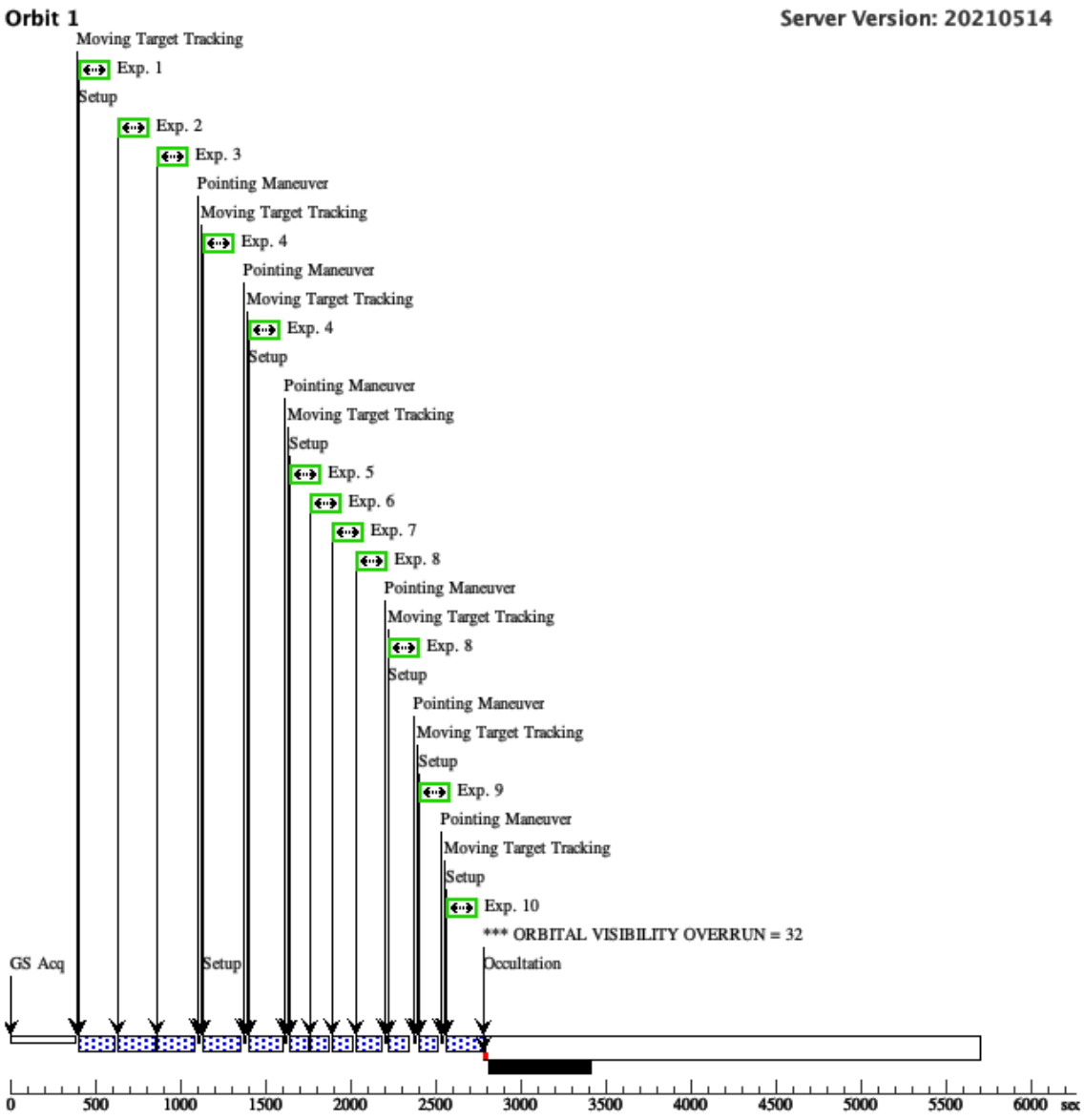
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21J (39) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21J (39) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21J (39)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39)	20 Secs (20 Secs) *[==>]*	*[1]*
8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39) Pattern 2, Exps 8-8 in Sequence 1-10 Non-Int in Saturn_21J (39) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21J (39)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21J (39)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21K (40), scheduling Wed Sep 01 18:01:18 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 39 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

(F631N_2K (40.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F502N_2K (40.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F395N_2K (40.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (40.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (40.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (40.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (40.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W (40.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (40.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (40.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (40.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (40.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(7)
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

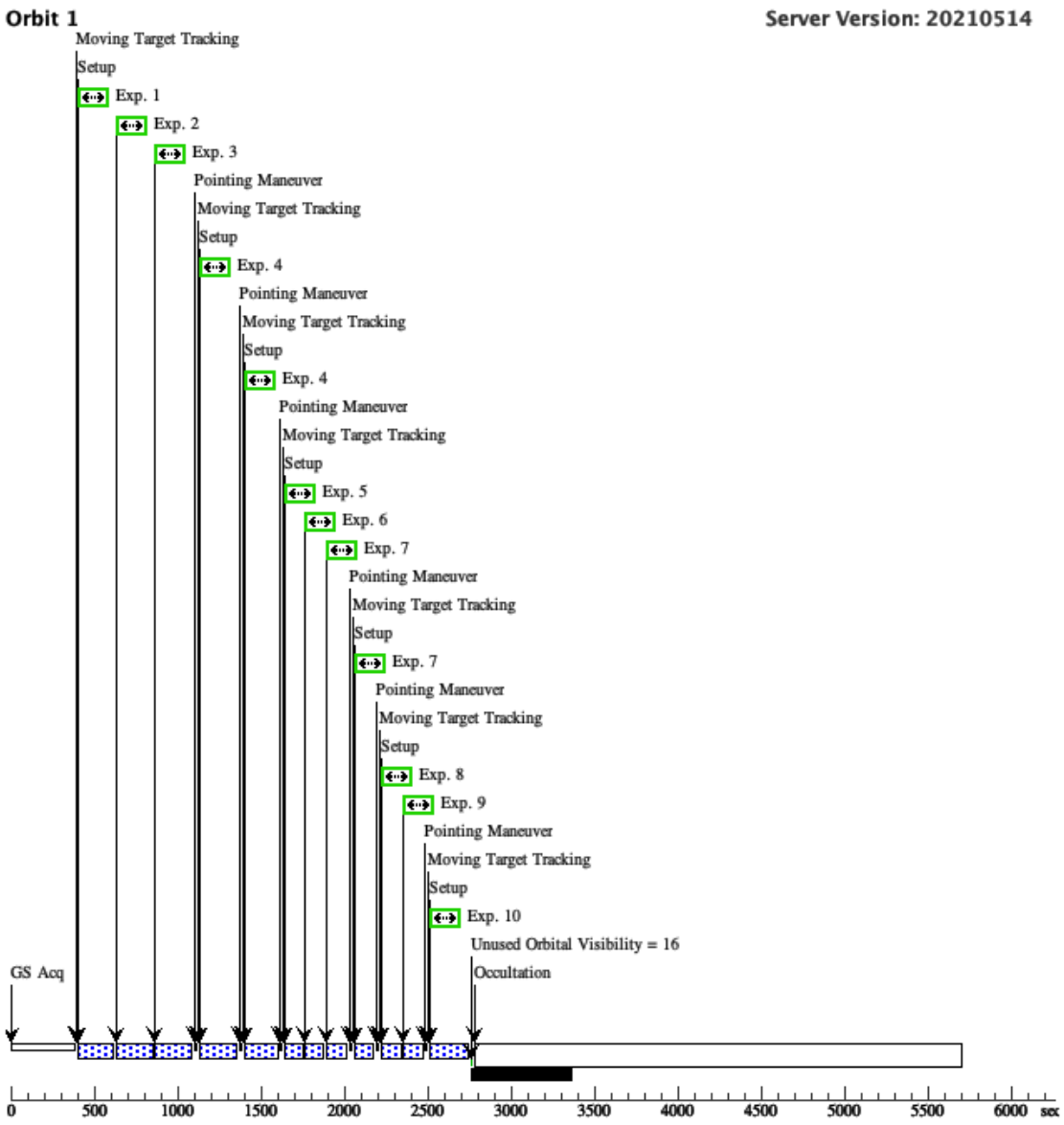
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21K (40) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21K (40) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21K (40)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40) Pattern 2, Exps 7-7 in Sequence 1-10 Non-Int in Saturn_21K (40) (2)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
8	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40)	20 Secs (20 Secs) *[==>]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21K (40)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21K (40)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16266, Saturn_21L (41), scheduling Wed Sep 01 18:01:18 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: AFTER 40 BY 0.9 Orbits TO 1.1 Orbits

Comments: 12 orbits, should be contiguous, if possible. A gap of 1 or 2 orbits between 6 - 7 is acceptable, or a gap between 5-6, 6-7, or 7-8. Impingement into SAA is OK if the above timing gaps cannot prevent it. We can tolerate gyro bias updates to ease the contiguous orbit constraints, and will work with our program contacts to fit them in. 3-gyro mode may be necessary as this is a moving target.

Saturn opposition (2021-AUG-02) +/- 30 days

OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889
If orbital visibility requires a cut, remove F467M first

Diagnostics

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(F395N_2K (41.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (41.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ727_quadD (41.004)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

(F763M (41.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F467M (41.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F343N (41.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W (41.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F631N (41.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (41.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(FQ889_quadA (41.010)) Warning (Form): POS TARG & PATTERN should be used carefully with WFC3 quad filters to avoid placing the target on the vignetted part of the field of view or moving it to another quadrant.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
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(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.725 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(4)

Solar System Targets

#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
(2)	SATURN-MAPS	STD=SATURN			NOT ECL P PARTIAL OF SATURN-MAPS BY TITAN FROM EARTH, SEP OF SATURN-MAPS RHEA FROM EARTH GT 10", SEP OF SATURN-MAPS TITAN FROM EARTH GT 10", SEP OF SATURN SUN FROM EARTH LT 168D	EARTH

Comments: Observe when Saturn is less than 168 degrees from the Sun. HST has a thermal constraint that it cannot point >168 degrees from the Sun for longer than 10 hours at a time. Also, after any pointing at >168, HST must spend at least 3 hours pointed at <168 before returning to any pointing >168. The Saturn series of visits in this program would violate that constraint if they are attempted when Saturn is >168 degrees from the Sun.
Description=Global Saturn Maps

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F631N_2K (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO	GS ACQ SCENARIO ONEB1BE	Sequence 1-10 Non-Int in Saturn_21L (41)	15 Secs (15 Secs) *[==>]*	*[1]*
2	F502N_2K (WFC3UVIS.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21L (41)	23 Secs (23 Secs) *[==>]*	*[1]*
3	F395N_2K (WFC3UVIS.im.1005337)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21L (41)	40 Secs (40 Secs) *[==>]*	*[1]*
4	FQ727_quadD (WFC3UVIS.im.1005393)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-10 Non-Int in Saturn_21L (41) Pattern 3, Exps 4-4 in Sequence 1-10 Non-Int in Saturn_21L (41) (3)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
5	F763M (WFC3UVIS.im.1005344)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-10 Non-Int in Saturn_21L (41)	2 Secs (2 Secs) *[==>]*	*[1]*
6	F467M (WFC3UVIS.im.1005339)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21L (41)	7 Secs (7 Secs) *[==>]*	*[1]*
7	F343N (WFC3UVIS.im.1005334)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21L (41)	20 Secs (20 Secs) *[==>]*	*[1]*
8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21L (41) Pattern 2, Exps 8-8 in Sequence 1-10 Non-Int in Saturn_21L (41) (2)	45 Secs (90 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	*[1]*
9	F631N (WFC3UVIS.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-10 Non-Int in Saturn_21L (41)	15 Secs (15 Secs) *[==>]*	*[1]*
10	FQ889_quadA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-10 Non-Int in Saturn_21L (41)	45 Secs (45 Secs) *[==>]*	*[1]*

Orbit Structure