



16790 - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Cycle: 29, Proposal Category: GO/DD

(Availability Mode: AVAILABLE)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
59	(6) JUPITER-CLEAN (9) JUPITER-GRS-JAN23	WFC3/UVIS	1	20-Dec-2022 19:00:24.0	yes
60	(6) JUPITER-CLEAN	WFC3/UVIS	1	20-Dec-2022 19:00:25.0	yes
61	(6) JUPITER-CLEAN	WFC3/UVIS	1	20-Dec-2022 19:00:26.0	yes
62	(6) JUPITER-CLEAN	WFC3/UVIS	1	20-Dec-2022 19:00:27.0	yes
01	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:29.0	yes
02	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:30.0	yes
03	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:32.0	yes
04	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:33.0	yes
05	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:35.0	yes
06	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:37.0	yes
07	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:38.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
08	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:40.0	yes
51	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:41.0	yes
52	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:43.0	yes
53	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:44.0	yes
54	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:46.0	yes
55	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:47.0	yes
56	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:49.0	yes
57	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:50.0	yes
58	(3) URANUS-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:51.0	yes
09	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:52.0	yes
10	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:53.0	yes
11	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:54.0	yes
12	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:55.0	yes
13	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:56.0	yes
14	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:57.0	yes
15	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:58.0	yes
16	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:00:59.0	yes
17	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:00.0	yes
18	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:01.0	yes
19	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:02.0	yes
20	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:03.0	yes
21	(1) JUPITER-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:04.0	yes
22	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:05.0	yes
23	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:06.0	yes
24	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:07.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
25	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:09.0	yes
26	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:10.0	yes
27	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:11.0	yes
28	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:13.0	yes
29	(4) NEPTUNE-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:14.0	yes
30	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:15.0	yes
31	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:16.0	yes
32	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:17.0	yes
33	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:19.0	yes
34	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:20.0	yes
35	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:21.0	yes
36	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:23.0	yes
37	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:24.0	yes
38	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:25.0	yes
39	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:26.0	yes
40	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:28.0	yes
41	(2) SATURN-MAPS	WFC3/UVIS	1	20-Dec-2022 19:01:29.0	yes

53 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. Note that Saturn is not

Proposal 16790 (STScI Edit Number: 39, Created: Tuesday, December 20, 2022 at 7:01:30 PM Eastern Standard Time) - Overview
requested until 2018, when orbit allocation would increase from 29 to 41; here we show the orbits for Cycle 29.

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) should 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

Proposal 16790 - Jupiter 22N (59) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

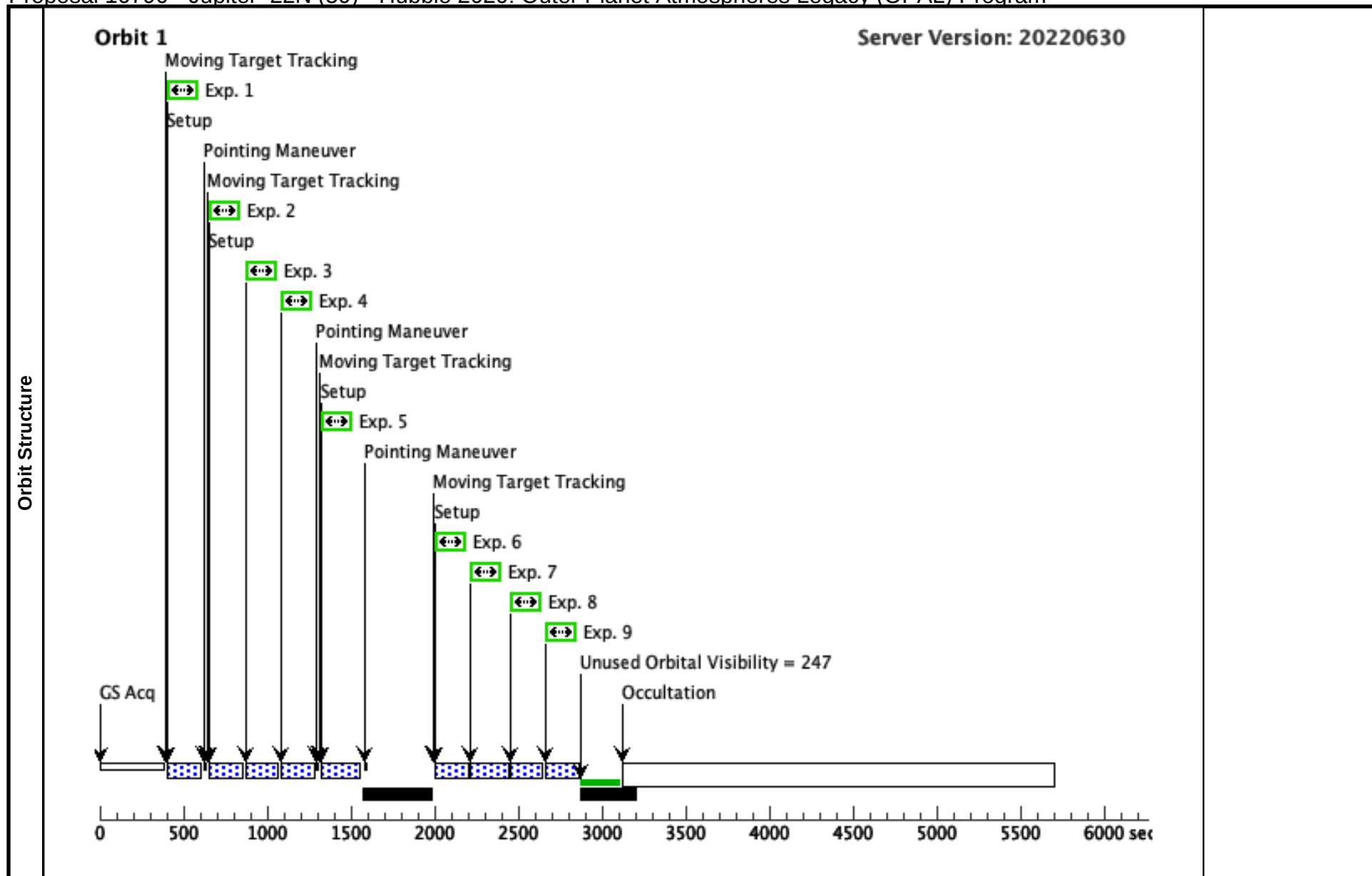
Visit	Proposal 16790, Jupiter_22N (59), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-JAN-2023:00:00:00 AND 01-FEB-2023:00:00:00; VISIBILITY INTERVAL 52 M Comments: Repeat to get 2 consecutive orbits viewing the GRS, followed 10hr later by another 2 consecutive orbits viewing the GRS. 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. PC - For scheduling windows, change target of exp 1 (59.001) depending on whether window is in Nov/Dec/Jan. Orbit sequence is designed to make sure GRS is less than 40 deg from CML in 2 consecutive orbits, and somewhere within 40 deg from CML in at least one of the other pair of orbits. GRS longitude predictions (these can be confirmed with amateur images, once a plan window is identified): GRS date GRS lon 2022-11-25 18:30 333.1 2022-12-01 12:00 335.0 2022-12-07 12:00 336.9 2022-12-15 12:00 339.4 2022-12-22 12:00 341.7 2022-12-31 12:00 344.5 2023-01-01 12:00 344.9 2023-01-15 12:00 349.3 2023-01-31 12:00 354.4	Wed Dec 21 00:01:31 GMT 2022
	(F631N (59.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F502N (59.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F395N (59.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F467M (59.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (59.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (59.005)) 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 (59.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F275W (59.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F343N (59.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F631N (59.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser	

Proposal 16790 - Jupiter 22N (59) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(6)	JUPITER-CLEAN	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, NOT ECL U FULL OF JUPITER BY IO FROM EARTH, NOT ECL U FULL OF JUPITER BY EUROPA FROM EARTH, NOT ECL U FULL OF JUPITER BY GANYMEDE FROM EARTH, NOT ECL U FULL OF JUPITER BY CALLISTO FROM EARTH	EARTH
	<i>Comments: Description=Jupiter with no moon transit/shadow</i>						
	(9)	JUPITER-GRS- JAN23	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, NOT ECL U FULL OF JUPITER BY IO FROM EARTH, NOT ECL U FULL OF JUPITER BY EUROPA FROM EARTH, NOT ECL U FULL OF JUPITER BY GANYMEDE FROM EARTH, NOT ECL U FULL OF JUPITER BY CALLISTO FROM EARTH, CML OF JUPITER FROM EARTH BETWEEN 293 332	EARTH
	<i>Comments: CML constraint is valid for observing dates between 1-31 Jan 2023</i>						
	<i>IDEAL CML CONSTRAINT: 299-326</i>						
	<i>Can widen if necessary: 293-332</i>						
	<i>Description=CML constraint to position GRS on disk for start of 2-orbit pair</i>						

Proposal 16790 - Jupiter 22N (59) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N	(9) JUPITER-GRS-JAN23	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	4 Secs (4 Secs) [==>]	[1]
	2	F502N	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	3 Secs (3 Secs) [==>]	[1]
	3	F395N	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	10 Secs (10 Secs) [==>]	[1]
	4	F467M	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	1.2 Secs (1.2 Secs) [==>]	[1]
	5	FQ889_quadA	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2; SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	45 Secs (45 Secs) [==>]	[1]
	6	F658N	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	8 Secs (8 Secs) [==>]	[1]
	7	F275W	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	30 Secs (30 Secs) [==>]	[1]
	8	F343N	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	6 Secs (6 Secs) [==>]	[1]
	9	F631N	(6) JUPITER-CLEAN	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22N (59)	4 Secs (4 Secs) [==>]	[1]

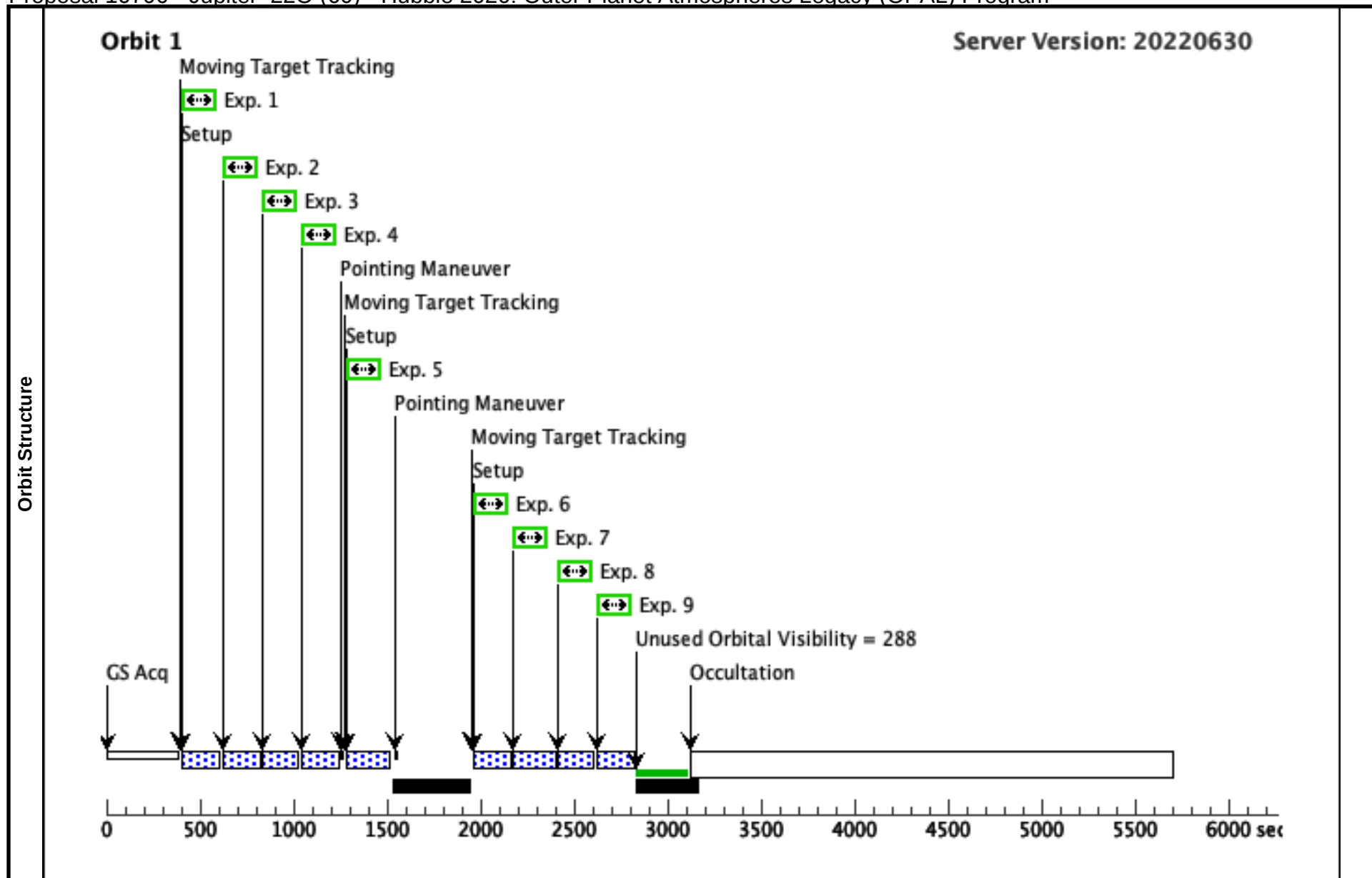


Proposal 16790 - Jupiter 22O (60) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22O (60), implementation					Wed Dec 21 00:01:31 GMT 2022	
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 59 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M						
Comments: Repeat to get 2 consecutive orbits viewing the GRS, followed 10hr later by another 2 consecutive orbits viewing the GRS.							
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	(F631N (60.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F502N (60.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F395N (60.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (60.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (60.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (60.005)) 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 (60.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F275W (60.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F343N (60.008)) 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	(F631N (60.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(6)	JUPITER-CLEAN	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, NOT ECL U FULL OF JUPITER BY IO FROM EARTH, NOT ECL U FULL OF JUPITER BY EUROPA FROM EARTH, NOT ECL U FULL OF JUPITER BY GANYMEDE FROM EARTH, NOT ECL U FULL OF JUPITER BY CALLISTO FROM EARTH	EARTH
	Comments: Description=Jupiter with no moon transit/shadow						

Proposal 16790 - Jupiter 22O (60) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	4 Secs (4 Secs) [==>]	[1]
	2	F502N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	3 Secs (3 Secs) [==>]	[1]
	3	F395N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	10 Secs (10 Secs) [==>]	[1]
	4	F467M	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	1.2 Secs (1.2 Secs) [==>]	[1]
	5	FQ889_quadA	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2; SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	45 Secs (45 Secs) [==>]	[1]
	6	F658N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	8 Secs (8 Secs) [==>]	[1]
	7	F275W	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	30 Secs (30 Secs) [==>]	[1]
	8	F343N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	6 Secs (6 Secs) [==>]	[1]
	9	F631N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22O (60)	4 Secs (4 Secs) [==>]	[1]

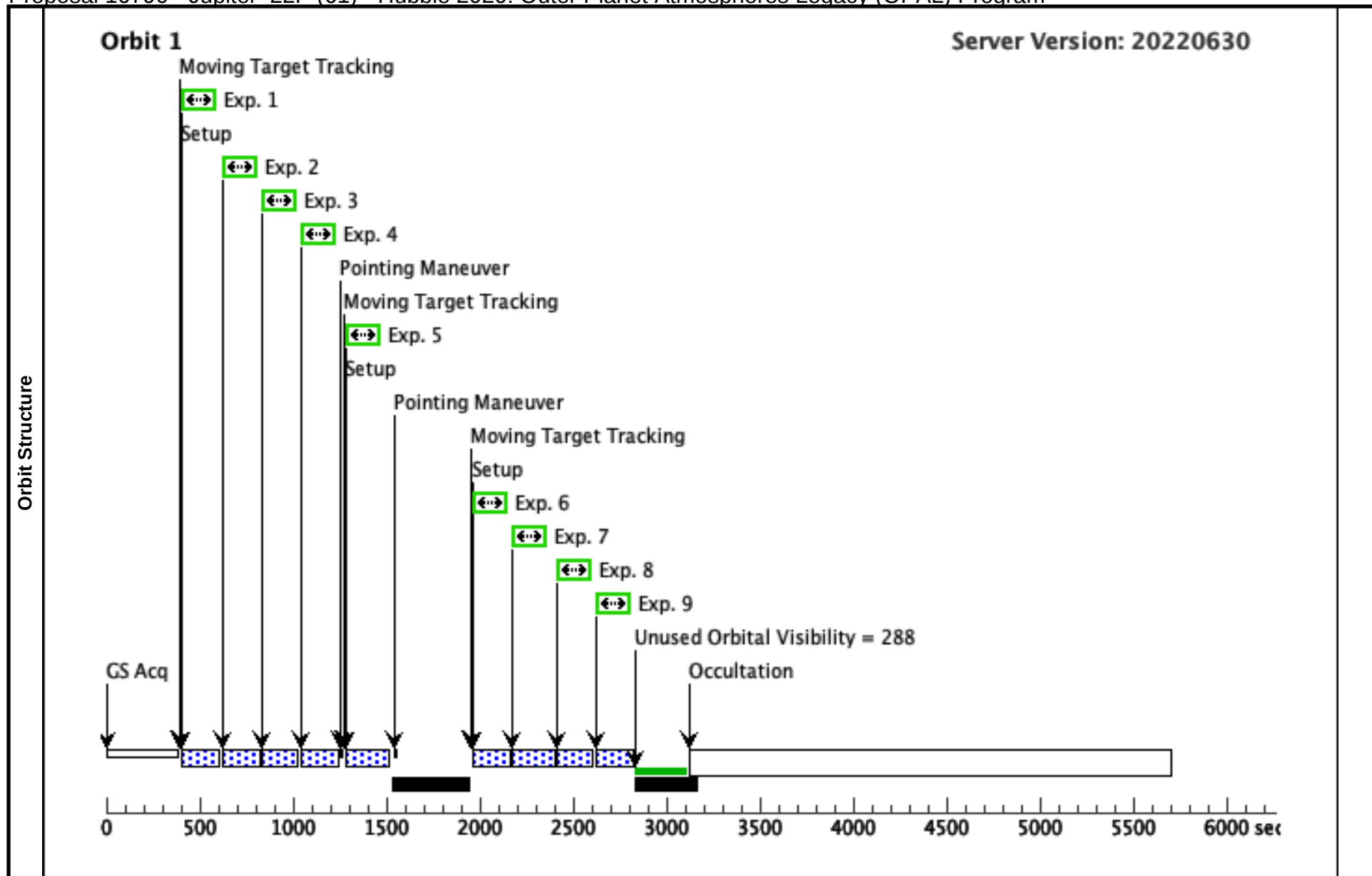


Proposal 16790 - Jupiter 22P (61) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22P (61), implementation Wed Dec 21 00:01:31 GMT 2022					
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 59 BY 5.9 Orbits TO 6.1 Orbits; VISIBILITY INTERVAL 52 M Comments: Repeat to get 2 consecutive orbits viewing the GRS, followed 10hr later by another 2 consecutive orbits viewing the GRS. 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	(F631N (61.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F502N (61.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F395N (61.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F467M (61.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (61.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (61.005)) 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 (61.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F275W (61.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F343N (61.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F631N (61.009)) 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	Ephem Center
	(6)	JUPITER-CLEAN	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, NOT ECL U FULL OF JUPITER BY IO FROM EARTH, NOT ECL U FULL OF JUPITER BY EUROPA FROM EARTH, NOT ECL U FULL OF JUPITER BY GANYMEDE FROM EARTH, NOT ECL U FULL OF JUPITER BY CALLISTO FROM EARTH
	Comments: Description=Jupiter with no moon transit/shadow					

Proposal 16790 - Jupiter 22P (61) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	4 Secs (4 Secs) [==>]	[1]
	2	F502N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	3 Secs (3 Secs) [==>]	[1]
	3	F395N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	10 Secs (10 Secs) [==>]	[1]
	4	F467M	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	1.2 Secs (1.2 Secs) [==>]	[1]
	5	FQ889_qua dA	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2. 2; SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	45 Secs (45 Secs) [==>]	[1]
	6	F658N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	8 Secs (8 Secs) [==>]	[1]
	7	F275W	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	30 Secs (30 Secs) [==>]	[1]
	8	F343N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	6 Secs (6 Secs) [==>]	[1]
	9	F631N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-In t in Jupiter_22P (61)	4 Secs (4 Secs) [==>]	[1]

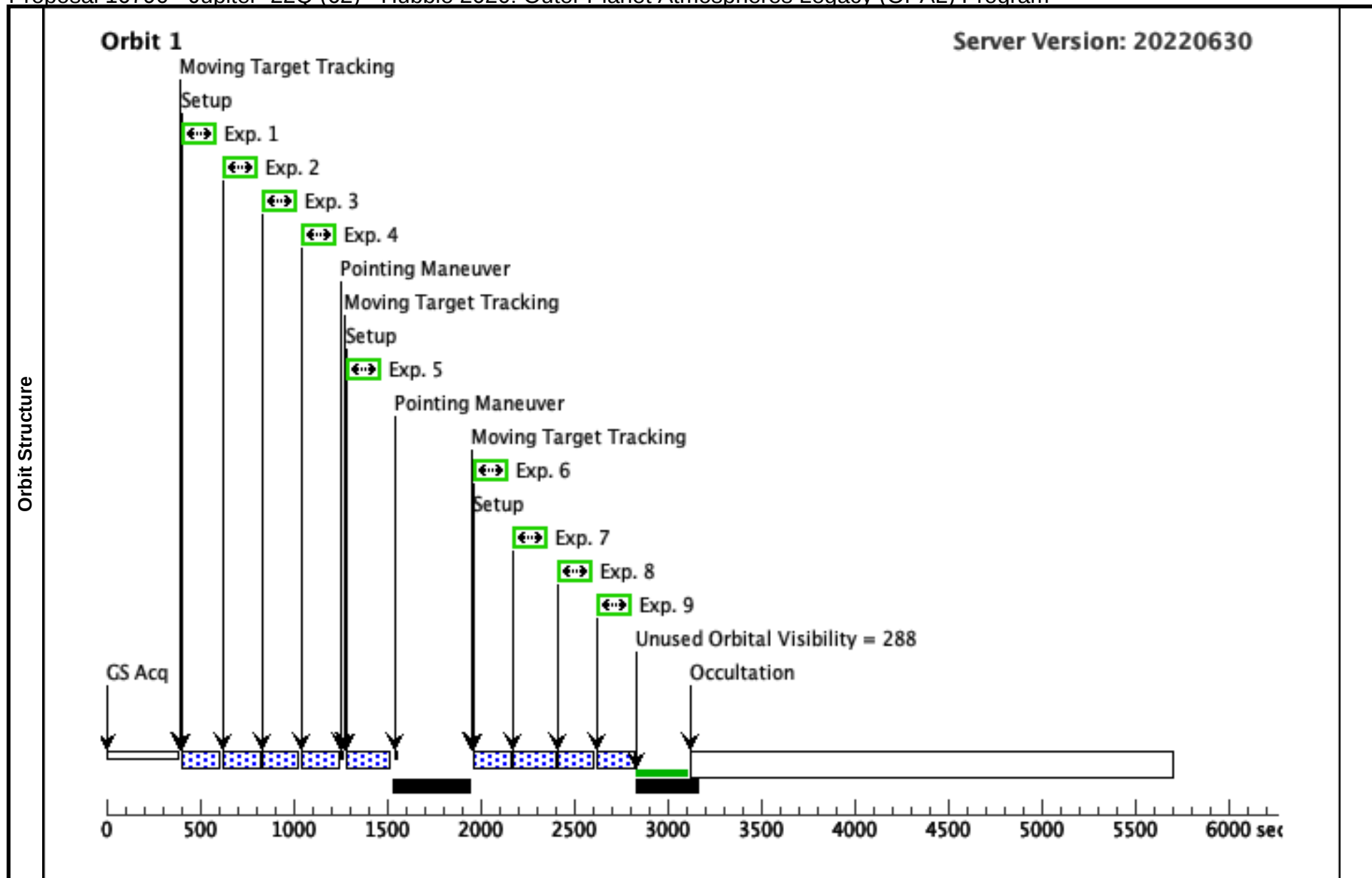


Proposal 16790 - Jupiter 22Q (62) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22Q (62), implementation						Wed Dec 21 00:01:31 GMT 2022
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 59 BY 6.9 Orbits TO 7.1 Orbits; VISIBILITY INTERVAL 52 M						
Comments: Repeat to get 2 consecutive orbits viewing the GRS, followed 10hr later by another 2 consecutive orbits viewing the GRS.							
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	(F631N (62.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F502N (62.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F395N (62.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (62.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (62.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (62.005)) 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 (62.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F275W (62.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F343N (62.008)) 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	(F631N (62.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(6)	JUPITER-CLEAN	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, NOT ECL U FULL OF JUPITER BY IO FROM EARTH, NOT ECL U FULL OF JUPITER BY EUROPA FROM EARTH, NOT ECL U FULL OF JUPITER BY GANYMEDE FROM EARTH, NOT ECL U FULL OF JUPITER BY CALLISTO FROM EARTH	EARTH
Comments: Description=Jupiter with no moon transit/shadow							

Proposal 16790 - Jupiter 22Q (62) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	4 Secs (4 Secs) [==>]	[1]
	2	F502N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	3 Secs (3 Secs) [==>]	[1]
	3	F395N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	10 Secs (10 Secs) [==>]	[1]
	4	F467M	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	1.2 Secs (1.2 Secs) [==>]	[1]
	5	FQ889_quadA	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +1.7,-2.2; SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	45 Secs (45 Secs) [==>]	[1]
	6	F658N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	8 Secs (8 Secs) [==>]	[1]
	7	F275W	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	30 Secs (30 Secs) [==>]	[1]
	8	F343N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	6 Secs (6 Secs) [==>]	[1]
	9	F631N	(6) JUPITER-CLEA N	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F631N	CR-SPLIT=NO; BLADE=A	SAA CONTOUR 02	Sequence 1-9 Non-Int in Jupiter_22Q (62)	4 Secs (4 Secs) [==>]	[1]

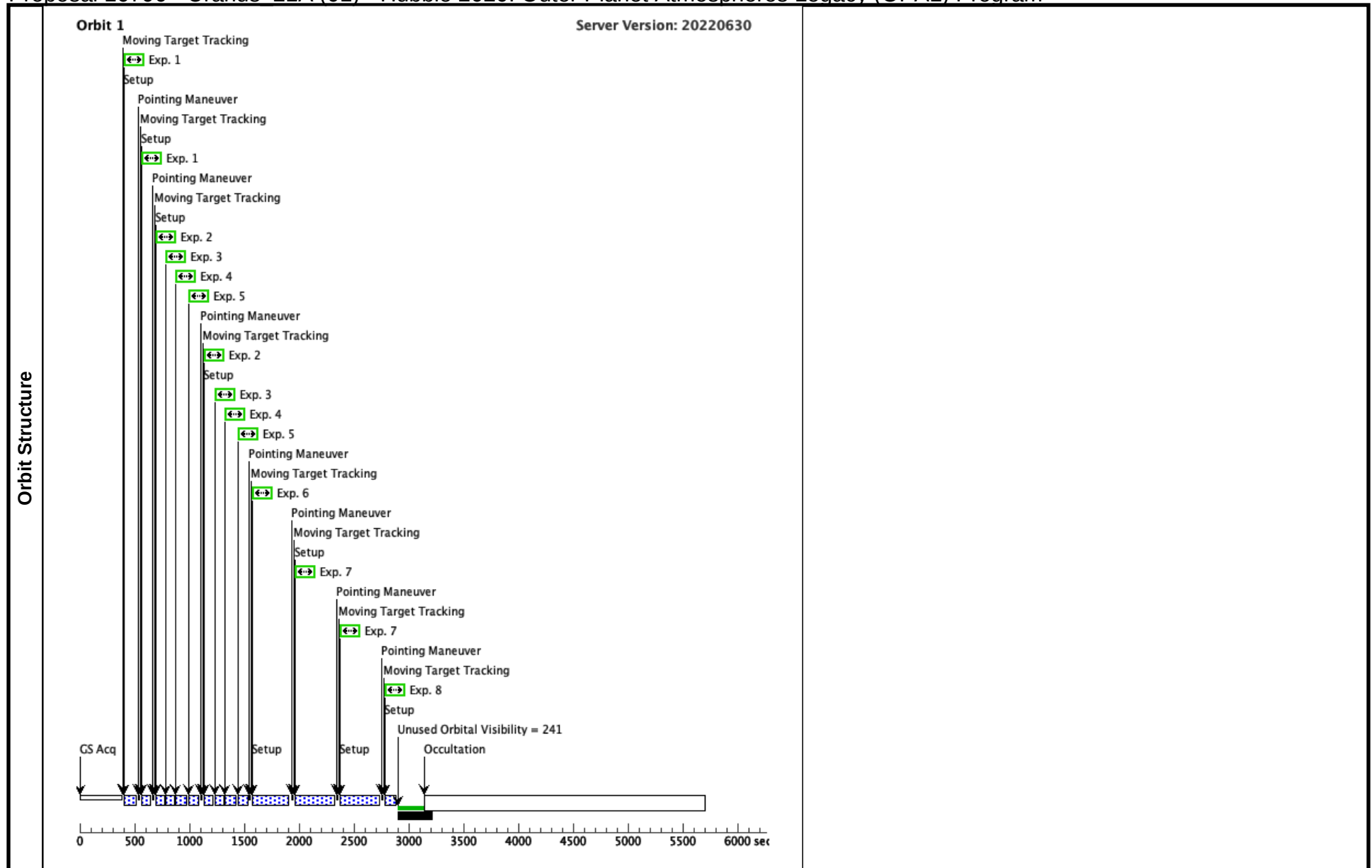


Proposal 16790 - Uranus 21A (01) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Uranus_21A (01), failed			Wed Dec 21 00:01:31 GMT 2022			
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: BETWEEN 05-OCT-2021:00:00:00 AND 04-DEC-2021:00:00:00; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Diagnostics	Comments: Uranus opposition (2021-NOV-04) +/- 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.						
	(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.						
Patterns	(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						
	#	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)			
	(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							

Proposal 16790 - Uranus 21A (01) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

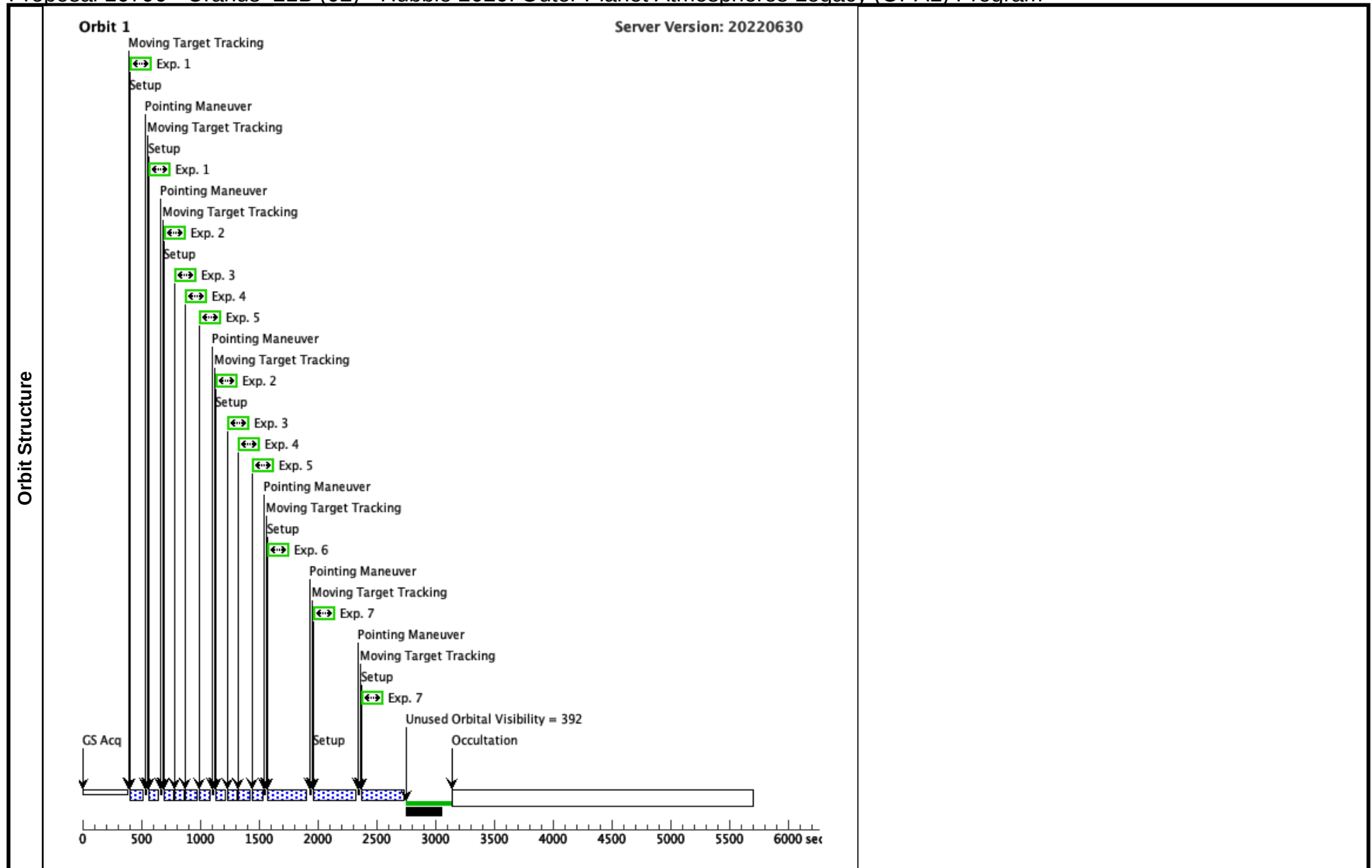
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F845M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-8 Non-Int in Uranus_21A (01) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21A (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_21A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (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_21A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (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_21A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (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_21A (01) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (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_21A (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_21A (01) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21A (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_21A (01)	35 Secs (35 Secs) [==>]	[1]



		Proposal 16790, Uranus_21B (02), failed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 01 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET <i>Comments: 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.</i> <i>3-gyro mode may be necessary as this is a moving target.</i>			Wed Dec 21 00:01:31 GMT 2022														
Visit																			
Diagnostics	(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.																		
Patterns	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Pattern</th> <th>Secondary Pattern</th> <th>Exposures</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td> Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing= </td> <td></td> <td>(1), (2-5)</td> </tr> <tr> <td>(3)</td> <td> Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing= </td> <td></td> <td>(7)</td> </tr> </tbody> </table>					#	Primary Pattern	Secondary Pattern	Exposures	(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1), (2-5)	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=		(7)		
	#	Primary Pattern	Secondary Pattern	Exposures															
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1), (2-5)																
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=		(7)																
Solar System Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(3)</td> <td>URANUS-MAPS</td> <td>STD=URANUS</td> <td></td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table> <i>Comments: Description=Global Uranus maps</i>					#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	(3)	URANUS-MAPS	STD=URANUS				EARTH
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center												
(3)	URANUS-MAPS	STD=URANUS				EARTH													

Proposal 16790 - Uranus 21B (02) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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 1-7 Non-Int in Uranus_21B (02)	35 Secs (70 Secs)	
								Pattern 2, Exps 1-1 in Sequence 1-7 Non-Int in Uranus_21B (02) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21B (02)	14 Secs (28 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21B (02) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21B (02)	6 Secs (12 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21B (02) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21B (02)	40 Secs (80 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21B (02) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
Exposures	5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21B (02)	25 Secs (50 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21B (02) (2)	[==>(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 1-7 Non-Int in Uranus_21B (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; SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21B (02)	200 Secs (400 Secs)	
								Pattern 3, Exps 7-7 in Sequence 1-7 Non-Int in Uranus_21B (02) (3)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]

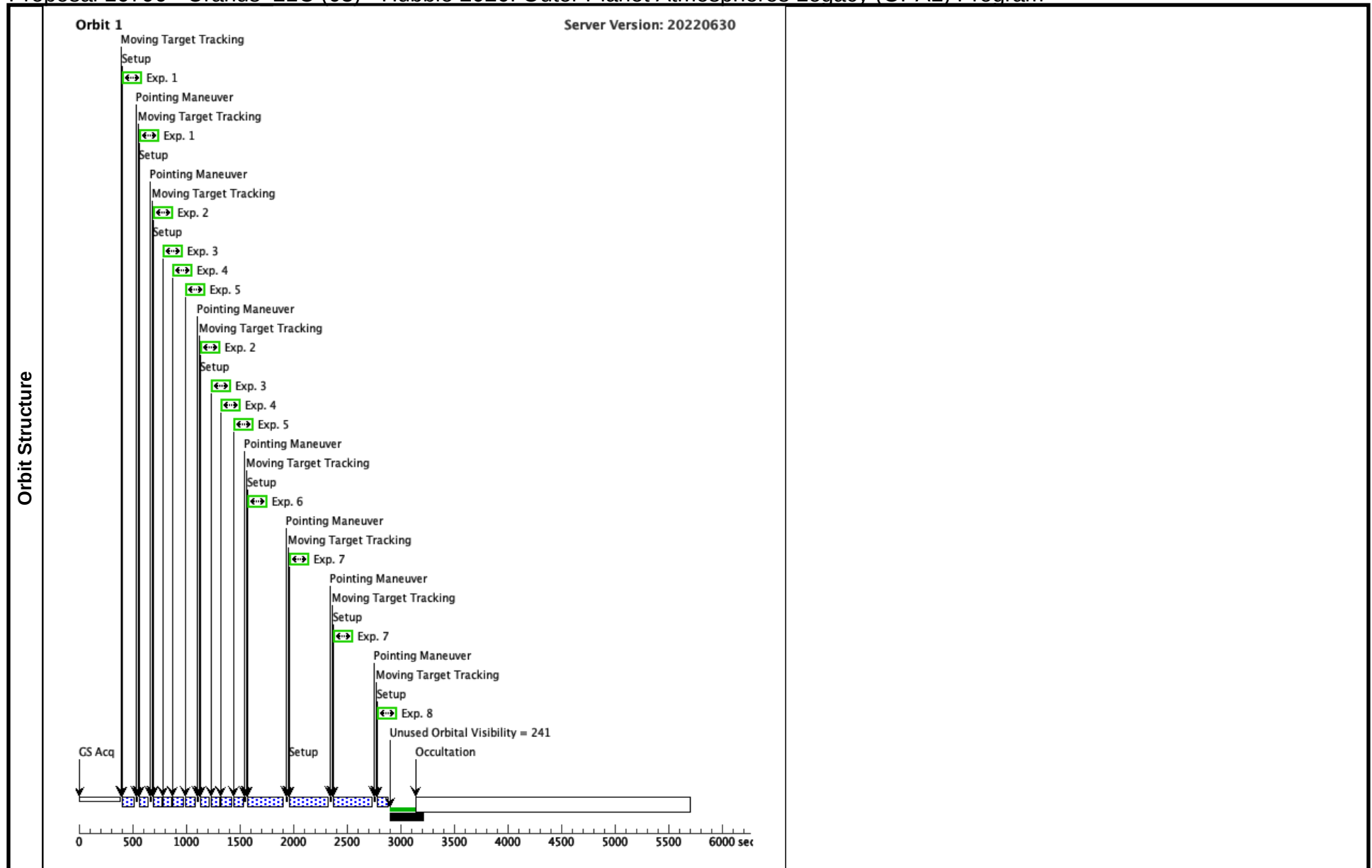


Proposal 16790 - Uranus 21C (03) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Uranus_21C (03), failed				Wed Dec 21 00:01:31 GMT 2022	
	Diagnostic Status: Warning					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: AFTER 02 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET					
Diagnostics	Comments: 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.					
	(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					
Patterns	(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					
#	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)	
	(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)	
#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(3)	URANUS-MAPS	STD=URANUS			
Solar System Targets	Comments: Description=Global Uranus maps					

Proposal 16790 - Uranus 21C (03) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21C (03) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21C (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_21C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (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_21C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (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_21C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (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_21C (03) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (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_21C (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_21C (03) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21C (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_21C (03)	35 Secs (35 Secs) [==>]	[1]

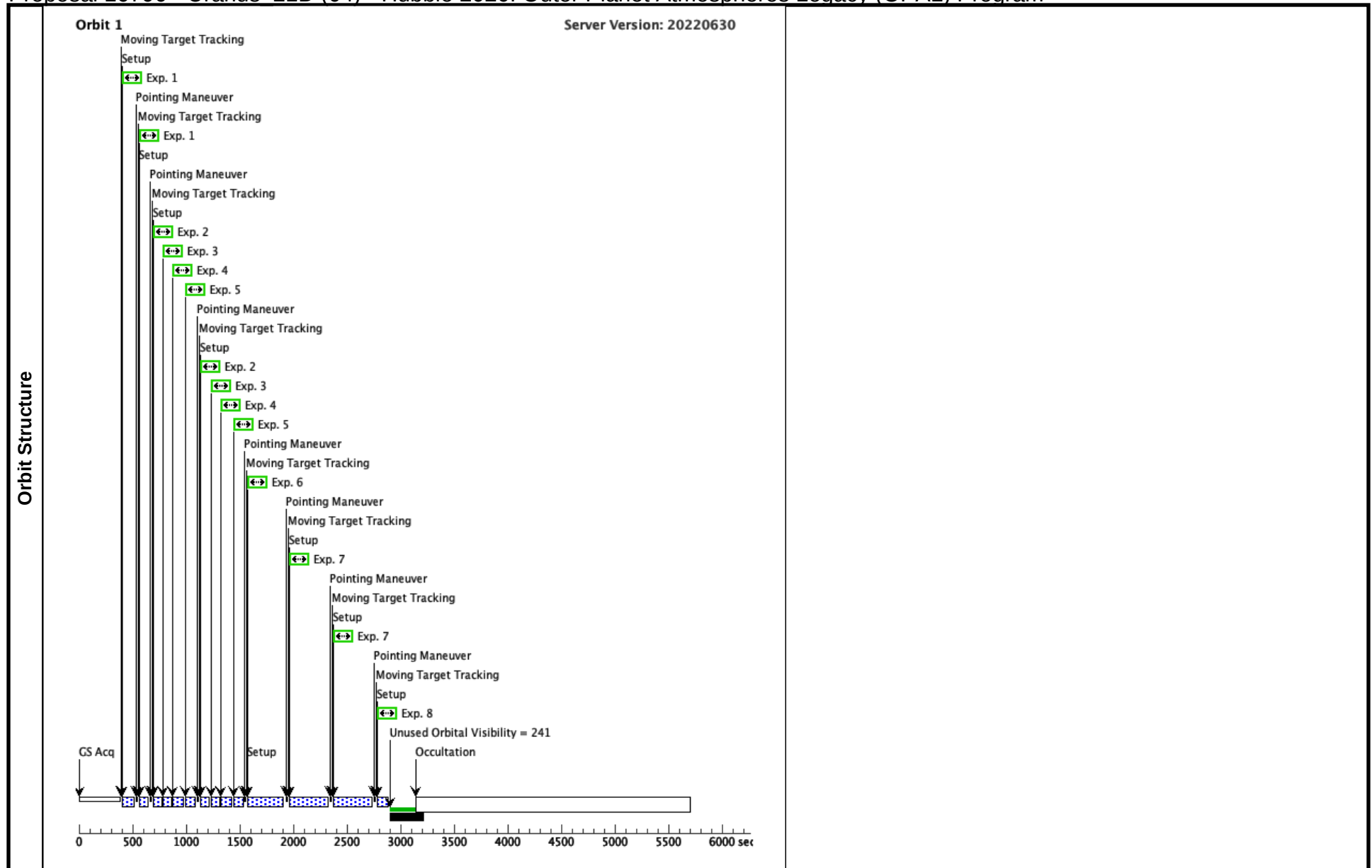


Proposal 16790 - Uranus 21D (04) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21D (04), failed				Wed Dec 21 00:01:31 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 03 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(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						
Diagnostics	(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			
	(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1), (2-5)			
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=		(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							

Proposal 16790 - Uranus 21D (04) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21D (04)	35 Secs (70 Secs)	
								Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21D (04) (2)	[==>(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_21D (04)	14 Secs (28 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (04) (2)	[==>(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_21D (04)	6 Secs (12 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (04) (2)	[==>(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_21D (04)	40 Secs (80 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (04) (2)	[==>(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_21D (04)	25 Secs (50 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (04) (2)	[==>(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_21D (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_21D (04)	200 Secs (400 Secs)	
								Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21D (04) (3)	[==>(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_21D (04)	35 Secs (35 Secs)	
									[==>]	[1]

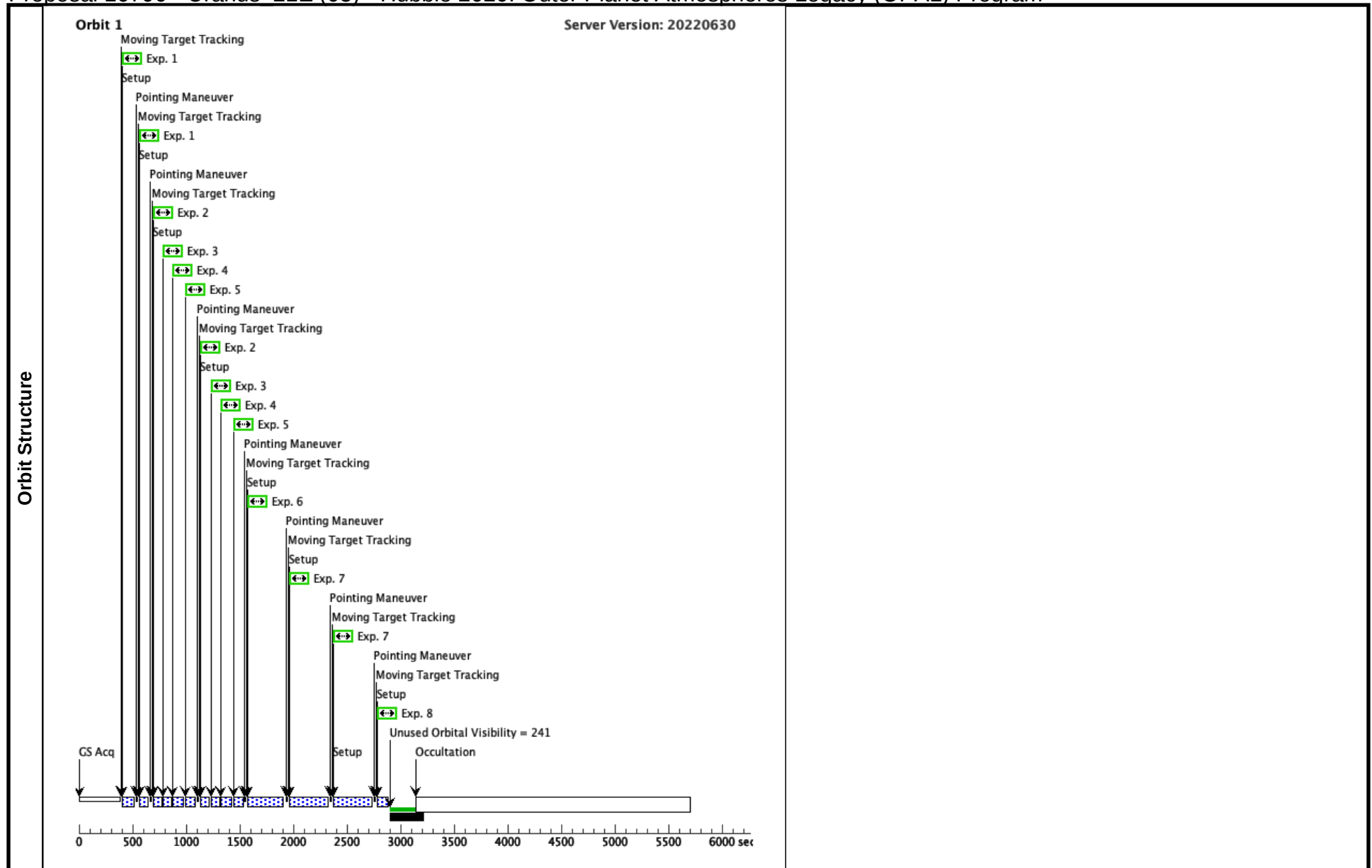


Proposal 16790 - Uranus 21E (05) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21E (05), failed				Wed Dec 21 00:01:31 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 04 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(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						
Diagnostics	(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			
	(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1), (2-5)			
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=		(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							

Proposal 16790 - Uranus 21E (05) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (05) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21E (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (05) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (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; SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (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; SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (05) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21E (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_21E (05)	35 Secs (35 Secs) [==>]	[1]

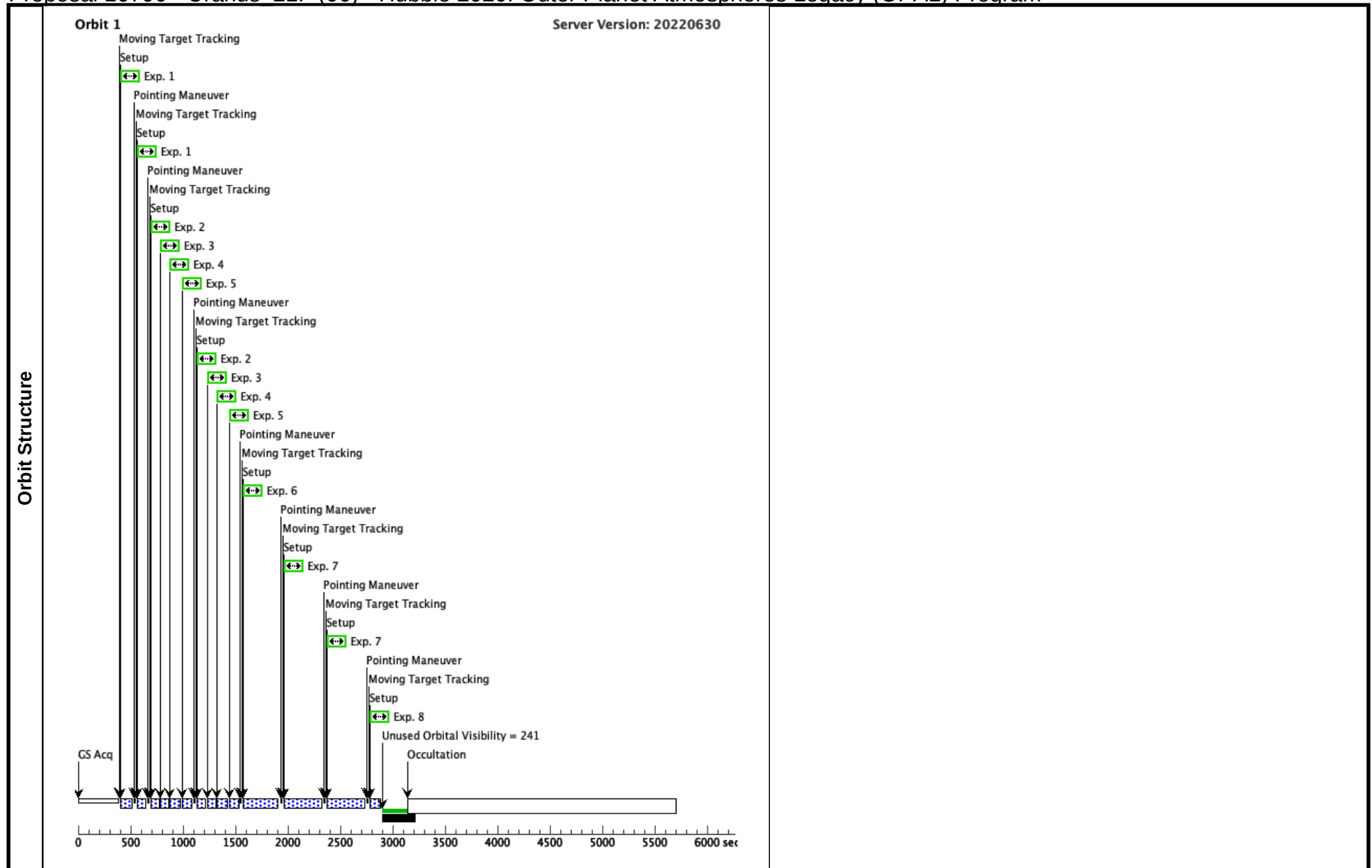


Proposal 16790 - Uranus 21F (06) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Uranus_21F (06), failed				Wed Dec 21 00:01:31 GMT 2022		
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 05 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET Comments: 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	(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						
Patterns	(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						
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(3)	URANUS-MAPS	STD=URANUS				EARTH
	Comments: Description=Global Uranus maps						

Proposal 16790 - Uranus 21F (06) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21F (06) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21F (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_21F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21F (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_21F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21F (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_21F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21F (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_21F (06) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21F (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_21F (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	Sequence 1-8 Non-Int in Uranus_21F (06) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21F (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		Sequence 1-8 Non-Int in Uranus_21F (06)	35 Secs (35 Secs) [==>]	[1]



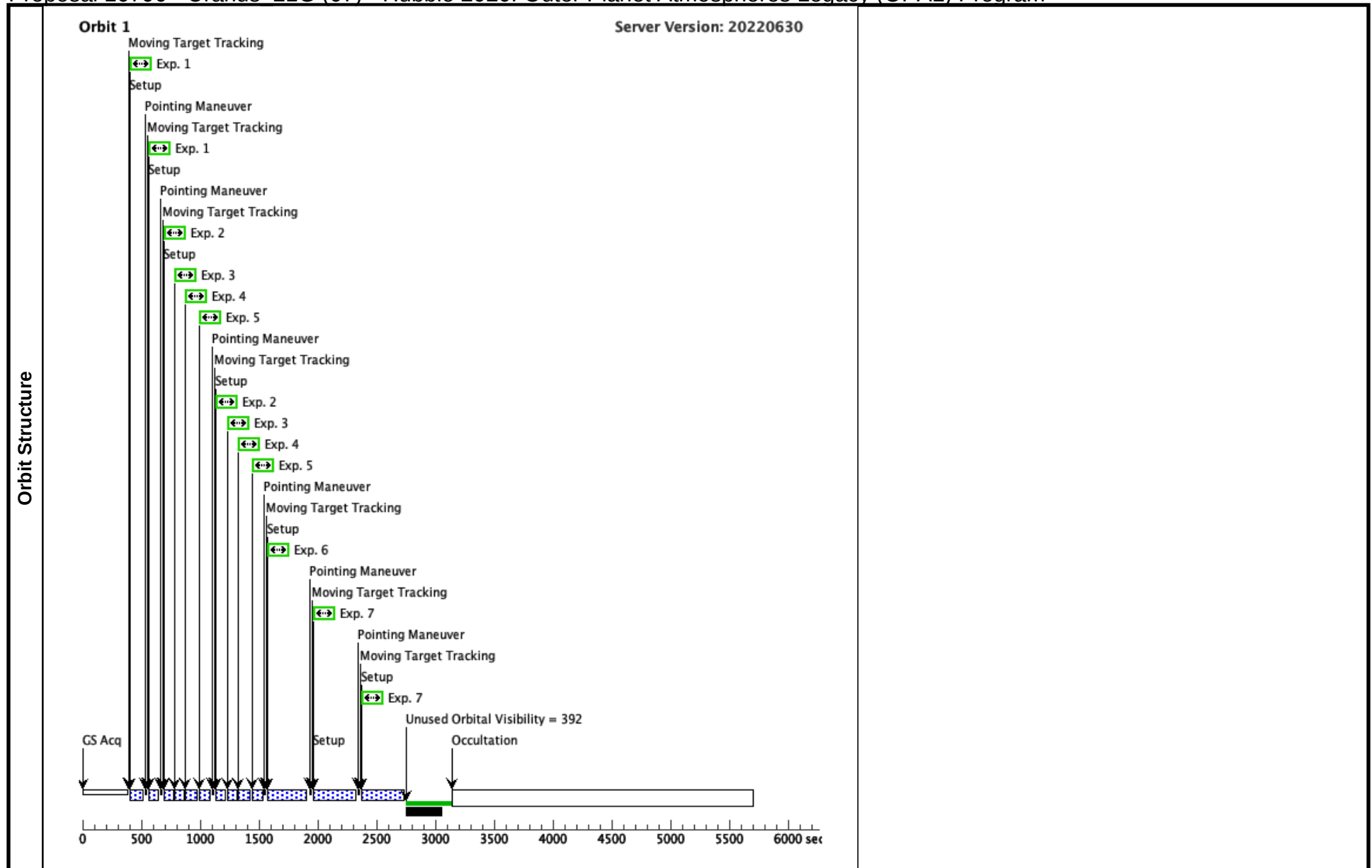
Proposal 16790 - Uranus 21G (07) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Wed Dec 21 00:01:31 GMT 2022

Proposal 16790, Uranus_21G (07), failed				Wed Dec 21 00:01:31 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 06 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
	Comments: 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 them. 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	(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.							
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)	
	(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							

Proposal 16790 - Uranus 21G (07) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (07)	35 Secs (70 Secs)	[1]
								Pattern 2, Exps 1-1 in Sequence 1-7 Non-Int in Uranus_21G (07) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	
	2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (07)	14 Secs (28 Secs)	[1]
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21G (07) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	
	3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (07)	6 Secs (12 Secs)	[1]
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21G (07) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	
	4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (07)	40 Secs (80 Secs)	[1]
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21G (07) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	
Exposures	5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO	SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (07)	25 Secs (50 Secs)	[1]
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21G (07) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	
	6	FQ619N_quadA	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +19,-23; SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (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; SAA CONTOUR 02	Sequence 1-7 Non-Int in Uranus_21G (07)	200 Secs (400 Secs)	[1]
								Pattern 3, Exps 7-7 in Sequence 1-7 Non-Int in Uranus_21G (07) (3)	[==>(Pattern 1)] [==>(Pattern 2)]	



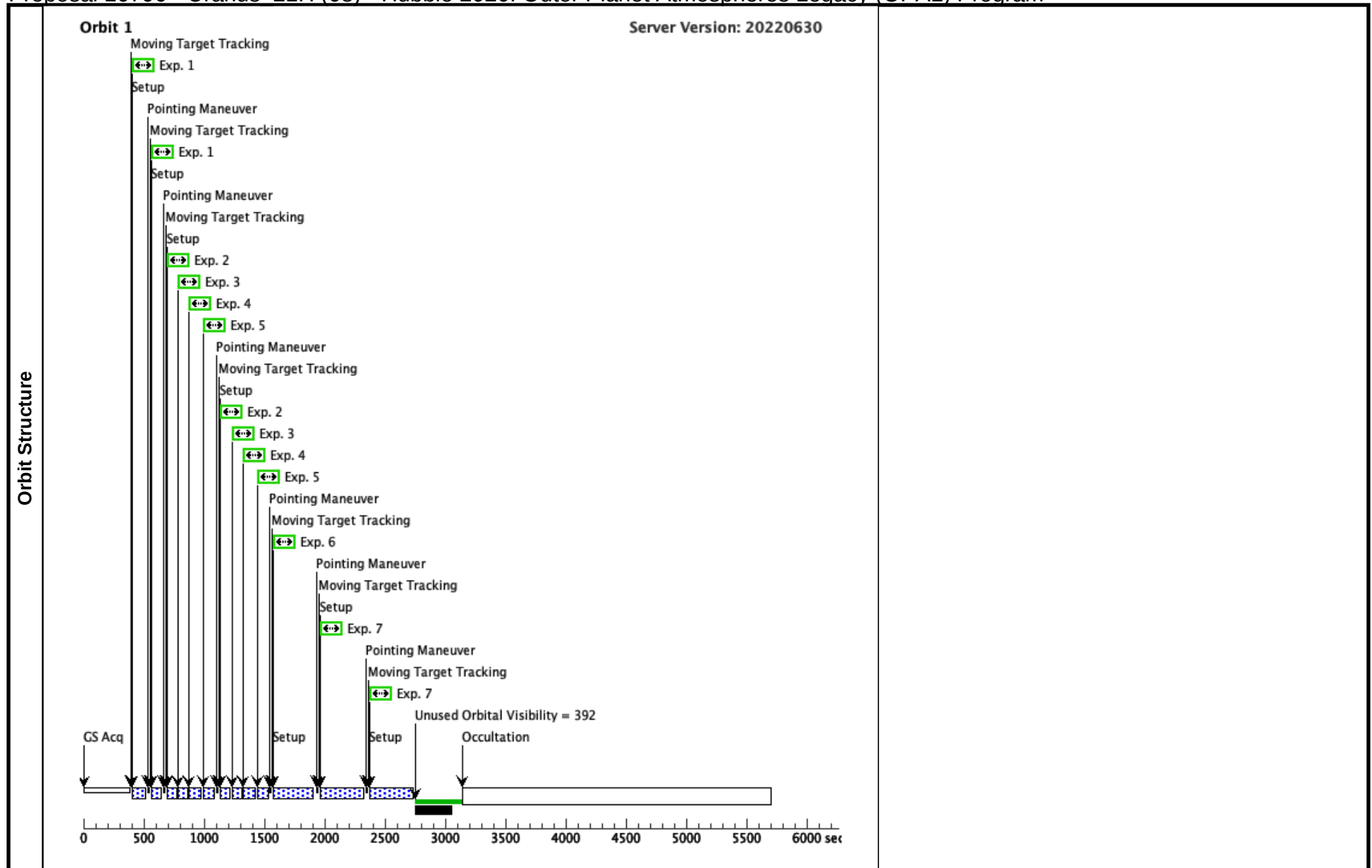
Proposal 16790 - Uranus 21H (08) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Wed Dec 21 00:01:32 GMT 2022

Proposal 16790, Uranus_21H (08), failed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 01 BY 18.9 Orbits TO 19.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET <i>Comments: 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.</i> <i>3-gyro mode may be necessary as this is a moving target.</i>					Wed Dec 21 00:01:32 GMT 2022
Visit					
Diagnostics					
Patterns					
Solar System Targets					

Proposal 16790 - Uranus 21H (08) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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 1-7 Non-Int in Uranus_21H (08)	35 Secs (70 Secs)	
								Pattern 2, Exps 1-1 in Sequence 1-7 Non-Int in Uranus_21H (08) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21H (08)	14 Secs (28 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21H (08) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21H (08)	6 Secs (12 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21H (08) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21H (08)	40 Secs (80 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21H (08) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21H (08)	25 Secs (50 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21H (08) (2)	[==>(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 1-7 Non-Int in Uranus_21H (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 1-7 Non-Int in Uranus_21H (08)	200 Secs (400 Secs)	
								Pattern 3, Exps 7-7 in Sequence 1-7 Non-Int in Uranus_21H (08) (3)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]

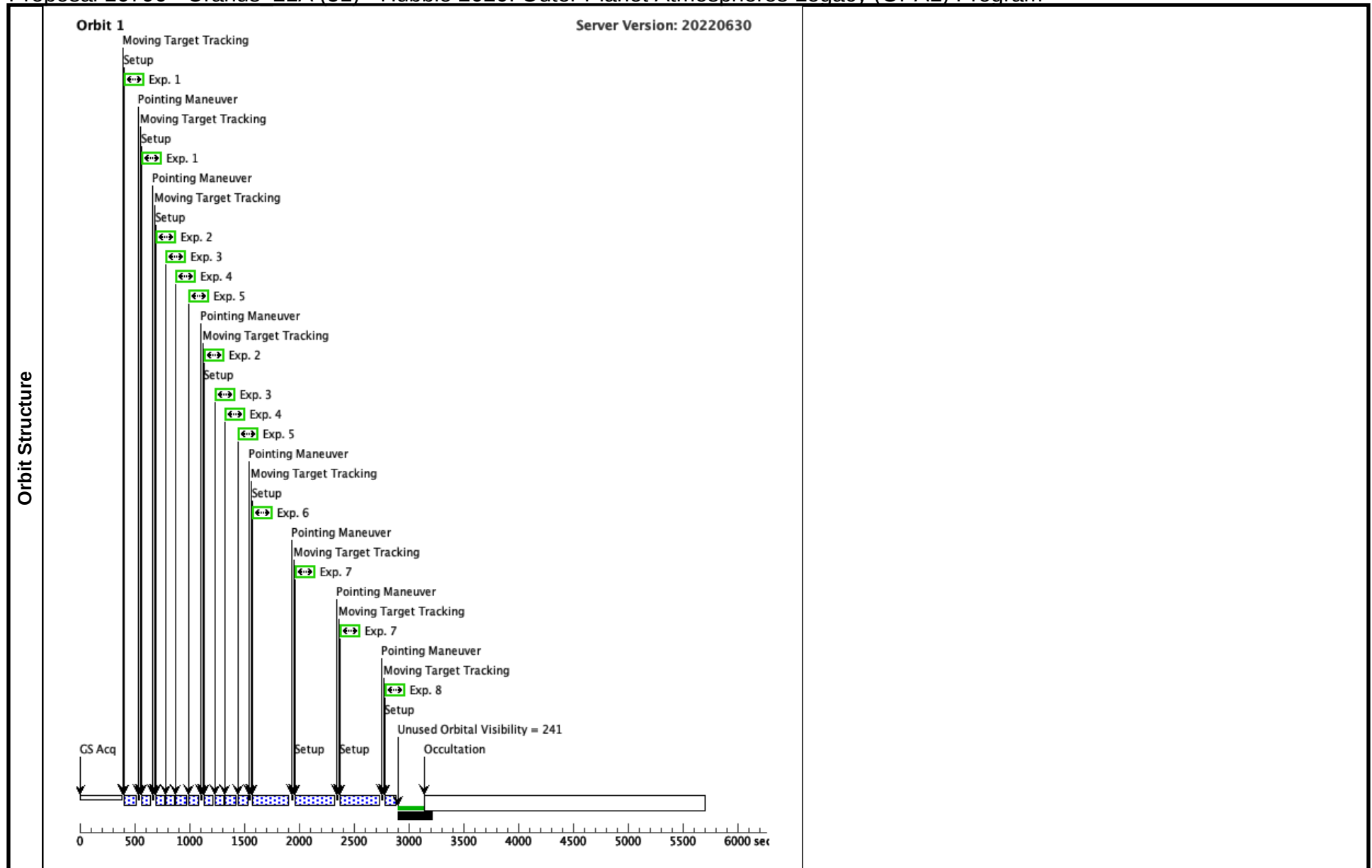


Proposal 16790 - Uranus 21A (51) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Uranus_21A (51), completed			Wed Dec 21 00:01:32 GMT 2022				
	Diagnostic Status: Warning							
	Scientific Instruments: WFC3/UVIS							
	Special Requirements: BETWEEN 05-OCT-2021:00:00:00 AND 11-DEC-2021:00:00:00; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET							
Diagnostics	Comments: Uranus opposition (2021-NOV-04) +/- 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.							
	(F845M (51.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(F467M (51.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(F547M (51.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(F657N (51.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(F763M (51.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ619N_quadA (51.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ619N_quadA (51.006)) 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.							
Patterns	(FQ727N_quadD (51.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ727N_quadD (51.007)) 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 (51.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	#	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)				
	(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						

Proposal 16790 - Uranus 21A (51) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21A (51) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21A (51) (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_21A (51) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (51) (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_21A (51) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (51) (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_21A (51) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (51) (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_21A (51) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21A (51) (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_21A (51)	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_21A (51) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21A (51) (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_21A (51)	35 Secs (35 Secs) [==>]	[1]

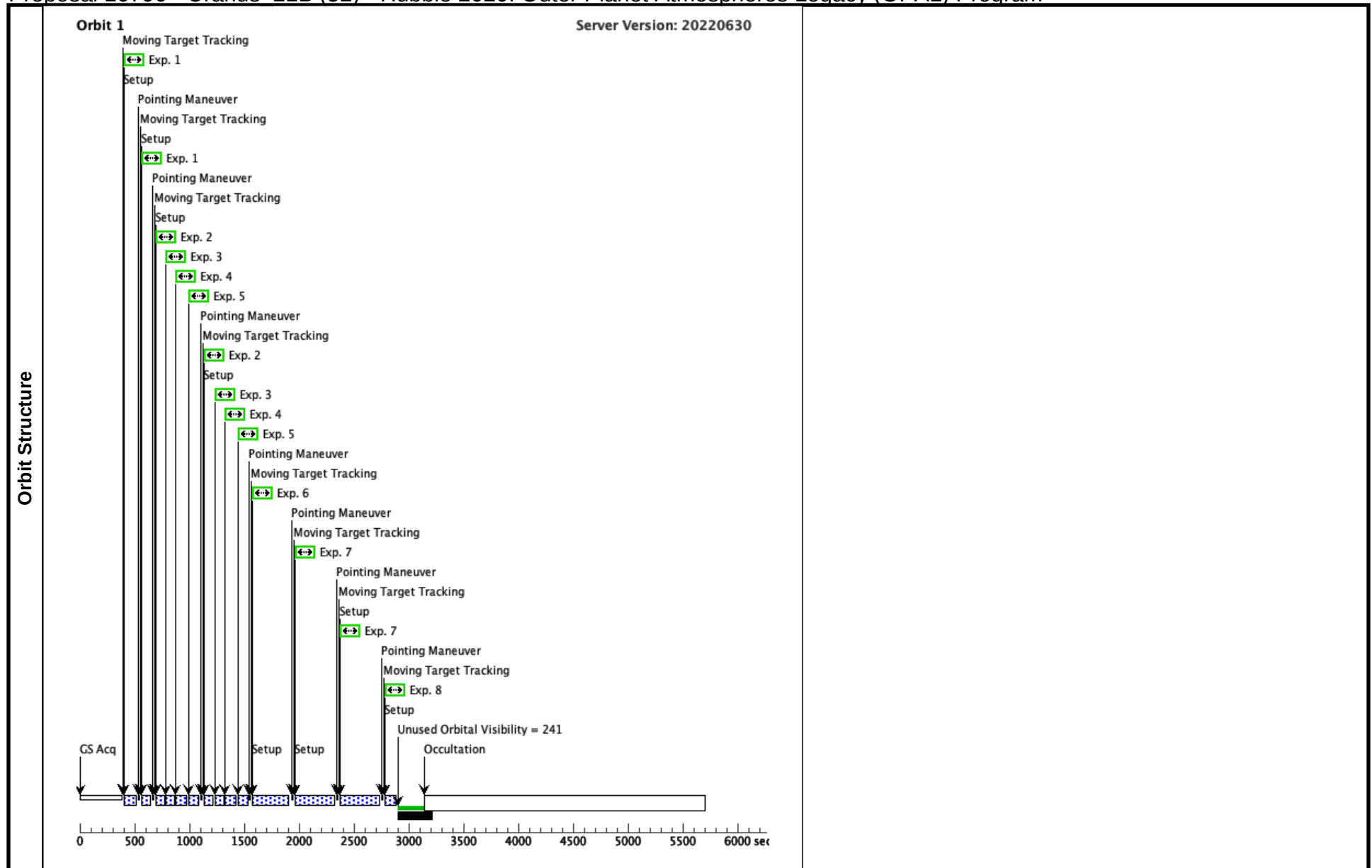


Proposal 16790 - Uranus 21B (52) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21B (52), completed				Wed Dec 21 00:01:32 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 51 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(F845M (52.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (52.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (52.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (52.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (52.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
Diagnostics	(FQ619N_quadA (52.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (52.006)) 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 (52.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ727N_quadD (52.007)) 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 (52.008)) 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)	
	(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				
Comments: Description=Global Uranus maps							

Proposal 16790 - Uranus 21B (52) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21B (52) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21B (52) (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_21B (52) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21B (52) (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_21B (52) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21B (52) (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_21B (52) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21B (52) (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_21B (52) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21B (52) (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_21B (52)	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_21B (52) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21B (52) (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_21B (52)	35 Secs (35 Secs) [==>]	[1]

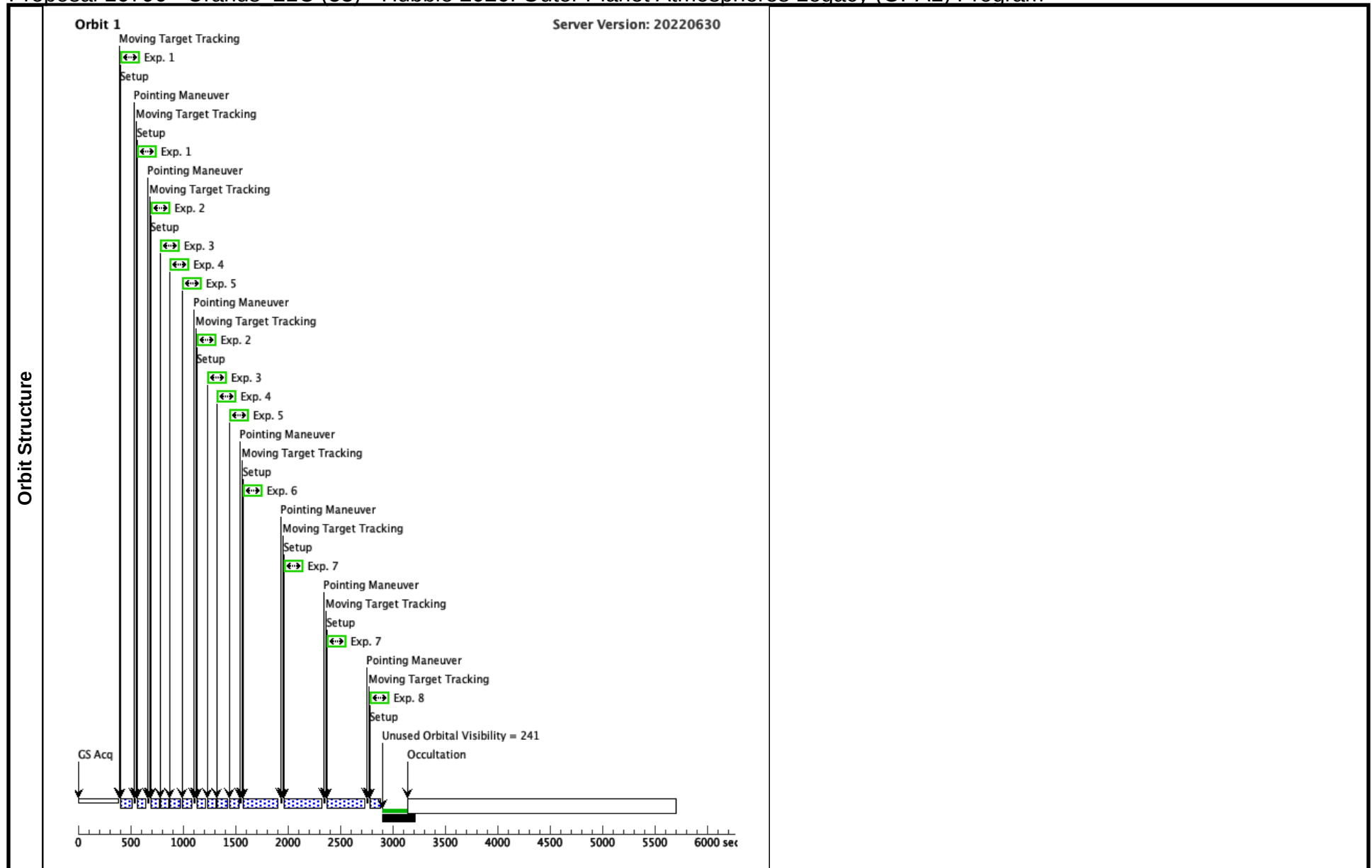


Proposal 16790 - Uranus 21C (53) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21C (53), completed				Wed Dec 21 00:01:32 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 52 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(F845M (53.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (53.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (53.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (53.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (53.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
Diagnostics	(FQ619N_quadA (53.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (53.006)) 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 (53.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ727N_quadD (53.007)) 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 (53.008)) 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			
	(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1), (2-5)			
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=		(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							

Proposal 16790 - Uranus 21C (53) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21C (53) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21C (53) (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_21C (53) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (53) (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_21C (53) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (53) (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_21C (53) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (53) (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_21C (53) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21C (53) (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_21C (53)	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_21C (53) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21C (53) (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_21C (53)	35 Secs (35 Secs) [==>]	[1]

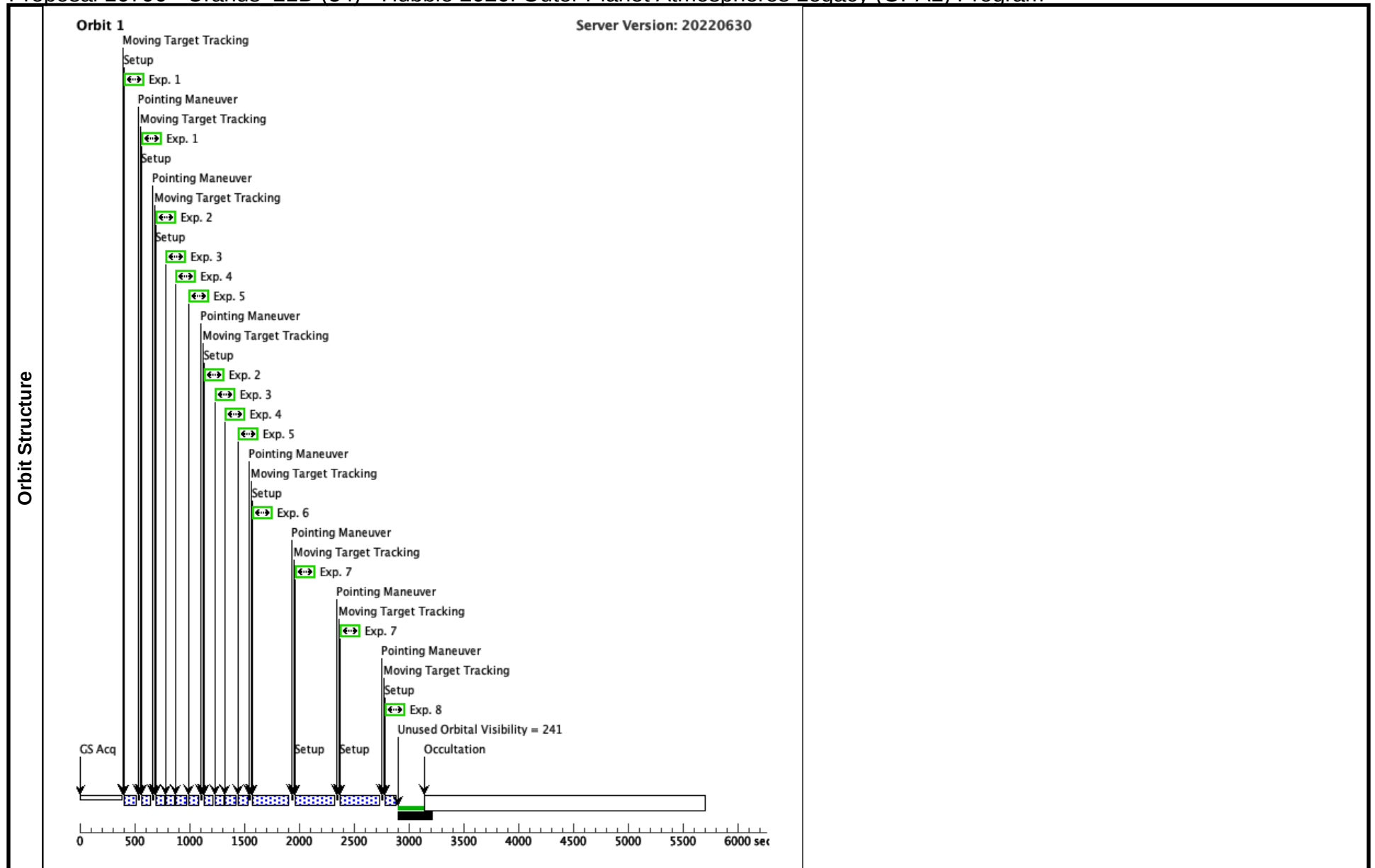


Proposal 16790 - Uranus 21D (54) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21D (54), completed				Wed Dec 21 00:01:32 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 53 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(F845M (54.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (54.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (54.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (54.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (54.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (54.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
(FQ619N_quadA (54.006)) 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 (54.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
(FQ727N_quadD (54.007)) 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 (54.008)) 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 Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=				(1), (2-5)	
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=				(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							

Proposal 16790 - Uranus 21D (54) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21D (54) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21D (54) (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_21D (54) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (54) (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_21D (54) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (54) (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_21D (54) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (54) (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_21D (54) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21D (54) (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_21D (54)	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_21D (54) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21D (54) (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_21D (54)	35 Secs (35 Secs) [==>]	[1]

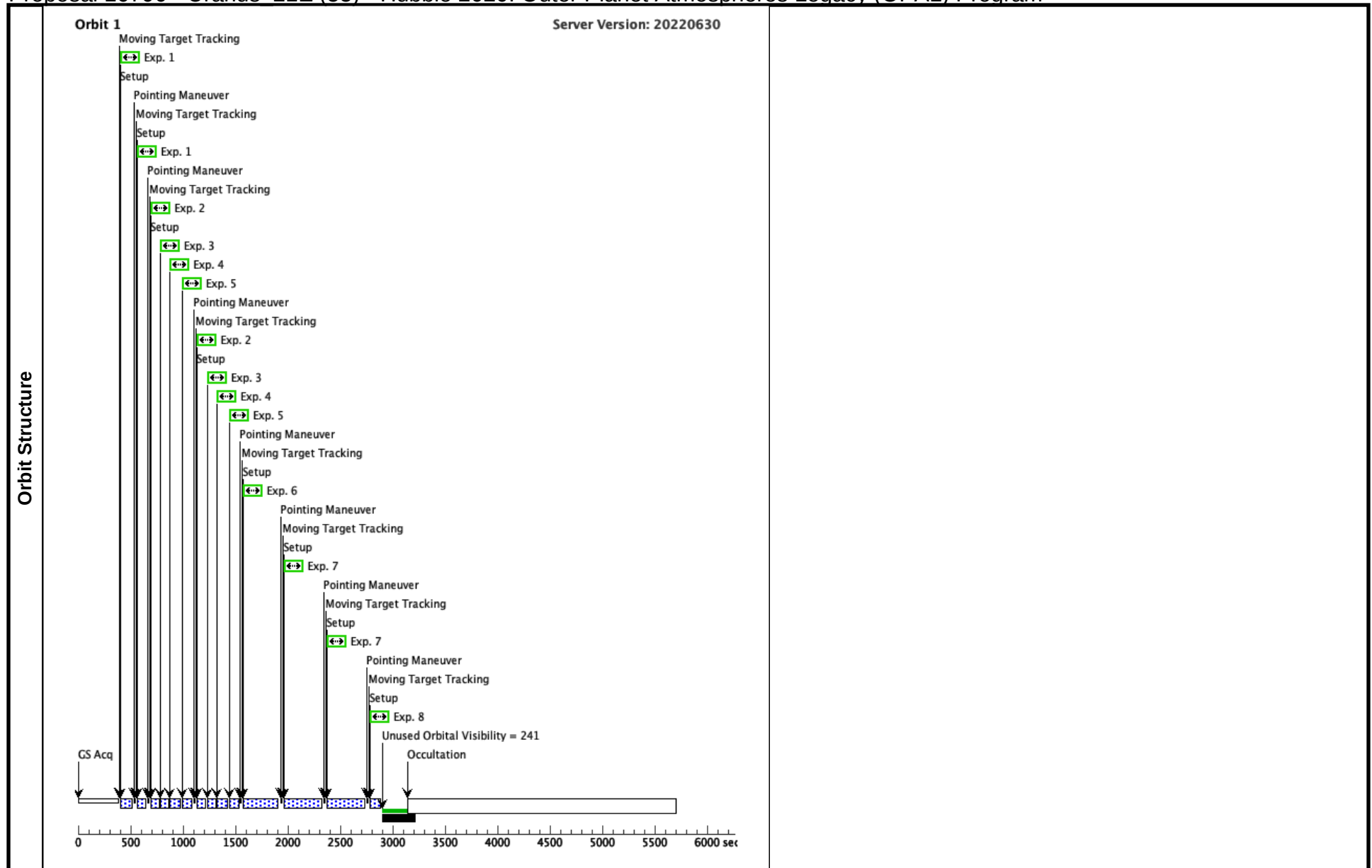


Proposal 16790 - Uranus 21E (55) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21E (55), completed				Wed Dec 21 00:01:32 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 54 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(F845M (55.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (55.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (55.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (55.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (55.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
Diagnostics	(FQ619N_quadA (55.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (55.006)) 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 (55.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ727N_quadD (55.007)) 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 (55.008)) 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			
	(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1), (2-5)			
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=		(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							

Proposal 16790 - Uranus 21E (55) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (55) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21E (55) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (55) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (55) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (55) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (55) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (55) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (55) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (55) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21E (55) (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; SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21E (55)	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_21E (55) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21E (55) (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_21E (55)	35 Secs (35 Secs) [==>]	[1]



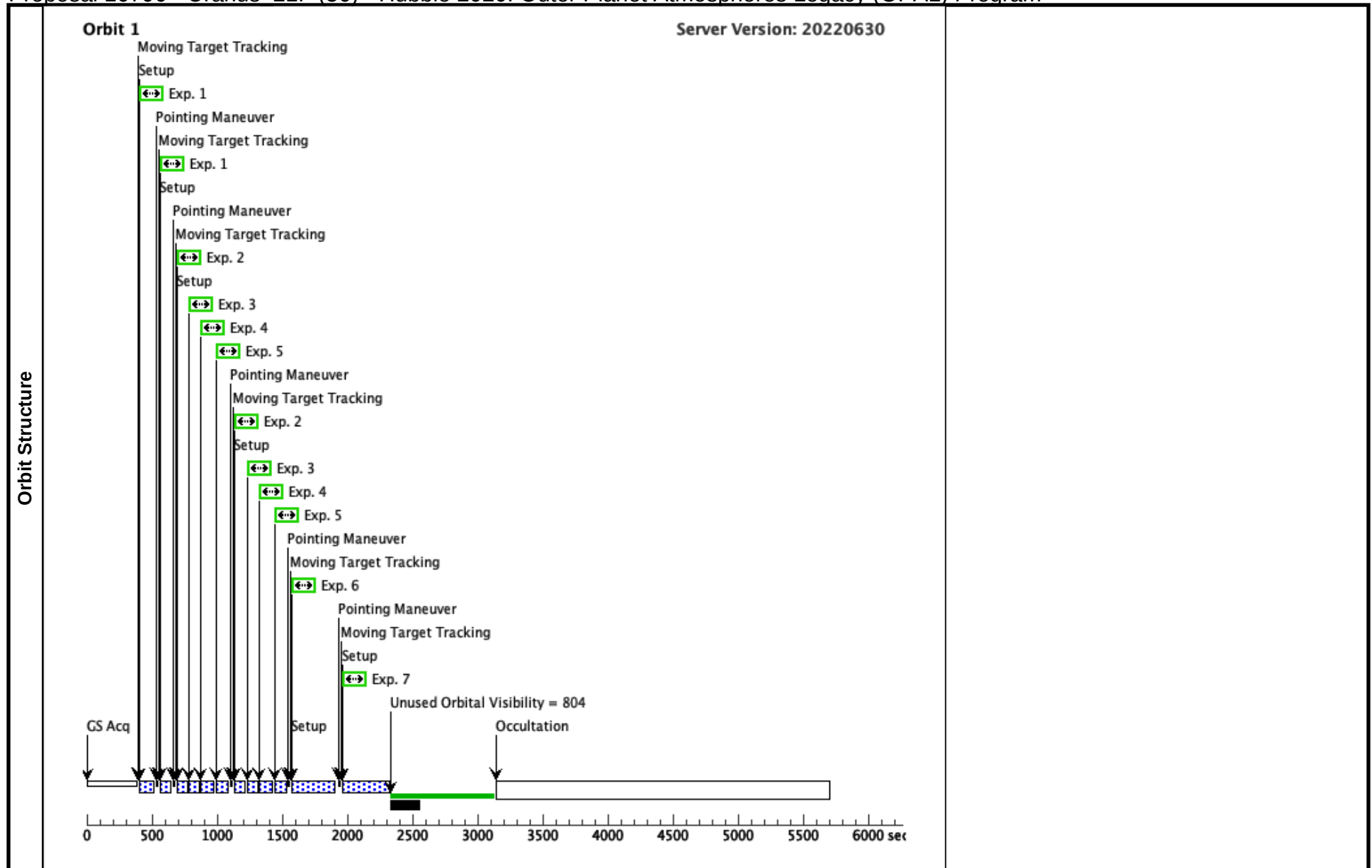
Proposal 16790 - Uranus 21F (56) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Wed Dec 21 00:01:32 GMT 2022

Visit	Proposal 16790, Uranus_21F (56), completed			Wed Dec 21 00:01:32 GMT 2022			
	Diagnostic Status: Warning						
Diagnostics	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 55 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
	Comments: 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.						
	(F845M (56.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
Patterns	(F467M (56.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (56.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (56.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (56.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (56.006)) 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	(FQ619N_quadA (56.006)) 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 (56.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ727N_quadD (56.007)) 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.						
	#	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)			
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center
	(3)	URANUS-MAPS	STD=URANUS				EARTH
Comments: Description=Global Uranus maps							

Proposal 16790 - Uranus 21F (56) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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 1-7 Non-Int in Uranus_21F (56)	35 Secs (70 Secs)	
								Pattern 2, Exps 1-1 in Sequence 1-7 Non-Int in Uranus_21F (56) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21F (56)	14 Secs (28 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21F (56) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21F (56)	6 Secs (12 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21F (56) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21F (56)	40 Secs (80 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21F (56) (2)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M	(3) URANUS-MAPS	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Uranus_21F (56)	25 Secs (50 Secs)	
								Pattern 2, Exps 2-5 in Sequence 1-7 Non-Int in Uranus_21F (56) (2)	[==>(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 1-7 Non-Int in Uranus_21F (56)	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 1-7 Non-Int in Uranus_21F (56)	200 Secs (200 Secs)	
									[==>]	[1]

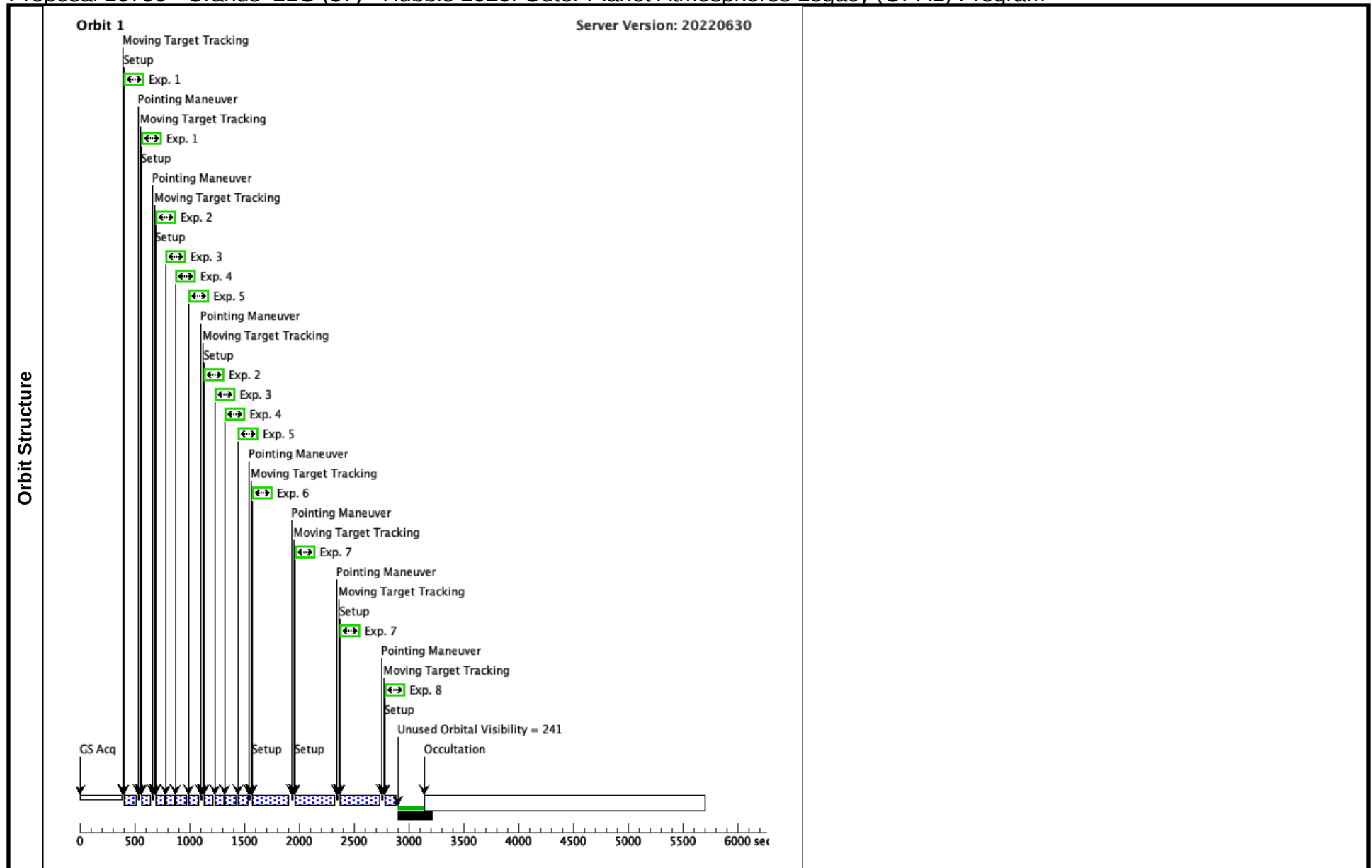


Proposal 16790 - Uranus 21G (57) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Uranus_21G (57), completed				Wed Dec 21 00:01:32 GMT 2022			
Visit	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 56 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET						
Comments: 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	(F845M (57.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (57.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (57.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (57.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (57.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
Diagnostics	(FQ619N_quadA (57.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (57.006)) 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 (57.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ727N_quadD (57.007)) 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 (57.008)) 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)	
	(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				
Comments: Description=Global Uranus maps							

Proposal 16790 - Uranus 21G (57) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21G (57) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21G (57) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21G (57) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21G (57) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21G (57) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21G (57) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21G (57) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21G (57) (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	SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21G (57) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21G (57) (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; SAA CONTOUR 02	Sequence 1-8 Non-Int in Uranus_21G (57)	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_21G (57) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21G (57) (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_21G (57)	35 Secs (35 Secs) [==>]	[1]

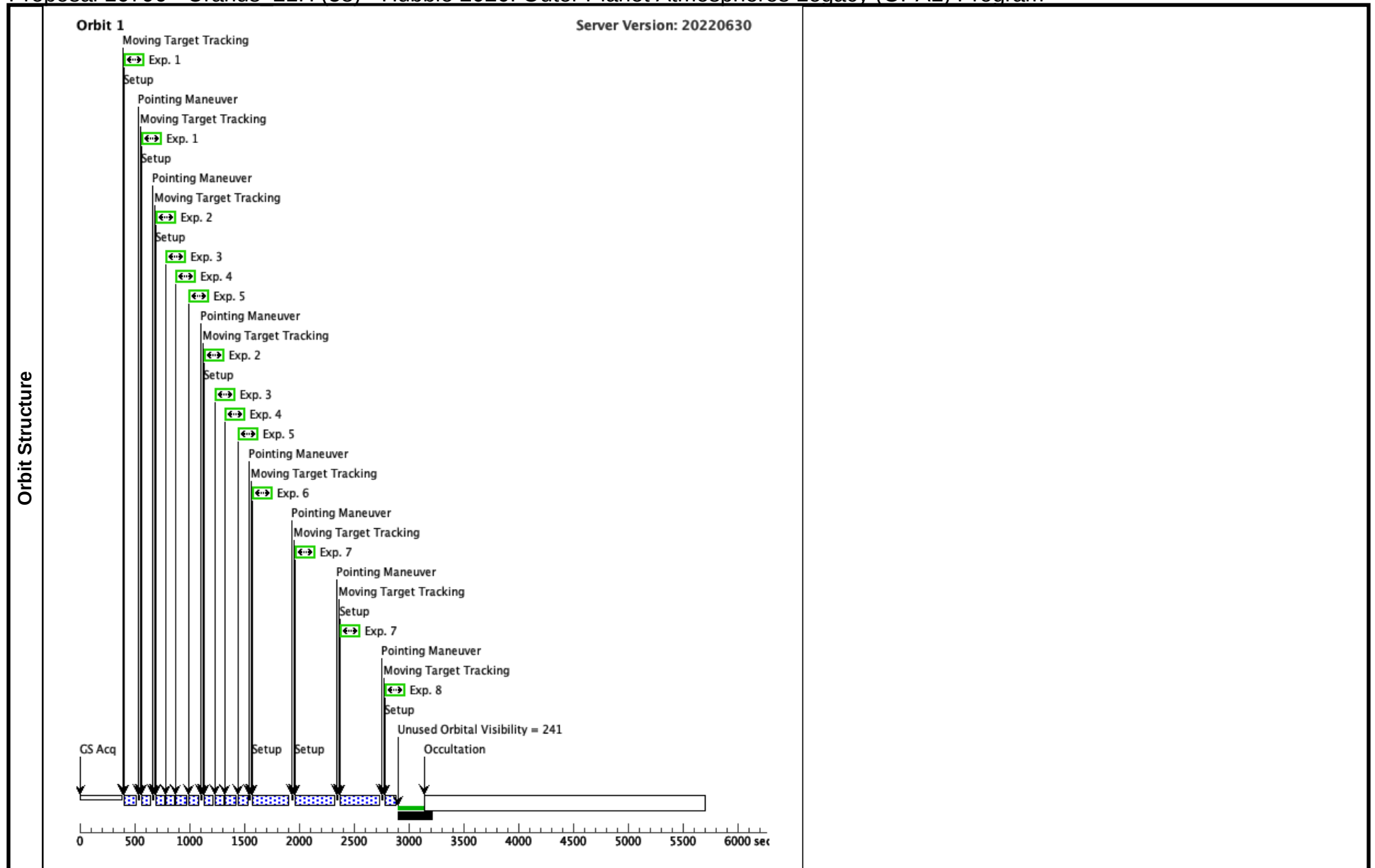


Proposal 16790 - Uranus 21H (58) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Uranus_21H (58), completed				Wed Dec 21 00:01:32 GMT 2022		
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 51 BY 18.9 Orbits TO 19.1 Orbits; VISIBILITY INTERVAL NO GYRO BIAS UPDATE ON MOVING TARGET Comments: 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	(F845M (58.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F467M (58.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F547M (58.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F657N (58.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F763M (58.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
Patterns	(FQ619N_quadA (58.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ619N_quadA (58.006)) 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 (58.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ727N_quadD (58.007)) 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 (58.008)) 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
	(3)	URANUS-MAPS	STD=URANUS				EARTH
	Comments: Description=Global Uranus maps						

Proposal 16790 - Uranus 21H (58) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_21H (58) Pattern 2, Exps 1-1 in Sequence 1-8 Non-Int in Uranus_21H (58) (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_21H (58) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21H (58) (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_21H (58) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21H (58) (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_21H (58) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21H (58) (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_21H (58) Pattern 2, Exps 2-5 in Sequence 1-8 Non-Int in Uranus_21H (58) (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_21H (58)	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_21H (58) Pattern 3, Exps 7-7 in Sequence 1-8 Non-Int in Uranus_21H (58) (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_21H (58)	35 Secs (35 Secs) [==>]	[1]

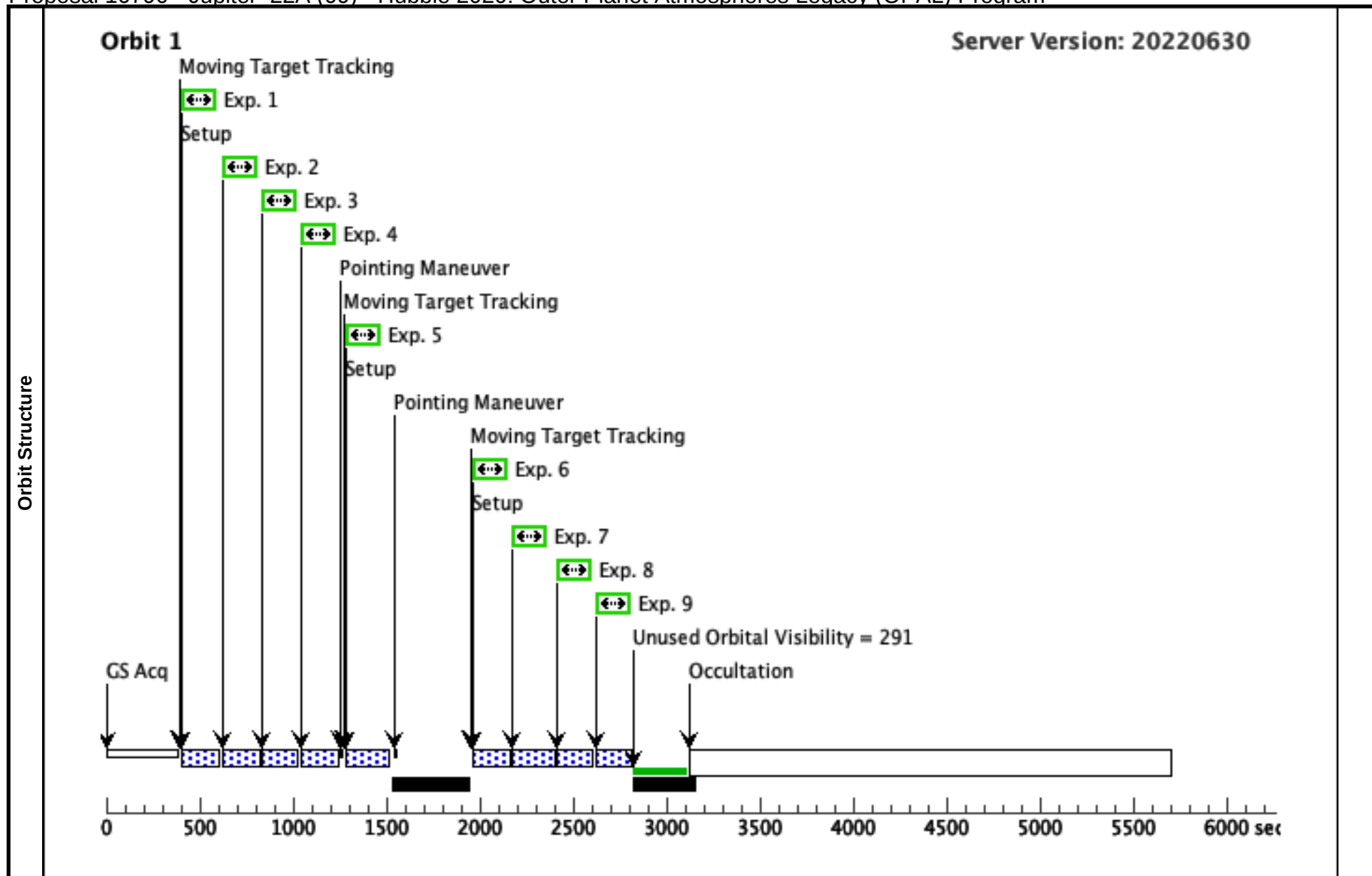


Proposal 16790 - Jupiter 22A (09) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22A (09), completed Wed Dec 21 00:01:32 GMT 2022					
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: BEFORE 14-NOV-2022:00:00:00; VISIBILITY INTERVAL 52 M <i>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.</i> <i>Jupiter opposition (2022-SEP-26) +/- 30 days preferred.</i>					
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	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
	<i>Comments: Description=Global Jupiter maps</i>					

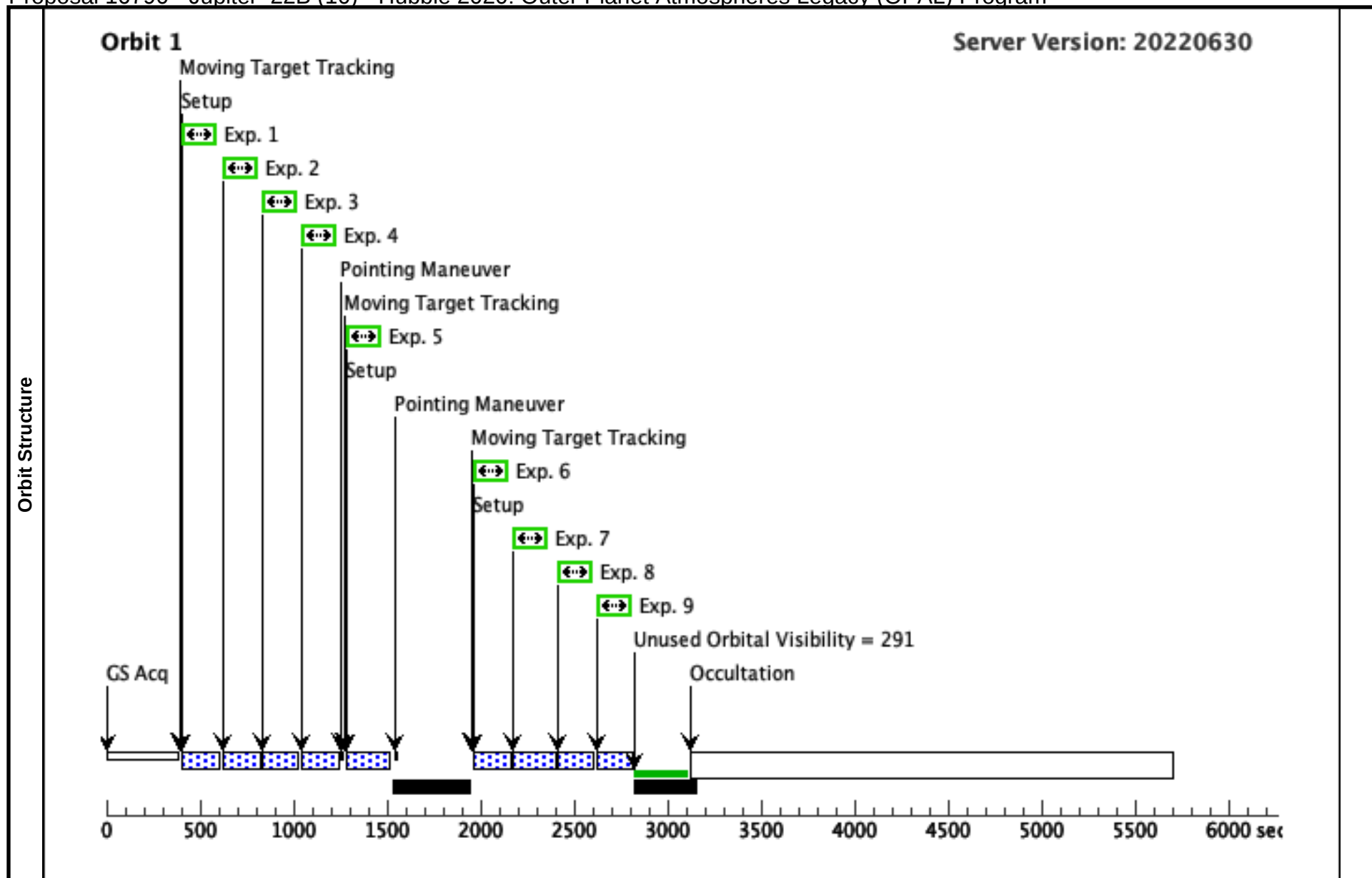
Proposal 16790 - Jupiter 22A (09) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_22A (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_22A (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_22A (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_22A (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_22A (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_22A (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_22A (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_22A (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_22A (09)	4 Secs (4 Secs) [==>]	[1]



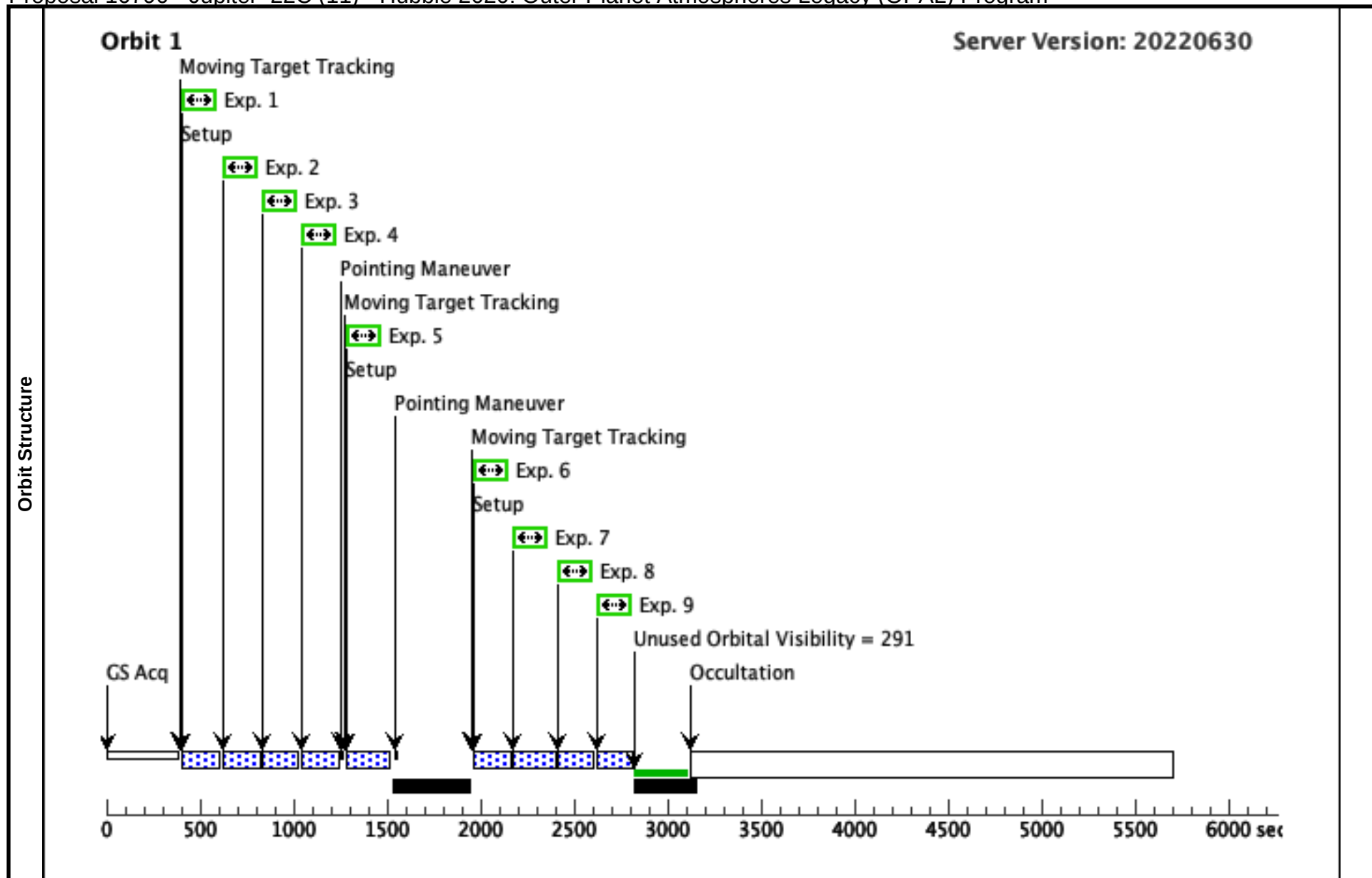
Proposal 16790 - Jupiter 22B (10) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22B (10), completed										Wed Dec 21 00:01:32 GMT 2022	
	Diagnostic Status: Warning											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: AFTER 09 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.												
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											
	(F631N (10.009)) 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						
	Comments: 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-In t in Jupiter_22B (10)	4 Secs (4 Secs) [==>]			
										[1]		
	2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22B (10)	3 Secs (3 Secs) [==>]			
										[1]		
	3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22B (10)	10 Secs (10 Secs) [==>]			
										[1]		
	4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22B (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 1-9 Non-In t in Jupiter_22B (10)	45 Secs (45 Secs) [==>]			
										[1]		
	6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22B (10)	8 Secs (8 Secs) [==>]			
										[1]		
	7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22B (10)	30 Secs (30 Secs) [==>]			
									[1]			
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22B (10)	.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-In t in Jupiter_22B (10)	4 Secs (4 Secs) [==>]				
									[1]			



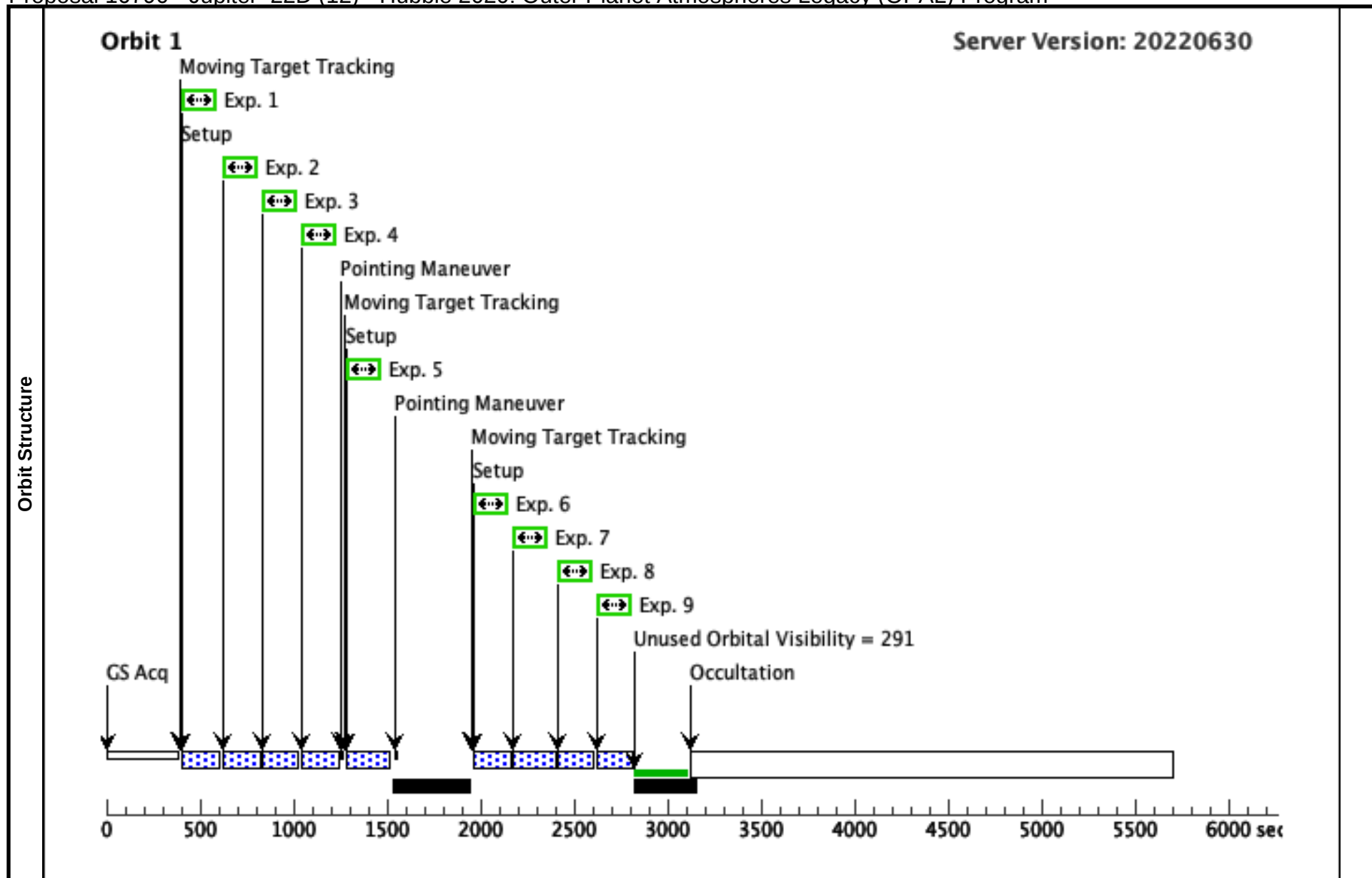
Proposal 16790 - Jupiter 22C (11) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22C (11), completed										Wed Dec 21 00:01:32 GMT 2022	
	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.												
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: 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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (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-In t in Jupiter_22C (11)	4 Secs (4 Secs) [==>]		[1]	



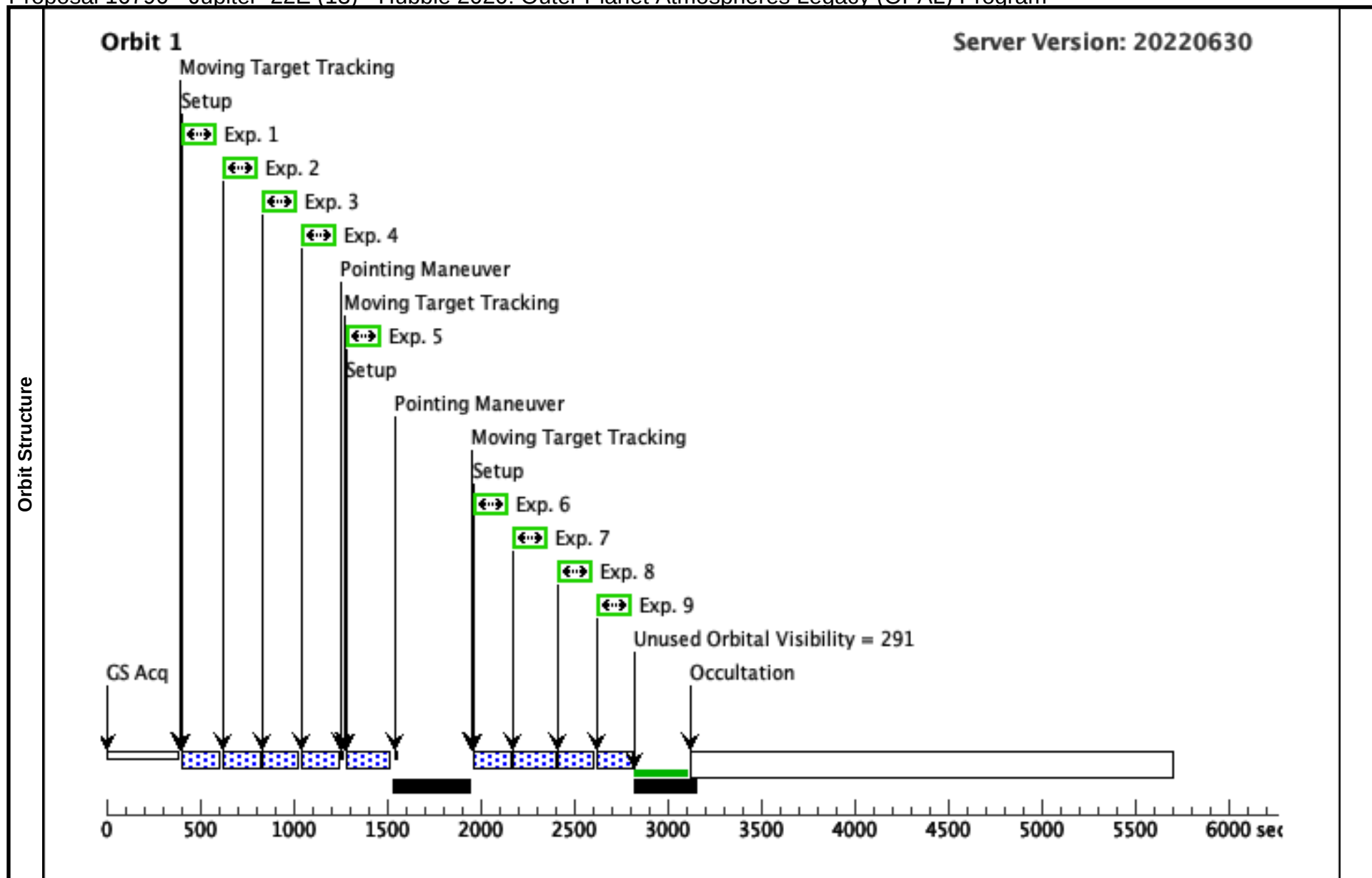
Proposal 16790 - Jupiter 22D (12) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22D (12), completed										Wed Dec 21 00:01:32 GMT 2022	
	Diagnostic Status: Warning											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: AFTER 11 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.												
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											
	(F631N (12.009)) 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: 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-In t in Jupiter_22D (12)	4 Secs (4 Secs) [==>]		[1]	
	2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22D (12)	3 Secs (3 Secs) [==>]		[1]	
	3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22D (12)	10 Secs (10 Secs) [==>]		[1]	
	4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22D (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 1-9 Non-In t in Jupiter_22D (12)	45 Secs (45 Secs) [==>]		[1]	
	6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22D (12)	8 Secs (8 Secs) [==>]		[1]	
	7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22D (12)	30 Secs (30 Secs) [==>]		[1]	
	8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22D (12)	.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-In t in Jupiter_22D (12)	4 Secs (4 Secs) [==>]		[1]	



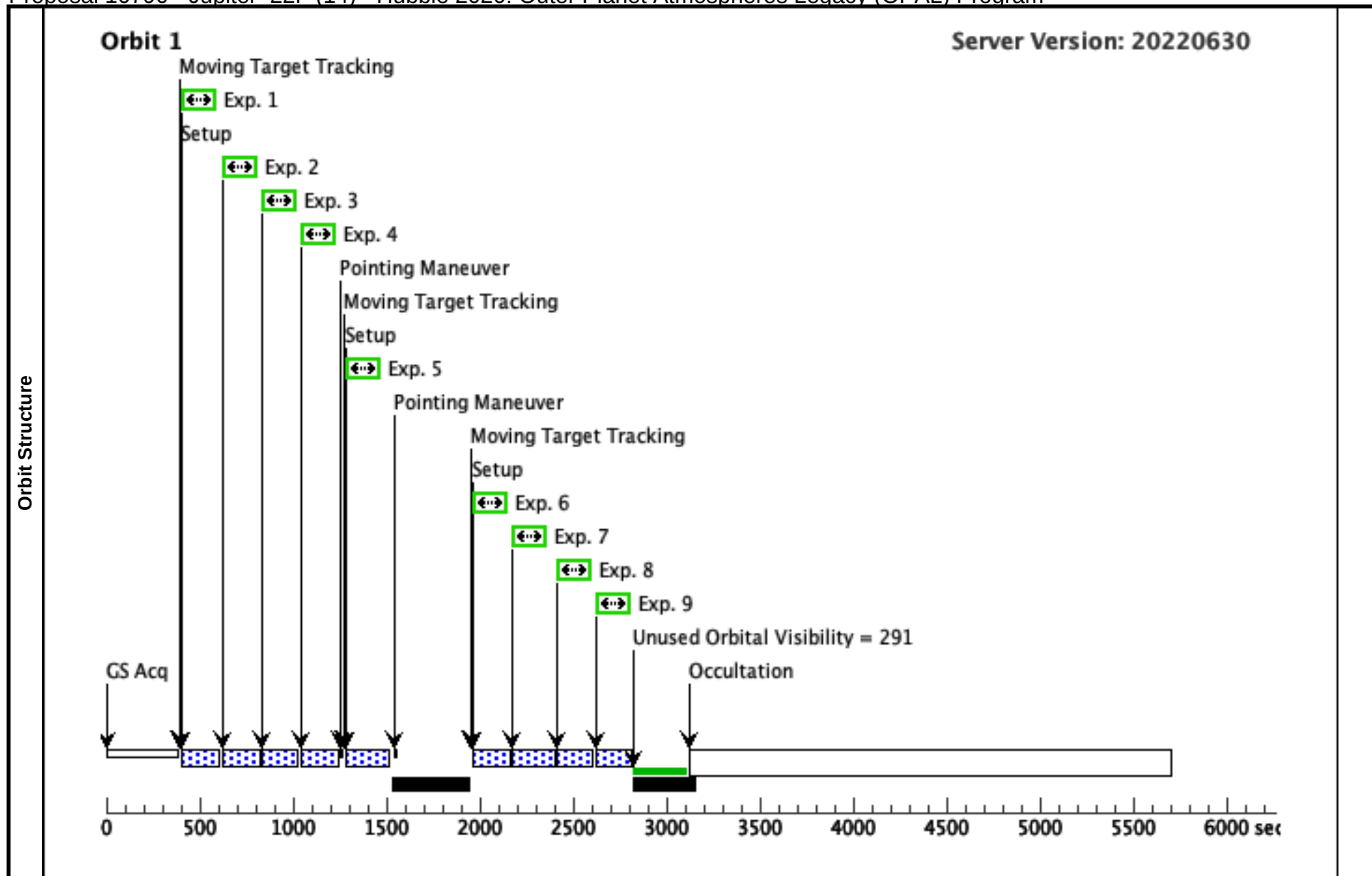
Proposal 16790 - Jupiter 22E (13) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22E (13), failed										Wed Dec 21 00:01:32 GMT 2022
	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.											
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: 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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (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-In t in Jupiter_22E (13)	4 Secs (4 Secs) [==>]	[1]	



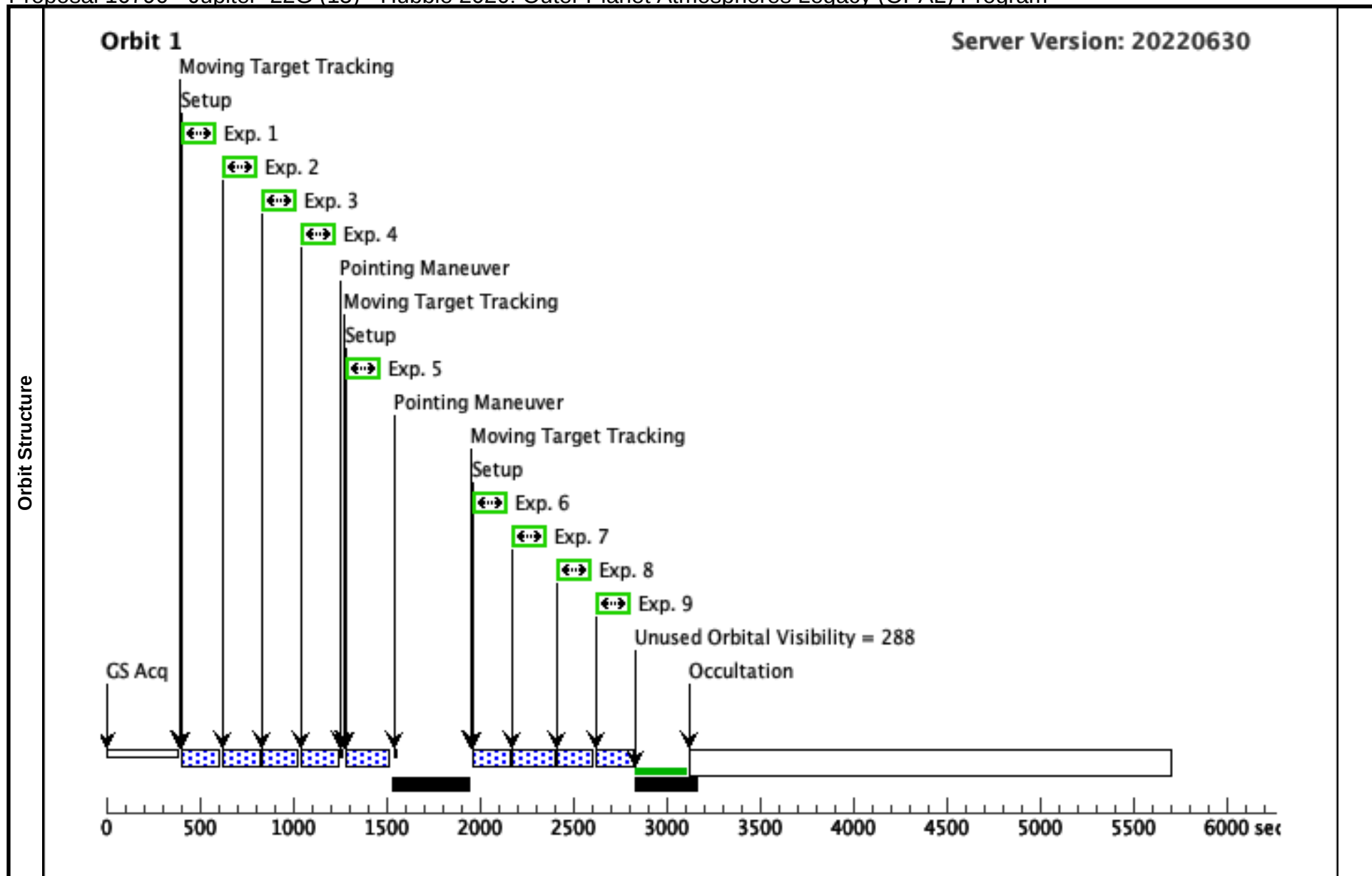
Proposal 16790 - Jupiter 22F (14) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22F (14), failed										Wed Dec 21 00:01:32 GMT 2022
	Diagnostic Status: Warning										
	Scientific Instruments: WFC3/UVIS										
	Special Requirements: AFTER 13 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.											
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										
	(F631N (14.009)) 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					
	Comments: 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-In t in Jupiter_22F (14)	4 Secs (4 Secs)		
									[==>]		[1]
	2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22F (14)	3 Secs (3 Secs)		
									[==>]		[1]
	3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22F (14)	10 Secs (10 Secs)		
									[==>]		[1]
	4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22F (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 1-9 Non-In t in Jupiter_22F (14)	45 Secs (45 Secs)		
									[==>]		[1]
	6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22F (14)	8 Secs (8 Secs)		
									[==>]		[1]
	7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22F (14)	30 Secs (30 Secs)		
								[==>]		[1]	
8	F547M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F547M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22F (14)	.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-In t in Jupiter_22F (14)	4 Secs (4 Secs)			
								[==>]		[1]	



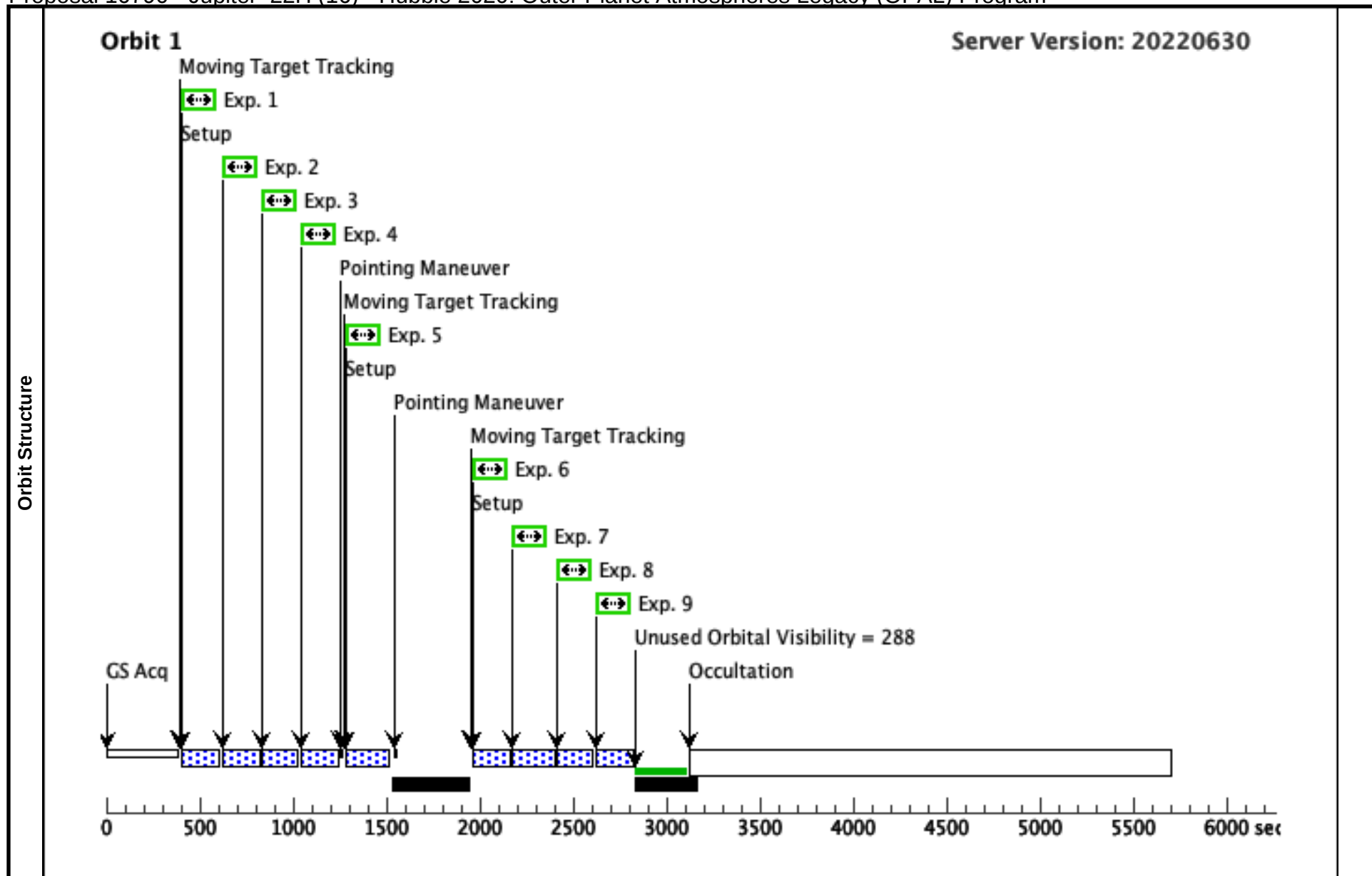
Proposal 16790 - Jupiter 22G (15) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22G (15), completed										Wed Dec 21 00:01:32 GMT 2022
	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.											
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: 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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (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-In t in Jupiter_22G (15)	4 Secs (4 Secs)			
								[==>]		[1]	



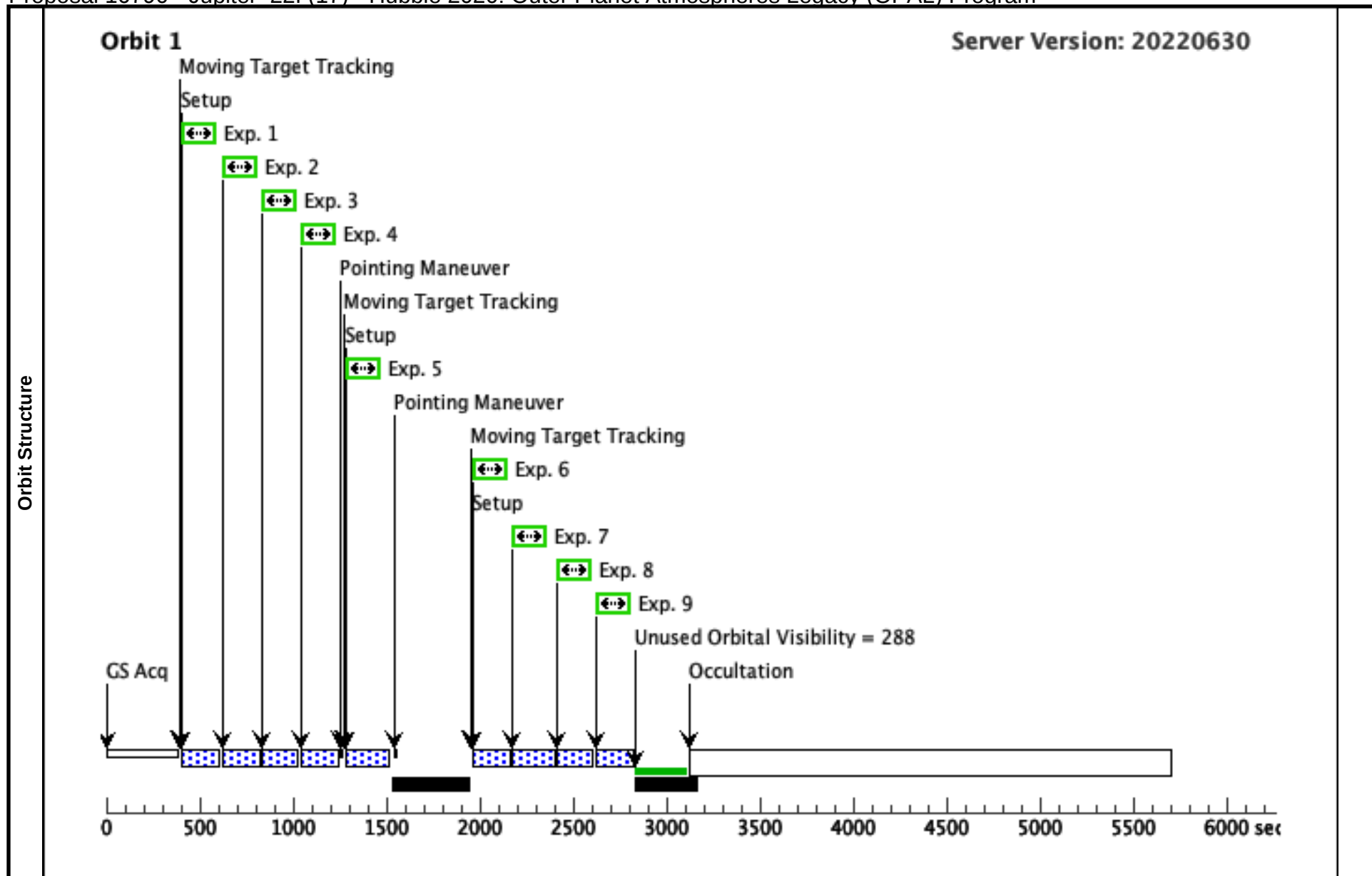
Proposal 16790 - Jupiter 22H (16) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22H (16), completed										Wed Dec 21 00:01:32 GMT 2022	
	Diagnostic Status: Warning											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: AFTER 15 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.												
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											
	(F631N (16.009)) 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: 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-In t in Jupiter_22H (16)	4 Secs (4 Secs) [==>]		[1]	
	2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22H (16)	3 Secs (3 Secs) [==>]		[1]	
	3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22H (16)	10 Secs (10 Secs) [==>]		[1]	
	4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22H (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 1-9 Non-In t in Jupiter_22H (16)	45 Secs (45 Secs) [==>]		[1]	
	6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22H (16)	8 Secs (8 Secs) [==>]		[1]	
	7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22H (16)	30 Secs (30 Secs) [==>]		[1]	
	8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22H (16)	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-In t in Jupiter_22H (16)	4 Secs (4 Secs) [==>]		[1]	



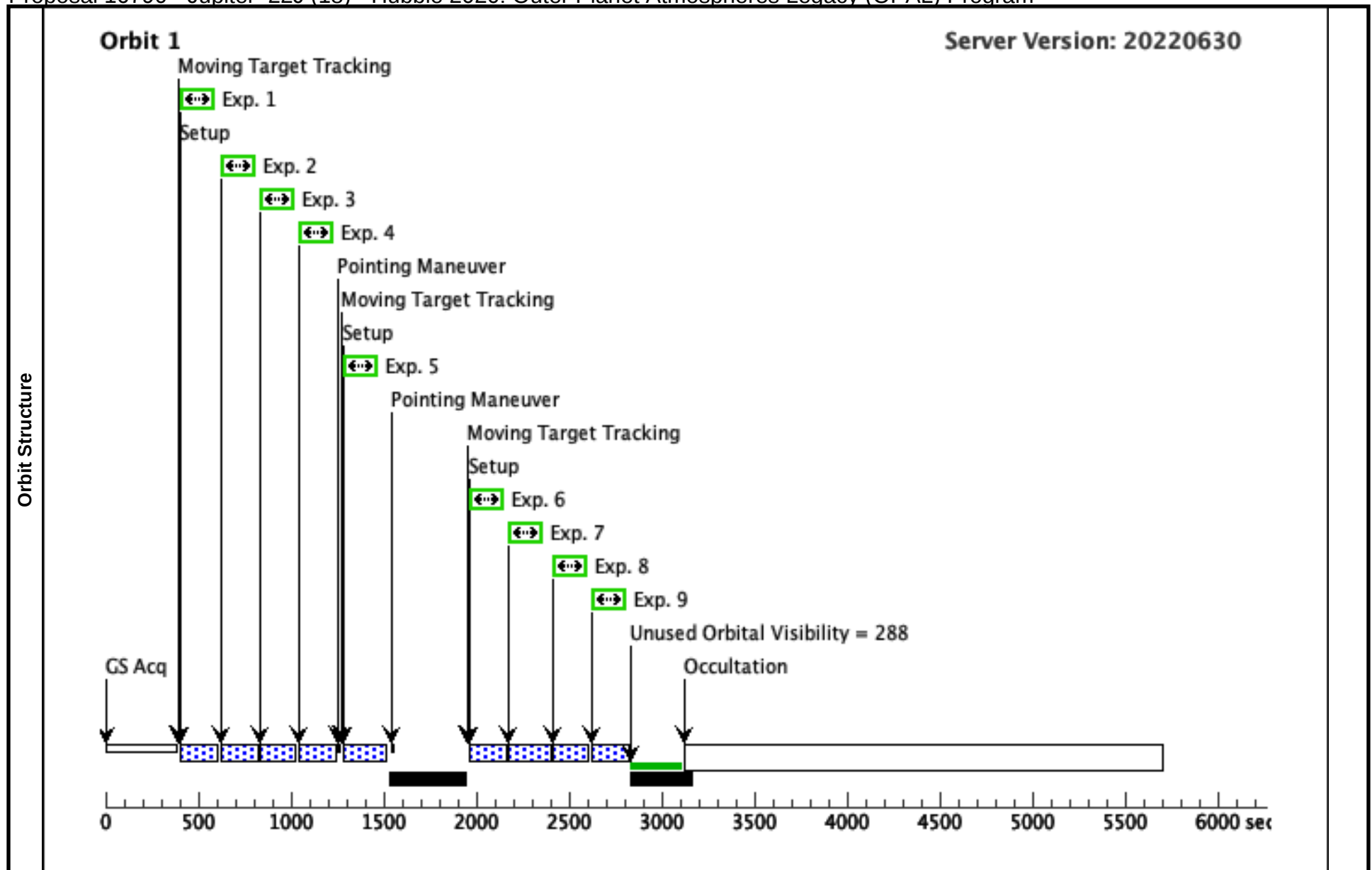
Proposal 16790 - Jupiter 22I (17) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22I (17), completed										Wed Dec 21 00:01:32 GMT 2022		
	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.													
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: 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_22I (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_22I (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_22I (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_22I (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_22I (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_22I (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_22I (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_22I (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_22I (17)	4 Secs (4 Secs) [==>]	[1]			



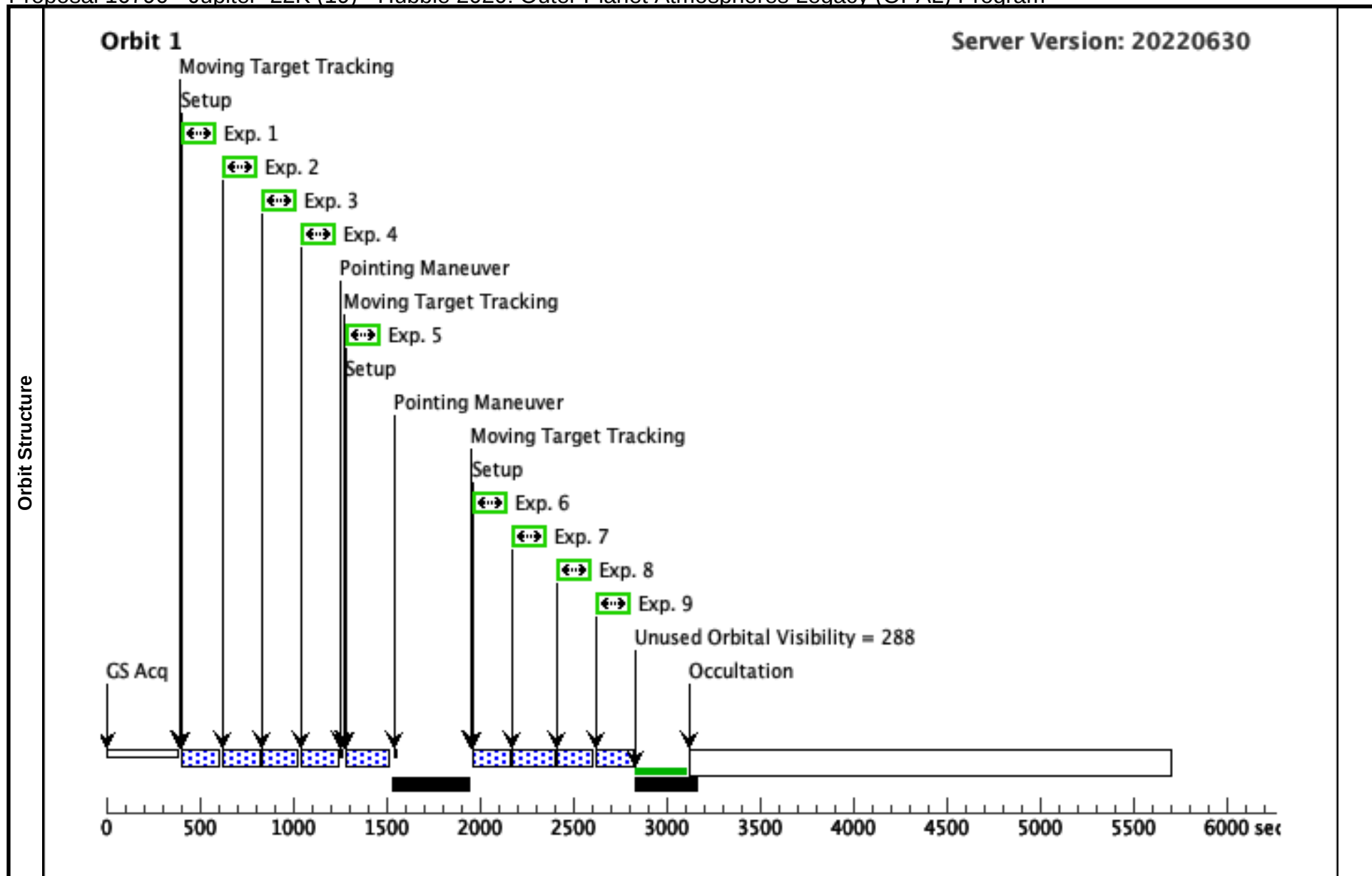
Proposal 16790 - Jupiter 22J (18) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22J (18), completed										Wed Dec 21 00:01:33 GMT 2022		
	Diagnostic Status: Warning												
Scientific Instruments: WFC3/UVIS													
Special Requirements: AFTER 17 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-qyro mode may be necessary as this is a moving target.													
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												
	(F631N (18.009)) 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: 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-In t in Jupiter_22J (18)	4 Secs (4 Secs) [==>]	[1]			
	2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22J (18)	3 Secs (3 Secs) [==>]	[1]			
	3	F395N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22J (18)	10 Secs (10 Secs) [==>]	[1]			
	4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-In t in Jupiter_22J (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 1-9 Non-In t in Jupiter_22J (18)	45 Secs (45 Secs) [==>]	[1]			
	6	F658N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F658N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22J (18)	8 Secs (8 Secs) [==>]	[1]			
	7	F275W	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22J (18)	30 Secs (30 Secs) [==>]	[1]			
	8	F343N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-In t in Jupiter_22J (18)	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-In t in Jupiter_22J (18)	4 Secs (4 Secs) [==>]	[1]			



Proposal 16790 - Jupiter 22K (19) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22K (19), completed										Wed Dec 21 00:01:33 GMT 2022	
	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-qyro mode may be necessary as this is a moving target.												
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: 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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (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-In t in Jupiter_22K (19)	4 Secs (4 Secs) [==>]		[1]	

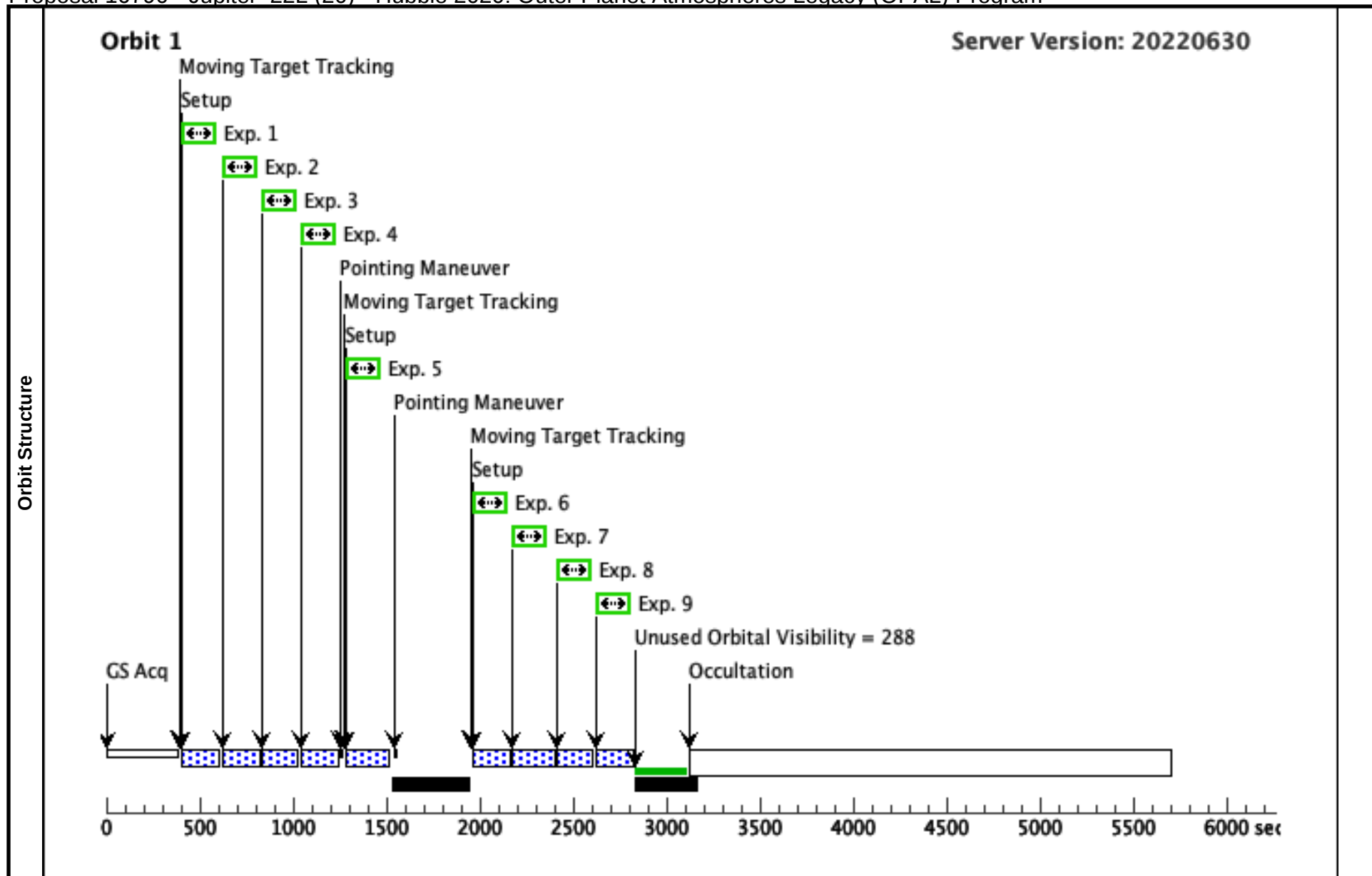


Proposal 16790 - Jupiter 22L (20) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22L (20), failed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 19 BY .9 Orbits TO 1.1 Orbits; VISIBILITY INTERVAL 52 M <i>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.</i> J						Wed Dec 21 00:01:33 GMT 2022
	(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 (F631N (20.009)) 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
<i>Comments: Description=Global Jupiter maps</i>							

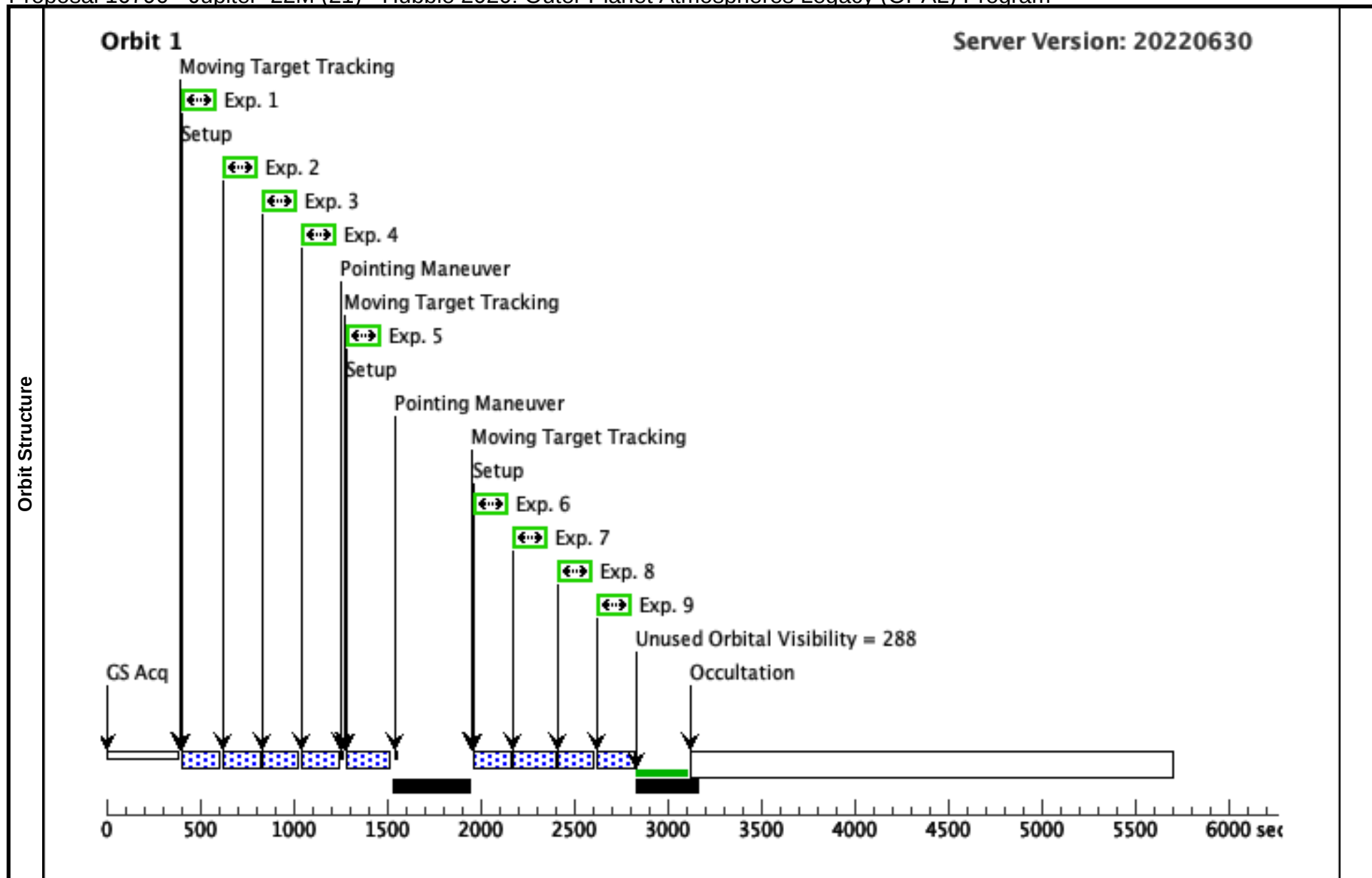
Proposal 16790 - Jupiter 22L (20) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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_22L (20)	4 Secs (4 Secs) [==>]	[1]
	2	F502N	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F502N	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_22L (20)	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_22L (20)	10 Secs (10 Secs) [==>]	[1]
	4	F467M	(1) JUPITER-MAPS	WFC3/UVIS, ACCUM, UVIS1-2K2A-SUB	F467M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Jupiter_22L (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 1-9 Non-Int in Jupiter_22L (20)	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_22L (20)	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_22L (20)	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_22L (20)	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_22L (20)	4 Secs (4 Secs) [==>]	[1]



Proposal 16790 - Jupiter 22M (21) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Jupiter_22M (21), failed										Wed Dec 21 00:01:33 GMT 2022	
	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.												
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: 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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (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-In t in Jupiter_22M (21)	4 Secs (4 Secs) [==>]		[1]	



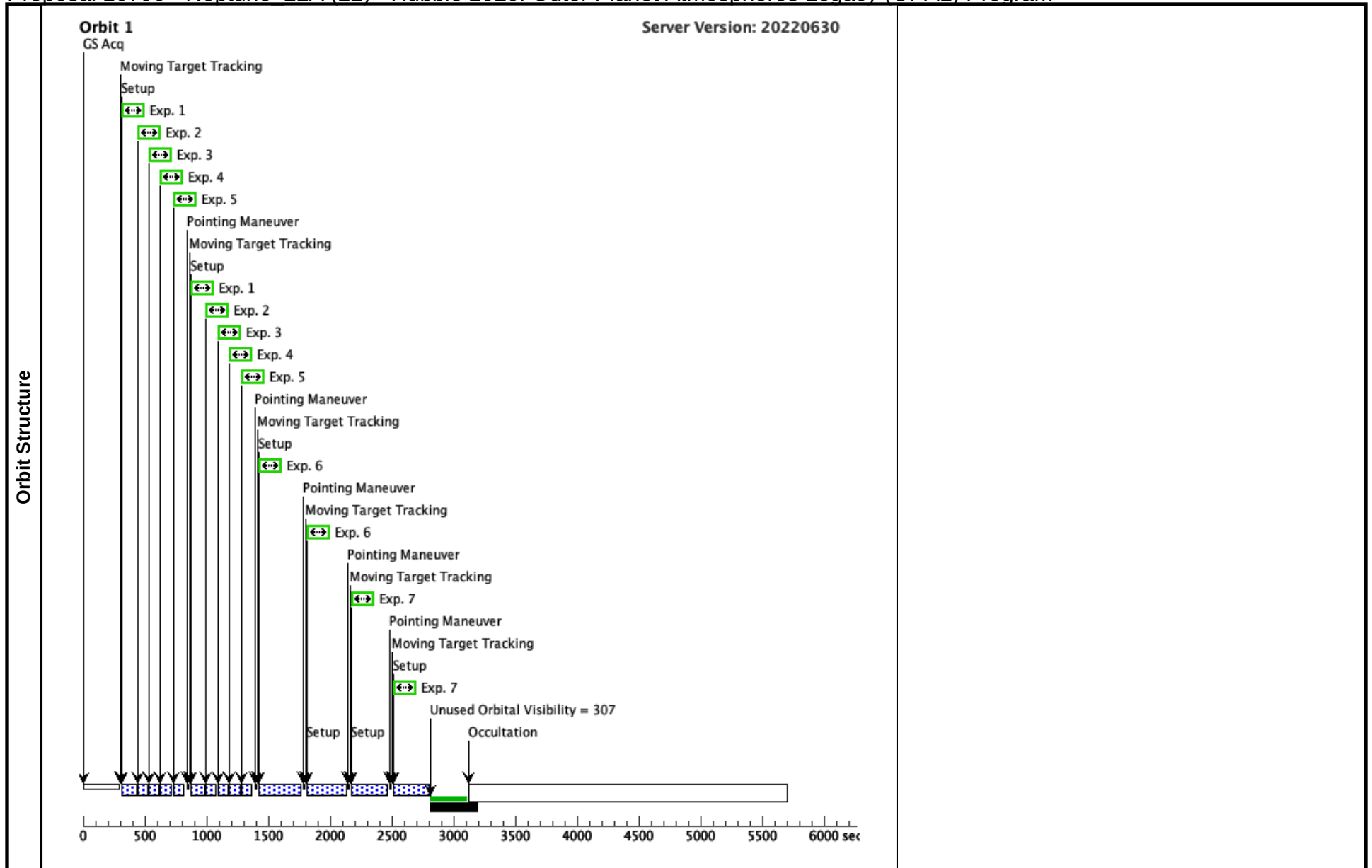
Proposal 16790 - Neptune 22A (22) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Wed Dec 21 00:01:33 GMT 2022

Visit	Proposal 16790, Neptune_22A (22), completed			Wed Dec 21 00:01:33 GMT 2022
	Diagnostic Status: Warning			
	Scientific Instruments: WFC3/UVIS			
	Special Requirements: ORIENT 5D TO 5 D; BETWEEN 17-AUG-2022:00:00:00 AND 16-OCT-2022:00:00:00; VISIBILITY INTERVAL 52 M			
Diagnostics	Comments: Neptune Opposition (2022-SEP-16) +/- 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.			
Patterns	(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			
Solar System Targets	(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			
Patterns	(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.			
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Proposal 16790 - Neptune 22A (22) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	GS ACQ SCENARIO ONEB1BE	Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22A (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		Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22A (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		Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22A (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		Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22A (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		Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22A (22) (2)	20 Secs (40 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	6	FQ727N_quad	(4) NEPTUNE-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22A (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	Sequence 1-7 Non-Int in Neptune_22A (22) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22A (22) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]

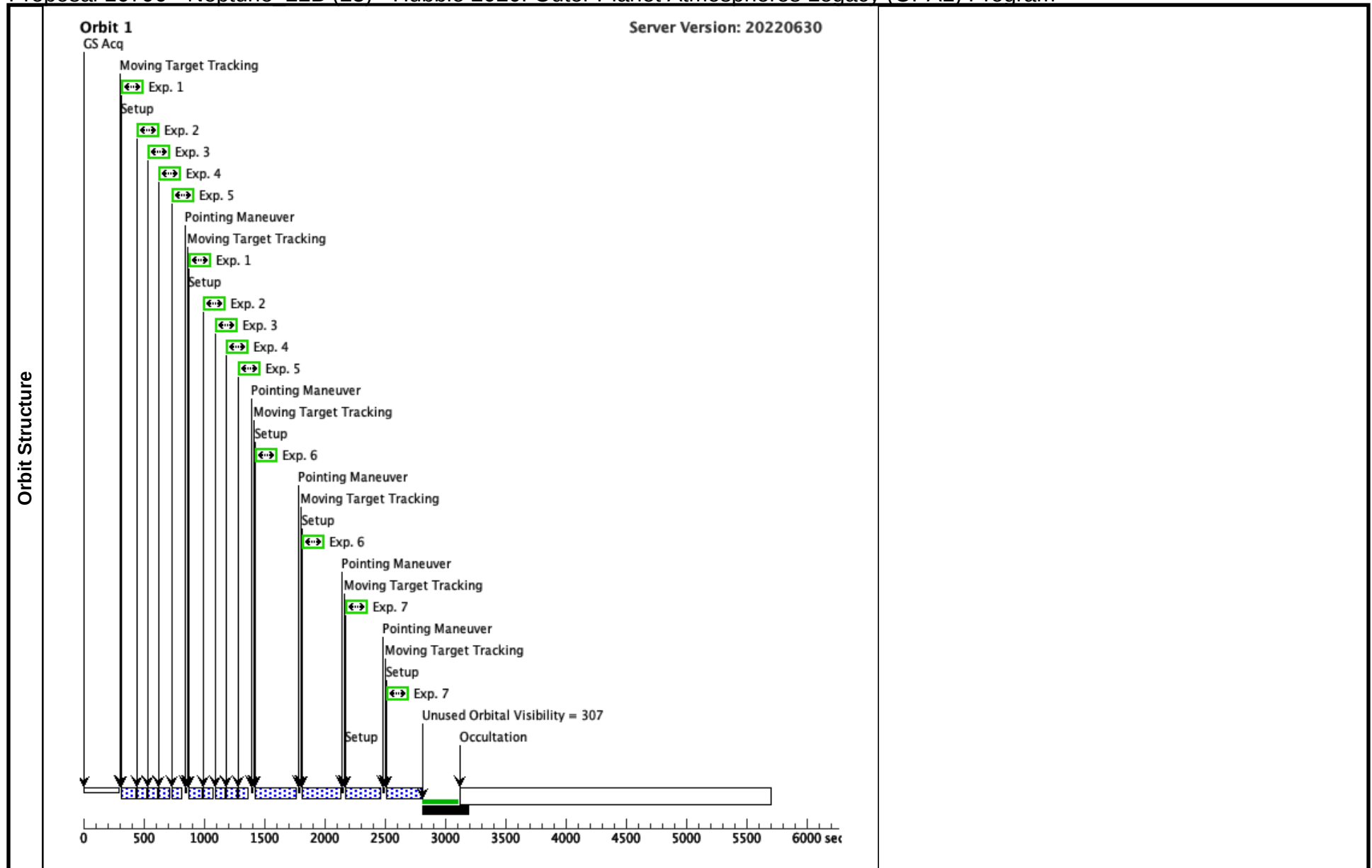


Proposal 16790 - Neptune 22B (23) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Neptune_22B (23), completed Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 22 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M <i>Comments: 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.</i>			
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)
Patterns	(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
	(4)	NEPTUNE-MAPS	STD=NEPTUNE	
Solar System Targets	Comments: Description=Global Neptune Maps			
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Proposal 16790 - Neptune 22B (23) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	GS ACQ SCENARIO ONEB1BE	Sequence 1-7 Non-Int in Neptune_22B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22B (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_22B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22B (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_22B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22B (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_22B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22B (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_22B (23) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22B (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_22B (23) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22B (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_22B (23) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22B (23) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]

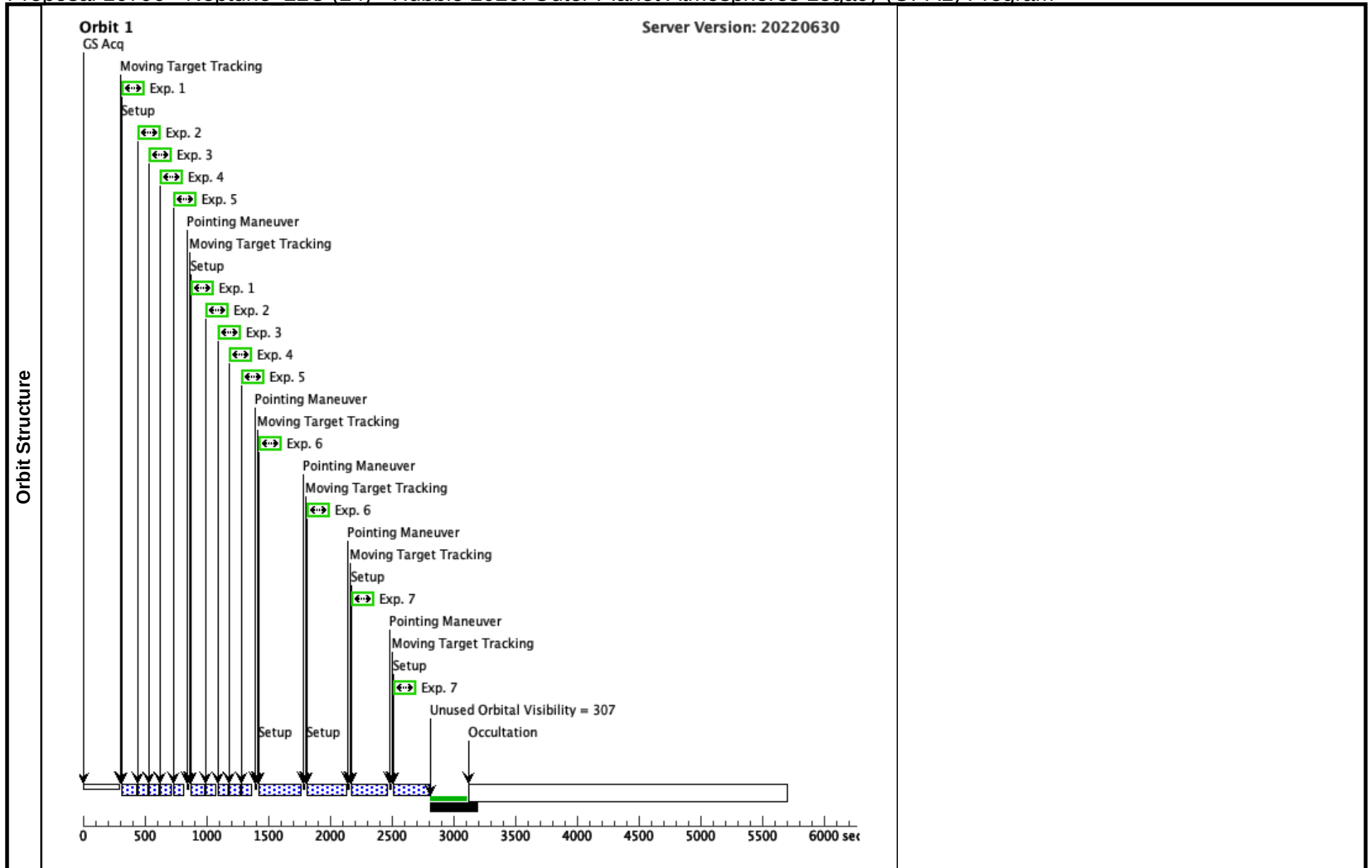


Proposal 16790 - Neptune 22C (24) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Proposal 16790, Neptune_22C (24), completed				Wed Dec 21 00:01:33 GMT 2022	
Visit	Diagnostic Status: Warning				
	Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 10D TO 10 D; AFTER 23 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M <i>Comments: 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.</i>				
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				
Patterns	(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				
Solar System Targets	(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.				

Proposal 16790 - Neptune 22C (24) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	GS ACQ SCENARIO ONEB1BE	Sequence 1-7 Non-Int in Neptune_22C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22C (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_22C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22C (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_22C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22C (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_22C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22C (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_22C (24) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22C (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_22C (24) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22C (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_22C (24) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22C (24) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]



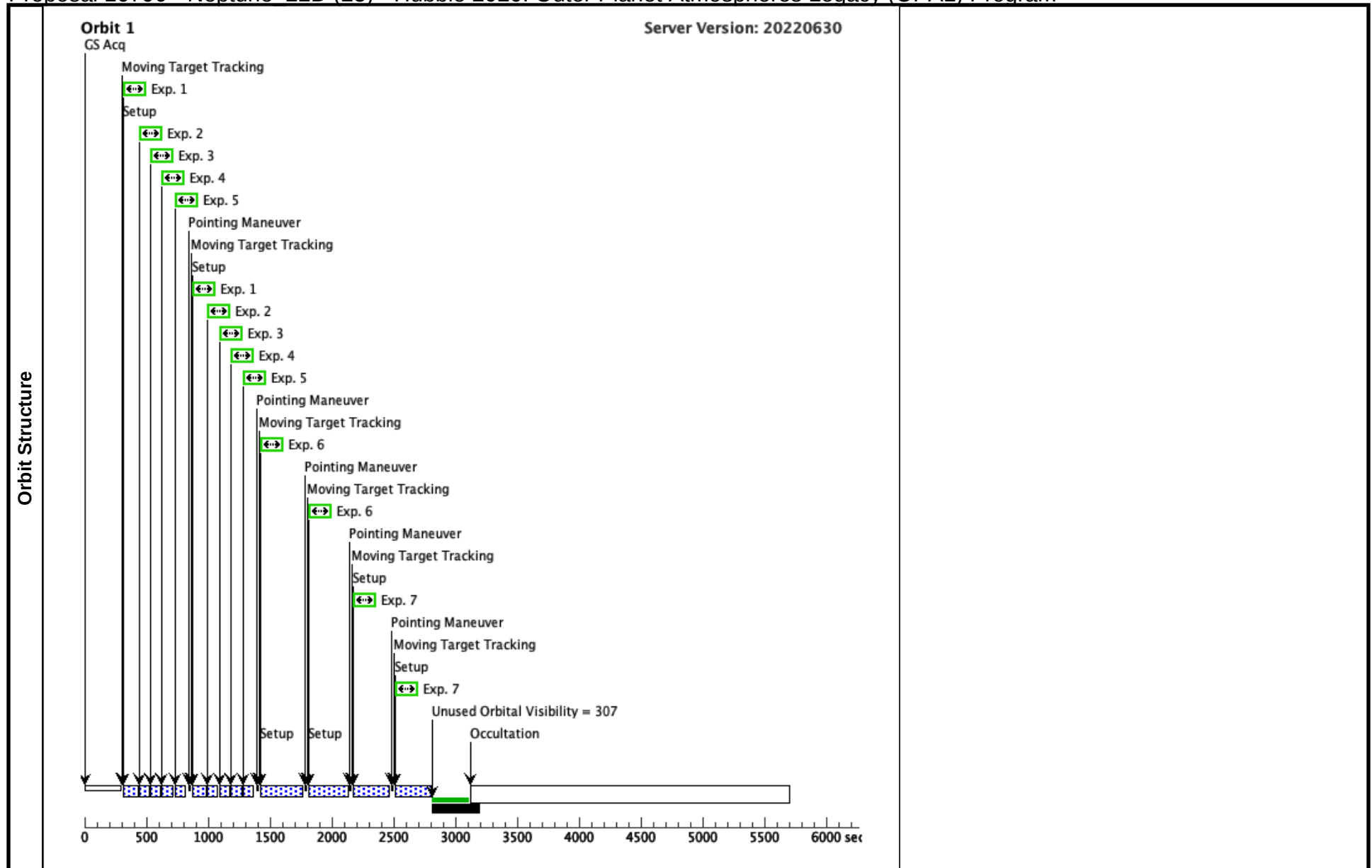
Proposal 16790 - Neptune 22D (25) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Wed Dec 21 00:01:33 GMT 2022

Proposal 16790, Neptune_22D (25), completed				Wed Dec 21 00:01:33 GMT 2022	
Visit	Diagnostic Status: Warning				
	Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 24 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M <i>Comments: 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.</i>				
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	
	(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	
	(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	
Solar System Targets	#	Name	Level 1	Level 2	Level 3
	(4)	NEPTUNE-MAPS	STD=NEPTUNE	Window	
Ephem Center					
Comments: Description=Global Neptune Maps					

Proposal 16790 - Neptune 22D (25) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

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	GS ACQ SCENARIO ONEB1BE	Sequence 1-7 Non-Int in Neptune_22D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22D (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_22D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22D (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_22D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22D (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_22D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22D (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_22D (25) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22D (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_22D (25) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22D (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_22D (25) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22D (25) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]

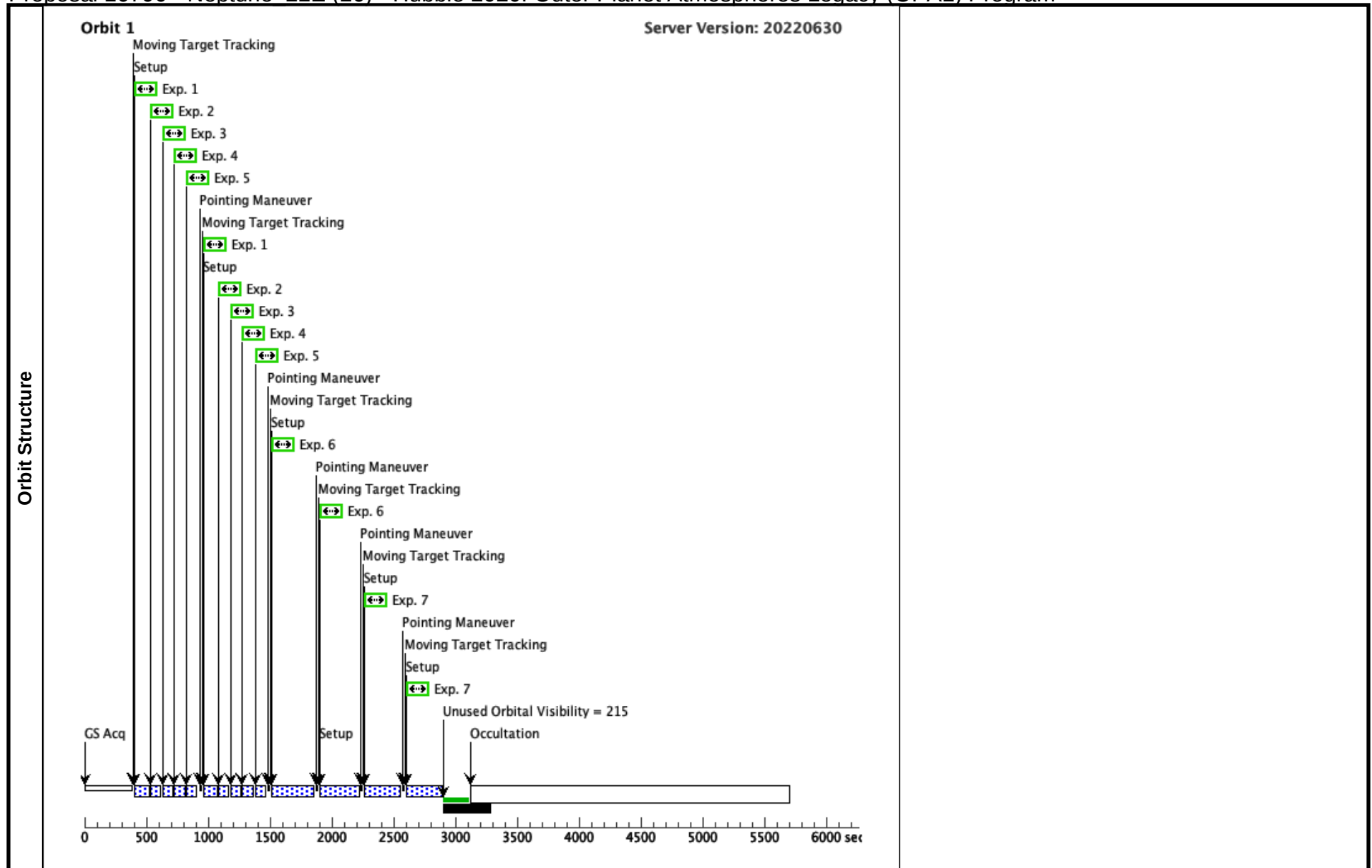


Proposal 16790 - Neptune 22E (26) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Neptune_22E (26), completed Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 25 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M <i>Comments: 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.</i>			
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)
Patterns	(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
	(4)	NEPTUNE-MAPS	STD=NEPTUNE	
Solar System Targets	Comments: Description=Global Neptune Maps			
Solar System Targets				
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Proposal 16790 - Neptune 22E (26) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F845M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22E (26) (2)	40 Secs (80 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22E (26) (2)	15 Secs (30 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22E (26) (2)	6 Secs (12 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22E (26) (2)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22E (26) (2)	20 Secs (40 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	6	FQ727N_quadD	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22E (26) (3)	150 Secs (300 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	7	FQ619N_quadA	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_22E (26) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22E (26) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]

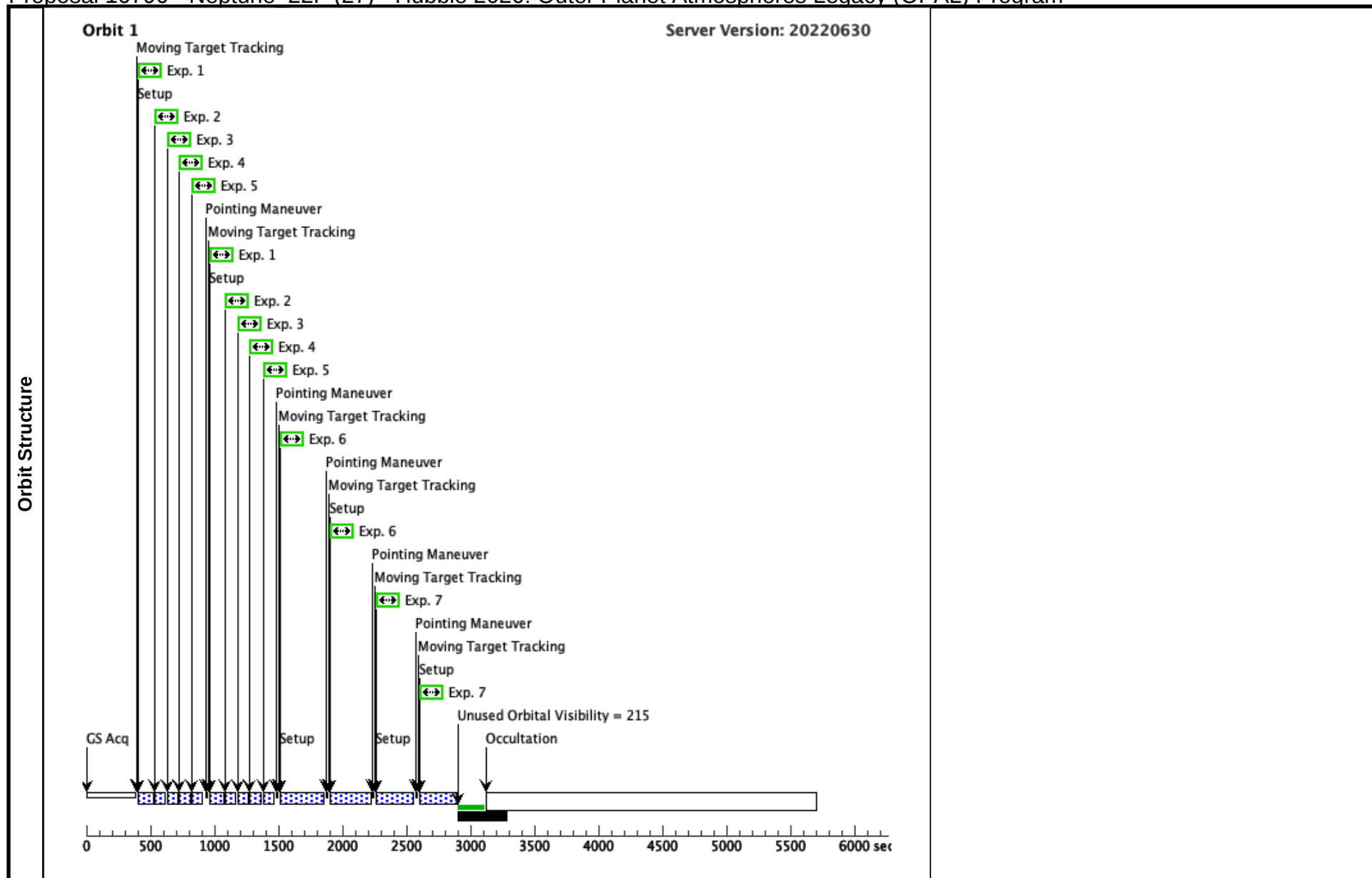


Proposal 16790 - Neptune 22F (27) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Neptune_22F (27), completed Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 26 BY 1.9 Orbits TO 3.1 Orbits; VISIBILITY INTERVAL 52 M <i>Comments: 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.</i>			
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)
Patterns	(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
	(4)	NEPTUNE-MAPS	STD=NEPTUNE	
Solar System Targets	Comments: Description=Global Neptune Maps			
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Proposal 16790 - Neptune 22F (27) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F845M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22F (27) (2)	40 Secs (80 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22F (27) (2)	15 Secs (30 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22F (27) (2)	6 Secs (12 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22F (27) (2)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22F (27) (2)	20 Secs (40 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	6	FQ727N_quadD	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22F (27) (3)	150 Secs (300 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	7	FQ619N_quadA	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_22F (27) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22F (27) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]

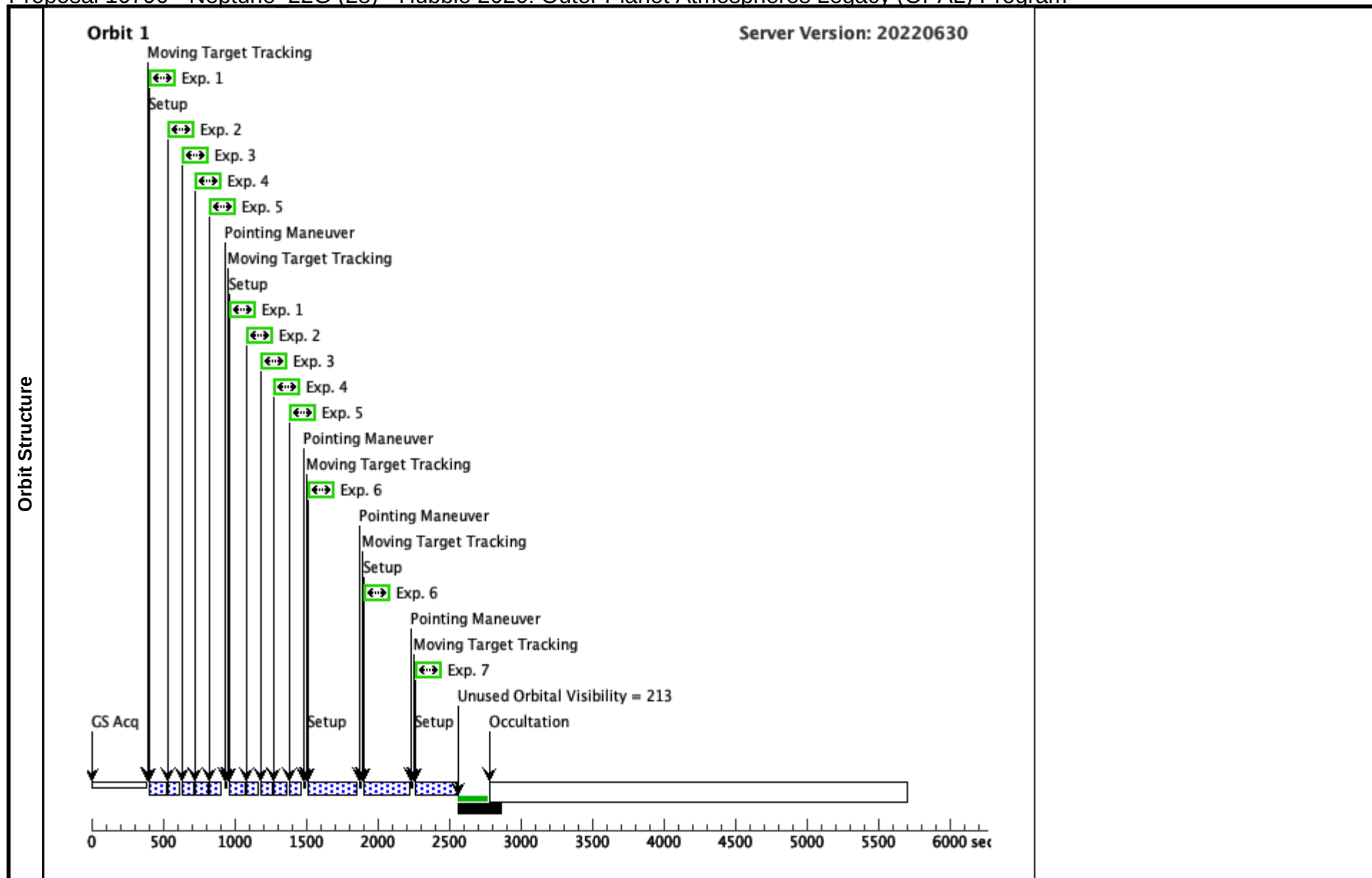


Proposal 16790 - Neptune 22G (28) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Neptune_22G (28), completed				Wed Dec 21 00:01:33 GMT 2022
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 27 BY 1.9 Orbits TO 3.1 Orbits <i>Comments: 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.</i>				
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)
Patterns	(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
	(4)	NEPTUNE-MAPS	STD=NEPTUNE		
Solar System Targets	Comments: Description=Global Neptune Maps				
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Proposal 16790 - Neptune 22G (28) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F845M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22G (28) (2)	40 Secs (80 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22G (28) (2)	15 Secs (30 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22G (28) (2)	6 Secs (12 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22G (28) (2)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22G (28) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22G (28) (2)	20 Secs (40 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	6	FQ727N_quadD	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_22G (28) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22G (28) (3)	150 Secs (300 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	7	FQ619N_quadA	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_22G (28)	120 Secs (120 Secs) [==>]	[1]

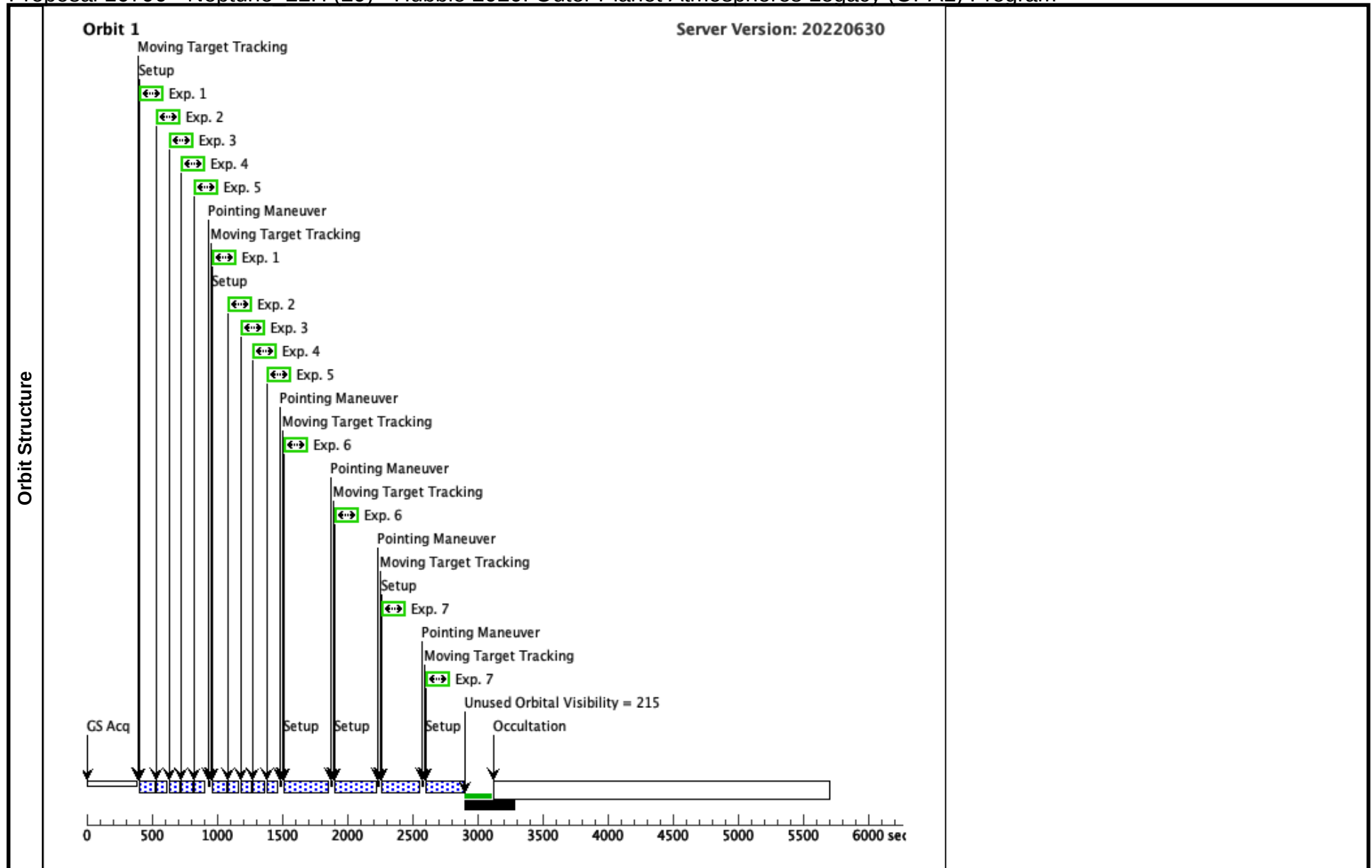


Proposal 16790 - Neptune 22H (29) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Neptune_22H (29), completed			Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 22 BY 17.9 Orbits TO 20.1 Orbits; VISIBILITY INTERVAL 52 M						
	Comments: 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						

Proposal 16790 - Neptune 22H (29) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F845M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F845M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22H (29) (2)	40 Secs (80 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	2	F467M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F467M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22H (29) (2)	15 Secs (30 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	3	F547M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F547M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22H (29) (2)	6 Secs (12 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	4	F657N	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F657N	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22H (29) (2)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F763M	CR-SPLIT=NO		Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 2, Exps 1-5 in Sequence 1-7 Non-Int in Neptune_22H (29) (2)	20 Secs (40 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	6	FQ727N_quadD	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -25,+28	Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 3, Exps 6-6 in Sequence 1-7 Non-Int in Neptune_22H (29) (3)	150 Secs (300 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	7	FQ619N_quadA	(4) NEPTUNE-MAP S	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ619N	CR-SPLIT=NO	POS TARG +20,-24	Sequence 1-7 Non-Int in Neptune_22H (29) Pattern 2, Exps 7-7 in Sequence 1-7 Non-Int in Neptune_22H (29) (2)	120 Secs (240 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]

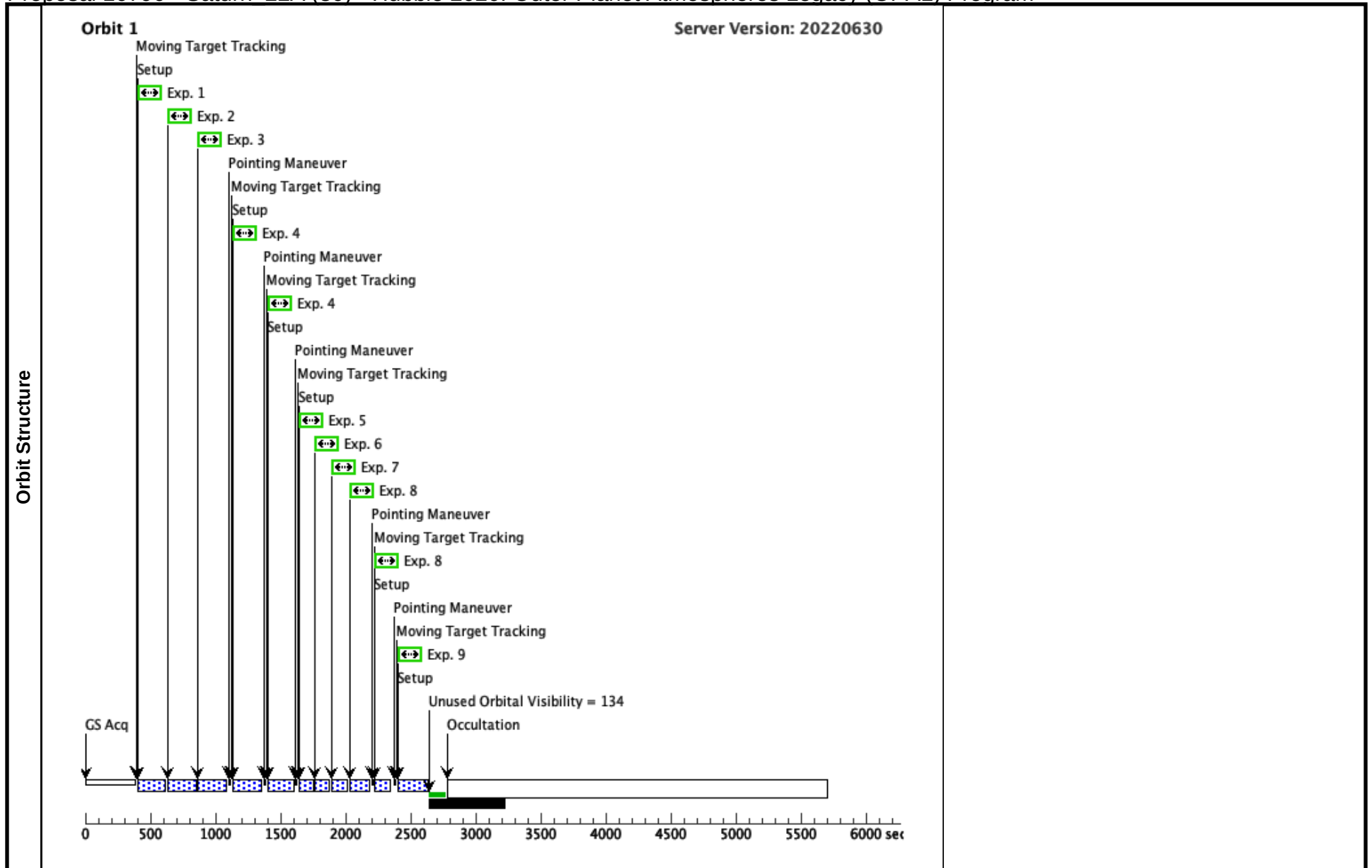


Proposal 16790 - Saturn 22A (30) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22A (30), completed			Wed Dec 21 00:01:33 GMT 2022				
	Diagnostic Status: Warning							
	Scientific Instruments: WFC3/UVIS							
	Special Requirements: BETWEEN 27-AUG-2022 AND 26-OCT-2022							
	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.							
Diagnostics	Saturn opposition (2022-SEP-26) +/- 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							
	(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							
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- EARTH 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
		Comments: Description=Global Saturn Maps						

Proposal 16790 - Saturn 22A (30) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22A (30)	15 Secs (15 Secs) [==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22A (30)	23 Secs (23 Secs) [==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22A (30)	40 Secs (40 Secs) [==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22A (30) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22A (30) (3)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22A (30)	2 Secs (2 Secs) [==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22A (30)	7 Secs (7 Secs) [==>]	[1]
	7	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22A (30)	20 Secs (20 Secs) [==>]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22A (30) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22A (30) (2)	45 Secs (90 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22A (30)	45 Secs (45 Secs) [==>]	[1]

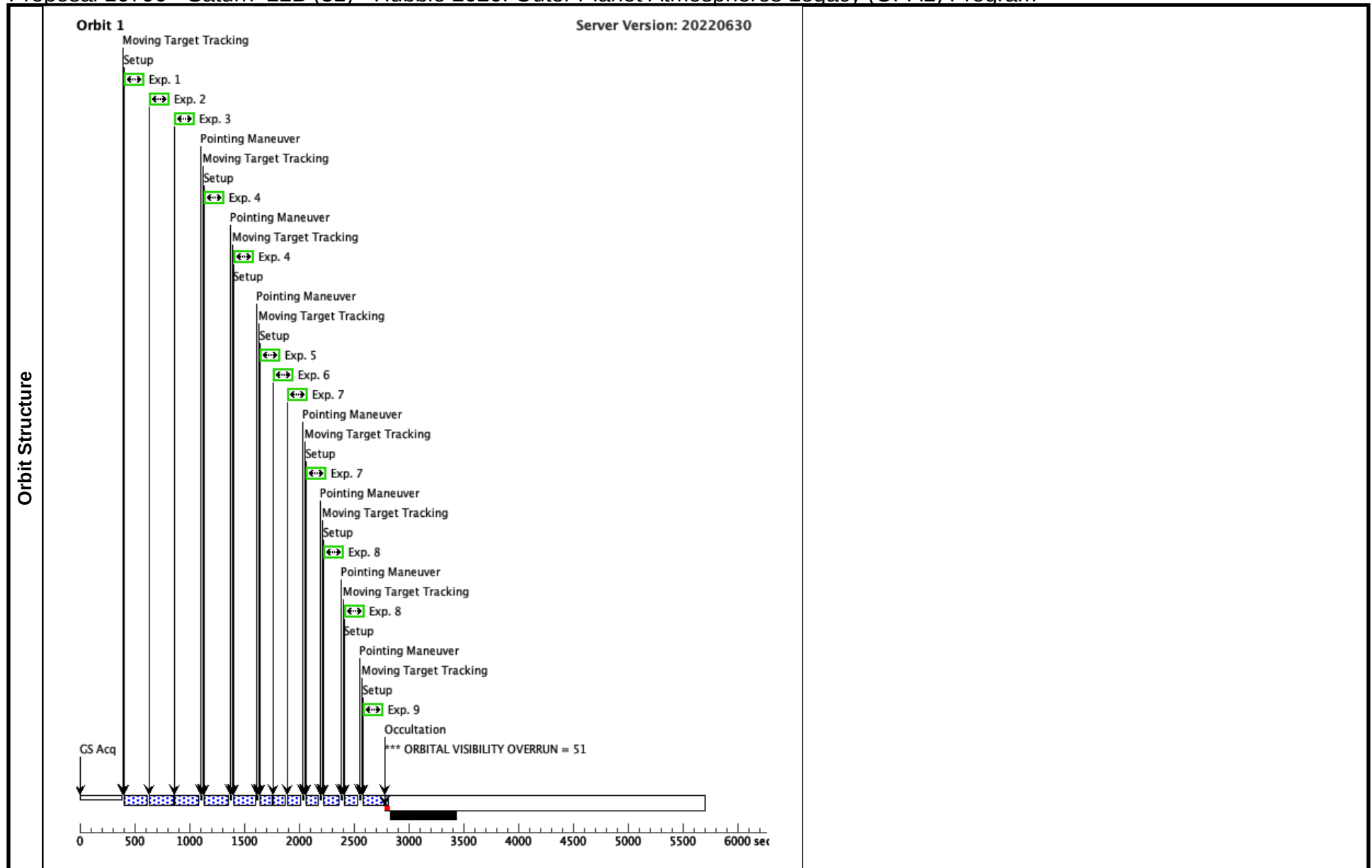


Proposal 16790 - Saturn 22B (31) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22B (31), completed			Wed Dec 21 00:01:33 GMT 2022			
	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.							
OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889							
If orbital visibility requires a cut, remove F467M first							
Diagnostics	(Saturn_22B (31)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
	(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						
	(F225W (31.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (31.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (31.009)) 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 Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=			(7), (8)		
	(3)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.725 Line Spacing=			(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
Comments: Description=Global Saturn Maps							

Proposal 16790 - Saturn 22B (31) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22B (31)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22B (31)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22B (31)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22B (31) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22B (31) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22B (31)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22B (31)	7 Secs (7 Secs)	[==>]	[1]
	7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22B (31) Pattern 2, Exps 7-7 in Sequence 1-9 Non-Int in Saturn_22B (31) (2)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22B (31) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22B (31) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22B (31)	45 Secs (45 Secs)	[==>]	[1]



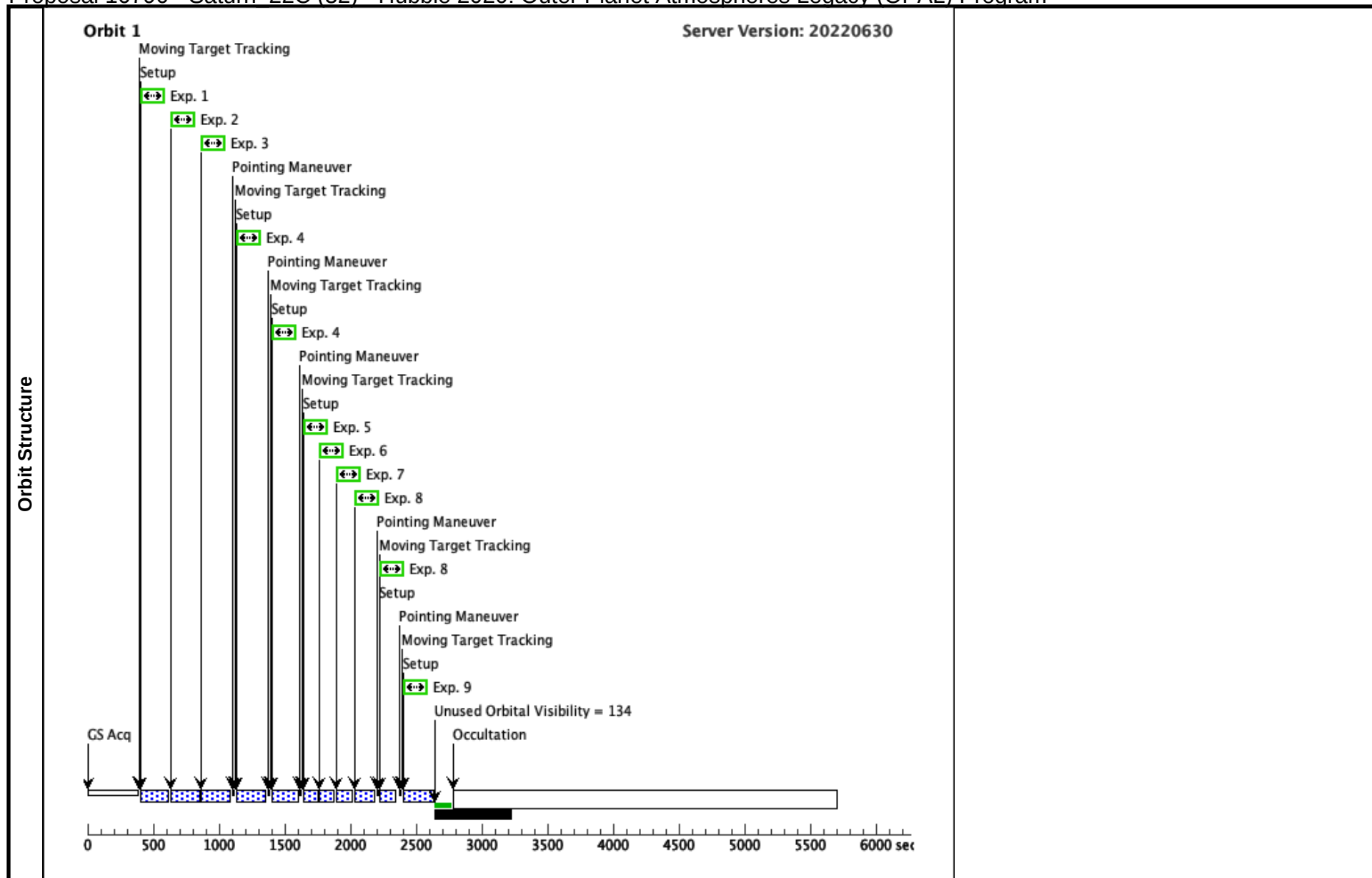
Proposal 16790 - Saturn 22C (32) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Wed Dec 21 00:01:33 GMT 2022

Visit	Proposal 16790, Saturn_22C (32), completed			Wed Dec 21 00:01:33 GMT 2022				
	Diagnostic Status: Warning							
	Scientific Instruments: WFC3/UVIS							
	Special Requirements: AFTER 31 BY 0.9 Orbits TO 1.1 Orbits							
	<i>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.</i>							
Diagnostics	OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889							
	If orbital visibility requires a cut, remove F467M first							
	(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							
	(F343N (32.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
Patterns	(F225W (32.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ889_quadA (32.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ889_quadA (32.009)) 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.							
	#	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
		<i>Comments: Description=Global Saturn Maps</i>						

Proposal 16790 - Saturn 22C (32) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22C (32)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22C (32)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22C (32)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22C (32) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22C (32) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22C (32)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22C (32)	7 Secs (7 Secs)	[==>]	[1]
	7	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22C (32)	20 Secs (20 Secs)	[==>]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22C (32) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22C (32) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22C (32)	45 Secs (45 Secs)	[==>]	[1]

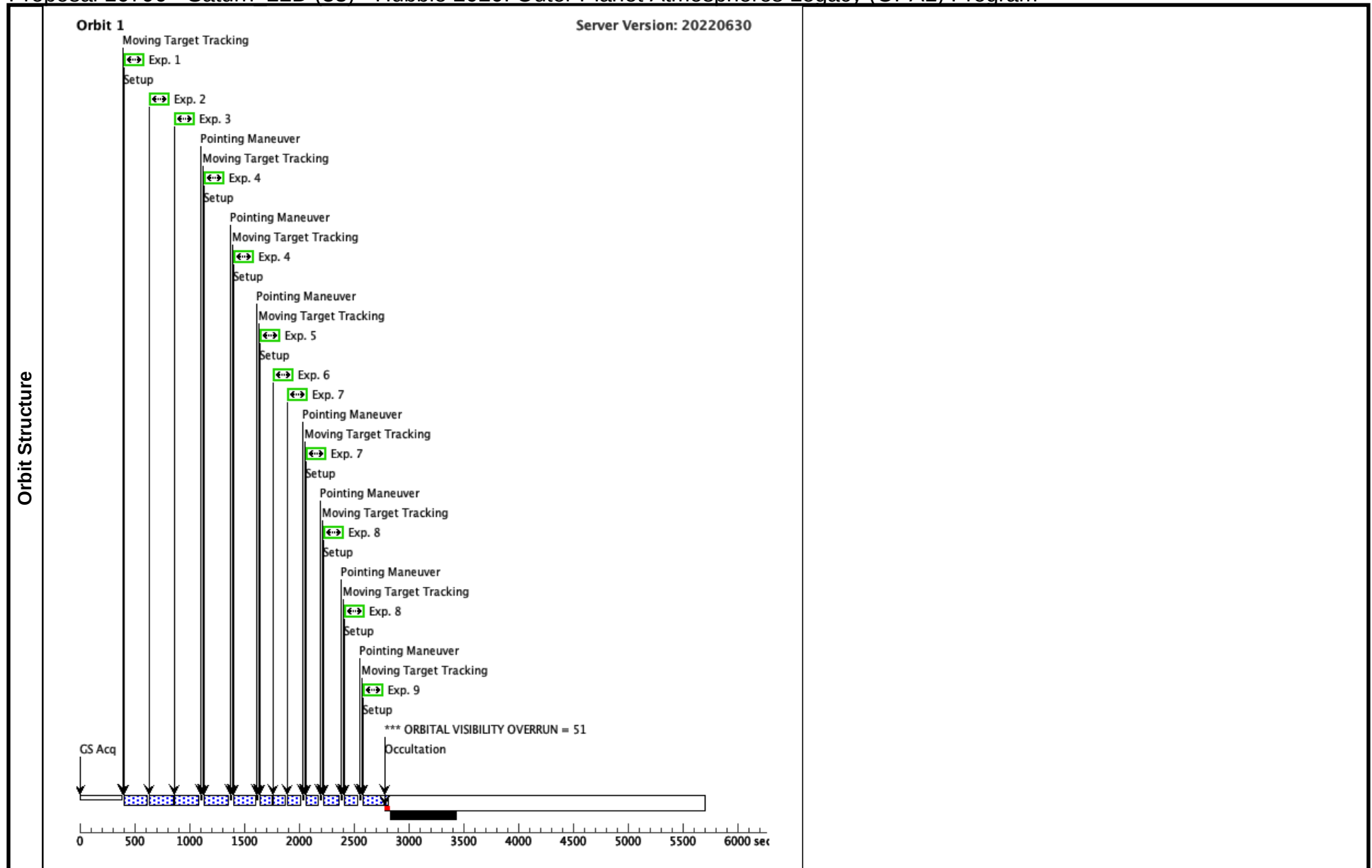


Proposal 16790 - Saturn 22D (33) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22D (33), completed						Wed Dec 21 00:01:33 GMT 2022	
	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.								
OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889								
If orbital visibility requires a cut, remove F467M first								
Diagnostics	(Saturn_22D (33)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN							
	(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							
	(F225W (33.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ889_quadA (33.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser							
	(FQ889_quadA (33.009)) 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		Coordinate Frame=POS-TARG				(7), (8)
	Purpose=DITHER		Pattern Orientation=46.84					
Number Of Points=2		Angle Between Sides=						
Point Spacing=0.145		Center Pattern=false						
Line Spacing=								
(3)	Pattern Type=WFC3-UVIS-DITHER-LINE		Coordinate Frame=POS-TARG				(4)	
Purpose=DITHER		Pattern Orientation=46.84						
Number Of Points=2		Angle Between Sides=						
Point Spacing=0.725		Center Pattern=false						
Line Spacing=								
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: Description=Global Saturn Maps							

Proposal 16790 - Saturn 22D (33) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22D (33)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22D (33)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22D (33)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22D (33) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22D (33) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22D (33)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22D (33)	7 Secs (7 Secs)	[==>]	[1]
	7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22D (33) Pattern 2, Exps 7-7 in Sequence 1-9 Non-Int in Saturn_22D (33) (2)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22D (33) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22D (33) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22D (33)	45 Secs (45 Secs)	[==>]	[1]

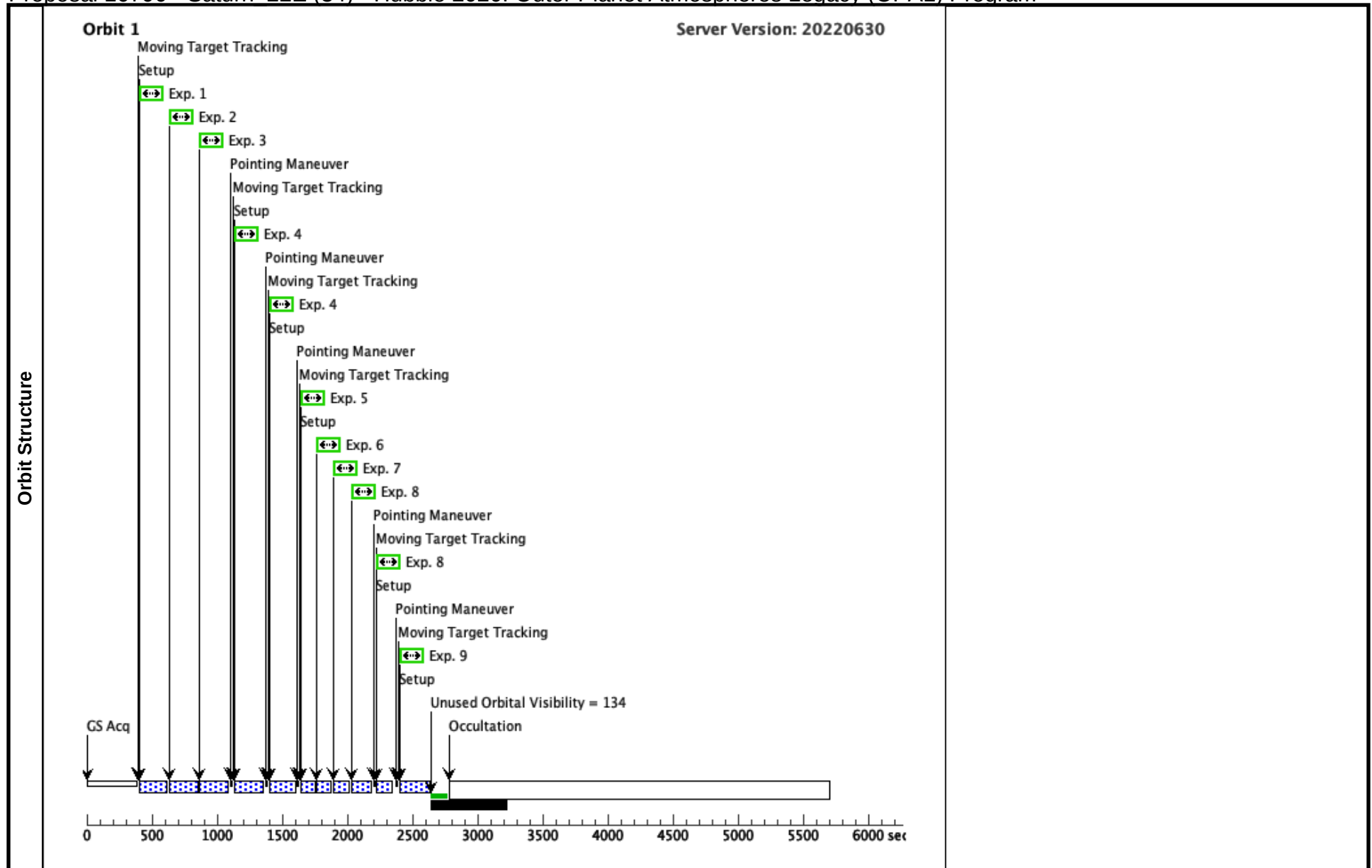


Proposal 16790 - Saturn 22E (34) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22E (34), completed			Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 33 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.							
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						
	(F343N (34.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F225W (34.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (34.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (34.009)) 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: Description=Global Saturn Maps							

Proposal 16790 - Saturn 22E (34) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22E (34)	15 Secs (15 Secs) [==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22E (34)	23 Secs (23 Secs) [==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22E (34)	40 Secs (40 Secs) [==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22E (34) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22E (34) (3)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22E (34)	2 Secs (2 Secs) [==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22E (34)	7 Secs (7 Secs) [==>]	[1]
	7	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22E (34)	20 Secs (20 Secs) [==>]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22E (34) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22E (34) (2)	45 Secs (90 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22E (34)	45 Secs (45 Secs) [==>]	[1]

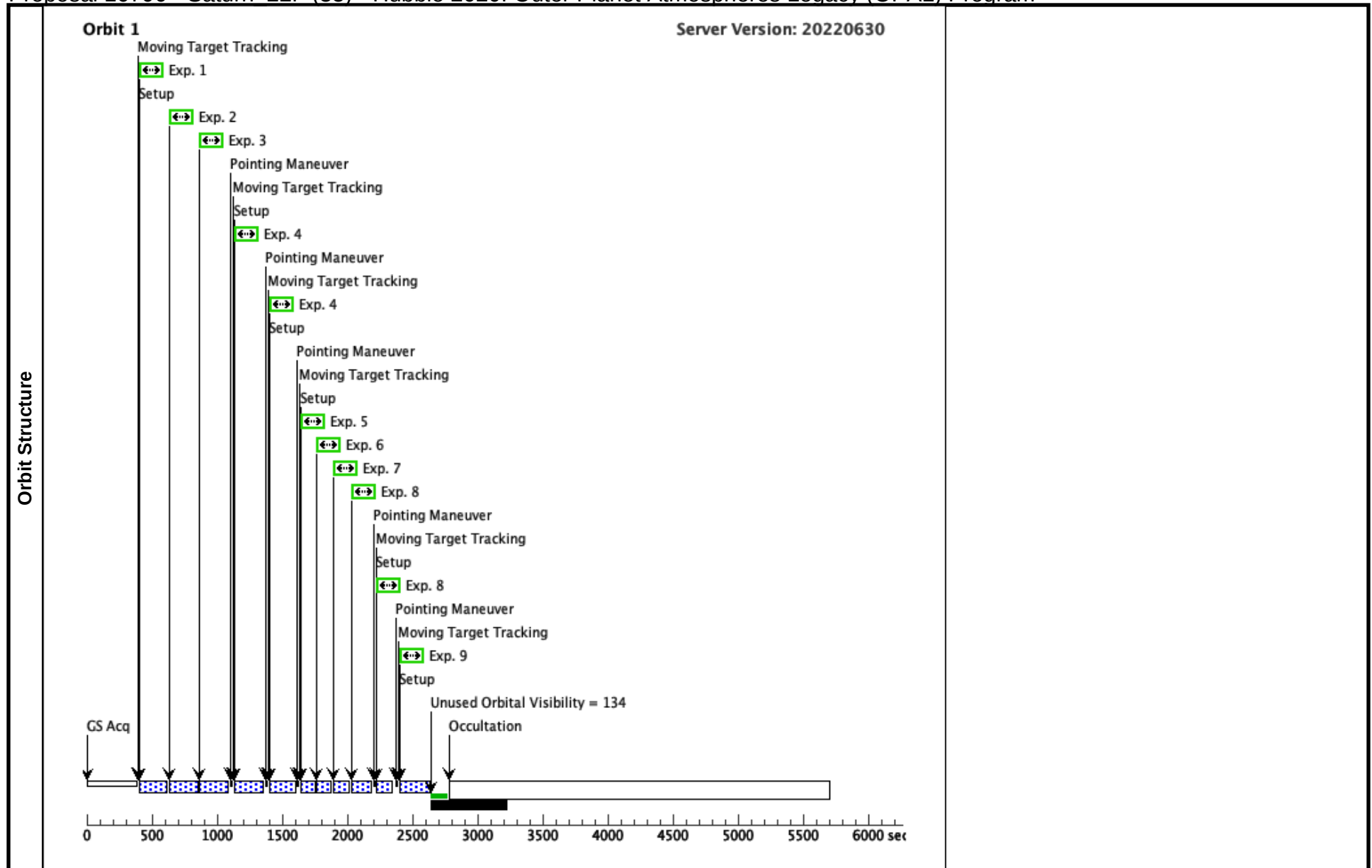


Proposal 16790 - Saturn 22F (35) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22F (35), completed Wed Dec 21 00:01:33 GMT 2022			
	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. 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 (F343N (35.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F225W (35.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (35.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (35.009)) 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)
Patterns	(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
	(2)	SATURN-MAPS	STD=SATURN	Level 3
	Window Ephem Center NOT ECL P PARTIAL OF SATURN- EARTH 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 Comments: Description=Global Saturn Maps			

Proposal 16790 - Saturn 22F (35) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22F (35)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22F (35)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22F (35)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22F (35) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22F (35) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22F (35)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22F (35)	7 Secs (7 Secs)	[==>]	[1]
	7	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22F (35)	20 Secs (20 Secs)	[==>]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22F (35) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22F (35) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22F (35)	45 Secs (45 Secs)	[==>]	[1]

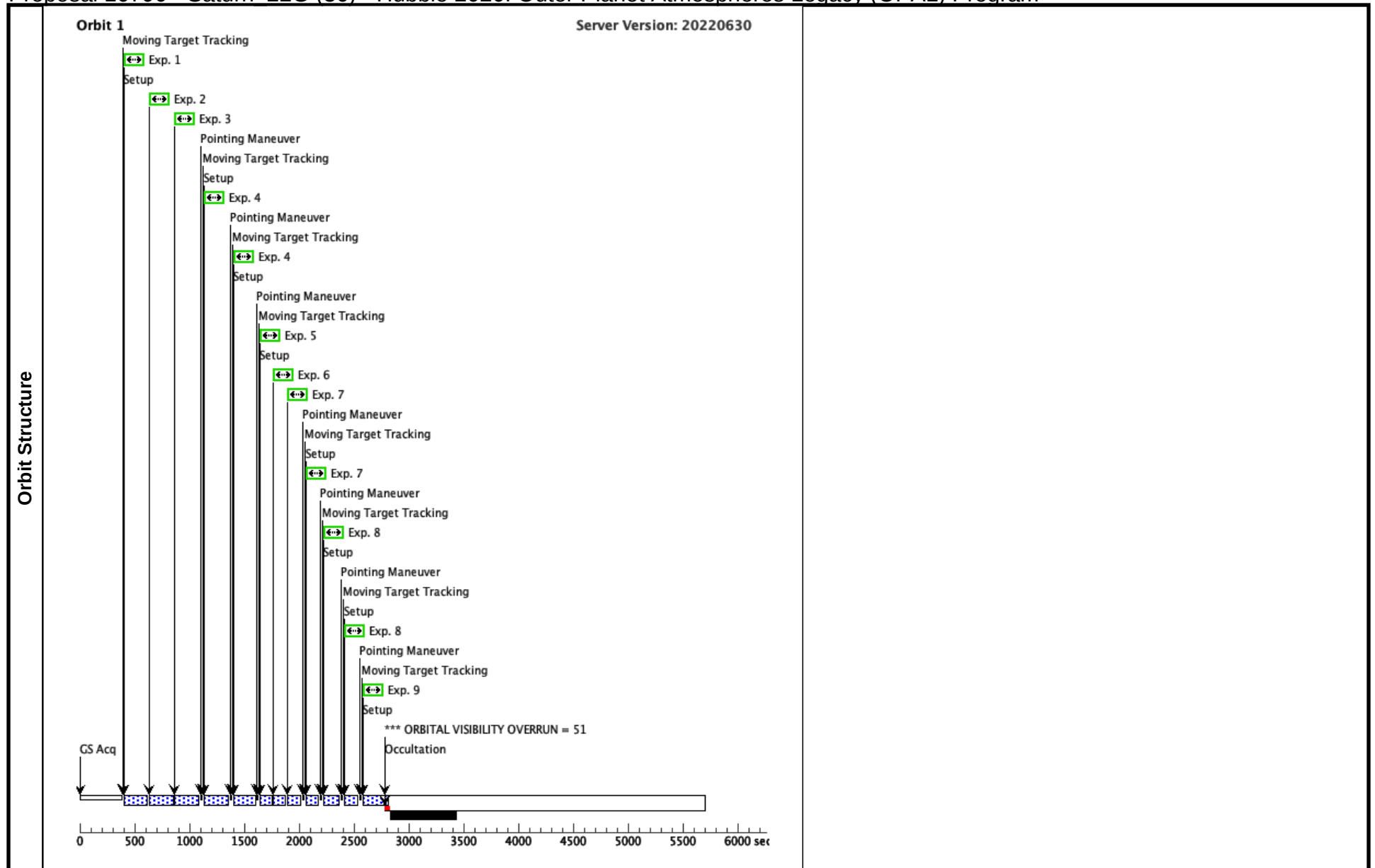


Proposal 16790 - Saturn 22G (36) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22G (36), completed			Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 35 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.							
OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889							
If orbital visibility requires a cut, remove F467M first							
Diagnostics	(Saturn_22G (36)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
	(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						
	(F225W (36.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (36.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (36.009)) 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), (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- EARTH 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
	Comments: Description=Global Saturn Maps						

Proposal 16790 - Saturn 22G (36) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22G (36)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22G (36)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22G (36)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22G (36) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22G (36) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22G (36)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22G (36)	7 Secs (7 Secs)	[==>]	[1]
	7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22G (36) Pattern 2, Exps 7-7 in Sequence 1-9 Non-Int in Saturn_22G (36) (2)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22G (36) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22G (36) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22G (36)	45 Secs (45 Secs)	[==>]	[1]

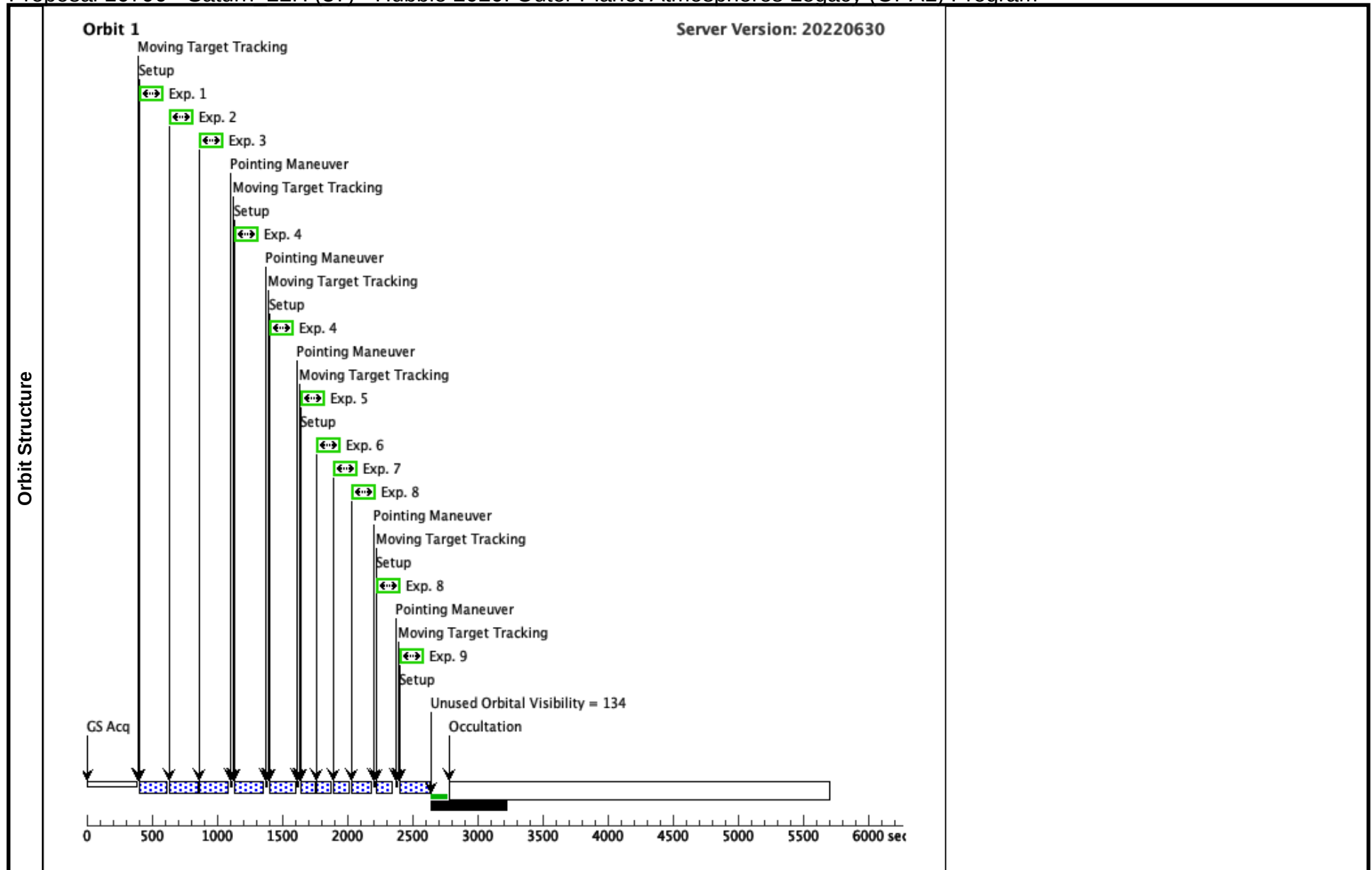


Proposal 16790 - Saturn 22H (37) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22H (37), completed Wed Dec 21 00:01:33 GMT 2022			
	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. 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 (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 (FQ889_quadA (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 (37.009)) 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)
Patterns	(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
	(2)	SATURN-MAPS	STD=SATURN	
	Comments: Description=Global Saturn Maps			NOT ECL P PARTIAL OF SATURN- EARTH 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

Proposal 16790 - Saturn 22H (37) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22H (37)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22H (37)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22H (37)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22H (37) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22H (37) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22H (37)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22H (37)	7 Secs (7 Secs)	[==>]	[1]
	7	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22H (37)	20 Secs (20 Secs)	[==>]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22H (37) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22H (37) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22H (37)	45 Secs (45 Secs)	[==>]	[1]

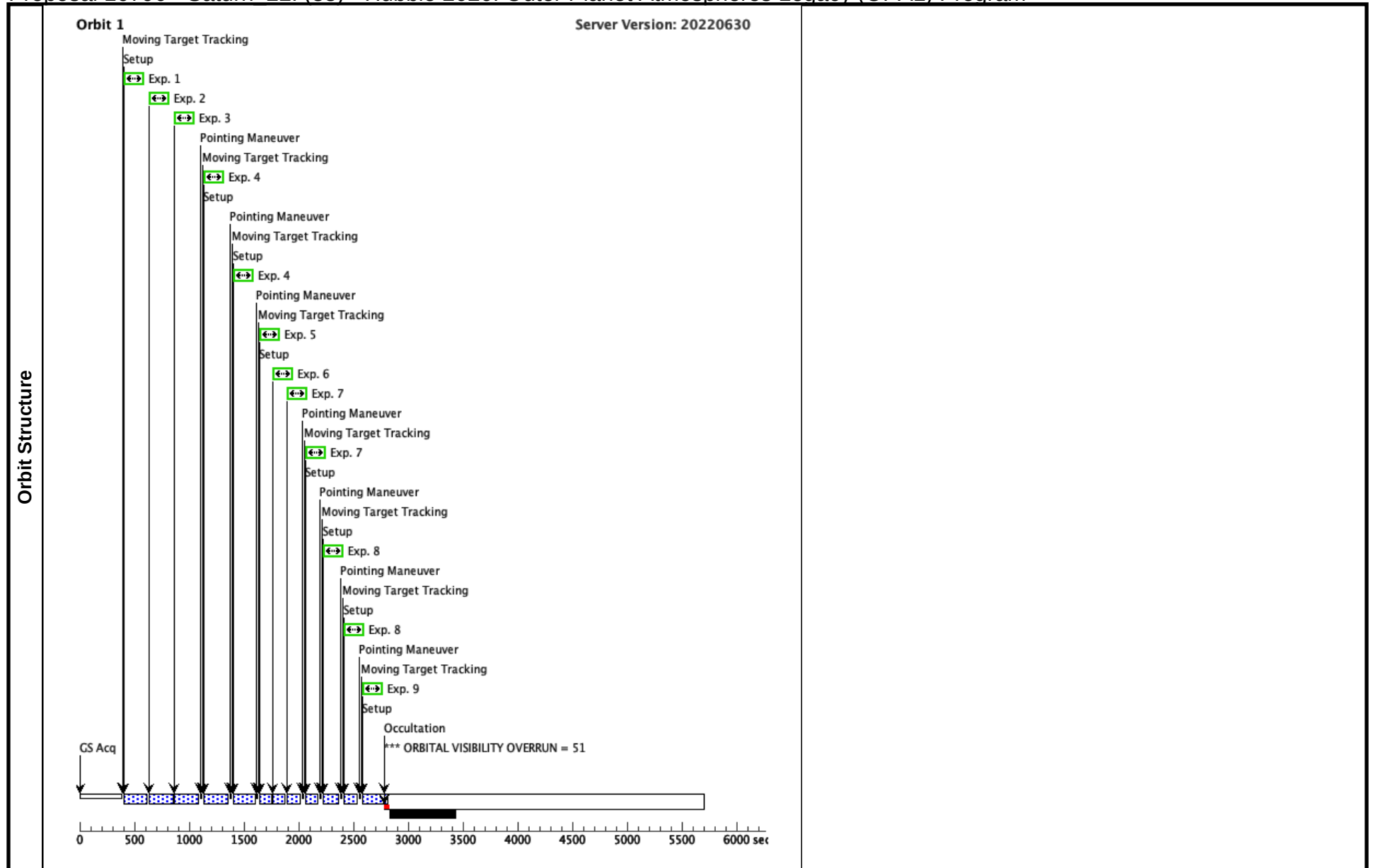


Proposal 16790 - Saturn 22I (38) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22I (38), completed			Wed Dec 21 00:01:33 GMT 2022			
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 37 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.							
OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889							
If orbital visibility requires a cut, remove F467M first							
Diagnostics	(Saturn_22I (38)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
	(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						
	(F225W (38.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (38.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (38.009)) 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), (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- EARTH 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
	Comments: Description=Global Saturn Maps						

Proposal 16790 - Saturn 22I (38) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22I (38)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22I (38)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22I (38)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22I (38) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22I (38) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22I (38)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22I (38)	7 Secs (7 Secs)	[==>]	[1]
	7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22I (38) Pattern 2, Exps 7-7 in Sequence 1-9 Non-Int in Saturn_22I (38) (2)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22I (38) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22I (38) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22I (38)	45 Secs (45 Secs)	[==>]	[1]

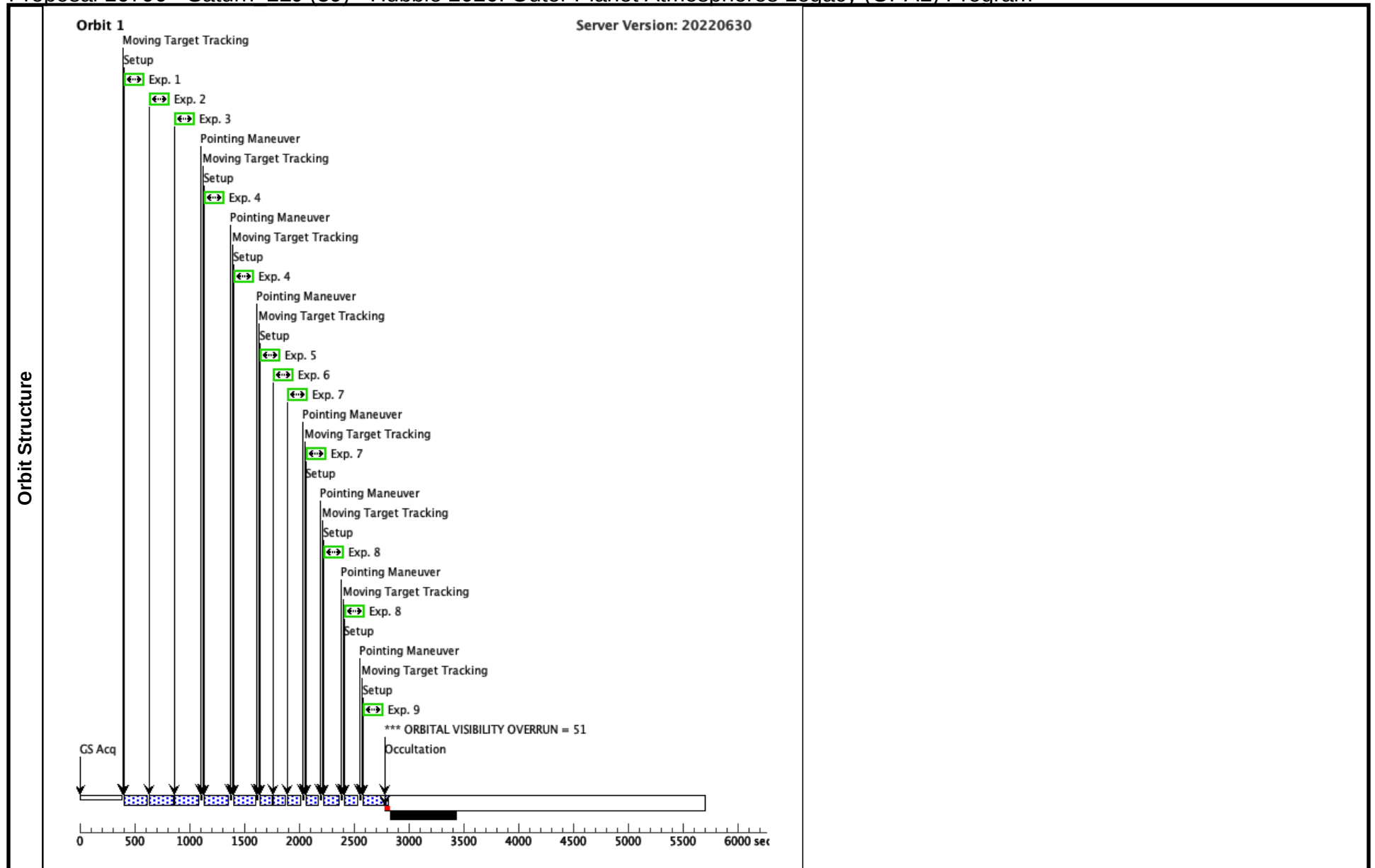


Proposal 16790 - Saturn 22J (39) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22J (39), completed			Wed Dec 21 00:01:34 GMT 2022			
	Diagnostic Status: Warning						
	Scientific Instruments: WFC3/UVIS						
	Special Requirements: AFTER 38 BY 0.9 Orbits TO 1.1 Orbits						
	<i>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.</i>						
OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889							
If orbital visibility requires a cut, remove F467M first							
Diagnostics	(Saturn_22J (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						
	(F275W (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						
Patterns	(FQ889_quadA (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 (39.009)) 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), (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- EARTH 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	
	<i>Comments: Description=Global Saturn Maps</i>						

Proposal 16790 - Saturn 22J (39) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22J (39)	15 Secs (15 Secs)	[==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22J (39)	23 Secs (23 Secs)	[==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22J (39)	40 Secs (40 Secs)	[==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-9 Non-Int in Saturn_22J (39) Pattern 3, Exps 4-4 in Sequence 1-9 Non-Int in Saturn_22J (39) (3)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-9 Non-Int in Saturn_22J (39)	2 Secs (2 Secs)	[==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22J (39)	7 Secs (7 Secs)	[==>]	[1]
	7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22J (39) Pattern 2, Exps 7-7 in Sequence 1-9 Non-Int in Saturn_22J (39) (2)	30 Secs (60 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-9 Non-Int in Saturn_22J (39) Pattern 2, Exps 8-8 in Sequence 1-9 Non-Int in Saturn_22J (39) (2)	45 Secs (90 Secs)	[==>(Pattern 1)] [==>(Pattern 2)]	[1]
	9	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-9 Non-Int in Saturn_22J (39)	45 Secs (45 Secs)	[==>]	[1]



Proposal 16790 - Saturn 22K (40) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

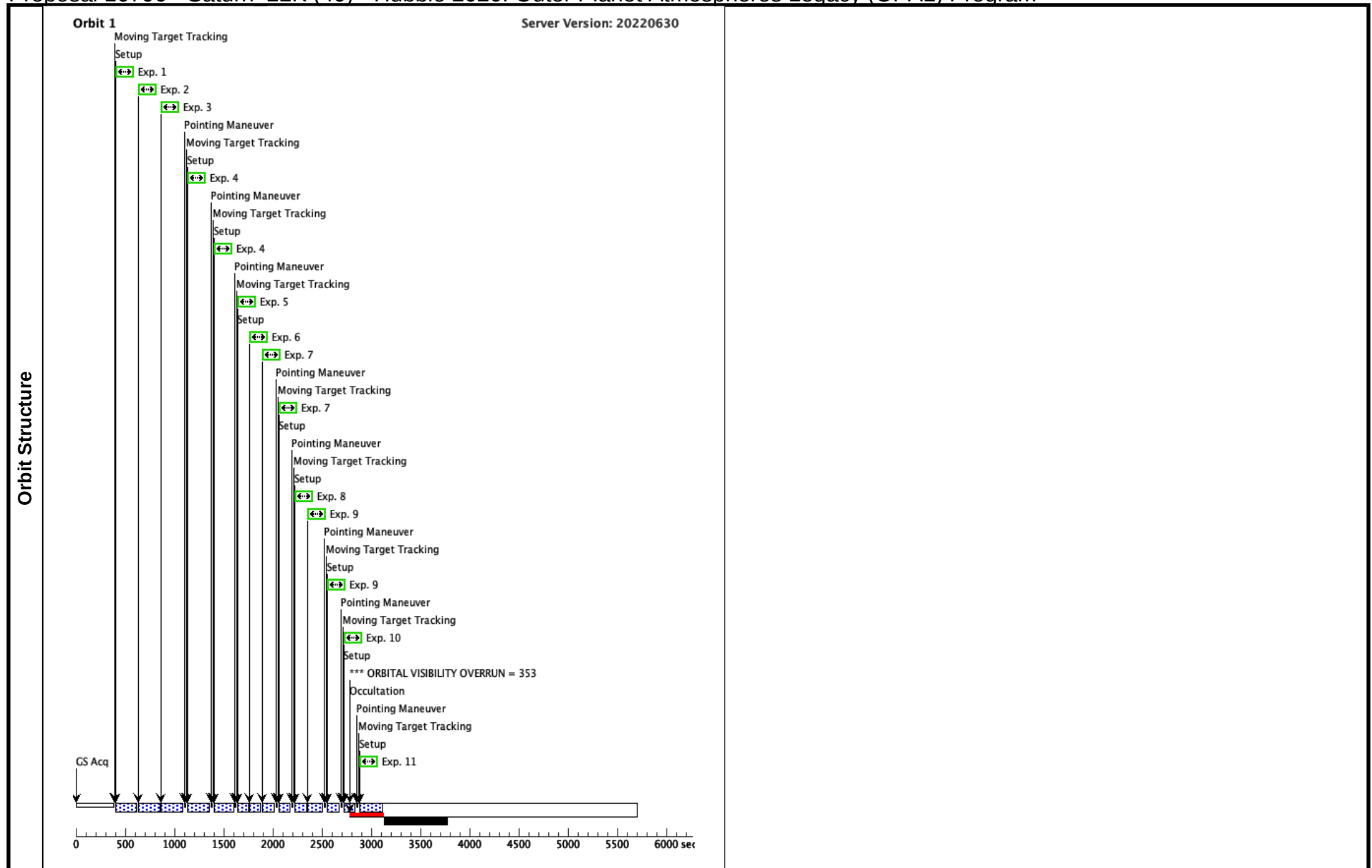
Visit	Proposal 16790, Saturn_22K (40), completed Wed Dec 21 00:01:34 GMT 2022		
	Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: DROP TO GYRO IF NECESSARY NO REACQ; AFTER 39 BY 0.9 Orbits TO 1.1 Orbits <i>Comments: 12 orbits, should be contiguous, if possible. A gap 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.</i> OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889 If orbital visibility requires a cut, remove F467M first		
Diagnostics	(Saturn_22K (40)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Saturn_22K (40)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (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 (F225W (40.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (F631N (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 (40.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (FQ889_quadA (40.011)) 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
	(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
	(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
		Exposures	
		(7), (9)	
		(4)	

Proposal 16790 - Saturn 22K (40) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Solar System Targets						
	#	Name	Level 1	Level 2	Level 3	Window
	(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
	Comments: Description=Global Saturn Maps					

Proposal 16790 - Saturn 22K (40) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_22K (40)	15 Secs (15 Secs) [==>]	[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_22K (40)	23 Secs (23 Secs) [==>]	[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_22K (40)	40 Secs (40 Secs) [==>]	[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-11 Non-Int in Saturn_22K (40) Pattern 3, Exps 4-4 in Sequence 1-11 Non-Int in Saturn_22K (40) (3)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-11 Non-Int in Saturn_22K (40)	2 Secs (2 Secs) [==>]	[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_22K (40)	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_22K (40) Pattern 2, Exps 7-7 in Sequence 1-11 Non-Int in Saturn_22K (40) (2)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	8	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_22K (40)	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_22K (40) Pattern 2, Exps 9-9 in Sequence 1-11 Non-Int in Saturn_22K (40) (2)	45 Secs (90 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	10	F631N (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-Int in Saturn_22K (40)	15 Secs (15 Secs) [==>]	[1]
	11	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-11 Non-Int in Saturn_22K (40)	45 Secs (45 Secs) [==>]	[1]



Proposal 16790 - Saturn 22L (41) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Visit	Proposal 16790, Saturn_22L (41), completed			Wed Dec 21 00:01:34 GMT 2022			
	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.							
OPAL Saturn filters: 225, 275, 343, 395, 467, 502, 631, 727, 763, 889							
If orbital visibility requires a cut, remove F467M first							
Diagnostics	(Saturn_22L (41)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN						
	(F631N_2K (41.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F502N_2K (41.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F395N_2K (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						
	(F275W (41.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F343N (41.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F225W (41.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(F631N (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 (41.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser						
	(FQ889_quadA (41.011)) 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
Comments: Description=Global Saturn Maps							

Proposal 16790 - Saturn 22L (41) - Hubble 2020: Outer Planet Atmospheres Legacy (OPAL) Program

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	F631N_2K (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F631N	CR-SPLIT=NO	GS ACQ SCENARI O ONEB1BE	Sequence 1-11 Non-I nt in Saturn_22L (41)	15 Secs (15 Secs) [==>]		[1]
	2	F502N_2K (WFC3UVI S.im.712369)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F502N	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41)	23 Secs (23 Secs) [==>]		[1]
	3	F395N_2K (WFC3UVI S.im.100533 7)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F395N	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41)	40 Secs (40 Secs) [==>]		[1]
	4	FQ727_qua dD (WFC3UVI S.im.100539 3)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ727N	CR-SPLIT=NO	POS TARG -16,+18	Sequence 1-11 Non-I nt in Saturn_22L (41) Pattern 3, Exps 4-4 i n Sequence 1-11 No n-Int in Saturn_22L (41) (3)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]		[1]
	5	F763M (WFC3UVI S.im.100534 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F763M	CR-SPLIT=NO; BLADE=A		Sequence 1-11 Non-I nt in Saturn_22L (41)	2 Secs (2 Secs) [==>]		[1]
	6	F467M (WFC3UVI S.im.100533 9)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F467M	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41)	7 Secs (7 Secs) [==>]		[1]
	7	F275W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F275W	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41) Pattern 2, Exps 7-7 i n Sequence 1-11 No n-Int in Saturn_22L (41) (2)	30 Secs (60 Secs) [==>(Pattern 1)] [==>(Pattern 2)]		[1]
	8	F343N (WFC3UVI S.im.100533 4)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F343N	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41)	20 Secs (20 Secs) [==>]		[1]
	9	F225W	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F225W	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41) Pattern 2, Exps 9-9 i n Sequence 1-11 No n-Int in Saturn_22L (41) (2)	45 Secs (90 Secs) [==>(Pattern 1)] [==>(Pattern 2)]		[1]
	10	F631N (WFC3UVI S.im.712372)	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS2-M1K1C-SUB	F631N	CR-SPLIT=NO		Sequence 1-11 Non-I nt in Saturn_22L (41)	15 Secs (15 Secs) [==>]		[1]
	11	FQ889_qua dA	(2) SATURN-MAPS	WFC3/UVIS, ACCUM, UVIS-QUAD-SUB	FQ889N	CR-SPLIT=NO	POS TARG +11,-14	Sequence 1-11 Non-I nt in Saturn_22L (41)	45 Secs (45 Secs) [==>]		[1]

