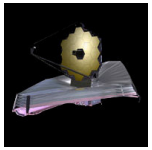

1604 - Dynamics and Temporal Variability in the Atmosphere of Neptune

Cycle: 1, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	***Observation***	***Label***	***Observing Template***	***Science Target***
Neptune Epoch 1				
	2	Neptune-Lon1A	MIRI Medium Resolution Spectroscopy	(1) NEPTUNE
	3	Neptune-Lon2A	MIRI Medium Resolution Spectroscopy	(1) NEPTUNE
	9	Neptune-Lon3A	MIRI Medium Resolution Spectroscopy	(1) NEPTUNE
	5	Neptune-Background	MIRI Medium Resolution Spectroscopy	(2) NEPTUNE-BACKGROUND
Neptune Epoch 2				
	6	Neptune-Lon1B	MIRI Medium Resolution Spectroscopy	(1) NEPTUNE
	7	Neptune-Lon2B	MIRI Medium Resolution Spectroscopy	(1) NEPTUNE
	10	Neptune-Lon3B	MIRI Medium Resolution Spectroscopy	(1) NEPTUNE
	8	Neptune-Background	MIRI Medium Resolution Spectroscopy	(2) NEPTUNE-BACKGROUND

ABSTRACT

We propose short sequences of spatially resolved spectroscopic thermal observations of Neptune using MIRI within Cycle 1 to follow up GTO observations in order to determine the variability of temperatures, composition and dyanamics on intermediate- to short-term time scales. Specific science goals include a deeper understanding of the influence of radiation and dynamics on polar and quasi-polar phenomena, storms and planetary-scale changes, longitudinal thermal waves and time-variable oscillations, as well as results of "cometary" atmospheric impacts. Despite the well-documented intermediate- and short-term variabiity of Neptune's cloud structure, no observations have been made on similar time scales to understand the correlated variability of temperatures, clouds and 3-dimensional dynamics.

MIRI is the ideal instrument for making the first of such observations. The implications of these results have a broad application, as Neptune represents a cold end-member of a large segment of a populous class of similar-sized exoplanets. Determination of Neptune's dynamics will provide insight into these bodies, e.g. providing clues as to the origin of rotational variability originates from inhomgeneous distributions of temperatures or composition versus cloud cover.

OBSERVING DESCRIPTION

Neptune global spatial-spectral map using MIRI, sampling two longitudes separated by 180 degrees of longitude.

Neptune rotates in 16 hours, 6 minutes. The time between adjacent observations during the first epoch is therefore 4.3hrs, the time between observations during the second epoch is 8.0hrs.

The preferred epoch for our observations is in the next available solar elongation window after the GTO observations of Neptune. Observations proposed for 2-6 weeks later would remain in this window.

Notes:

1. PRECISE LONGITUDES ARE FLEXIBLE: These have now been implemented as an "after observation" constraint.

2. DITHERING: MIRI assumes a 4-point dither pattern to optimise the imaging of this 2.3" diameter disc. Large 1" dither offsets should be avoided, as the purpose is to improve spatial sampling for ALL of the MIRI channels. If a 2-point dither pattern is found to be sufficient for these

moving targets, then we would consider changing the dithering technique prior to execution to increase the exposure time.

3. BACKGROUND: MIRI observations assume a single offset to a background region of sky (20" is acceptable, provided no Neptunian satellites are in the field of view). This would be best scheduled immediately before or after one of the science exposures.

4. SATURATION: The SHORT detector (channels 1 and 2) show no sign of saturating for 8 groups in the methane band at 7.66 μm (the brightest spectral point from 5-11 μm). The LONG detector (channels 3 and 4) saturate in the 5th group near C2H2 emission at 13.7 μm, so we selected 4 groups.

Proposal 1604 - Targets - Dynamics and Temporal Variability in the Atmosphere of Neptune

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		
Comments: Extended=YES				
(2)	NEPTUNE-BACKGROUND	STD=NEPTUNE	TYPE=POS_ANGLE,RAD=20,ANG=0,REF=NORTH	
Comments: Extended=YES				

Observation

Proposal 1604, Observation 2: Neptune-Lon1A

Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Lon1A (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon1A (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon1A (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon1A (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon1A (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon1A (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Neptune-Lon1A (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	YES	FULL	NEUTRAL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	EXTENDED SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
2		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
3		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	

Special Requirements

Between Dates 01-NOV-2023:00:00:00 and 01-JAN-2024:00:00:00

9 After 2 by 10.1 Hours to 11.1 Hours
Group Observations 2, 5, Non-interruptible

DEFAULT WINDOW: ANGULAR RATE NEPTUNE FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE BY TRITON FROM JWST

Observation

Proposal 1604, Observation 3: Neptune-Lon2A

Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Lon2A (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2A (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2A (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2A (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2A (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2A (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Neptune-Lon2A (Obs 3)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	YES	FULL	NEUTRAL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	EXTENDED SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
2		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
3		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	

Special Requirements

6 After 3 by 14 Days to 50 Days

DEFAULT WINDOW: ANGULAR RATE NEPTUNE FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE BY TRITON FROM JWST

Observation

Proposal 1604, Observation 9: Neptune-Lon3A

Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Lon3A (Obs 9)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon3A (Obs 9)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon3A (Obs 9)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon3A (Obs 9)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon3A (Obs 9)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon3A (Obs 9)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Neptune-Lon3A (Obs 9)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	YES	FULL	NEUTRAL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	EXTENDED SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
2		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
3		IMAGER	F1000W	FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	

Special Requirements

9 After 2 by 10.1 Hours to 11.1 Hours

DEFAULT WINDOW: ANGULAR RATE NEPTUNE FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE BY TRITON FROM JWST

Observation

Proposal 1604, Observation 5: Neptune-Background

Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Background (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Background (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Background (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Background (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Background (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Background (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Neptune-Background (Obs 5)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	NEPTUNE-BACKGROUND	STD=NEPTUNE	TYPE=POS_ANGLE,RAD=20,ANG=0,REF=NORTH	

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	YES	FULL	NEUTRAL

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1		IMAGER	F1000W	FASTR1	4	8	1	None	1	8	108.227	
1	LONG(C)	MRSLONG		FASTR1	4	8	1	None	1	8	108.227	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	None	1	4	108.227	
2		IMAGER	F1000W	FASTR1	4	8	1	None	1	8	108.227	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	None	1	8	108.227	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	None	1	4	108.227	
3		IMAGER	F1000W	FASTR1	4	8	1	None	1	8	108.227	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	None	1	8	108.227	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	None	1	4	108.227	

Special Requirements	
	Group Observations 2, 5, Non-interruptible DEFAULT WINDOW: ANGULAR RATE NEPTUNE-BACKGROUND FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT OCCULTATION OF NEPTUNE-BACKGROUND BY NEPTUNE FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE-BACKGROUND BY TRITON FROM JWST

Observation

Proposal 1604, Observation 6: Neptune-Lon1B Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Lon1B (Obs 6)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Neptune-Lon1B (Obs 6)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Neptune-Lon1B (Obs 6)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Neptune-Lon1B (Obs 6)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	NO	FULL	NEUTRAL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	EXTENDED SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	LONG(C)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	

Special Requirements	
	6 After 3 by 14 Days to 50 Days 7 After 6 by 4.8 Hours to 5.8 Hours 10 After 6 by 10.1 Hours to 11.1 Hours Group Observations 6, 8, Non-interruptible DEFAULT WINDOW: ANGULAR RATE NEPTUNE FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE BY TRITON FROM JWST

Observation

Proposal 1604, Observation 7: Neptune-Lon2B Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Lon2B (Obs 7)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2B (Obs 7)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Neptune-Lon2B (Obs 7)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.
(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Neptune-Lon2B (Obs 7)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	NO	FULL	NEUTRAL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	EXTENDED SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	LONG(C)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	

Special Requirements	
	7 After 6 by 4.8 Hours to 5.8 Hours DEFAULT WINDOW: ANGULAR RATE NEPTUNE FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE BY TRITON FROM JWST

Observation

Proposal 1604, Observation 10: Neptune-Lon3B Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Lon3B (Obs 10)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Neptune-Lon3B (Obs 10)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Neptune-Lon3B (Obs 10)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Neptune-Lon3B (Obs 10)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	NEPTUNE	STD=NEPTUNE		

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	NO	FULL	NEUTRAL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	EXTENDED SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	LONG(C)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	Dither 1	4	32	432.906	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	Dither 1	4	16	432.906	

Special Requirements	
	10 After 6 by 10.1 Hours to 11.1 Hours DEFAULT WINDOW: ANGULAR RATE NEPTUNE FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE BY TRITON FROM JWST

Observation

Proposal 1604, Observation 8: Neptune-Background Wed Dec 06 23:00:15 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Neptune-Background (Obs 8)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Neptune-Background (Obs 8)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Neptune-Background (Obs 8)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Neptune-Background (Obs 8)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	NEPTUNE-BACKGROUND	STD=NEPTUNE	TYPE=POS_ANGLE,RAD=20,ANG=0,REF=NORTH	

Comments: Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F1500W	All MRS	NO	FULL	NEUTRAL

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	LONG(C)	MRSLONG		FASTR1	4	8	1	None	1	8	108.227	
1	LONG(C)	MRSSHORT		FASTR1	9	4	1	None	1	4	108.227	
2	MEDIUM(B)	MRSLONG		FASTR1	4	8	1	None	1	8	108.227	
2	MEDIUM(B)	MRSSHORT		FASTR1	9	4	1	None	1	4	108.227	
3	SHORT(A)	MRSLONG		FASTR1	4	8	1	None	1	8	108.227	
3	SHORT(A)	MRSSHORT		FASTR1	9	4	1	None	1	4	108.227	

Special Requirements	
	Group Observations 6, 8, Non-interruptible DEFAULT WINDOW: ANGULAR RATE NEPTUNE-BACKGROUND FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT OCCULTATION OF NEPTUNE-BACKGROUND BY NEPTUNE FROM JWST DEFAULT WINDOW: NOT ECLIPSE PENUMBRAL PARTIAL OF NEPTUNE-BACKGROUND BY TRITON FROM JWST