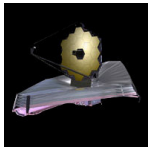

1272 - Kuiper Belt Science with JWST

Cycle: 1, Proposal Category: GTO

INVESTIGATORS

Name	*Institution*
Dr. Dean C. Hines (PI)	**Space Telescope Science Institute**
Gillian Wright (CoI) (ESA Member)	United Kingdom Astronomy Technology Centre
Dr. Bryan Jason Holler (CoI)	Space Telescope Science Institute
Dr. Michael Migo Mueller (CoI) (ESA Member)	University of Groningen

OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
TRITON				
	1	MIRI MRS	MIRI Medium Resolution Spectroscopy	(1) TRITON
	9	MIRI MRS	MIRI Medium Resolution Spectroscopy	(1) TRITON
	2	MIRI IMAGING	MIRI Imaging	(1) TRITON
	12	MIRI IMAGING BCKG	MIRI Imaging	(5) TRITON-BCKG
	10	MIRI IMAGING	MIRI Imaging	(1) TRITON
	13	MIRI IMAGING BCKG	MIRI Imaging	(5) TRITON-BCKG
	3	NIRSPEC IFU	NIRSpec IFU Spectroscopy	(1) TRITON
	11	NIRSPEC IFU	NIRSpec IFU Spectroscopy	(1) TRITON
2013 XZ8				
	4	MIRI MRS	MIRI Medium Resolution Spectroscopy	(2) 2013XZ8
	5	NIRSPEC IFU	NIRSpec IFU Spectroscopy	(2) 2013XZ8
CHARIKLO				
	6	NIRSPEC IFU	NIRSpec IFU Spectroscopy	(3) CHARIKLO
	106	NIRSPEC IFU	NIRSpec IFU Spectroscopy	(3) CHARIKLO

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
SEDNA				
	8	NIRSPEC IFU	NIRSpec IFU Spectroscopy	(4) SEDNA

ABSTRACT

Observation IDs: HINES_1000, HINES_1001, HINES_2000, HINES_2001, HINES_3000, HINES_3001, HINES_4000, HINES_5000, HINES_6000, HINES_7000, HINES_8000, HINES_9000, HINES_10000, WRIGHT_2001

We plan to exploit JWST’s exquisite sensitivity in the 1-5 micron region to study the largest trans-Neptunian Objects and Kuiper Belt objects via reflectance spectroscopy. The composition of even the largest of these bodies is poorly constrained. We propose to use NIRSpec’s IFU to obtain the first high-SNR, R > 100 spectra for a sample of these objects. MIRI spectra will also be obtained on some targets. These data can be expected to reveal the presence of previously unseen molecular ices, constrain their physical state (crystalline phase, solution with other species, temperature, grain-size), identify new organic species, and constrain isotopic ratios for some elements (H, O, C, N). MIRI MRS and Imaging data will also be used to study temperature variations on several targets, and will be interpreted in the context of existing Herschel and/or Spitzer thermal data. The targets represent a large fraction of the diversity of the Kuiper Belt in terms of collisional history (Pluto and Haumea underwent catastrophic impacts), effects of planetary migration (resonant, classical, Centaur and scattered objects), multiplicity (several host at least one moon), albedo, and major species composition (H2O, CH4, N2, NH3, CO). These objects represent the end-state of accretion and subsequent processing in the Kuiper Belt. This initial reconnaissance of their surface compositions will inform our understanding of the long history of processes in the outermost regions of the Sun’s proto-planetary disk.

OBSERVING DESCRIPTION

TRITON: Observations are planned for 2 different hemispheres on Triton, the largest moon of Neptune, with one centered on peak absorption from volatile ices (340-20 degrees) and one on the opposite hemisphere where absorption from volatiles is at a minimum (160-180 degrees). Observations 1, 2, and 3 were grouped to observe the volatile-rich hemisphere of Triton and observations 9, 10, and 11 were grouped to observe the volatile-poor hemisphere of Triton. Triton's rotation period is ~5.9 days. These central longitude constraints place a time window for the observations to occur less than 24 hours, but greater than 1 hour, so will not receive a 1-hour overhead in a future version of APT. NIRSpec IFU observations are at the highest resolution due to the brightness of Triton; a high SNR can be achieved throughout the wavelength range even at high resolution. The NRSIRS2RAPID readout mode was chosed to further increase the SNR in a shorter amount of time. The imaging filters chosen are the longest wavelength filters available on MIRI because the flux is the highest at these longest wavelengths (due to Triton's thermal peak at even longer wavelengths). 5 groups (the minimum recommended) are specified for the MIRI imaging observations because a high SNR can be achieved in only a

short period of time. The full MRS range (all 3 grating settings) will be used to obtain observations from 5.6 to 28 microns. The FAST readout mode was selected due to Triton's brightness. Simultaneous imaging of the field near Triton during the MRS observations are planned with the F1280W filter. TA for the Triton MRS observations are not required but must be specified in APT 25.4.0.1 since there is currently no option for "No TA." TA will be removed in a future version of APT.

ECHECLUS: Medium resolution and PRISM observations will be made of the Centaur Echeclus with the NIRSpec IFU to obtain a decent SNR. The NRSIRS2RAPID readout mode was chosen to increase the SNR of these observations. The FAST readout mode was selected due to Echeclus's brightness. Simultaneous imaging of the field near Echeclus during the MRS observations are planned with the F1280W filter. TA for the Echeclus MRS observations are not required but must be specified in APT 25.4.0.1 since there is currently no option for "No TA." TA will be removed in a future version of APT.

BIENOR: PRISM observations will be made of the grey Centaur Bienor with the NIRSpec IFU to obtain a decent SNR. The NRSIRS2RAPID readout mode was chosen to increase the SNR of these observations.

SEDNA: Medium resolution and PRISM observations will be made of the KBO Sedna with the NIRSpec IFU to obtain a decent SNR. The NRSIRS2RAPID readout mode was chosen to increase the SNR of these observations. Due to the relative faintness of Sedna, observations at the longest near-infrared wavelengths, where flux from the object is lowest, will be made with the low-resolution PRISM mode instead of the medium resolution grating. PRISM also covers the full wavelength range and will contribute to a higher SNR at the shorter wavelengths.

Proposal 1272 - Targets - Kuiper Belt Science with JWST

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	TRITON	STD=NEPTUNE	STD=TRITON	
Comments: Extended=NO				
(2)	2013XZ8	TYPE=ASTEROID,A=13.48208814347893,E=0.3749557191831147,I=22.5294787346963,O=266.6779574293917,W=288.1682043722156,M=334.4891311063574,EQUINOX=J2000,EPOCH=26-OCT-2017:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(3)	CHARIKLO	TYPE=ASTEROID,A=15.74776694990585,E=0.1713543678296343,I=23.41162716731226,O=300.3797700739185,W=241.5029631295137,M=58.44575455857901,EQUINOX=J2000,EPOCH=29-JAN-2014:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(4)	SEDNA	TYPE=ASTEROID,A=500.5169750897563,E=0.8480834646428406,I=11.92871162913267,O=144.5263866414448,W=311.5200318768571,M=358.0681026495191,EQUINOX=J2000,EPOCH=08-JUL-2016:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(5)	TRITON-BCKG	STD=NEPTUNE	STD=TRITON	TYPE=POS_ANGLE,RAD=300,ANG=0,REF=NORTH
Comments: Extended=NO				

Observation

Proposal 1272, Observation 1: MIRI MRS Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(MIRI MRS (Obs 1)) Warning (Form): Imager Filter overlap.
(MIRI MRS (Obs 1)) Warning (Form): Imager Filter overlap.
(MIRI MRS (Obs 1)) Warning (Form): Imager Filter overlap.
(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

Comments: Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
F1500W	ALL	YES	FULL

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	F1280W	FASTR1	8	10	1	Dither 1	4	40	987.914	
1	LONG(C)	MRSLONG		FASTR1	90	1	1	Dither 1	4	4	999.014	
1	LONG(C)	MRSSHORT		FASTR1	90	1	1	Dither 1	4	4	999.014	
2		IMAGER	F1280W	FASTR1	8	10	1	Dither 1	4	40	987.914	
2	MEDIUM(B)	MRSLONG		FASTR1	90	1	1	Dither 1	4	4	999.014	
2	MEDIUM(B)	MRSSHORT		FASTR1	90	1	1	Dither 1	4	4	999.014	
3		IMAGER	F1280W	FASTR1	8	10	1	Dither 1	4	40	987.914	
3	SHORT(A)	MRSLONG		FASTR1	90	1	1	Dither 1	4	4	999.014	
3	SHORT(A)	MRSSHORT		FASTR1	90	1	1	Dither 1	4	4	999.014	

Special Requirements	
	Group Observations 1, 2, 3, 12, Non-interruptible DEFAULT WINDOW: ANGULAR RATE TRITON FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT OCCULTATION OF TRITON BY NEPTUNE FROM JWST

Observation

Proposal 1272, Observation 9: MIRI MRS Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(MIRI MRS (Obs 9)) Warning (Form): Imager Filter overlap.
(MIRI MRS (Obs 9)) Warning (Form): Imager Filter overlap.
(MIRI MRS (Obs 9)) Warning (Form): Imager Filter overlap.
(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

Comments: Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
F1500W	ALL	YES	FULL

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	F1280W	FASTR1	8	10	1	Dither 1	4	40	987.914	
1	LONG(C)	MRSLONG		FASTR1	90	1	1	Dither 1	4	4	999.014	
1	LONG(C)	MRSSHORT		FASTR1	90	1	1	Dither 1	4	4	999.014	
2		IMAGER	F1280W	FASTR1	8	10	1	Dither 1	4	40	987.914	
2	MEDIUM(B)	MRSLONG		FASTR1	90	1	1	Dither 1	4	4	999.014	
2	MEDIUM(B)	MRSSHORT		FASTR1	90	1	1	Dither 1	4	4	999.014	
3		IMAGER	F1280W	FASTR1	8	10	1	Dither 1	4	40	987.914	
3	SHORT(A)	MRSLONG		FASTR1	90	1	1	Dither 1	4	4	999.014	
3	SHORT(A)	MRSSHORT		FASTR1	90	1	1	Dither 1	4	4	999.014	

Special Requirements	
	Group Observations 9, 10, 11, 13, Non-interruptible DEFAULT WINDOW: ANGULAR RATE TRITON FROM JWST LESS THAN 0.03 DEFAULT WINDOW: NOT OCCULTATION OF TRITON BY NEPTUNE FROM JWST

Observation

Proposal 1272, Observation 2: MIRI IMAGING Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

Comments: Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	2-Point								DEFAULT

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F2100W	FASTR1	5	1	1	Dither 1	2	2	27.75	
2	F2550W	FASTR1	5	1	1	Dither 1	2	2	27.75	

Special Requirements

No Parallel Attachments

Group Observations 1, 2, 3, 12, Non-interruptible

DEFAULT WINDOW: ANGULAR RATE TRITON FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT OCCULTATION OF TRITON BY NEPTUNE FROM JWST

Observation

Proposal 1272, Observation 12: MIRI IMAGING BCKG Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(5)	TRITON-BCKG	STD=NEPTUNE	STD=TRITON	TYPE=POS_ANGLE,RAD=300,ANG=0,REF=NORTH

Comments: Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	2-Point								DEFAULT

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F2550W	FASTR1	5	1	1	Dither 1	2	2	27.75	

Special Requirements

No Parallel Attachments

Group Observations 1, 2, 3, 12, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF TRITON-BCKG BY NEPTUNE FROM JWST
DEFAULT WINDOW: ANGULAR RATE TRITON-BCKG FROM JWST LESS THAN 0.03

Observation

Proposal 1272, Observation 10: MIRI IMAGING Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

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

Solar System Targets

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

Comments: Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	2-Point								DEFAULT

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F2100W	FASTR1	5	1	1	Dither 1	2	2	27.75	
2	F2550W	FASTR1	5	1	1	Dither 1	2	2	27.75	

Special Requirements

No Parallel Attachments

Group Observations 9, 10, 11, 13, Non-interruptible

DEFAULT WINDOW: ANGULAR RATE TRITON FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT OCCULTATION OF TRITON BY NEPTUNE FROM JWST

Observation

Proposal 1272, Observation 13: MIRI IMAGING BCKG Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(5)	TRITON-BCKG	STD=NEPTUNE	STD=TRITON	TYPE=POS_ANGLE,RAD=300,ANG=0,REF=NORTH

Comments: Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	2-Point								DEFAULT

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F2550W	FASTR1	5	1	1	Dither 1	2	2	27.75	

Special Requirements

No Parallel Attachments

Group Observations 9, 10, 11, 13, Non-interruptible

DEFAULT WINDOW: NOT OCCULTATION OF TRITON-BCKG BY NEPTUNE FROM JWST
DEFAULT WINDOW: ANGULAR RATE TRITON-BCKG FROM JWST LESS THAN 0.03

Observation

Proposal 1272, Observation 3: NIRSPEC IFU Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

Comments: Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	2	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G140H/F100LP	NRSIRS2RAPID	10	1	false	true	NONE	2	2	320.956	
2	G235H/F170LP	NRSIRS2RAPID	15	1	false	true	NONE	2	2	466.844	
3	G395H/F290LP	NRSIRS2RAPID	20	1	false	true	NONE	2	2	612.733	

Special Requirements

Group Observations 1, 2, 3, 12, Non-interruptible

DEFAULT WINDOW: ANGULAR RATE TRITON FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT OCCULTATION OF TRITON BY NEPTUNE FROM JWST
CENTRAL MERIDIAN LONGITUDE OF TRITON FROM JWST BETWEEN 340 20

Observation

Proposal 1272, Observation 11: NIRSPEC IFU Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

Comments: Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	2	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G140H/F100LP	NRSIRS2RAPID	10	1	false	true	NONE	2	2	320.956	
2	G235H/F170LP	NRSIRS2RAPID	15	1	false	true	NONE	2	2	466.844	
3	G395H/F290LP	NRSIRS2RAPID	20	1	false	true	NONE	2	2	612.733	

Special Requirements

Group Observations 9, 10, 11, 13, Non-interruptible

DEFAULT WINDOW: ANGULAR RATE TRITON FROM JWST LESS THAN 0.03
DEFAULT WINDOW: NOT OCCULTATION OF TRITON BY NEPTUNE FROM JWST
CENTRAL MERIDIAN LONGITUDE OF TRITON FROM JWST BETWEEN 160 200

Observation

Proposal 1272, Observation 4: MIRI MRS Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(MIRI MRS (Obs 4)) Warning (Form): Imager Filter overlap.

(MIRI MRS (Obs 4)) Warning (Form): Imager Filter overlap.

(MIRI MRS (Obs 4)) Warning (Form): Imager Filter overlap.

(Visit 4:1) Warning (Form): Data Excess over lower threshold

(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	2013XZ8	TYPE=ASTEROID,A=13.48208814347893,E=0.3749557191831147,I=22.5294787346963,O=266.6779574293917,W=288.1682043722156,M=334.4891311063574,EQUINOX=J2000,EPOCH=26-OCT-2017:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
F1500W	ALL	YES	FULL

Dithers

#	Dither Type	Optimized For	Direction
1	2-Point	POINT 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	F1280W	FASTR1	12	25	1	Dither 1	2	50	1798.226	
1	LONG(C)	MRSLONG		FASTR1	55	6	1	Dither 1	2	12	1859.277	
1	LONG(C)	MRSSHORT		FASTR1	55	6	1	Dither 1	2	12	1859.277	
2		IMAGER	F1280W	FASTR1	12	25	1	Dither 1	2	50	1798.226	
2	MEDIUM(B)	MRSLONG		FASTR1	55	6	1	Dither 1	2	12	1859.277	
2	MEDIUM(B)	MRSSHORT		FASTR1	55	6	1	Dither 1	2	12	1859.277	
3		IMAGER	F1280W	FASTR1	12	25	1	Dither 1	2	50	1798.226	
3	SHORT(A)	MRSLONG		FASTR1	55	6	1	Dither 1	2	12	1859.277	
3	SHORT(A)	MRSSHORT		FASTR1	55	6	1	Dither 1	2	12	1859.277	

Special Requirements	DEFAULT WINDOW: ANGULAR RATE 2013XZ8 FROM JWST LESS THAN 0.03 DISTANCE 2013XZ8 SUN LESS THAN 9.0

Observation

Proposal 1272, Observation 5: NIRSPEC IFU Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	2013XZ8	TYPE=ASTEROID,A=13.48208814347893,E=0.3749557191831147,I=22.5294787346963,O=266.6779574293917,W=288.1682043722156,M=334.4891311063574,EQUINOX=J2000,EPOCH=26-OCT-2017:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	2	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G235M/F170LP	NRSIRS2RAPID	20	1	false	true	NONE	2	2	612.733	
2	G395M/F290LP	NRSIRS2RAPID	40	1	false	true	NONE	2	2	1196.289	
3	PRISM/CLEAR	NRSIRS2RAPID	3	1	false	true	NONE	2	2	116.711	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2013XZ8 FROM JWST LESS THAN 0.03
DISTANCE 2013XZ8 SUN LESS THAN 9.0

Observation

Proposal 1272, Observation 6: NIRSPEC IFU Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

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

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(3)	CHARIKLO	TYPE=ASTEROID,A=15.74776694990585,E=0.1713543678296343,I=23.41162716731226,O=300.3797700739185,W=241.5029631295137,M=58.44575455857901,EQUINOX=J2000,EPOCH=29-JAN-2014:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	2	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	1	false	true	NONE	2	2	320.956	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE CHARIKLO FROM JWST LESS THAN 0.03

Observation

Proposal 1272, Observation 106: NIRSPEC IFU Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 106:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(3)	CHARIKLO	TYPE=ASTEROID,A=15.74776694990585,E=0.1713543678296343,I=23.41162716731226,O=300.3797700739185,W=241.5029631295137,M=58.44575455857901,EQUINOX=J2000,EPOCH=29-JAN-2014:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	2	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	1	false	true	NONE	2	2	320.956	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE CHARIKLO FROM JWST LESS THAN 0.03

Observation

Proposal 1272, Observation 8: NIRSPEC IFU Mon Feb 27 17:01:22 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

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

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(4)	SEDNA	TYPE=ASTEROID,A=500.5169750897563,E=0.8480834646428406,I=11.92871162913267,O=144.5263866414448,W=311.5200318768571,M=358.0681026495191,EQUINOX=J2000,EPOCH=08-JUL-2016:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	2	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	25	1	false	true	NONE	2	2	758.622	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE SEDNA FROM JWST LESS THAN 0.03