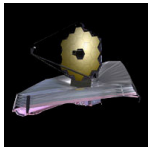

1191 - Kuiper Belt Science with JWST

Cycle: 1, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
PLUTO+CHARON				
	2	PLUTO MIRI MRS	MIRI Medium Resolution Spectroscopy	(1) PLUTO+CHARON
	3	PLUTO NIRSPEC IFU : 0 deg	NIRSpec IFU Spectroscopy	(1) PLUTO+CHARON
	103	PLUTO NIRSPEC IFU : 0 deg (Obs 3 repeat)	NIRSpec IFU Spectroscopy	(1) PLUTO+CHARON
	4	PLUTO NIRSPEC IFU : 120 deg	NIRSpec IFU Spectroscopy	(1) PLUTO+CHARON
	5	PLUTO NIRSPEC IFU : 200 deg	NIRSpec IFU Spectroscopy	(1) PLUTO+CHARON
	6	PLUTO NIRSPEC IFU : 280 deg	NIRSpec IFU Spectroscopy	(1) PLUTO+CHARON
	106	PLUTO NIRSPEC IFU : 280 deg	NIRSpec IFU Spectroscopy	(1) PLUTO+CHARON
HAUMEA FAMILY				
	7	2002TX300 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(6) 2002TX300

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	8	2005RR43 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(7) 2005RR43
	9	2003OP32 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(8) 2003OP32
	10	1995SM55 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(9) 1995SM55
	11	1999KR16 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(10) 1999KR16
	12	2002AW197 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(11) 2002AW197
	13	2005UQ513 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(12) 2005UQ513
	14	2004PT107 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(13) 2004PT107
LOW ALBEDO DWARF-PLANET KBOS				
	15	2007OR10 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(3) 2007OR10
	16	SALACIA NIRSPEC IFU	NIRSpec IFU Spectroscopy	(4) SALACIA
	17	2002MS4 NIRSPEC IFU	NIRSpec IFU Spectroscopy	(5) 2002MS4
ERIS				
	18	ERIS MIRI LRS	MIRI Low Resolution Spectroscopy	(2) ERIS
	19	ERIS NIRSPEC IFU	NIRSpec IFU Spectroscopy	(2) ERIS

ABSTRACT

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 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.

This proposal is part of a broader set of guaranteed-time observations to be made under programs 1254, 1272, 1273, 1231 and 1271.

OBSERVING DESCRIPTION

PLUTO+CHARON: NIRSpec IFU observations with the high-resolution gratings are planned for 4 different sub-observer longitudes on Pluto: 0, 120, 200, and 280 degrees. The range for each sub-observer longitude is 20 degrees. Pluto's rotation period is ~6.4 days. These central longitude constraints place a time window for the observations to occur less than 24 hours, but greater than 1 hour, so do not receive a 1-hour overhead. A MIRI MRS observation is grouped with the NIRSpec observation centered at 200 degrees longitude (observation 5), the approximate location of the volatile-rich Sputnik Planitia. The NRSIRS2RAPID readout mode was chosen for the NIRSpec observations to maximize the SNR in a short amount of time. The full MRS range (all 3 grating settings) will be used to obtain observations from 5.6 to 28 microns. Simultaneous imaging of the field near Pluto during the MRS observations are planned with the F560W filter. TA for the Pluto+Charon MRS observations are not required because of the high accuracy of the ephemeris.

HAUMEA FAMILY: 2002 TX300, 2005 RR43, 2003 OP32, and 1995 SM55 are currently considered to be members of the Haumea collisional family due to their orbital elements and surface composition. 1999 KR16, 2002 AW197, 2005 UQ513, and 2004 PT107 have similar orbital elements to the Haumea family but lack the same surface compositions from ground-based near-infrared spectra. All 8 of thes objects will be observed with the NIRSpec IFU in PRISM mode to test if surface composition truly is a prerequisite for Haumea family membership.

LOW ALBEDO KBOS: 2007 OR10, Salacia, and 2002 MS4 will be observed with the NIRSpec IFU in PRISM mode.

ERIS: Due to its brightness, Eris will be observed with the NIRSpec IFU and the medium-resolution gratings across the entire near-infrared wavelength range. No PRISM observations are specified. MIRI LRS observations will be used to obtain short-wavelength mid-infrared spectra of this KBO, and a TA is specified in order to accurately place Eris in the thin LRS slit. The rotation period of Eris is poorly-constrained, so we do not place central longitude constraints on these observations.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	PLUTO+CHARON	STD=PLUTO		
Comments: Extended=NO				
(2)	ERIS	STD=ERIS		
Comments: Extended=NO				
(3)	2007OR10	TYPE=ASTEROID,A=67.02678419174214,E=0.5065 733668385273,I=30.91540189471459 ,O=336.818565193629,W=206.9892899457812,M=10 4.3154336275493,EQUINOX=J2000,EPOCH=24- OCT-2016:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(4)	SALACIA	TYPE=ASTEROID,A=41.87530185966378,E=0.1096 978787101603,I=23.93123551318733 ,O=280.0646756512846,W=308.3861681701611,M=1 22.4038788935097,EQUINOX=J2000,EPOCH=10- NOV-2016:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(5)	2002MS4	TYPE=ASTEROID,A=41.72443097956842,E=0.1466 516805357026,I=17.71765889758368 ,O=216.2097162692309,W=213.8547768989156,M=2 12.3068812412642,EQUINOX=J2000,EPOCH=20- AUG-2011:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(6)	2002TX300	TYPE=ASTEROID,A=43.09343114550625,E=0.1246 016924515481,I=25.84997003163252 ,O=324.5327283939301,W=338.5269117363324,M=7 7.3000166963899,EQUINOX=J2000,EPOCH=17- AUG-2018:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(7)	2005RR43	TYPE=ASTEROID,A=43.11134513247017,E=0.1359 319961124028,I=28.52267659630006 ,O=85.8368279017387,W=279.2157294753141,M=44. 66802926455291,EQUINOX=J2000,EPOCH=24-JUL- 2016:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(8)	2003OP32	TYPE=ASTEROID,A=43.10804196662881,E=0.1072 842877526021,I=27.22022829411137 ,O=182.9283094303479,W=67.61278045873134,M=7 2.24841256710465,EQUINOX=J2000,EPOCH=07- NOV-2016:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(9)	1995SM55	TYPE=ASTEROID,A=41.8967678773187,E=0.10752 23749772663,I=27.0690294857322 ,O=21.07207198977048,W=71.51082610056226,M=3 27.0194192042942,EQUINOX=J2000,EPOCH=17- NOV-2014:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(10)	1999KR16	TYPE=ASTEROID,A=49.20884836826788,E=0.3095 008859638814,I=24.76770536678599 ,O=205.5618124828128,W=58.29108604474668,M=3 46.8868853661516,EQUINOX=J2000,EPOCH=08- MAY-2017:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				

	(11)	2002AW197	TYPE=ASTEROID,A=47.49650043804512,E=0.1319308143510317,I=24.36567452232541,O=297.4613742860583,W=293.6502087366333,M=294.2145186702706,EQUINOX=J2000,EPOCH=08-AUG-2016:00:00:00,EpochTimeScale=TDB
	Comments: Extended=NO		
	(12)	2005UQ513	TYPE=ASTEROID,A=43.20368193290723,E=0.1476684947340574,I=25.70553683240755,O=307.6069527766863,W=223.0280934914657,M=226.551636566264,EQUINOX=J2000,EPOCH=24-FEB-2019:00:00:00,EpochTimeScale=TDB
	Comments: Extended=NO		
	(13)	2004PT107	TYPE=ASTEROID,A=40.43297648526189,E=0.05499206907466044,I=26.16311347753991,O=320.9494159436758,W=18.4269314139079,M=354.6530438335935,EQUINOX=J2000,EPOCH=24-JUL-2016:00:00:00,EpochTimeScale=TDB
	Comments: Extended=NO		

Observation

Proposal 1191, Observation 2: PLUTO MIRI MRS Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

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)	PLUTO+CHARON	STD=PLUTO		

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	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	F560W	FASTR1	8	10	1	Dither 1	4	40	987.914	
1	LONG(C)	MRSLONG		FASTR1	92	1	1	Dither 1	4	4	1021.215	
1	LONG(C)	MRSSHORT		FASTR1	92	1	1	Dither 1	4	4	1021.215	
2		IMAGER	F560W	FASTR1	8	10	1	Dither 1	4	40	987.914	
2	MEDIUM(B)	MRSLONG		FASTR1	92	1	1	Dither 1	4	4	1021.215	
2	MEDIUM(B)	MRSSHORT		FASTR1	92	1	1	Dither 1	4	4	1021.215	
3		IMAGER	F560W	FASTR1	8	10	1	Dither 1	4	40	987.914	
3	SHORT(A)	MRSLONG		FASTR1	92	1	1	Dither 1	4	4	1021.215	
3	SHORT(A)	MRSSHORT		FASTR1	92	1	1	Dither 1	4	4	1021.215	

Special Requirements	
	Group Observations 2, 5, Non-interruptible DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 3: PLUTO NIRSPEC IFU: 0 deg Tue Mar 28 17:00:28 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)	PLUTO+CHARON	STD=PLUTO		

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	14	1	false	true	NONE	2	2	437.667	
2	G235H/F170LP	NRSIRS2RAPID	19	1	false	true	NONE	2	2	583.556	
3	G395H/F290LP	NRSIRS2RAPID	38	1	false	true	NONE	2	2	1137.933	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03
CENTRAL MERIDIAN LONGITUDE OF PLUTO+CHARON FROM JWST BETWEEN 350 10

Observation

Proposal 1191, Observation 103: PLUTO NIRSPEC IFU: 0 deg (Obs 3 repeat) Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: This observation is a repeat of observation 3.
Obs 3 failed due to selection of the wrong guide-star (Pluto was out of the FOV).
ref. WOPR TTRB-88564

Diagnostics

(Visit 103:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	PLUTO+CHARON	STD=PLUTO		

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	14	1	false	true	NONE	2	2	437.667	
2	G235H/F170LP	NRSIRS2RAPID	19	1	false	true	NONE	2	2	583.556	
3	G395H/F290LP	NRSIRS2RAPID	38	1	false	true	NONE	2	2	1137.933	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03
CENTRAL MERIDIAN LONGITUDE OF PLUTO+CHARON FROM JWST BETWEEN 350 10

Observation

Proposal 1191, Observation 4: PLUTO NIRSPEC IFU: 120 deg Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(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
(1)	PLUTO+CHARON	STD=PLUTO		

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	14	1	false	true	NONE	2	2	437.667	
2	G235H/F170LP	NRSIRS2RAPID	19	1	false	true	NONE	2	2	583.556	
3	G395H/F290LP	NRSIRS2RAPID	38	1	false	true	NONE	2	2	1137.933	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03
CENTRAL MERIDIAN LONGITUDE OF PLUTO+CHARON FROM JWST BETWEEN 110 130

Observation

Proposal 1191, Observation 5: PLUTO NIRSPEC IFU: 200 deg Tue Mar 28 17:00:28 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
(1)	PLUTO+CHARON	STD=PLUTO		

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	14	1	false	true	NONE	2	2	437.667	
2	G235H/F170LP	NRSIRS2RAPID	19	1	false	true	NONE	2	2	583.556	
3	G395H/F290LP	NRSIRS2RAPID	38	1	false	true	NONE	2	2	1137.933	

Special Requirements

Group Observations 2, 5, Non-interruptible

DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03
CENTRAL MERIDIAN LONGITUDE OF PLUTO+CHARON FROM JWST BETWEEN 165 175

Observation

Proposal 1191, Observation 6: PLUTO NIRSPEC IFU: 280 deg Tue Mar 28 17:00:28 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
(1)	PLUTO+CHARON	STD=PLUTO		

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	14	1	false	true	NONE	2	2	437.667	
2	G235H/F170LP	NRSIRS2RAPID	19	1	false	true	NONE	2	2	583.556	
3	G395H/F290LP	NRSIRS2RAPID	38	1	false	true	NONE	2	2	1137.933	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03
CENTRAL MERIDIAN LONGITUDE OF PLUTO+CHARON FROM JWST BETWEEN 270 290

Observation

Proposal 1191, Observation 106: PLUTO NIRSPEC IFU: 280 deg Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: Repeat of skipped observation 6.

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
(1)	PLUTO+CHARON	STD=PLUTO		

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	14	1	false	true	NONE	2	2	437.667	
2	G235H/F170LP	NRSIRS2RAPID	19	1	false	true	NONE	2	2	583.556	
3	G395H/F290LP	NRSIRS2RAPID	38	1	false	true	NONE	2	2	1137.933	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE PLUTO+CHARON FROM JWST LESS THAN 0.03
CENTRAL MERIDIAN LONGITUDE OF PLUTO+CHARON FROM JWST BETWEEN 230 250

Observation

Proposal 1191, Observation 7: 2002TX300 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: Time issues. Just go with whatever readout option gives shortest time.

Diagnostics

(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(6)	2002TX300	TYPE=ASTEROID,A=43.09343114550625,E=0.1246016924515481,I=25.84997003163252,O=324.5327283939301,W=338.5269117363324,M=77.3000166963899,EQUINOX=J2000,EPOCH=17-AUG-2018:00:00:00,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	15	1	false	true	NONE	2	2	466.844	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2002TX300 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 8: 2005RR43 NIRSPEC IFU Tue Mar 28 17:00:28 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
(7)	2005RR43	TYPE=ASTEROID,A=43.11134513247017,E=0.1359319961124028,I=28.52267659630006,O=85.8368279017387,W=279.2157294753141,M=44.66802926455291,EQUINOX=J2000,EPOCH=24-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	15	1	false	true	NONE	2	2	466.844	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2005RR43 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 9: 2003OP32 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(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
(8)	2003OP32	TYPE=ASTEROID,A=43.10804196662881,E=0.1072842877526021,I=27.22022829411137,O=182.9283094303479,W=67.61278045873134,M=72.24841256710465,EQUINOX=J2000,EPOCH=07-NOV-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	20	1	false	true	NONE	2	2	612.733	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2003OP32 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 10: 1995SM55 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

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
(9)	1995SM55	TYPE=ASTEROID,A=41.8967678773187,E=0.10752 23749772663,I=27.0690294857322 ,O=21.07207198977048,W=71.51082610056226,M=3 27.0194192042942,EQUINOX=J2000,EPOCH=17- NOV-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	20	1	false	true	NONE	2	2	612.733	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 1995SM55 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 11: 1999KR16 NIRSPEC IFU Tue Mar 28 17:00:28 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
(10)	1999KR16	TYPE=ASTEROID,A=49.20884836826788,E=0.3095008859638814,I=24.76770536678599,O=205.5618124828128,W=58.29108604474668,M=346.8868853661516,EQUINOX=J2000,EPOCH=08-MAY-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	PRISM/CLEAR	NRSIRS2RAPID	25	1	false	true	NONE	2	2	758.622	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 1999KR16 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 12: 2002AW197 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

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
(11)	2002AW197	TYPE=ASTEROID,A=47.49650043804512,E=0.1319308143510317,I=24.36567452232541,O=297.4613742860583,W=293.6502087366333,M=294.2145186702706,EQUINOX=J2000,EPOCH=08-AUG-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	15	1	false	true	NONE	2	2	466.844	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2002AW197 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 13: 2005UQ513 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

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
(12)	2005UQ513	TYPE=ASTEROID,A=43.20368193290723,E=0.1476684947340574,I=25.70553683240755,O=307.6069527766863,W=223.0280934914657,M=226.551636566264,EQUINOX=J2000,EPOCH=24-FEB-2019:00:00:00,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	15	1	false	true	NONE	2	2	466.844	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2005UQ513 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 14: 2004PT107 NIRSPEC IFU

Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 14:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(13)	2004PT107	TYPE=ASTEROID,A=40.43297648526189,E=0.0549 9206907466044,I=26.16311347753991 ,O=320.9494159436758,W=18.4269314139079,M=35 4.6530438335935,EQUINOX=J2000,EPOCH=24- 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	30	1	false	true	NONE	2	2	904.511	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2004PT107 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 15: 2007OR10 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(3)	2007OR10	TYPE=ASTEROID,A=67.02678419174214,E=0.5065733668385273,I=30.91540189471459,O=336.818565193629,W=206.9892899457812,M=104.3154336275493,EQUINOX=J2000,EPOCH=24-OCT-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	30	1	false	true	NONE	2	2	904.511	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE 2007OR10 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 16: SALACIA NIRSPEC IFU

Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 16:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(4)	SALACIA	TYPE=ASTEROID,A=41.87530185966378,E=0.1096978787101603,I=23.93123551318733,O=280.0646756512846,W=308.3861681701611,M=122.4038788935097,EQUINOX=J2000,EPOCH=10-NOV-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 SALACIA FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 17: 2002MS4 NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 17:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(5)	2002MS4	TYPE=ASTEROID,A=41.72443097956842,E=0.1466516805357026,I=17.71765889758368,O=216.2097162692309,W=213.8547768989156,M=212.3068812412642,EQUINOX=J2000,EPOCH=20-AUG-2011:00:00:00,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 2002MS4 FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 18: ERIS MIRI LRS Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(ERIS MIRI LRS (Obs 18)) Warning (Form): Record ETC Wkbk.Calc ID used to verify target acquisition.

(Exposure) Warning (Form): Record ETC Wkbk.Calc ID used to verify target acquisition.

(Visit 18:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

Comments: Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F560W	FAST	8	1	1	22.2	

Template

Subarray	Obtain Verification Image?
FULL	false

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	ALONG SLIT NOD				

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	50	3	6	1	2	843.612	

Special Requirements	DEFAULT WINDOW: ANGULAR RATE ERIS FROM JWST LESS THAN 0.03

Observation

Proposal 1191, Observation 19: ERIS NIRSPEC IFU Tue Mar 28 17:00:28 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 19:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

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

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	G140M/F100LP	NRSIRS2RAPID	20	1	false	true	NONE	2	2	612.733	
2	G235M/F170LP	NRSIRS2RAPID	20	1	false	true	NONE	2	2	612.733	
3	G395M/F290LP	NRSIRS2RAPID	40	1	false	true	NONE	2	2	1196.289	

Special Requirements

DEFAULT WINDOW: ANGULAR RATE ERIS FROM JWST LESS THAN 0.03