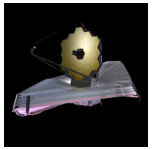

2970 - The volatile content and C/O ratio of old disks: constraints on young planet atmospheres

Cycle: 2, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1		MIRI Medium Resolution Spectroscopy	(1) 2MASSJ16042165-2130284
	2		MIRI Medium Resolution Spectroscopy	(2) 2MASS-J16064794-1841437
	3		MIRI Medium Resolution Spectroscopy	(3) 2MASSJ16142029-1906481
	4		MIRI Medium Resolution Spectroscopy	(4) 2MASSJ16153456-2242421
	5		MIRI Medium Resolution Spectroscopy	(5) 2MASSJ16075796-2040087
	6		MIRI Medium Resolution Spectroscopy	(6) 2MASSJ16052157-1821412
	7		MIRI Medium Resolution Spectroscopy	(7) 2MASSJ16123916-1859284
	8		MIRI Medium Resolution Spectroscopy	(8) 2MASSJ16062196-1928445

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	9		MIRI Medium Resolution Spectroscopy	(9) 2MASSJ16035767-2031055
	10		MIRI Medium Resolution Spectroscopy	(10) 2MASSJ16141107-2305362
	11		MIRI Medium Resolution Spectroscopy	(11) 2MASSJ16153220-2010236
	12		MIRI Medium Resolution Spectroscopy	(12) 2MASS-J16120505-2043404
	13		MIRI Medium Resolution Spectroscopy	(13) 2MASSJ16111534-1757214
	14		MIRI Medium Resolution Spectroscopy	(14) 2MASSJ16064385-1908056

ABSTRACT

Sub-Neptunes are the most common type of planets inside 1 au. Their cores have likely formed via pebble accretion and their primordial envelopes accreted from the gas disk. There are hints of large scale inward drift of icy pebbles, possibly contributing to form sub-Neptunes, in ~1-3 Myr-old solar-type protoplanetary disks (Mstar~0.4-1.5Msun). The chemical inventory of these young disks will be soon characterized in detail via GTO and Cycle1 MIRI-MRS programs. Unfortunately, disks at later evolutionary stages, when sub-Neptunes likely accrete their envelopes, are not covered in these programs. Here, we propose MIRI-MRS observations of a well-characterized sample of ~5-10 Myr-old solar-type protoplanetary disks to reveal their chemical inventory and, by comparing with the young disks, to constrain how it evolved. By covering ~3 orders of magnitude in millimeter flux, hence dust (pebble) mass, we will also test the prediction that the C/O elemental ratio inside the snowline becomes supersolar at these old ages, especially toward the faintest disks with the smallest dust content. Our observations will provide a glimpse into the chemical composition of gas that is accreted to form the primordial atmosphere of sub-Neptunes which is critical for the subsequent atmospheric loss and chemical evolution.

OBSERVING DESCRIPTION

We request MIRI-MRS observations for 14 disks in the Upper Sco star-forming region with 2MASS names: 2MASSJ16042165-2130284, 2MASS-J16064794-1841437, 2MASSJ16120668-3010270, 2MASSJ16153456-2242421, 2MASSJ16075796-2040087, 2MASSJ16052157-1821412, 2MASSJ16123916-1859284, 2MASSJ16062196-1928445, 2MASSJ16035767-2031055, 2MASSJ16141107-2305362, 2MASSJ16153220-2010236, 2MASS-J16120505-2043404, 2MASSJ16111534-1757214, and 2MASSJ16064385-1908056.

Each observation starts with an acquisition on Target to place the source at the center of the IFU field of view. As we aim to obtain complete spectral coverage, we observe in all three grating settings: SHORT (A), MEDIUM (B), and LONG (C). Exposures are set to reach a S/N of ~200 at 16um. While acquiring the medium- resolution spectra, we take simultaneous images (at no extra time) with the F770W, F1000W, and F1130W filters as they can be used to improve the astrometric solution of individual MRS exposures. Our sources are expected to be unresolved, hence the use of the 4-Point dither pattern.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	2MASSJ16042165-2130284	RA: 16 04 21.6410 (241.0901708d) Dec: -21 30 28.92 (-21.50803d) Equinox: J2000	Proper Motion RA: -8.917635762864193E-4 sec of time/yr Proper Motion Dec: -0.023804999955245876 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(2)	2MASS-J16064794-1841437	RA: 16 06 47.9310 (241.6997125d) Dec: -18 41 44.12 (-18.69559d) Equinox: J2000	Proper Motion RA: -6.011180138403578E-4 sec of time/yr Proper Motion Dec: -0.021010999967074895 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(3)	2MASSJ16142029-1906481	RA: 16 14 20.2880 (243.5845333d) Dec: -19 06 48.06 (-19.11335d) Equinox: J2000	Proper Motion RA: -6.988 mas/yr Proper Motion Dec: -26.267 mas/yr Epoch of Position: 2015.5	
	Comments: Information retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(4)	2MASSJ16153456-2242421	RA: 16 15 34.5358 (243.8938992d) Dec: -22 42 42.90 (-22.71192d) Equinox: J2000	Proper Motion RA: -0.0019007192911060734 sec of time/yr Proper Motion Dec: -0.051299999972798105 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(5)	2MASSJ16075796-2040087	RA: 16 07 57.9511 (241.9914629d) Dec: -20 40 9.08 (-20.66919d) Equinox: J2000	Proper Motion RA: -5.661758220023781E-4 sec of time/yr Proper Motion Dec: -0.02460799998971197 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(6)	2MASSJ16052157-1821412	RA: 16 05 21.5787 (241.3399113d) Dec: -18 21 41.77 (-18.36160d) Equinox: J2000	Proper Motion RA: -6.522757654899978E-4 sec of time/yr Proper Motion Dec: -0.021143000003576162 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(7)	2MASSJ16123916-1859284	RA: 16 12 39.1575 (243.1631562d) Dec: -18 59 28.85 (-18.99135d) Equinox: J2000	Proper Motion RA: -5.980886593122838E-4 sec of time/yr Proper Motion Dec: -0.025458000072831055 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			

(8)	2MASSJ16062196-1928445	RA: 16 06 21.9398 (241.5914158d) Dec: -19 28 44.80 (-19.47911d) Equinox: J2000	Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(9)	2MASSJ16035767-2031055	RA: 16 03 57.6584 (240.9902433d) Dec: -20 31 5.96 (-20.51832d) Equinox: J2000	Proper Motion RA: -8.235811985373697E-4 sec of time/yr Proper Motion Dec: -0.022844000022814726 arcsec/yr Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(10)	2MASSJ16141107-2305362	RA: 16 14 11.0633 (243.5460971d) Dec: -23 05 36.58 (-23.09349d) Equinox: J2000	Proper Motion RA: -4.1324857656200144E-4 sec of time/yr Proper Motion Dec: -0.03262499999436841 arcsec/yr Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(11)	2MASSJ16153220-2010236	RA: 16 15 32.1662 (243.8840258d) Dec: -20 10 24.60 (-20.17350d) Equinox: J2000	Proper Motion RA: -0.0010369473337850969 sec of time/yr Proper Motion Dec: -0.026999999931831553 arcsec/yr Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(12)	2MASS-J16120505-2043404	RA: 16 12 5.0431 (243.0210129d) Dec: -20 43 40.94 (-20.72804d) Equinox: J2000	Proper Motion RA: -9.429709519639764E-4 sec of time/yr Proper Motion Dec: -0.02462000006744347 arcsec/yr Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(13)	2MASSJ16111534-1757214	RA: 16 11 15.3344 (242.8138933d) Dec: -17 57 21.81 (-17.95606d) Equinox: J2000	Proper Motion RA: -6.274966706495983E-4 sec of time/yr Proper Motion Dec: -0.024626000003991066 arcsec/yr Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			
(14)	2MASSJ16064385-1908056	RA: 16 06 43.8502 (241.6827092d) Dec: -19 08 5.89 (-19.13497d) Equinox: J2000	Proper Motion RA: -7.618249010332979E-4 sec of time/yr Proper Motion Dec: -0.02189199999520497 arcsec/yr Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[Protoplanetary disks, T Tauri stars]*			

Observation

Proposal 2970, Observation 1

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	2MASSJ16042165-2130284	RA: 16 04 21.6410 (241.0901708d) Dec: -21 30 28.92 (-21.50803d) Equinox: J2000	Proper Motion RA: -8.917635762864193E-4 sec of time/yr Proper Motion Dec: -0.023804999955245876 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.47

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 2

Wed May 10 23:08:54 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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	2MASS-J16064794-1841437	RA: 16 06 47.9310 (241.6997125d) Dec: -18 41 44.12 (-18.69559d) Equinox: J2000	Proper Motion RA: -6.011180138403578E-4 sec of time/yr Proper Motion Dec: -0.021010999967074895 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	6	1	1	16.65	140145.24

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	75	2	1	Dither 1	4	8	1676.124	
1	SHORT(A)	MRSSHORT		FASTR1	75	2	1	Dither 1	4	8	1676.124	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	75	2	1	Dither 1	4	8	1676.124	
2	MEDIUM(B)	MRSSHORT		FASTR1	75	2	1	Dither 1	4	8	1676.124	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	75	2	1	Dither 1	4	8	1676.124	
3	LONG(C)	MRSSHORT		FASTR1	75	2	1	Dither 1	4	8	1676.124	

Observation

Proposal 2970, Observation 3

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	2MASSJ16142029-1906481	RA: 16 14 20.2880 (243.5845333d)	Proper Motion RA: -6.988 mas/yr	
		Dec: -19 06 48.06 (-19.11335d)	Proper Motion Dec: -26.267 mas/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: Information retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.53

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	25	1	1	Dither 1	4	4	277.504	
1	SHORT(A)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
1	SHORT(A)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	
2		IMAGER	F1000W	FASTR1	25	1	1	Dither 1	4	4	277.504	
2	MEDIUM(B)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
2	MEDIUM(B)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	
3		IMAGER	F1130W	FASTR1	25	1	1	Dither 1	4	4	277.504	
3	LONG(C)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
3	LONG(C)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	

Observation

Proposal 2970, Observation 4

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	2MASSJ16153456-2242421	RA: 16 15 34.5358 (243.8938992d) Dec: -22 42 42.90 (-22.71192d) Equinox: J2000	Proper Motion RA: -0.0019007192911060734 sec of time/yr Proper Motion Dec: -0.051299999972798105 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.51

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	25	1	1	Dither 1	4	4	277.504	
1	SHORT(A)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
1	SHORT(A)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	
2		IMAGER	F1000W	FASTR1	25	1	1	Dither 1	4	4	277.504	
2	MEDIUM(B)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
2	MEDIUM(B)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	
3		IMAGER	F1130W	FASTR1	25	1	1	Dither 1	4	4	277.504	
3	LONG(C)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
3	LONG(C)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	

Observation

Proposal 2970, Observation 5

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	2MASSJ16075796-2040087	RA: 16 07 57.9511 (241.9914629d) Dec: -20 40 9.08 (-20.66919d) Equinox: J2000	Proper Motion RA: -5.661758220023781E-4 sec of time/yr Proper Motion Dec: -0.02460799998971197 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.52

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	25	1	1	Dither 1	4	4	277.504	
1	SHORT(A)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
1	SHORT(A)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	
2		IMAGER	F1000W	FASTR1	25	1	1	Dither 1	4	4	277.504	
2	MEDIUM(B)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
2	MEDIUM(B)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	
3		IMAGER	F1130W	FASTR1	25	1	1	Dither 1	4	4	277.504	
3	LONG(C)	MRSLONG		FASTR1	25	1	1	Dither 1	4	4	277.504	
3	LONG(C)	MRSSHORT		FASTR1	25	1	1	Dither 1	4	4	277.504	

Observation

Proposal 2970, Observation 6

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(6)	2MASSJ16052157-1821412	RA: 16 05 21.5787 (241.3399113d) Dec: -18 21 41.77 (-18.36160d) Equinox: J2000	Proper Motion RA: -6.522757654899978E-4 sec of time/yr Proper Motion Dec: -0.021143000003576162 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.49

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 7

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	2MASSJ16123916-1859284	RA: 16 12 39.1575 (243.1631562d) Dec: -18 59 28.85 (-18.99135d) Equinox: J2000	Proper Motion RA: -5.980886593122838E-4 sec of time/yr Proper Motion Dec: -0.025458000072831055 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.50

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 8

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(8)	2MASSJ16062196-1928445	RA: 16 06 21.9398 (241.5914158d) Dec: -19 28 44.80 (-19.47911d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.54

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 9

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(9)	2MASSJ16035767-2031055	RA: 16 03 57.6584 (240.9902433d) Dec: -20 31 5.96 (-20.51832d) Equinox: J2000	Proper Motion RA: -8.235811985373697E-4 sec of time/yr Proper Motion Dec: -0.022844000022814726 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.55

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 10

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(10)	2MASSJ16141107-2305362	RA: 16 14 11.0633 (243.5460971d) Dec: -23 05 36.58 (-23.09349d) Equinox: J2000	Proper Motion RA: -4.1324857656200144E-4 sec of time/yr Proper Motion Dec: -0.03262499999436841 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.51

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 11

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(11)	2MASSJ16153220-2010236	RA: 16 15 32.1662 (243.8840258d) Dec: -20 10 24.60 (-20.17350d) Equinox: J2000	Proper Motion RA: -0.0010369473337850969 sec of time/yr Proper Motion Dec: -0.026999999931831553 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.47

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 12

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(12)	2MASS-J16120505-2043404	RA: 16 12 5.0431 (243.0210129d) Dec: -20 43 40.94 (-20.72804d) Equinox: J2000	Proper Motion RA: -9.429709519639764E-4 sec of time/yr Proper Motion Dec: -0.02462000006744347 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.48

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	75	1	1	Dither 1	4	4	832.512	
1	SHORT(A)	MRSLONG		FASTR1	75	1	1	Dither 1	4	4	832.512	
1	SHORT(A)	MRSSHORT		FASTR1	75	1	1	Dither 1	4	4	832.512	
2		IMAGER	F1000W	FASTR1	75	1	1	Dither 1	4	4	832.512	
2	MEDIUM(B)	MRSLONG		FASTR1	75	1	1	Dither 1	4	4	832.512	
2	MEDIUM(B)	MRSSHORT		FASTR1	75	1	1	Dither 1	4	4	832.512	
3		IMAGER	F1130W	FASTR1	75	1	1	Dither 1	4	4	832.512	
3	LONG(C)	MRSLONG		FASTR1	75	1	1	Dither 1	4	4	832.512	
3	LONG(C)	MRSSHORT		FASTR1	75	1	1	Dither 1	4	4	832.512	

Observation

Proposal 2970, Observation 13

Wed May 10 23:08:54 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(13)	2MASSJ16111534-1757214	RA: 16 11 15.3344 (242.8138933d) Dec: -17 57 21.81 (-17.95606d) Equinox: J2000	Proper Motion RA: -6.274966706495983E-4 sec of time/yr Proper Motion Dec: -0.024626000003991066 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	4	1	1	11.1	140145.49

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Observation

Proposal 2970, Observation 14

Wed May 10 23:08:55 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(14)	2MASSJ16064385-1908056	RA: 16 06 43.8502 (241.6827092d) Dec: -19 08 5.89 (-19.13497d) Equinox: J2000	Proper Motion RA: -7.618249010332979E-4 sec of time/yr Proper Motion Dec: -0.02189199999520497 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[Protoplanetary disks, T Tauri stars]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	FAST	6	1	1	16.65	140145.24

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	SHORT(A)	MRSLONG		FASTR1	75	2	1	Dither 1	4	8	1676.124	
1	SHORT(A)	MRSSHORT		FASTR1	75	2	1	Dither 1	4	8	1676.124	
2		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	75	2	1	Dither 1	4	8	1676.124	
2	MEDIUM(B)	MRSSHORT		FASTR1	75	2	1	Dither 1	4	8	1676.124	
3		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	LONG(C)	MRSLONG		FASTR1	75	2	1	Dither 1	4	8	1676.124	
3	LONG(C)	MRSSHORT		FASTR1	75	2	1	Dither 1	4	8	1676.124	