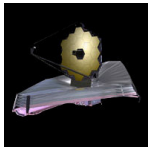

4278 - Tracing molecular gas in nearby metal-poor systems: the keys to unlocking star-formation in the early universe

Cycle: 2, Proposal Category: GO

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1	J0337-0502	MIRI Medium Resolution Spectroscopy	(1) J0337-0502
	17	J0337-0502 (repetition of Visit 1)	MIRI Medium Resolution Spectroscopy	(1) J0337-0502
	2	J0337-0502-BKG	MIRI Medium Resolution Spectroscopy	(2) J0337-0502-BKG
	18	J0337-0502-BKG (repetition of visit 2)	MIRI Medium Resolution Spectroscopy	(2) J0337-0502-BKG
	3	J0934+5514	MIRI Medium Resolution Spectroscopy	(3) J0934+5514
	4	J0934+5514-BKG	MIRI Medium Resolution Spectroscopy	(4) J0934+5514-BKG
	5	J0127-0619	MIRI Medium Resolution Spectroscopy	(5) J0127-0619
	6	J0127-0619-BKG	MIRI Medium Resolution Spectroscopy	(6) J0127-0619-BKG
	11	J0944+0038	MIRI Medium Resolution Spectroscopy	(11) J0944-0038
	12	J0944+0038-BKG	MIRI Medium Resolution Spectroscopy	(12) J0944-0038-BKG
	13	J1323-0132	MIRI Medium Resolution Spectroscopy	(13) J1323-0132
	14	J1323-0132-BKG	MIRI Medium Resolution Spectroscopy	(14) J1323-0132-BKG
	15	J1418+2102	MIRI Medium Resolution Spectroscopy	(15) J1418+2102
	16	J1418+2102-BKG	MIRI Medium Resolution Spectroscopy	(16) J1418+2102-BKG

ABSTRACT

Molecular gas and star formation (SF) are among the main drivers of galaxy evolution and it is uniquely important to investigate them in the pristine primeval systems of the high-z Universe. SF is expected to take place in the cold molecular phase of the gas, mainly constituted by molecular Hydrogen, that unfortunately cannot be directly traced. Alternative methods, like the use of CO, are limited in metal-poor environments, where the reduced dust shielding and high ionization radiation create the so called CO-dark gas. Most importantly, the cold gas phase is inaccessible in the high-z Universe with the current facilities. Here we propose an efficient MIRI MRS program of six nearby metal-poor objects, considered high-z analogs and spanning a range of galaxy properties. Moreover, each is complemented by a unique set of multi-wavelength data (UV, optical and submm). Our aim is to investigate in an alternative way their total molecular reservoir. Specifically, we will measure their warm molecular gas through multiple mid-IR H2 rotational lines, which will be revealed for the first time in low-metallicity gas by harnessing the sensitivity of MIRI.

The conversion of the warm-to-cold molecular gas through their detailed modeling will then give us access to the total molecular gas content. Overall, the MIRI MRS spectra for our high-z analogs in combination with the UV-optical-submm coverage will shed light on the interstellar medium conditions and mechanisms in metal-poor extreme environments of the early systems.

OBSERVING DESCRIPTION

We will observe a sample of metal-poor local galaxies with the MIRI/MRS IFU.

We will require one pointing per galaxy, that will cover the majority of the emission with Channel 1 (3.2" X 3.7"), since they are compact systems. In addition, we request companion background observations with half the integrations (same group number, halvening the dithering) as that of the individual pointings to accurately measure and correct for the thermal background.

Given the expected absolute pointing accuracy of JWST (0.10”), we do not request additional time to perform a target acquisition. Our proposed science goals can be achieved with a pointing uncertainty of ~0.10”.

We will obtain MIRI/MRS spectra to study the molecular gas traced by H2 pure-rotational transitions uniquely covered by MIRI/MRS wavelength range (5-28 micron) in these metal-poor systems. Hence, we will use all three grating settings, SHORT (A), MEDIUM (B), and LONG (C), and the FAST readout mode. For the galaxies where the H2 transitions reach enough signal-to-noise per spatial elements we will also map the molecular gas emission.

We will collect simultaneous off-source imaging observations using the the F770W, F1130W, and F1800W filters. With these observations we will primarily map PAH and warm dust emission.

We do not require any specific PA orientation for the MIRI/MRS pointings, but background and science observations are connected via a fixed offset and placed in an uninterruptible sequence. This ensures that the target remains at the center of the imaging FoV regardless of the telescope roll angle.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	J0337-0502	RA: 03 37 44.0610 (54.4335875d) Dec: -05 02 40.19 (-5.04450d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Blue compact dwarf galaxies]* *Extended=YES*				
(2)	J0337-0502-BKG	RA: 03 37 44.5000 (54.4354167d) Dec: -05 01 45.88 (-5.02941d) Equinox: J2000		
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*				
(3)	J0934+5514	RA: 09 34 2.0200 (143.5084167d) Dec: +55 14 28.10 (55.24114d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Blue compact dwarf galaxies]* *Extended=YES*				
(4)	J0934+5514-BKG	RA: 09 33 55.5690 (143.4815375d) Dec: +55 15 19.15 (55.25532d) Equinox: J2000		
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*				
(5)	J0127-0619	RA: 01 27 35.5110 (21.8979625d) Dec: -06 19 36.06 (-6.32668d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Blue compact dwarf galaxies]* *Extended=YES*				
(6)	J0127-0619-BKG	RA: 01 27 33.0800 (21.8878333d) Dec: -06 20 37.60 (-6.34378d) Equinox: J2000		
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*				
(11)	J0944-0038	RA: 09 44 1.8700 (146.0077917d) Dec: -00 38 32.18 (-.64227d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Emission line galaxies]* *Extended=YES*				

(12)	J0944-0038-BKG	RA: 09 44 6.0500 (146.0252083d) Dec: -00 38 3.50 (-.63431d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*		
(13)	J1323-0132	RA: 13 23 47.5200 (200.9480000d) Dec: -01 32 51.94 (-1.54776d) Equinox: J2000
Comments: *Category=Galaxy* *Description=[Emission line galaxies]* *Extended=YES*		
(14)	J1323-0132-BKG	RA: 13 23 50.7400 (200.9614167d) Dec: -01 32 15.20 (-1.53756d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*		
(15)	J1418+2102	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000
Comments: *Category=Galaxy* *Description=[Emission line galaxies]* *Extended=YES*		
(16)	J1418+2102-BKG	RA: 14 18 54.6900 (214.7278750d) Dec: +21 02 49.70 (21.04714d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*		

Observation

Proposal 4278, Observation 1: J0337-0502 Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J0337-0502-BKG (Obs 2)]

Diagnostics

(J0337-0502 (Obs 1)) Warning (Form): Imager Filter overlap.

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

(J0337-0502 (Obs 1)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	J0337-0502	RA: 03 37 44.0610 (54.4335875d) Dec: -05 02 40.19 (-5.04450d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Blue compact dwarf galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F1800W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1130W	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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	
	Aperture PA Range 32.33 to 86.63 Degrees (V3 32.33 to 86.63) Sequence Observations 1, 2, Non-interruptible Same Aperture PA 1, 2

Observation

Proposal 4278, Observation 17: J0337-0502 (repetition of Visit 1) Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J0337-0502-BKG (repetition of visit 2) (Obs 18)]

Diagnostics

(J0337-0502 (repetition of Visit 1) (Obs 17)) Warning (Form): Imager Filter overlap.

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

(J0337-0502 (repetition of Visit 1) (Obs 17)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	J0337-0502	RA: 03 37 44.0610 (54.4335875d) Dec: -05 02 40.19 (-5.04450d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Blue compact dwarf galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F1800W	FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1130W	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	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	
	Aperture PA Range 32.33 to 86.63 Degrees (V3 32.33 to 86.63) Sequence Observations 17, 18, Non-interruptible Same Aperture PA 17, 18

Observation

Proposal 4278, Observation 2: J0337-0502-BKG Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J0337-0502 (Obs 1)]

Diagnostics

(J0337-0502-BKG (Obs 2)) Warning (Form): Imager Filter overlap.

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

(J0337-0502-BKG (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	J0337-0502-BKG	RA: 03 37 44.5000 (54.4354167d) Dec: -05 01 45.88 (-5.02941d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F1800W	FASTR1	50	1	1	Dither 1	2	2	277.504	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	2	2	277.504	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	2	2	277.504	
2		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	2	2	277.504	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	2	2	277.504	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	2	2	277.504	
3		IMAGER	F770W	FASTR1	50	1	1	Dither 1	2	2	277.504	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	2	2	277.504	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	2	2	277.504	

Special Requirements	Sequence Observations 1, 2, Non-interruptible Same Aperture PA 1, 2

Observation

Proposal 4278, Observation 18: J0337-0502-BKG (repetition of visit 2) Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J0337-0502 (repetition of Visit 1) (Obs 17)]

Diagnostics

(J0337-0502-BKG (repetition of visit 2) (Obs 18)) Warning (Form): Imager Filter overlap.

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

(J0337-0502-BKG (repetition of visit 2) (Obs 18)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	J0337-0502-BKG	RA: 03 37 44.5000 (54.4354167d) Dec: -05 01 45.88 (-5.02941d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F1800W	FASTR1	50	1	1	Dither 1	2	2	277.504	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	2	2	277.504	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	2	2	277.504	
2		IMAGER	F1130W	FASTR1	50	1	1	Dither 1	2	2	277.504	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	2	2	277.504	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	2	2	277.504	
3		IMAGER	F770W	FASTR1	50	1	1	Dither 1	2	2	277.504	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	2	2	277.504	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	2	2	277.504	

Special Requirements	
	Sequence Observations 17, 18, Non-interruptible Same Aperture PA 17, 18

Observation

Proposal 4278, Observation 3: J0934+5514 Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J0934+5514-BKG (Obs 4)]

Diagnostics

(J0934+5514 (Obs 3)) Warning (Form): Imager Filter overlap.

(Visit 3:1) Warning (Form): Data Excess over lower threshold

(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)	J0934+5514	RA: 09 34 2.0200 (143.5084167d) Dec: +55 14 28.10 (55.24114d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Blue compact dwarf galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F770W	FASTR1	250	1	1	Dither 1	4	4	2775.04	
1	SHORT(A)	MRSLONG		FASTR1	250	1	1	Dither 1	4	4	2775.04	
1	SHORT(A)	MRSSHORT		FASTR1	250	1	1	Dither 1	4	4	2775.04	
2		IMAGER	F1130W	FASTR1	250	1	1	Dither 1	4	4	2775.04	
2	MEDIUM(B)	MRSLONG		FASTR1	250	1	1	Dither 1	4	4	2775.04	
2	MEDIUM(B)	MRSSHORT		FASTR1	250	1	1	Dither 1	4	4	2775.04	
3		IMAGER	F1800W	FASTR1	250	1	1	Dither 1	4	4	2775.04	
3	LONG(C)	MRSLONG		FASTR1	250	1	1	Dither 1	4	4	2775.04	
3	LONG(C)	MRSSHORT		FASTR1	250	1	1	Dither 1	4	4	2775.04	

Special Requirements	Sequence Observations 3, 4, Non-interruptible

Observation

Proposal 4278, Observation 4: J0934+5514-BKG Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J0934+5514 (Obs 3)]

Diagnostics

(J0934+5514-BKG (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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	J0934+5514-BKG	RA: 09 33 55.5690 (143.4815375d) Dec: +55 15 19.15 (55.25532d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F770W	FASTR1	250	1	1	Dither 1	2	2	1387.52	
1	SHORT(A)	MRSLONG		FASTR1	250	1	1	Dither 1	2	2	1387.52	
1	SHORT(A)	MRSSHORT		FASTR1	250	1	1	Dither 1	2	2	1387.52	
2		IMAGER	F1130W	FASTR1	250	1	1	Dither 1	2	2	1387.52	
2	MEDIUM(B)	MRSLONG		FASTR1	250	1	1	Dither 1	2	2	1387.52	
2	MEDIUM(B)	MRSSHORT		FASTR1	250	1	1	Dither 1	2	2	1387.52	
3		IMAGER	F1800W	FASTR1	250	1	1	Dither 1	2	2	1387.52	
3	LONG(C)	MRSLONG		FASTR1	250	1	1	Dither 1	2	2	1387.52	
3	LONG(C)	MRSSHORT		FASTR1	250	1	1	Dither 1	2	2	1387.52	

Special Requirements	Sequence Observations 3, 4, Non-interruptible

Observation

Proposal 4278, Observation 5: J0127-0619 Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J0127-0619-BKG (Obs 6)]

Diagnostics

(J0127-0619 (Obs 5)) Warning (Form): Imager Filter overlap.

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

(J0127-0619 (Obs 5)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

(Visit 5:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	J0127-0619	RA: 01 27 35.5110 (21.8979625d) Dec: -06 19 36.06 (-6.32668d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Blue compact dwarf galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F770W	FASTR1	60	1	1	Dither 1	4	4	666.01	
1	SHORT(A)	MRSLONG		FASTR1	60	1	1	Dither 1	4	4	666.01	
1	SHORT(A)	MRSSHORT		FASTR1	60	1	1	Dither 1	4	4	666.01	
2		IMAGER	F1130W	FASTR1	60	1	1	Dither 1	4	4	666.01	
2	MEDIUM(B)	MRSLONG		FASTR1	60	1	1	Dither 1	4	4	666.01	
2	MEDIUM(B)	MRSSHORT		FASTR1	60	1	1	Dither 1	4	4	666.01	
3		IMAGER	F1800W	FASTR1	60	1	1	Dither 1	4	4	666.01	
3	LONG(C)	MRSLONG		FASTR1	60	1	1	Dither 1	4	4	666.01	
3	LONG(C)	MRSSHORT		FASTR1	60	1	1	Dither 1	4	4	666.01	

Special Requirements	
	Aperture PA Range 234.0 to 274.0 Degrees (V3 234.0 to 274.0) Sequence Observations 5, 6, Non-interruptible Same Aperture PA 5, 6

Observation

Proposal 4278, Observation 6: J0127-0619-BKG Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J0127-0619 (Obs 5)]

Diagnostics

(J0127-0619-BKG (Obs 6)) Warning (Form): Imager Filter overlap.

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

(J0127-0619-BKG (Obs 6)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(6)	J0127-0619-BKG	RA: 01 27 33.0800 (21.8878333d) Dec: -06 20 37.60 (-6.34378d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F770W	FASTR1	60	1	1	Dither 1	2	2	333.005	
1	SHORT(A)	MRSLONG		FASTR1	60	1	1	Dither 1	2	2	333.005	
1	SHORT(A)	MRSSHORT		FASTR1	60	1	1	Dither 1	2	2	333.005	
2		IMAGER	F1130W	FASTR1	60	1	1	Dither 1	2	2	333.005	
2	MEDIUM(B)	MRSLONG		FASTR1	60	1	1	Dither 1	2	2	333.005	
2	MEDIUM(B)	MRSSHORT		FASTR1	60	1	1	Dither 1	2	2	333.005	
3		IMAGER	F1800W	FASTR1	60	1	1	Dither 1	2	2	333.005	
3	LONG(C)	MRSLONG		FASTR1	60	1	1	Dither 1	2	2	333.005	
3	LONG(C)	MRSSHORT		FASTR1	60	1	1	Dither 1	2	2	333.005	

Special Requirements	Sequence Observations 5, 6, Non-interruptible Same Aperture PA 5, 6

Observation

Proposal 4278, Observation 11: J0944+0038 Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J0944+0038-BKG (Obs 12)]

Diagnostics

(J0944+0038 (Obs 11)) Warning (Form): Imager Filter overlap.

(Visit 11:1) Warning (Form): Data Excess over lower threshold

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

(J0944+0038 (Obs 11)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(11)	J0944-0038	RA: 09 44 1.8700 (146.0077917d) Dec: -00 38 32.18 (-.64227d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F770W	FASTR1	130	1	1	Dither 1	4	4	1443.021	
1	SHORT(A)	MRSLONG		FASTR1	130	1	1	Dither 1	4	4	1443.021	
1	SHORT(A)	MRSSHORT		FASTR1	130	1	1	Dither 1	4	4	1443.021	
2		IMAGER	F1130W	FASTR1	130	1	1	Dither 1	4	4	1443.021	
2	MEDIUM(B)	MRSLONG		FASTR1	130	1	1	Dither 1	4	4	1443.021	
2	MEDIUM(B)	MRSSHORT		FASTR1	130	1	1	Dither 1	4	4	1443.021	
3		IMAGER	F1800W	FASTR1	130	1	1	Dither 1	4	4	1443.021	
3	LONG(C)	MRSLONG		FASTR1	130	1	1	Dither 1	4	4	1443.021	
3	LONG(C)	MRSSHORT		FASTR1	130	1	1	Dither 1	4	4	1443.021	

Special Requirements	
	Aperture PA Range 88.0 to 115.0 Degrees (V3 88.0 to 115.0) Sequence Observations 11, 12, Non-interruptible Same Aperture PA 11, 12

Observation

Proposal 4278, Observation 12: J0944+0038-BKG Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J0944+0038 (Obs 11)]

Diagnostics

(J0944+0038-BKG (Obs 12)) Warning (Form): Imager Filter overlap.

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

(J0944+0038-BKG (Obs 12)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(12)	J0944-0038-BKG	RA: 09 44 6.0500 (146.0252083d) Dec: -00 38 3.50 (-.63431d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F770W	FASTR1	130	1	1	Dither 1	2	2	721.51	
1	SHORT(A)	MRSLONG		FASTR1	130	1	1	Dither 1	2	2	721.51	
1	SHORT(A)	MRSSHORT		FASTR1	130	1	1	Dither 1	2	2	721.51	
2		IMAGER	F1130W	FASTR1	130	1	1	Dither 1	2	2	721.51	
2	MEDIUM(B)	MRSLONG		FASTR1	130	1	1	Dither 1	2	2	721.51	
2	MEDIUM(B)	MRSSHORT		FASTR1	130	1	1	Dither 1	2	2	721.51	
3		IMAGER	F1800W	FASTR1	130	1	1	Dither 1	2	2	721.51	
3	LONG(C)	MRSLONG		FASTR1	130	1	1	Dither 1	2	2	721.51	
3	LONG(C)	MRSSHORT		FASTR1	130	1	1	Dither 1	2	2	721.51	

Special Requirements	Sequence Observations 11, 12, Non-interruptible Same Aperture PA 11, 12

Observation

Proposal 4278, Observation 13: J1323-0132 Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J1323-0132-BKG (Obs 14)]

Diagnostics

(J1323-0132 (Obs 13)) Warning (Form): Imager Filter overlap.

(Visit 13:1) Warning (Form): Data Excess over lower threshold

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

(J1323-0132 (Obs 13)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(13)	J1323-0132	RA: 13 23 47.5200 (200.9480000d) Dec: -01 32 51.94 (-1.54776d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F770W	FASTR1	150	1	1	Dither 1	4	4	1665.024	
1	SHORT(A)	MRSLONG		FASTR1	150	1	1	Dither 1	4	4	1665.024	
1	SHORT(A)	MRSSHORT		FASTR1	150	1	1	Dither 1	4	4	1665.024	
2		IMAGER	F1130W	FASTR1	150	1	1	Dither 1	4	4	1665.024	
2	MEDIUM(B)	MRSLONG		FASTR1	150	1	1	Dither 1	4	4	1665.024	
2	MEDIUM(B)	MRSSHORT		FASTR1	150	1	1	Dither 1	4	4	1665.024	
3		IMAGER	F1800W	FASTR1	150	1	1	Dither 1	4	4	1665.024	
3	LONG(C)	MRSLONG		FASTR1	150	1	1	Dither 1	4	4	1665.024	
3	LONG(C)	MRSSHORT		FASTR1	150	1	1	Dither 1	4	4	1665.024	

Special Requirements	
	Aperture PA Range 107.0 to 125.0 Degrees (V3 107.0 to 125.0) Sequence Observations 13, 14, Non-interruptible Same Aperture PA 13, 14

Observation

Proposal 4278, Observation 14: J1323-0132-BKG Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J1323-0132 (Obs 13)]

Diagnostics

(J1323-0132-BKG (Obs 14)) Warning (Form): Imager Filter overlap.

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

(J1323-0132-BKG (Obs 14)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(14)	J1323-0132-BKG	RA: 13 23 50.7400 (200.9614167d) Dec: -01 32 15.20 (-1.53756d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F770W	FASTR1	150	1	1	Dither 1	2	2	832.512	
1	SHORT(A)	MRSLONG		FASTR1	150	1	1	Dither 1	2	2	832.512	
1	SHORT(A)	MRSSHORT		FASTR1	150	1	1	Dither 1	2	2	832.512	
2		IMAGER	F1130W	FASTR1	150	1	1	Dither 1	2	2	832.512	
2	MEDIUM(B)	MRSLONG		FASTR1	150	1	1	Dither 1	2	2	832.512	
2	MEDIUM(B)	MRSSHORT		FASTR1	150	1	1	Dither 1	2	2	832.512	
3		IMAGER	F1800W	FASTR1	150	1	1	Dither 1	2	2	832.512	
3	LONG(C)	MRSLONG		FASTR1	150	1	1	Dither 1	2	2	832.512	
3	LONG(C)	MRSSHORT		FASTR1	150	1	1	Dither 1	2	2	832.512	

Special Requirements	Sequence Observations 13, 14, Non-interruptible Same Aperture PA 13, 14

Observation

Proposal 4278, Observation 15: J1418+2102 Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J1418+2102-BKG (Obs 16)]

Diagnostics

(J1418+2102 (Obs 15)) Warning (Form): Imager Filter overlap.

(Visit 15:1) Warning (Form): Data Excess over lower threshold

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

(J1418+2102 (Obs 15)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(15)	J1418+2102	RA: 14 18 51.1190 (214.7129958d) Dec: +21 02 39.84 (21.04440d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	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	F770W	FASTR1	150	1	1	Dither 1	4	4	1665.024	
1	SHORT(A)	MRSLONG		FASTR1	150	1	1	Dither 1	4	4	1665.024	
1	SHORT(A)	MRSSHORT		FASTR1	150	1	1	Dither 1	4	4	1665.024	
2		IMAGER	F1130W	FASTR1	150	1	1	Dither 1	4	4	1665.024	
2	MEDIUM(B)	MRSLONG		FASTR1	150	1	1	Dither 1	4	4	1665.024	
2	MEDIUM(B)	MRSSHORT		FASTR1	150	1	1	Dither 1	4	4	1665.024	
3		IMAGER	F1800W	FASTR1	150	1	1	Dither 1	4	4	1665.024	
3	LONG(C)	MRSLONG		FASTR1	150	1	1	Dither 1	4	4	1665.024	
3	LONG(C)	MRSSHORT		FASTR1	150	1	1	Dither 1	4	4	1665.024	

Special Requirements	
	Aperture PA Range 107.0 to 160.0 Degrees (V3 107.0 to 160.0) Sequence Observations 15, 16, Non-interruptible Same Aperture PA 15, 16

Observation

Proposal 4278, Observation 16: J1418+2102-BKG Mon Jun 03 18:00:44 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J1418+2102 (Obs 15)]

Diagnostics

(J1418+2102-BKG (Obs 16)) Warning (Form): Imager Filter overlap.

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

(J1418+2102-BKG (Obs 16)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(16)	J1418+2102-BKG	RA: 14 18 54.6900 (214.7278750d) Dec: +21 02 49.70 (21.04714d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Telescope/sky background]
Extended=YES

Acquisition

#	Target
1	NONE

Template

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

Dithers

#	Dither Type	Optimized For	Direction
1	2-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	F770W	FASTR1	150	1	1	Dither 1	2	2	832.512	
1	SHORT(A)	MRSLONG		FASTR1	150	1	1	Dither 1	2	2	832.512	
1	SHORT(A)	MRSSHORT		FASTR1	150	1	1	Dither 1	2	2	832.512	
2		IMAGER	F1130W	FASTR1	150	1	1	Dither 1	2	2	832.512	
2	MEDIUM(B)	MRSLONG		FASTR1	150	1	1	Dither 1	2	2	832.512	
2	MEDIUM(B)	MRSSHORT		FASTR1	150	1	1	Dither 1	2	2	832.512	
3		IMAGER	F1800W	FASTR1	150	1	1	Dither 1	2	2	832.512	
3	LONG(C)	MRSLONG		FASTR1	150	1	1	Dither 1	2	2	832.512	
3	LONG(C)	MRSSHORT		FASTR1	150	1	1	Dither 1	2	2	832.512	

Special Requirements	Sequence Observations 15, 16, Non-interruptible Same Aperture PA 15, 16