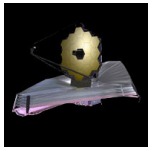

3226 - Extremely metal-poor galaxies as laboratories for the first galaxies

Cycle: 2, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1	J0811+4730	MIRI Medium Resolution Spectroscopy	(1) J0811+4730
	6	J0811+4730-BKG	MIRI Medium Resolution Spectroscopy	(6) J0811+4730-BKG
	2	J1004+3256	MIRI Medium Resolution Spectroscopy	(2) J1004+3256
	7	J1004+3256-BKG	MIRI Medium Resolution Spectroscopy	(7) J1004+3256-BKG
	3	J1234+3901	MIRI Medium Resolution Spectroscopy	(3) J1234+3901
	8	J1234+3901-BKG	MIRI Medium Resolution Spectroscopy	(8) J1234+3901-BKG
	4	J1505+3721	MIRI Medium Resolution Spectroscopy	(4) J1505+3721
	9	J1505+3721-BKG	MIRI Medium Resolution Spectroscopy	(9) J1505+3721-BKG
	5	J2229+2725	MIRI Medium Resolution Spectroscopy	(5) J2229+2725

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	10	J2229+2725-BKG	MIRI Medium Resolution Spectroscopy	(10) J2229+2725-BKG

ABSTRACT

We propose to obtain the first complete mid-IR (5-25 micron) spectra of five of the most metal-poor, compact star-forming galaxies - with metallicities 12+log(O/H)=6.98-7.23 - known so far.

The H recombination lines and the numerous fine-structure lines of Ne, Ar, S, Mg, and others will provide unique constraints on the ionizing radiation field of these galaxies over a wide range of energies. This is of prime interest to help solving a long-standing problem of metal-poor galaxies, whose hard spectra represent a major challenge for stellar population and photoionization models.

The mid-IR lines will allow us to determine accurate nebular abundances of Ne/H, Ar/H, and others, avoiding the temperature dependence of the "direct method" employing optical emission lines. The O/H abundance ("metallicity") derived from the mid-IR spectra will thus provide a fundamental test of the 'golden standard' of extra-galactic metallicities, which could be systematically biased and underestimated due to electron temperature variations on spatially unresolved scales.

The mid-IR spectra will provide unique empirical information on a variety of physical mechanisms (photoionization, X-ray ionization, shocks) which may be present in these extreme objects. They will also be combined with multi-wavelength observations from HST, 10m class telescopes, VLA, GMRT, and others, to yield the most detailed description of the ISM and radiation field of extremely metal-poor galaxies.

The proposed JWST observations will have an important impact on the interpretation of upcoming JWST spectroscopic observations and on our understanding of the most metal-poor and first galaxies in the early Universe.

OBSERVING DESCRIPTION

We request MRS observations of 5 low-redshift, very compact, and strongly star-forming galaxies and a dedicated background observation for each target, as a non-interruptible sequence.

No target acquisition is needed, since we do not require a pointing accuracy better than 0.14".

We request the full MIRI/MRS wavelength range (4 channels, 3 spectral settings) to detect all major mid-IR lines and constrain the vast range of

ionization potential.

We select 1 integration with 28 groups to maximize the signal-to-noise ratio (based on ETC calculation), while obtaining a reliable ramp slope. A 4-point dithering, optimized for all wavelengths, is used to mitigate contamination by bad pixels, by sampling the (very compact) science target with redundant detector locations.
The dither pattern used ensures that the source is always within the field-of-view, i.e., minimizing uncertainties on the source extent and/or due to the pointing accuracy.

Dedicated offset background observations are requested for each science target, in order to remove the physical background (dominated by zodiacal emission) and telescope thermal emission. Additionally, since the galaxies are very compact (<<0.5" FWHM), the 4-point dithering should allow using off-source regions in the IFU field to refine the physical background emission estimated from the dedicated background observation. No dithering is required for the background observation since full sampling is not required for these. The dedicated backgrounds will be removed using the master_background subtraction method in the pipeline.

We chose the SLOW readout mode to avoid data excess.

MIRI/MRS simultaneous imaging in F1130W will be used to improve the astrometric solution. From WISE we expect no saturation of the imager in the F1130W filter. We use the F1130W filter, as this allows observing the brightest stars without saturation, since most stars will not have significant excess emission above that from the stellar photosphere.

Considering the similar Hbeta fluxes and ~same compact sizes of all the sources, we used the same calculations and therefore provide the same ETC workbook link for all targets:
https://jwst.etc.stsci.edu/workbook.html?wb_id=145567

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	J0811+4730	RA: 08 11 52.1300 (122.9672083d) Dec: +47 30 26.24 (47.50729d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Compact galaxies]* *Extended=NO*				
(2)	J1004+3256	RA: 10 04 9.9100 (151.0412917d) Dec: +32 56 12.51 (32.93681d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Compact galaxies]* *Extended=NO*				
(3)	J1234+3901	RA: 12 34 15.7100 (188.5654583d) Dec: +39 01 16.41 (39.02123d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Compact galaxies]* *Extended=NO*				
(4)	J1505+3721	RA: 15 05 8.5800 (226.2857500d) Dec: +37 21 40.22 (37.36117d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Compact galaxies]* *Extended=NO*				
(5)	J2229+2725	RA: 22 29 33.1900 (337.3882917d) Dec: +27 25 25.60 (27.42378d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Compact galaxies]* *Extended=NO*				
(6)	J0811+4730-BKG	RA: 08 11 54.2600 (122.9760833d) Dec: +47 29 58.40 (47.49956d) Equinox: J2000		
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*				
(7)	J1004+3256-BKG	RA: 10 04 11.9100 (151.0496250d) Dec: +32 55 47.70 (32.92992d) Equinox: J2000		
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*				

(8)	J1234+3901-BKG	RA: 12 34 12.7400 (188.5530833d) Dec: +39 01 4.10 (39.01781d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*		
(9)	J1505+3721-BKG	RA: 15 05 10.7000 (226.2945833d) Dec: +37 21 14.90 (37.35414d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*		
(10)	J2229+2725-BKG	RA: 22 29 35.3000 (337.3970833d) Dec: +27 25 4.30 (27.41786d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Telescope/sky background]* *Extended=YES*		

Observation

Proposal 3226, Observation 1: J0811+4730 Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J0811+4730-BKG (Obs 6)]

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)	J0811+4730	RA: 08 11 52.1300 (122.9672083d) Dec: +47 30 26.24 (47.50729d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Compact galaxies]
Extended=NO

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	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	

Special Requirements	Sequence Observations 1, 6, Non-interruptible

Observation

Proposal 3226, Observation 6: J0811+4730-BKG Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J0811+4730 (Obs 1)]

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)	J0811+4730-BKG	RA: 08 11 54.2600 (122.9760833d) Dec: +47 29 58.40 (47.49956d) 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

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	F1130W	FASTR1	10	1	1	None	1	1	27.75	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
2		IMAGER	F1130W	FASTR1	10	1	1	None	1	1	27.75	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
3		IMAGER	F1130W	FASTR1	10	1	1	None	1	1	27.75	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	

Special Requirements	Sequence Observations 1, 6, Non-interruptible

Observation

Proposal 3226, Observation 2: J1004+3256 Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J1004+3256-BKG (Obs 7)]

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)	J1004+3256	RA: 10 04 9.9100 (151.0412917d) Dec: +32 56 12.51 (32.93681d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Compact galaxies]
Extended=NO

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	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	

Special Requirements	Sequence Observations 2, 7, Non-interruptible

Observation

Proposal 3226, Observation 7: J1004+3256-BKG Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J1004+3256 (Obs 2)]

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)	J1004+3256-BKG	RA: 10 04 11.9100 (151.0496250d) Dec: +32 55 47.70 (32.92992d) 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

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	F1130W	FASTR1	15	4	1	None	1	4	174.828	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
2		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
3		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	

Special Requirements	Sequence Observations 2, 7, Non-interruptible

Observation

Proposal 3226, Observation 3: J1234+3901 Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J1234+3901-BKG (Obs 8)]

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)	J1234+3901	RA: 12 34 15.7100 (188.5654583d) Dec: +39 01 16.41 (39.02123d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Compact galaxies]
Extended=NO

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	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	

Special Requirements	Sequence Observations 3, 8, Non-interruptible

Observation

Proposal 3226, Observation 8: J1234+3901-BKG Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J1234+3901 (Obs 3)]

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)	J1234+3901-BKG	RA: 12 34 12.7400 (188.5530833d) Dec: +39 01 4.10 (39.01781d) 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

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	F1130W	FASTR1	15	4	1	None	1	4	174.828	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
2		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
3		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	

Special Requirements	Sequence Observations 3, 8, Non-interruptible

Observation

Proposal 3226, Observation 4: J1505+3721 Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J1505+3721-BKG (Obs 9)]

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)	J1505+3721	RA: 15 05 8.5800 (226.2857500d) Dec: +37 21 40.22 (37.36117d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Compact galaxies]
Extended=NO

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	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	

Special Requirements	Sequence Observations 4, 9, Non-interruptible

Observation

Proposal 3226, Observation 9: J1505+3721-BKG Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J1505+3721 (Obs 4)]

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)	J1505+3721-BKG	RA: 15 05 10.7000 (226.2945833d) Dec: +37 21 14.90 (37.35414d) 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

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	F1130W	FASTR1	15	4	1	None	1	4	174.828	
1	SHORT(A)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
1	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
2		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
3		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
3	LONG(C)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
3	LONG(C)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	

Special Requirements	Sequence Observations 4, 9, Non-interruptible

Observation

Proposal 3226, Observation 5: J2229+2725 Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[J2229+2725-BKG (Obs 10)]

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)	J2229+2725	RA: 22 29 33.1900 (337.3882917d) Dec: +27 25 25.60 (27.42378d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Compact galaxies]
Extended=NO

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	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
1	LONG(C)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
1	LONG(C)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3		IMAGER	F1130W	FASTR1	15	4	1	Dither 1	4	16	699.31	
3	SHORT(A)	MRSLONG		SLOWR1	28	1	1	Dither 1	4	4	2675.671	
3	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	Dither 1	4	4	2675.671	

Special Requirements	Sequence Observations 5, 10, Non-interruptible

Observation

Proposal 3226, Observation 10: J2229+2725-BKG Sat Oct 14 00:00:11 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [J2229+2725 (Obs 5)]

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)	J2229+2725-BKG	RA: 22 29 35.3000 (337.3970833d) Dec: +27 25 4.30 (27.41786d) 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

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	F1130W	FASTR1	15	4	1	None	1	4	174.828	
1	LONG(C)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
1	LONG(C)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
2		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
2	MEDIUM(B)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
2	MEDIUM(B)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	
3		IMAGER	F1130W	FASTR1	15	4	1	None	1	4	174.828	
3	SHORT(A)	MRSLONG		SLOWR1	28	1	1	None	1	1	668.918	
3	SHORT(A)	MRSSHORT		SLOWR1	28	1	1	None	1	1	668.918	

Special Requirements	Sequence Observations 5, 10, Non-interruptible