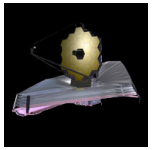

4530 - MIRI Studies of Lensed Galaxies at Redshifts Above 9

Cycle: 3, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Gz9p3-MRS+MIRIM				
	1	Gz9p3-MRS-long	MIRI Medium Resolution Spectroscopy	(1) Gz9p3
	2	Gz9p3-MIRIM	MIRI Imaging	(1) Gz9p3
	5	Gz9p3-MIRIM	MIRI Imaging	(1) Gz9p3
Gz9p3-NIRSpec/IFS				
	3	Gz9p3-NIRSpec-PRISM	NIRSpec IFU Spectroscopy	(1) Gz9p3
MACS1149-MIRIM				
	4	MIRIM-MACS1149-JD1	MIRI Imaging	(2) MACS1149-JD1

ABSTRACT

The program is targeting two spectrocopically known lensed galaxies at redshfit above 9, ALMA-[OIII] emitter MACS1149-JD1 and Gz9p3, recently identified with JWST. MACS1149-JD1 will be observed with MIRI imager (MIRIM) using the F770W filter, complementing the existing set of JWST data and extending the wavelength coverage to further constrain the stellar populations and SFH. Gz9p3 will be observed both with MIRI and NIRSpec. MIRI imaging with F560W and F770W plus MRS spectroscopy targetingn the Halpha+[NII] line. R100 spectroscopy with the

NIRSpec integral field spectrograph will be obtained to cover the entire UV-optical range up to the Hbeta and [OIII]5007 line.

OBSERVING DESCRIPTION

MACS1149-JD1

MIRIM observations with filter F770W, FASTR1 readout with 140 groups per integration, one integration per dither. 9 dithers with medium cycling for a total of 3500 seconds

Gz9p3

MRS spectroscopy in the LONG configuration with SLOWR1 readout and 20 groups per integration, 2 integrations per dither and a total of 5 times 4-point dithers for a total of about 20 ksec.

MIRIM imaging with F560W and F770W in FASTR1 mode with 138 and 140 groups per integration, respectively. Cycling dither strategy with MEDIUM steps for total integrations of ~2700 and ~~500 seconds

NIRSpec IFS with the PRISM/R100 using NRSIRS2RAPID readout with 32 groups and 6 dithers with medium step cycling and total integration of ~~900 seconds

Proposal 4530 - Targets - MIRI Studies of Lensed Galaxies at Redshifts Above 9

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	Gz9p3	RA: 00 14 28.1260 (3.6171917d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Emission line galaxies, High-redshift galaxies, Primordial galaxies]* *Extended=NO*				
(2)	MACS1149-JD1	RA: 11 49 33.5800 (177.3899167d) Dec: +22 24 45.70 (22.41269d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[High-redshift galaxies, Lyman-alpha galaxies]* *Extended=NO*				

Observation

Proposal 4530, Observation 1: Gz9p3-MRS-long

Wed Nov 20 14:00:10 GMT 2024

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)	Gz9p3	RA: 00 14 28.1260 (3.6171917d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies, High-redshift galaxies, Primordial galaxies]
Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
	All MRS	YES	FULL	Allow Auto Reorder

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	POINT SOURCE	NEGATIVE
2	4-Point	POINT SOURCE	POSITIVE

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	116	3	1	Dither 1	4	12	3885.056	
1	LONG(C)	MRSLONG		SLOWR1	20	2	1	Dither 1	4	8	3917.947	
1	LONG(C)	MRSSHORT		SLOWR1	20	2	1	Dither 1	4	8	3917.947	
2		IMAGER	F770W	FASTR1	116	3	1	Dither 2	4	12	3885.056	
2	LONG(C)	MRSLONG		SLOWR1	20	2	1	Dither 2	4	8	3917.947	
2	LONG(C)	MRSSHORT		SLOWR1	20	2	1	Dither 2	4	8	3917.947	
3		IMAGER	F770W	FASTR1	116	3	1	Dither 1	4	12	3885.056	
3	LONG(C)	MRSLONG		SLOWR1	20	2	1	Dither 1	4	8	3917.947	
3	LONG(C)	MRSSHORT		SLOWR1	20	2	1	Dither 1	4	8	3917.947	
4		IMAGER	F1000W	FASTR1	116	3	1	Dither 2	4	12	3885.056	
4	LONG(C)	MRSLONG		SLOWR1	20	2	1	Dither 2	4	8	3917.947	
4	LONG(C)	MRSSHORT		SLOWR1	20	2	1	Dither 2	4	8	3917.947	
5		IMAGER	F1000W	FASTR1	116	3	1	Dither 1	4	12	3885.056	
5	LONG(C)	MRSLONG		SLOWR1	20	2	1	Dither 1	4	8	3917.947	
5	LONG(C)	MRSSHORT		SLOWR1	20	2	1	Dither 1	4	8	3917.947	

Special Requirements

Group Observations 1, 2, Non-interruptible

Observation

Proposal 4530, Observation 2: Gz9p3-MIRIM

Wed Nov 20 14:00:10 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Imaging

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
(1)	Gz9p3	RA: 00 14 28.1260 (3.6171917d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies, High-redshift galaxies, Primordial galaxies]
Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	1	7						MEDIUM
2	CYCLING	1	9						MEDIUM

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F560W	FASTR1	138	1	1	Dither 1	7	7	2680.689	
2	F770W	FASTR1	140	1	1	Dither 2	9	9	3496.55	

Special Requirements

Group Observations 1, 2, Non-interruptible

Observation

Proposal 4530, Observation 5: Gz9p3-MIRIM

Wed Nov 20 14:00:10 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Imaging

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
(1)	Gz9p3	RA: 00 14 28.1260 (3.6171917d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies, High-redshift galaxies, Primordial galaxies]
Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	1	7						MEDIUM
2	CYCLING	1	9						MEDIUM

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F560W	FASTR1	138	1	1	Dither 1	7	7	2680.689	
2	F770W	FASTR1	140	1	1	Dither 2	9	9	3496.55	

Observation

Proposal 4530, Observation 3: Gz9p3-NIRSpec-PRISM Wed Nov 20 14:00:10 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRSpec IFU 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
(1)	Gz9p3	RA: 00 14 28.1260 (3.6171917d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Emission line galaxies, High-redshift galaxies, Primordial galaxies]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	MEDIUM	1	6	

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	32	1	false	true	NONE	6	6	2888.6	
2	PRISM/CLEAR	NRSIRS2RAPID	32	1	true	false	NONE	1	1	481.433	

Observation

Proposal 4530, Observation 4: MIRIM-MACS1149-JD1 Wed Nov 20 14:00:10 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Comments: The specific range of PA for MIRI observations has been selected such to avoid the presence of bright stars in the simultaneous MIRIM field while MRS is prime. These MIRIM images are in cosmological fields and would therefore be used not only for astrometric purposes but also for science. It is therefore important to avoid potentital contamination effects in sections of the imager due to saturation effects around bright point sources in the mid-IR

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
(2)	MACS1149-JD1	RA: 11 49 33.5800 (177.3899167d) Dec: +22 24 45.70 (22.41269d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[High-redshift galaxies, Lyman-alpha galaxies]
Extended=NO

Template

Subarray
FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	1	9						MEDIUM

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F770W	FASTR1	140	1	1	Dither 1	9	9	3496.55	

Special Requirements

Aperture PA Range 119.83544897 to 139.83544897 Degrees (V3 115.0 to 135.0)
Aperture PA Range 279.83544897 to 291.83544897 Degrees (V3 275.0 to 287.0)
Background Limited. Background no more than 40th percentile above minimum