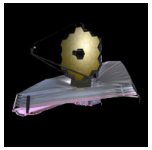

1284 - MIRI IFS of COS-zs7-1

Cycle: 1, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1		MIRI Medium Resolution Spectroscopy	(1) COS-ZS7-1
	2		MIRI Imaging	(2) COS-ZS7-1-IMA

ABSTRACT

The sources included in this proposal have an observation ID: WRIGHT_0101 and WRIGHT_0102

MIRI is the only instrument onboard JWST able to detect the H-alpha line for sources at redshifts beyond 6.7, the key diagnostic line to establish the instantaneous star formation, as well as the Ly-alpha and ionizing continuum escape fractions for sources during the Epoch of Reionization (EoR) of the universe . Deep MIRI spectroscopy of the H-alpha line with the medium resolution integral field spectrograph (MRS) of the source COS-zs7-1 will be obtained, as well as mid-IR imaging of the host galaxy and surrounding field with the MIRI imager.

OBSERVING DESCRIPTION

This program observes one confirmed Ly-alpha emitter, COS-zs7-1, with a redshift equal to 7.1. The purpose of the program is to get the H-alpha emission line with the MRS
using the SHORT wavelenght configuration, and the simultaneous IMAGER observations with the F1000w filter. In addition, we request the imaging of the target with the IMAGER using the F560w filter.

A combination of dithering strategies (4-pt and 2pt, point source) were selected to optimize the PSF and detector effects for the IMAGER filter, and channel 1 of the MRS (H-alpha line is located in channel 1).

The PA constraint (108 < PA_V3 < 110) has been selected to avoid bright stars that can saturate de simultaneous IMAGER observations. An additional constraint in the observing dates (6-Apr to 15-May) have been requested to be in a low background regime emission in Channel 1 of the MRS. Low background conditions are required to minimize the impact of background in the observations and signal-to-nosie ratio for these very faint galaxies at high redshifts.

Observation

Proposal 1284, Observation 1

Wed Feb 21 00:10:58 GMT 2018

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)	COS-ZS7-1	RA: 10 00 23.7600 (150.0990000d) Dec: +02 20 37.00 (2.34361d) Equinox: J2000		

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

Acquisition

#	AcqTarget
1	NONE

Template

AcqFilter	*Primary Channel*	*Simultaneous Imaging*	*Imager Subarray*
F560W	CHANNEL1	YES	FULL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	Extended Source	Positive
2	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	F1000W	FAST	86	12	1	Dither 1	4	48	11455.365	
1	SHORT(A)	MRSLONG		SLOW	40	3	1	Dither 1	4	12	11467.162	
1	SHORT(A)	MRSSHORT		SLOW	40	3	1	Dither 1	4	12	11467.162	
2		IMAGER	F1000W	FAST	86	12	1	Dither 2	4	48	11455.365	
2	SHORT(A)	MRSLONG		SLOW	40	3	1	Dither 2	4	12	11467.162	
2	SHORT(A)	MRSSHORT		SLOW	40	3	1	Dither 2	4	12	11467.162	

Special Requirements	
	Aperture PA Range 108.0 to 110.0 Degrees (V3 108.0 to 110.0) Background Limited. Background no more than 40% above minimum

Observation

Proposal 1284, Observation 2

Wed Feb 21 00:10:58 GMT 2018

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
(2)	COS-ZS7-1-IMA	RA: 10 00 20.6500 (150.0860417d) Dec: +02 20 33.16 (2.34254d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Lyman-alpha galaxies, Lyman-break galaxies]
Extended=Unknown

Template

Subarray

FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	4-Point-Sets	1			4	1	POINT SOURCE	POSITIVE	SMALL

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	FAST	120	2	1	Dither 1	4	8	2664.038	

Special Requirements

Aperture PA Range 112.449705 to 114.449705 Degrees (V3 108.0 to 110.0)
Background Limited. Background no more than 40% above minimum