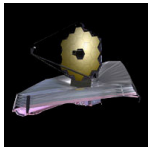

1223 - NIRSpec GTO observations of NGC4654

Cycle: 1, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
NIRSpec				
	1	NIRSpec IFU	NIRSpec IFU Spectroscopy	(1) NGC4654-NUCLEUS

ABSTRACT

We will use the NIRSpec Integral-Field Unit to obtain complete 1-5.3 micron spectra of the nucleus of NGC4654, a rare example of a galactic nucleus harboring two massive star clusters in the process of merging. The data will enable us to measure the ages, stellar populations, and velocities of the two clusters. These results will put stringent constraints on competing theories for the formation of massive compact objects (be it massive nuclear star clusters or super-massive black holes) in galactic nuclei.

OBSERVING DESCRIPTION

We will use the NIRSpec Integral-Field Unit to obtain complete 1-5.3 micron spectra of the nucleus of NGC4654, a rare example of a galactic nucleus harboring two massive star clusters in the process of merging. The data will enable us to measure the ages, stellar populations, and velocities of the two clusters. These results will put stringent constraints on competing theories for the formation of massive compact objects (be it massive nuclear star clusters or super-massive black holes) in galactic nuclei. For each of the three high-resolution gratings, we will execute a compact 4-point dither pattern, followed by a single "leakage" exposure at the first dither position.

Proposal 1223 - Targets - NIRSpec GTO observations of NGC4654

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	NGC4654-NUCLEUS	RA: 12 43 56.5800 (190.9857500d) Dec: +13 07 36.14 (13.12671d) Equinox: J2000		

Comments: The target coordinates are for the mid-point between the two nuclear star clusters.
Category=Galaxy
Description=[Disk galaxies, Galaxy nuclei, Spiral galaxies]
Extended=YES

Observation

Proposal 1223, Observation 1: NIRSpec IFU Wed Jun 24 02:10:02 GMT 2020

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: The PA special requirement is used to avoid a couple of bright "spoiler stars" that would fall within the MSA field during the other scheduling window.

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)	NGC4654-NUCLEUS	RA: 12 43 56.5800 (190.9857500d) Dec: +13 07 36.14 (13.12671d) Equinox: J2000		

Comments: The target coordinates are for the mid-point between the two nuclear star clusters.
Category=Galaxy
Description=[Disk galaxies, Galaxy nuclei, Spiral galaxies]
Extended=YES

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	4	

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	G140H/F100LP	NRSIRS2RAPID	15	1	false	true	NONE	4	4	933.689	
2	G235H/F170LP	NRSIRS2RAPID	15	1	false	true	NONE	4	4	933.689	
3	G395H/F290LP	NRSIRS2RAPID	15	1	false	true	NONE	4	4	933.689	

Special Requirements

Aperture PA Range 248.892975 to 278.892975 Degrees (V3 110.0 to 140.0)