



4553 - IFU observations of high redshift galaxies

Cycle: 3, Proposal Category: GTO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Massimo Stiavelli (PI)	Space Telescope Science Institute
Dr. Takahiro Morishita (CoI)	California Institute of Technology

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1		NIRSpec IFU Spectroscopy	(1) Gz9p3
	51	WOPR copy of obs. 1	NIRSpec IFU Spectroscopy	(1) Gz9p3
	2		NIRSpec IFU Spectroscopy	(2) Clumpy

ABSTRACT

We focus on high-redshift galaxies with substructure by targeting them with the NIRSpec IFU

OBSERVING DESCRIPTION

We observe high-redshift galaxies with known substructure using the NIRSpec IFU in order to study their physical conditions as a function of position.

The first target is Gz9p3 (Boyett et al.). It is spectroscopically confirmed at redshift 9.31 and shows multiple clumps. The available NIRSpec MSA G395H exposure is truncated at ~4microns and therefore doesn't include Hbeta and OIII. We are planning a G396H IFU exposure. The chip gap will cover the NeIII line but we should be able to detect OII, Hbeta and OIII and possibly other lines as a function of position.

JWST Proposal 4553 (Created: Thursday, December 12, 2024, 11:00:09AM Eastern Standard Time) - Overview

The second target is a pair of galaxies likely members of the A2744-z7p9OD protocluster at redshift 7.9. One object is ZD6 and is spectroscopically confirmed at $z=7.88$. The second object has the same colors as its neighbor ZD6 and it is likely to be at the same redshift. Both objects show clumps or substructure and are fully included in the IFU field of view. The G395H exposure should include multiple emission lines incl. OIII (seen in ZD6 low res spectrum), Hbeta and other lines. The intersip gap will not fall on any major emission line.

For the second target, as the two objects are separate for ~ 3 arcsec, we put constraints on PA so both will fit within the FoV of IFU. The acceptable Apertura PA range is either [0:30], [90:120], [180:210], or [270:300]. (But at [0:30] we see a warning for meteostrikes; this range should be avoided.)

Proposal 4553 - Targets - IFU observations of high redshift galaxies

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	Gz9p3	RA: 00 14 28.1263 (3.6171929d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000 <i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i>		
(2)	Clumpy	RA: 00 14 25.6319 (3.6067996d) Dec: -30 22 50.94 (-30.38082d) Equinox: J2000 <i>Comments: cf. Coordinates from E.V. (00 14 25.6953 -30 22 50.59)</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies, Irregular galaxies]</i>			

Proposal 4553 - Observation 1 - IFU observations of high redshift galaxies

Thu Dec 12 16:00:09 GMT 2024

Observation	Proposal 4553, Observation 1 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(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 28.1263 (3.6171929d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000									
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i>												
Template	TA Method					HFF Readout Mode						
	NONE					false						
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	CYCLING		SMALL	1			13				
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	G395H/F290LP	NRSIRS2	22	1	false	true	NONE	13	13	21051.768	

Proposal 4553 - Observation 51 - IFU observations of high redshift galaxies

Thu Dec 12 16:00:09 GMT 2024

Observation	<p>Proposal 4553, Observation 51: WOPR copy of obs. 1</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
Diagnostics	<p>(Visit 51:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous			
	(1)	Gz9p3	RA: 00 14 28.1263 (3.6171929d) Dec: -30 25 31.93 (-30.42554d) Equinox: J2000									
	<p><i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies]</p>											
Template	TA Method					HFF Readout Mode						
	NONE					false						
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	CYCLING		SMALL	1			13				
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	G395H/F290LP	NRSIRS2	22	1	false	true	NONE	13	13	21051.768	

Proposal 4553 - Observation 2 - IFU observations of high redshift galaxies

Thu Dec 12 16:00:09 GMT 2024

Observation	<p>Proposal 4553, Observation 2 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy</p>											
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)	Clumpy	RA: 00 14 25.6319 (3.6067996d) Dec: -30 22 50.94 (-30.38082d) Equinox: J2000									
	<p><i>Comments: cf. Coordinates from E.V. (00 14 25.6953 -30 22 50.59)</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies, Irregular galaxies]</i></p>											
Template	TA Method						HFF Readout Mode					
	NONE						false					
Dithers	#	Dither Type		Size	Starting Point		Number of Points	Points				
	1	CYCLING		SMALL	1		12					
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	G395H/F290LP	NRSIRS2	22	1	false	true	NONE	12	12	19432.401	
Special Requirements	Aperture PA Range 180 to 210 Degrees (V3 41.02835083 to 71.02835083)											