



4549 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Cycle: 3, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	POINTING-1_HUDF_GOODS-S	NIRCam Wide Field Slitless Spectroscopy	(1) POINTING-1_HUDF_GOODS-S

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
	2	POINTING-2_HUDF_GOODS-S	NIRCam Wide Field Slitless Spectroscopy	(2) POINTING-2_HUDF_GOODS-S
	3	POINTING-3_HUDF_GOODS-S	NIRCam Wide Field Slitless Spectroscopy	(3) POINTING-3_HUDF_GOODS-S
	4	POINTING-4_HUDF_GOODS-S	NIRCam Wide Field Slitless Spectroscopy	(4) POINTING-4_HUDF_GOODS-S
	5	POINTING-5_HUDF_GOODS-S	NIRCam Wide Field Slitless Spectroscopy	(5) POINTING-5_HUDF_GOODS-S
	6	POINTING-6_HUDF_GOODS-S	NIRCam Wide Field Slitless Spectroscopy	(6) POINTING-6_HUDF_GOODS-S

ABSTRACT

The JWST/NIRCam Wide Field Slitless Spectroscopy (WFSS) mode has proven to be highly efficient and effective at detecting rest-frame optical and near-infrared emission lines for galaxies at high redshifts. Here, we propose to conduct a JWST/NIRCam WFSS survey over the Hubble Ultra Deep Field (HUDF) in GOODS-S with the F356W filter, achieving a 5-sigma line flux limit of roughly $2e-18$ ergs/s/cm² across a total survey area of roughly 20 square arcminutes (six individual pointings). We are targeting this region of the sky since it has the richest set of ancillary data (including JWST Cycle-1 observations from GTO-1207, GTO-1180, and GO-1895), spanning observed-frame wavelengths of 0.4 microns all the way out to 25 microns. Together, these data will produce a massive legacy sample of line-emitting galaxies over a wide redshift range with relatively simple selection functions (e.g. [OII] emitters at $7.5 < z < 9.4$, [OIII] emitters at $5.2 < z < 6.8$, and H α emitters at $3.7 < z < 4.9$). Such a data set will allow a variety of science programs aimed at characterizing the physical properties of galaxies, including: line-luminosity functions; the production and escape of ionizing photons; the excitation, ionization, and metallicity of nebular regions; the morphology and kinematics of the interstellar medium; and the identification of the earliest galaxy clusters. JWST/MIRI observations with the F1800W filter will be taken in parallel, allowing for more precise stellar mass estimates and characterization of active galactic nuclei (AGN) beyond cosmic noon and all the way through the epoch of reionization.

OBSERVING DESCRIPTION

We will use the JWST/NIRCam Wide Field Slitless Spectroscopy (WFSS) mode with the F356W filter to observe the Hubble Ultra Deep Field (HUDF) in GOODS-S. Grism R will be used as required by the design of our six pointings, and we will make use of both NIRCam modules in order to maximize the total survey area. When combined with the partially overlapping FRESCO data in the F444W filter (GO-1895), the proposed program will achieve a contiguous wavelength coverage from 3.1 microns out to 5.0 microns. Based on our independent analysis of the FRESCO data, we have measured a median 5-sigma line flux limit of roughly $2e-18$ ergs/s/cm² around 4.2 microns. The goal of this proposal is to reach a

similar depth with the F356W filter, producing a legacy data set with a nearly uniform line flux sensitivity over the combined wavelength coverage of 3.1-5.0 microns.

We will integrate for roughly 1160 seconds per integration, with six groups per integration (larger than the minimum number of groups required for good cosmic-ray removal) and one integration per exposure using the DEEP8 readout mode. This observing pattern was chosen to minimize detector noise. At each individual dither position, we will obtain simultaneous short-wavelength (SW) imaging with the F150W filter, making use of the six-point INTRAMODULEBOX primary-dither pattern in order to fill the gaps between the four SW detectors while maximizing the area of full-depth for the LW detector. Furthermore, the design of our six pointings produces a contiguous area for the JWST/MIRI parallel observations.

The total charged time is 19.5 hours, which consists of 13.1 hours of science time and 13.0 hours of parallel time.

Proposal 4549 - Targets - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	POINTING- 1_HUDF_GOODS-S	RA: 03 32 44.4647 (53.1852696d) Dec: -27 47 10.12 (-27.78614d) Equinox: J2000	Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0	
<i>Comments:</i> Category=Unidentified Description=[Blank field]				
(2)	POINTING- 2_HUDF_GOODS-S	RA: 03 32 42.2053 (53.1758554d) Dec: -27 48 3.09 (-27.80086d) Equinox: J2000	Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0	
<i>Comments:</i> Category=Unidentified Description=[Blank field]				
(3)	POINTING- 3_HUDF_GOODS-S	RA: 03 32 39.9500 (53.1664583d) Dec: -27 48 56.06 (-27.81557d) Equinox: J2000	Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0	
<i>Comments:</i> Category=Unidentified Description=[Blank field]				
(4)	POINTING- 4_HUDF_GOODS-S	RA: 03 32 31.9700 (53.1332083d) Dec: -27 47 57.96 (-27.79943d) Equinox: J2000	Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0	
<i>Comments:</i> Category=Unidentified Description=[Blank field]				
(5)	POINTING- 5_HUDF_GOODS-S	RA: 03 32 34.2380 (53.1426583d) Dec: -27 47 3.73 (-27.78437d) Equinox: J2000	Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0	
<i>Comments:</i> Category=Unidentified Description=[Blank field]				
(6)	POINTING- 6_HUDF_GOODS-S	RA: 03 32 36.5030 (53.1520958d) Dec: -27 46 9.50 (-27.76931d) Equinox: J2000	Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0	
<i>Comments:</i> Category=Unidentified Description=[Blank field]				

Fixed Targets

Proposal 4549 - Observation 1 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Wed Jun 28 20:05:12 GMT 2023

Observation	Proposal 4549, Observation 1: POINTING-1_HUDF_GOODS-S Diagnostic Status: Warning Observing Template: NIRCam Wide Field Slitless Spectroscopy Coordinated Parallel Template(s): MIRI Imaging											
	(POINTING-1_HUDF_GOODS-S (Obs 1)) Warning (Form): Use of only one of GRISMR or GRISMC may result in spectral overlap from multiple sources that can't be corrected. Users should address this issue in their proposal text. (Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 1:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(1)	POINTING-1_HUDF_GOODS-S	RA: 03 32 44.4647 (53.1852696d) Dec: -27 47 10.12 (-27.78614d) Equinox: J2000				Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0					
<i>Comments:</i> Category=Unidentified Description=[Blank field]												
Template	NIRCam Wide Field Slitless Spectroscopy						MIRI Imaging					
	Module: ALL Subarray: FULL Grism (Long Wavelength): GRISMR Show partial spectra region in Aladin: false						Subarray: FULL					
Dithers	#	Primary Dither Type				Primary Dithers			Subpixel Positions			
	1	INTRAMODULEBOX				6			NONE			
Direct Image	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	6	1	1	311.366		GRISMR	Direct Image	1
Spectral Elements	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	DEEP8	6	1	6	6957.427		GRISMR	Grism (Long Wavelength)	6
	2	F150W	F356W	SHALLOW4	6	1	2	622.733			Out of Field	2

Proposal 4549 - Observation 1 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Spectral Elements	MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1		F1800W	FASTR1	69	6	1		6	36	6976.451	
	2		F1800W	FASTR1	57	2	1		1	2	319.13	
	3		F1800W	FASTR1	57	2	1		2	4	638.259	
Special Requirements	Aperture PA Range 294 to 306 Degrees (V3 294.0 to 306.0) No Parallel Attachments											
	Same Aperture PA 1, 2, 3, 4, 5, 6											

Proposal 4549 - Observation 2 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Wed Jun 28 20:05:12 GMT 2023

Observation	Proposal 4549, Observation 2: POINTING-2_HUDF_GOODS-S Diagnostic Status: Warning Observing Template: NIRCam Wide Field Slitless Spectroscopy Coordinated Parallel Template(s): MIRI Imaging											
	(POINTING-2_HUDF_GOODS-S (Obs 2)) Warning (Form): Use of only one of GRISMR or GRISMC may result in spectral overlap from multiple sources that can't be corrected. Users should address this issue in their proposal text. (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)	POINTING-2_HUDF_GOODS-S	RA: 03 32 42.2053 (53.1758554d) Dec: -27 48 3.09 (-27.80086d) Equinox: J2000				Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0					
<i>Comments:</i> Category=Unidentified Description=[Blank field]												
Template	NIRCam Wide Field Slitless Spectroscopy						MIRI Imaging					
	Module: ALL Subarray: FULL Grism (Long Wavelength): GRISMR Show partial spectra region in Aladin: false						Subarray: FULL					
Dithers	#	Primary Dither Type				Primary Dithers			Subpixel Positions			
	1	INTRAMODULEBOX				6			NONE			
Direct Image	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	6	1	1	311.366		GRISMR	Direct Image	1
Spectral Elements	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	DEEP8	6	1	6	6957.427		GRISMR	Grism (Long Wavelength)	6
	2	F150W	F356W	SHALLOW4	6	1	2	622.733			Out of Field	2

Proposal 4549 - Observation 2 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Spectral Elements	MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1		F1800W	FASTR1	69	6	1		6	36	6976.451	
	2		F1800W	FASTR1	57	2	1		1	2	319.13	
	3		F1800W	FASTR1	57	2	1		2	4	638.259	
Special Requirements	No Parallel Attachments											
	Same Aperture PA 1, 2, 3, 4, 5, 6											

Proposal 4549 - Observation 3 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Wed Jun 28 20:05:12 GMT 2023

Observation	Proposal 4549, Observation 3: POINTING-3_HUDF_GOODS-S Diagnostic Status: Warning Observing Template: NIRCam Wide Field Slitless Spectroscopy Coordinated Parallel Template(s): MIRI Imaging											
	(POINTING-3_HUDF_GOODS-S (Obs 3)) Warning (Form): Use of only one of GRISMR or GRISMC may result in spectral overlap from multiple sources that can't be corrected. Users should address this issue in their proposal text. (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)	POINTING-3_HUDF_GOODS-S	RA: 03 32 39.9500 (53.1664583d) Dec: -27 48 56.06 (-27.81557d) Equinox: J2000				Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0					
<i>Comments:</i> Category=Unidentified Description=[Blank field]												
Template	NIRCam Wide Field Slitless Spectroscopy						MIRI Imaging					
	Module: ALL Subarray: FULL Grism (Long Wavelength): GRISMR Show partial spectra region in Aladin: false						Subarray: FULL					
Dithers	#	Primary Dither Type				Primary Dithers			Subpixel Positions			
	1	INTRAMODULEBOX				6			NONE			
Direct Image	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	6	1	1	311.366		GRISMR	Direct Image	1
Spectral Elements	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	DEEP8	6	1	6	6957.427		GRISMR	Grism (Long Wavelength)	6
	2	F150W	F356W	SHALLOW4	6	1	2	622.733			Out of Field	2

Proposal 4549 - Observation 3 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Spectral Elements	MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1		F1800W	FASTR1	69	6	1		6	36	6976.451	
	2		F1800W	FASTR1	57	2	1		1	2	319.13	
	3		F1800W	FASTR1	57	2	1		2	4	638.259	
Special Requirements	No Parallel Attachments											
	Same Aperture PA 1, 2, 3, 4, 5, 6											

Proposal 4549 - Observation 4 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Wed Jun 28 20:05:12 GMT 2023

Observation	Proposal 4549, Observation 4: POINTING-4_HUDF_GOODS-S Diagnostic Status: Warning Observing Template: NIRCam Wide Field Slitless Spectroscopy Coordinated Parallel Template(s): MIRI Imaging											
	(POINTING-4_HUDF_GOODS-S (Obs 4)) Warning (Form): Use of only one of GRISMR or GRISMC may result in spectral overlap from multiple sources that can't be corrected. Users should address this issue in their proposal text. (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)	POINTING-4_HUDF_GOODS-S	RA: 03 32 31.9700 (53.1332083d) Dec: -27 47 57.96 (-27.79943d) Equinox: J2000				Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0					
<i>Comments:</i> Category=Unidentified Description=[Blank field]												
Template	NIRCam Wide Field Slitless Spectroscopy						MIRI Imaging					
	Module: ALL Subarray: FULL Grism (Long Wavelength): GRISMR Show partial spectra region in Aladin: false						Subarray: FULL					
Dithers	#	Primary Dither Type				Primary Dithers			Subpixel Positions			
	1	INTRAMODULEBOX				6			NONE			
Direct Image	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW2	6	1	1	289.893		GRISMR	Direct Image	1
Spectral Elements	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	DEEP8	6	1	6	6957.427		GRISMR	Grism (Long Wavelength)	6
	2	F150W	F356W	SHALLOW2	6	1	2	579.786			Out of Field	2

Proposal 4549 - Observation 4 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Spectral Elements	MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1		F1800W	FASTR1	69	6	1		6	36	6976.451	
	2		F1800W	FASTR1	53	2	1		1	2	296.929	
	3		F1800W	FASTR1	53	2	1		2	4	593.859	
Special Requirements	No Parallel Attachments											
	Same Aperture PA 1, 2, 3, 4, 5, 6											

Proposal 4549 - Observation 5 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Wed Jun 28 20:05:12 GMT 2023

Observation	Proposal 4549, Observation 5: POINTING-5_HUDF_GOODS-S Diagnostic Status: Warning Observing Template: NIRCam Wide Field Slitless Spectroscopy Coordinated Parallel Template(s): MIRI Imaging											
	(POINTING-5_HUDF_GOODS-S (Obs 5)) Warning (Form): Use of only one of GRISMR or GRISMC may result in spectral overlap from multiple sources that can't be corrected. Users should address this issue in their proposal text. (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)	POINTING-5_HUDF_GOODS-S	RA: 03 32 34.2380 (53.1426583d) Dec: -27 47 3.73 (-27.78437d) Equinox: J2000				Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0					
<i>Comments:</i> Category=Unidentified Description=[Blank field]												
Template	NIRCam Wide Field Slitless Spectroscopy						MIRI Imaging					
	Module: ALL Subarray: FULL Grism (Long Wavelength): GRISMR Show partial spectra region in Aladin: false						Subarray: FULL					
Dithers	#	Primary Dither Type				Primary Dithers			Subpixel Positions			
	1	INTRAMODULEBOX				6			NONE			
Direct Image	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW2	6	1	1	289.893		GRISMR	Direct Image	1
Spectral Elements	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	DEEP8	6	1	6	6957.427		GRISMR	Grism (Long Wavelength)	6
	2	F150W	F356W	SHALLOW2	6	1	2	579.786			Out of Field	2

Proposal 4549 - Observation 5 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Spectral Elements	MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1		F1800W	FASTR1	69	6	1		6	36	6976.451	
	2		F1800W	FASTR1	53	2	1		1	2	296.929	
	3		F1800W	FASTR1	53	2	1		2	4	593.859	
Special Requirements	No Parallel Attachments											
	Same Aperture PA 1, 2, 3, 4, 5, 6											

Proposal 4549 - Observation 6 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Wed Jun 28 20:05:12 GMT 2023

Observation	Proposal 4549, Observation 6: POINTING-6_HUDF_GOODS-S Diagnostic Status: Warning Observing Template: NIRCam Wide Field Slitless Spectroscopy Coordinated Parallel Template(s): MIRI Imaging											
	(POINTING-6_HUDF_GOODS-S (Obs 6)) Warning (Form): Use of only one of GRISMR or GRISMC may result in spectral overlap from multiple sources that can't be corrected. Users should address this issue in their proposal text. (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)	POINTING-6_HUDF_GOODS-S	RA: 03 32 36.5030 (53.1520958d) Dec: -27 46 9.50 (-27.76931d) Equinox: J2000				Proper Motion RA: 0.000 Proper Motion Dec: 0.000 Epoch of Position: 2000.0					
<i>Comments:</i> Category=Unidentified Description=[Blank field]												
Template	NIRCam Wide Field Slitless Spectroscopy						MIRI Imaging					
	Module: ALL Subarray: FULL Grism (Long Wavelength): GRISMR Show partial spectra region in Aladin: false						Subarray: FULL					
Dithers	#	Primary Dither Type				Primary Dithers			Subpixel Positions			
	1	INTRAMODULEBOX				6			NONE			
Direct Image	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW2	6	1	1	289.893		GRISMR	Direct Image	1
Spectral Elements	NIRCam Wide Field Slitless Spectroscopy	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	DEEP8	6	1	6	6957.427		GRISMR	Grism (Long Wavelength)	6
	2	F150W	F356W	SHALLOW2	6	1	2	579.786			Out of Field	2

Proposal 4549 - Observation 6 - JWST/NIRCam Slitless Spectroscopy in the JWST/MIRI HUDF Region

Spectral Elements	MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1		F1800W	FASTR1	69	6	1		6	36	6976.451	
	2		F1800W	FASTR1	53	2	1		1	2	296.929	
	3		F1800W	FASTR1	53	2	1		2	4	593.859	
Special Requirements	No Parallel Attachments											
	Same Aperture PA 1, 2, 3, 4, 5, 6											