



10096 - JWST Analysis of Gas and Galaxies at the End of Reionization

Cycle: 5, Proposal Category: GO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Rajeshwari Dutta (PI)	Inter-University Centre for Astronomy and Astrophysics
Dr. Alejandro Benitez-Llambay (CoI) (ESA Member)	University of Milano-Bicocca
Dr. Rich Bielby (CoI) (ESA Member)	Durham University
Dr. Lise Christensen (CoI) (ESA Member)	University of Copenhagen, Niels Bohr Institute
Dr. Valentina D'Odorico (CoI) (ESA Member)	INAF - Osservatorio Astronomico di Trieste
Dr. Matteo Fossati (CoI) (ESA Member)	Universita degli Studi di Milano-Bicocca
Prof. Michele Fumagalli (CoI) (ESA Member) (CoPI) (Contact)	Universita degli Studi di Milano-Bicocca
Dr. Grecco Oyarzun (CoI)	University of Oklahoma Norman Campus
Dr. Norbert Pirzkal (CoI) (ESA Member)	Space Telescope Science Institute - ESA - JWST
Dr. Marc Rafelski (CoI) (CoPI) (US Admin CoI) (Contact)	Space Telescope Science Institute
Dr. Mitchell Revalski (CoI)	Space Telescope Science Institute
Dr. Louise Welsh (CoI) (ESA Member)	Durham University
Dr. Kalina Nedkova (CoI)	California Institute of Technology
Dr. Alexander Beckett (CoI) (ESA Member)	CNRS, Laboratoire d'Astrophysique de Marseille
Prof. George D Becker (CoI)	University of California - Riverside

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
NIRCAM				
	1		NIRCam Wide Field Slitless Spectroscopy	(1) QSO-J0025-0145
	2		NIRCam Wide Field Slitless Spectroscopy	(2) QSO-J0131-0321
	3		NIRCam Wide Field Slitless Spectroscopy	(3) QSO-J0306+1853
	4		NIRCam Wide Field Slitless Spectroscopy	(4) QSO-J0747+1153

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
	5		NIRCam Wide Field Slitless Spectroscopy	(5) QSO-J1436+2132
	6		NIRCam Wide Field Slitless Spectroscopy	(6) QSO-J2207-0416

ABSTRACT

Galaxy surveys and quasar absorption spectroscopy using VLT and HST have demonstrated the power of studying the co-evolution of galaxies and the circumgalactic medium (CGM) in constraining galaxy formation theories up to $z \sim 4$. We propose to extend our knowledge of the galaxy-CGM connection to the end of the reionization epoch by conducting a blind galaxy survey around a unique sample of the six brightest $z \sim 5$ -5.5 quasars with the highest number density of strong HI absorbers at $z \sim 4$ -5.5 in high-quality X-Shooter and HIRES spectra. This is the highest redshift window where surveys in absorption and emission can be combined to characterize the early metal enrichment of the CGM, and the cold flow accretion onto galaxies traced by individual strong HI and metal absorption lines. By exploiting the powerful combination of NIRCAM F277W and F356W grism spectra, deep multiband (F090W, F115W, F150W, F200W, F277W, F356W) images and quasar spectra, we will assemble an unprecedented dataset for the first statistical study of the metallicity distribution in the CGM of $z \sim 4$ -5.5 galaxies. The proposed survey will characterize the galaxy environment of strong HI absorbers at $z \sim 4$ -5.5, and the links between the CGM gas and the properties of the unbiased galaxy sample, such as star formation rate, stellar mass, metallicity, size, and morphology, which can be obtained only with NIRCAM. By comparing with analogous CGM surveys at $z < 4$ and predictions from cosmological simulations, we will trace the co-evolution of the galaxy-CGM connection over 12 billion years of cosmic history, and place robust constraints on how the reionization epoch transforms the interplay between galaxies and CGM.

OBSERVING DESCRIPTION

The proposed observations consist of NIRCAM Wide Field Slitless Spectroscopy using the F277W and F356W filters, along with imaging using the F090W, F115W, F150W, F200W, F277W and F356W filters. The sample consists of six fields centred on $z \sim 5$ -5.5 bright quasars that have high-quality archival X-Shooter and HIRES spectra. The goal is to detect and estimate the properties of $z \sim 4$ -5.5 galaxies, and correlate them with the properties of strong HI and metal absorbers detected in the quasar spectra. The F356W spectra of galaxies will cover the emission lines of H α , [NII] and [SII], while the F277W spectra will cover the [OIII] and H β emission lines in the redshift of interest. We target a line flux limit of $4e-18$ erg/s/cm² in F356W. This is equivalent to a SFR limit of 2 Msun/yr based on H α emission. We target a flux limit of $8e-18$ erg/s/cm² in F277W to detect [OIII] emission from all the H α emitters detected in F356W, assuming a H α /[OIII] ratio of 2 that is typically seen in high redshift emission line galaxies. To detect the above target flux limits at a S/N ~ 5 , we require ~ 2 h of grism exposure in each filter.

We will split the time in the two orthogonal grisms, GRISMR and GRISMC, such that we reach a S/N ~ 3.5 in each grism exposure. Observing with both grisms that disperse light in two different directions is essential to disentangle spectra of overlapping sources, particularly in the region around

the quasars, where we expect to detect most of the galaxies associated with the absorbers. We will observe with module A with spatial offsets such that the quasar falls in the centre of the optimal field of view (FoV), within which complete spectra from both grisms will be obtained for all sources. To minimize overheads, the exposures for both filters are placed between the same observation, and therefore a single offset has to be utilized to place the QSO in the optimal field of view of both filters. Since the Module A aperture places the target at 950,950, we offset by 48,48" to place the QSO in the overlap region for the optimized field of view of both filters. This shrinks the combined optimal FoV to 0.1 arcmin^2 (128^2 kpc^2) at $z \sim 4.5$. The individual filters will still have their optimal FoV of 0.28 arcmin^2 ($\sim 200^2 \text{ kpc}^2$ at $z \sim 4.5$) for F277W and 1.59 arcmin^2 ($\sim 500^2 \text{ kpc}^2$ at $z \sim 4.5$) for F356W. However, this area is not centered on the QSO for F356W to accomodate F277W, meaning that the some areas around the QSO has full wavelength coverage with both grisms while other areas do not. While the optimal FoV of F277W is smaller than that of F356W, the FoV of F277W for the red half of the wavelength range is much higher, so the $z > \sim 4.5$ sources will have a larger FoV. For galaxies that lie outside of the optimal FoV, we will use the redshift prior from multiple emission lines (H α , [OIII]) in the larger FoV of F356W to deal with spectral contamination from emission lines in F277W. Therefore, the combination of two filters and two grism orientations enables us to deal with contamination and securely identify sources over the full FoV of $2.2 \times 2.2 \text{ arcmin}^2$.

The grism observations require direct imaging to determine the locations and sizes of sources for spectral extraction. We target galaxies with F277W AB mag of 27.2 and F356W AB mag of 27.3 at $S/N \sim 5$, which can be obtained in an exposure time of $\sim 18 \text{ min}$. During the long-wavelength observations for the grism spectroscopy and direct imaging, we will obtain simultaneous imaging in the short-wavelength filters of F090W, F115W, F150W and F200W at no extra cost, allowing us to reach down to AB magnitudes of 27.5 in F090W, 26.5 in F115W, 26.8 in F150W, and 28.1 in F200W at a $S/N \sim 5$.

We will use the SHALLOW4 readout pattern for all exposures. The grism observations will be split into 6 groups per integration, 1 integration per exposure, and 12 exposures per specification (corresponding to 12 dithers). The dithering pattern will be 3 INTRAMODULEX primary dithers and 4 standard subpixel dithers. This will help to improve our treatment of spectral contamination, fully sample the point spread function, and clean the data of image artifacts. The direct imaging observations will be split into 5 groups per integration, and 2 integrations per exposure. Combining the grism exposure with the required direct and out-of-field imaging, the total science (charged) time on each source is $\sim 5.3 \text{ h}$ ($\sim 9 \text{ h}$).

Proposal 10096 - Targets - JWST Analysis of Gas and Galaxies at the End of Reionization

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	QSO-J0025-0145	RA: 00 25 26.8349 (6.3618121d) Dec: -01 45 32.51 (-1.75903d) Equinox: J2000	Proper Motion RA: 5.202451573315809E-6 sec of time/yr Proper Motion Dec: -2.0899997252854519E-4 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]				
	(2)	QSO-J0131-0321	RA: 01 31 27.3474 (22.8639475d) Dec: -03 21 0.08 (-3.35002d) Equinox: J2000	Proper Motion RA: -1.6695195737591226E-6 sec of time/yr Proper Motion Dec: -2.9000034373893868E-5 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]				
	(3)	QSO-J0306+1853	RA: 03 06 42.5122 (46.6771342d) Dec: +18 53 15.83 (18.88773d) Equinox: J2000	Proper Motion RA: 2.1842798656148452E-6 sec of time/yr Proper Motion Dec: 1.5099999999999998E-4 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]				
	(4)	QSO-J0747+1153	RA: 07 47 49.1745 (116.9548937d) Dec: +11 53 52.46 (11.89791d) Equinox: J2000	Proper Motion RA: -2.3232447154504847E-5 sec of time/yr Proper Motion Dec: 1.65E-4 arcsec/yr Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]				
	(5)	QSO-J1436+2132	RA: 14 36 5.0030 (219.0208458d) Dec: +21 32 39.25 (21.54424d) Equinox: J2000	Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]				
	(6)	QSO-J2207-0416	RA: 22 07 10.1252 (331.7921883d) Dec: -04 16 56.24 (-4.28229d) Equinox: J2000	Epoch of Position: 2015.5	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]				

Proposal 10096 - Observation 1 - JWST Analysis of Gas and Galaxies at the End of Reionization

Observation	Proposal 10096, Observation 1											Fri May 29 20:00:32 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRCam Wide Field Slitless Spectroscopy											
Diagnostics	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(Visit 1:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(Visit 1:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(1)	QSO-J0025-0145	RA: 00 25 26.8349 (6.3618121d) Dec: -01 45 32.51 (-1.75903d) Equinox: J2000				Proper Motion RA: 5.202451573315809E-6 sec of time/yr Proper Motion Dec: -2.0899997252854519E-4 arcsec/yr Epoch of Position: 2015.5					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Quasars]											
Template	Module				Subarray				Grism (Long Wavelength)			
	A				FULL				BOTH			
Dithers	#	Primary Dither Type				Primary Dithers				Subpixel Positions		
	1	INTRAMODULEX				3				4-Point		
Direct Image	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	2	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	3	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
	4	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	2	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	3	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2
	4	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	5	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	6	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2

Proposal 10096 - Observation 1 - JWST Analysis of Gas and Galaxies at the End of Reionization

Special Requirements	Sequence Visits within 53.0 Days Visits Same PA Offset 48.0 arcsec, 48.0 arcsec
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Proposal 10096 - Observation 2 - JWST Analysis of Gas and Galaxies at the End of Reionization

Observation	Proposal 10096, Observation 2											Fri May 29 20:00:32 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRCam Wide Field Slitless Spectroscopy											
Diagnostics	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(Visit 2:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
	(Visit 2:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(2)	QSO-J0131-0321	RA: 01 31 27.3474 (22.8639475d) Dec: -03 21 0.08 (-3.35002d) Equinox: J2000				Proper Motion RA: -1.6695195737591226E-6 sec of time/yr Proper Motion Dec: -2.9000034373893868E-5 arcsec/yr Epoch of Position: 2015.5					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=Galaxy											
	Description=[Quasars]											
Template	Module				Subarray				Grism (Long Wavelength)			
	A				FULL				BOTH			
Dithers	#	Primary Dither Type				Primary Dithers				Subpixel Positions		
	1	INTRAMODULEX				3				4-Point		
Direct Image	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	2	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	3	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
	4	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	2	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	3	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2
	4	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	5	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	6	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2

Proposal 10096 - Observation 2 - JWST Analysis of Gas and Galaxies at the End of Reionization

Special Requirements	Sequence Visits within 53.0 Days Visits Same PA Offset 48.0 arcsec, 48.0 arcsec
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Proposal 10096 - Observation 3 - JWST Analysis of Gas and Galaxies at the End of Reionization

Observation	Proposal 10096, Observation 3											Fri May 29 20:00:32 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRCam Wide Field Slitless 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		
	(3)	QSO-J0306+1853	RA: 03 06 42.5122 (46.6771342d) Dec: +18 53 15.83 (18.88773d) Equinox: J2000				Proper Motion RA: 2.1842798656148452E-6 sec of time/yr Proper Motion Dec: 1.5099999999999998E-4 arcsec/yr Epoch of Position: 2015.5					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=Galaxy Description=[Quasars]											
Template	Module		Subarray					Grism (Long Wavelength)				
	A		FULL					BOTH				
Dithers	#	Primary Dither Type				Primary Dithers				Subpixel Positions		
	1	INTRAMODULEX				3				4-Point		
Direct Image	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	2	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	3	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
	4	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	2	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	3	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2
	4	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	5	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	6	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2

Special Requirements	Offset 48.0 arcsec, 48.0 arcsec
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Proposal 10096 - Observation 4 - JWST Analysis of Gas and Galaxies at the End of Reionization

Observation	Proposal 10096, Observation 4											Fri May 29 20:00:32 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRCam Wide Field Slitless Spectroscopy											
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		
	(4)	QSO-J0747+1153	RA: 07 47 49.1745 (116.9548937d) Dec: +11 53 52.46 (11.89791d) Equinox: J2000				Proper Motion RA: -2.3232447154504847E-5 sec of time/yr Proper Motion Dec: 1.65E-4 arcsec/yr Epoch of Position: 2015.5					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=Galaxy Description=[Quasars]											
Template	Module		Subarray					Grism (Long Wavelength)				
	A		FULL					BOTH				
Dithers	#	Primary Dither Type				Primary Dithers				Subpixel Positions		
	1	INTRAMODULEX				3				4-Point		
Direct Image	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	2	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	3	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
	4	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	2	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	3	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2
	4	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	5	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	6	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2

Special Requirements	Offset 48.0 arcsec, 48.0 arcsec
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Proposal 10096 - Observation 5 - JWST Analysis of Gas and Galaxies at the End of Reionization

Observation	Proposal 10096, Observation 5											Fri May 29 20:00:32 GMT 2026	
	Diagnostic Status: Warning												
	Observing Template: NIRCam Wide Field Slitless Spectroscopy												
Diagnostics	(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
	(Visit 5:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
	(Visit 5:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous			
	(5)	QSO-J1436+2132	RA: 14 36 5.0030 (219.0208458d) Dec: +21 32 39.25 (21.54424d) Equinox: J2000				Epoch of Position: 2015.5						
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.												
	Category=Galaxy												
	Description=[Quasars]												
Template	Module				Subarray				Grism (Long Wavelength)				
	A				FULL				BOTH				
Dithers	#	Primary Dither Type				Primary Dithers				Subpixel Positions			
	1	INTRAMODULEX				3				4-Point			
Direct Image	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers	
	1	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1	
	2	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1	
	3	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1	
	4	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1	
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers	
	1	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12	
	2	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12	
	3	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2	
	4	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12	
	5	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12	
	6	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2	

Proposal 10096 - Observation 5 - JWST Analysis of Gas and Galaxies at the End of Reionization

Special Requirements	Sequence Visits within 53.0 Days Visits Same PA Offset 48.0 arcsec, 48.0 arcsec
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Proposal 10096 - Observation 6 - JWST Analysis of Gas and Galaxies at the End of Reionization

Observation	Proposal 10096, Observation 6											Fri May 29 20:00:32 GMT 2026
	Diagnostic Status: Warning											
	Observing Template: NIRCam Wide Field Slitless Spectroscopy											
Diagnostics	(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)	QSO-J2207-0416	RA: 22 07 10.1252 (331.7921883d) Dec: -04 16 56.24 (-4.28229d) Equinox: J2000				Epoch of Position: 2015.5					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=Galaxy											
	Description=[Quasars]											
Template	Module				Subarray				Grism (Long Wavelength)			
	A				FULL				BOTH			
Dithers	#	Primary Dither Type				Primary Dithers				Subpixel Positions		
	1	INTRAMODULEX				3				4-Point		
Direct Image	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	2	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMR	Direct Image	1
	3	F150W	F356W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
	4	F115W	F277W	SHALLOW4	5	2	2	526.102	214714	GRISMC	Direct Image	1
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID	Grism (Long Wavelength)	Exposure Type	Total Dithers
	1	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	2	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMR	Grism (Long Wavelength)	12
	3	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2
	4	F200W	F356W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	5	F090W	F277W	SHALLOW4	6	1	12	3736.396	214714	GRISMC	Grism (Long Wavelength)	12
	6	F115W	F277W	SHALLOW4	5	2	4	1052.203	214714		Out of Field	2

Special Requirements	Offset 48.0 arcsec, 48.0 arcsec
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