



1835 - Unraveling the knots of gaseous Cosmic Web filaments at $z \sim 3$ through H-alpha emission observations

Cycle: 1, Proposal Category: GO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Prof. Sebastiano Cantalupo (PI) (ESA Member)	Universita di Milano-Bicocca
Prof. Charles C. Steidel (CoI) (US Admin CoI)	California Institute of Technology
Dr. Ruari Mackenzie (CoI) (ESA Member)	ETH Zurich
Prof. Simon J. Lilly (CoI) (ESA Member)	Eidgenossische Technische Hochschule (ETH)
Ms. Sofia Gallego (CoI) (ESA Member)	ETH Zurich
Dr. Raffaella Anna Marino (CoI) (ESA Member)	Eidgenossische Technische Hochschule (ETH)
Dr. Jorrryt Matthee (CoI) (ESA Member)	Institute of Science and Technology Austria
Dr. Gabriele Pezzulli (CoI) (ESA Member)	Kapteyn Astronomical Institute
Ms. Stephanie Dorothy Catherine de Beer (CoI) (ESA Member)	Universita di Milano-Bicocca
Prof. Michael Maseda (CoI)	University of Wisconsin - Madison
Dr. Themiya Nanayakkara (CoI)	Swinburne University of Technology
Prof. Michele Fumagalli (CoI) (ESA Member)	Universita di Milano-Bicocca
Dr. Matteo Fossati (CoI) (ESA Member)	Universita di Milano-Bicocca

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	MQN03_Plan2023h5	NIRSpec MultiObject Spectroscopy	(7) MQN03_APT_allcat_v3
	4	MQN03_PlanSep2023c4	NIRSpec MultiObject Spectroscopy	(9) MQN03_APT_allcat_v092023b
	2	MQN01_Plan2023ns	NIRSpec MultiObject Spectroscopy	(6) MQN01_APT_allcat_v3

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
	3	MQN01_preimaging	NIRCam Imaging	(3) QSOMQN01

ABSTRACT

Our cosmological model predicts that most of the matter in the universe is distributed in a network of filaments - the Cosmic Web - in which galaxies form and evolve. Because most of this material is very diffuse, its direct imaging has for long remained elusive, leaving many questions still open, e.g.: what are the morphological and kinematical properties of the Cosmic Web on both small (kpc) and large (Mpc) scales? How do galaxies get their gas from the Cosmic Web? Here, we tackle these questions with an innovative method to detect in emission the gaseous Cosmic Web using bright quasars as “cosmic flashlights”. In particular, we propose to observe in H-alpha emission two fields at $z \sim 3$ which contain the largest Cosmic Web filaments – over 4 cMpc in length - discovered so far in deep MUSE Ly-alpha emission searches around bright quasars. Because Ly-alpha is affected by radiative transfer which change both its spatial and spectral distribution, non-resonant H-alpha observations are fundamental in order to directly constrain both the filament densities and kinematics. The filament projected angular sizes are perfectly suited for NIRSpec-MOS which can trace the filaments over their full length capturing, at the same time, several embedded galaxies. Our H-alpha observations will probe structures within the filaments on scales smaller than a few physical kpc directly constraining both their density and kinematics. By relating these quantities to the kinematics and distance from associated galaxies, our result will be fundamental to informing a new generation of theoretical and numerical models in order to reveal the physics of intergalactic gas accretion and galactic outflows.

OBSERVING DESCRIPTION

The observations for this program consist of NIRSpec Multi-Object-Spectroscopy using the G235H grating and F170LP filter within two different fields, labeled MQN01 and MQN03, centered on two bright quasars at $z \sim 3.2$. These two fields contain the largest contiguous Cosmic Web filaments discovered so far in Ly-alpha emission around bright quasars.

The primary observational goal of this proposal is to detect the H-alpha emission produced by both gas and galaxies within these filaments. The emission is expected to be at a wavelength of about 2.7 microns. The region of interest in both fields extend to about 90” and they can therefore fit in a single MSA quadrant in each field. In particular, the MSA configurations are designed to follow the most interesting filamentary structures using a set of “slitlets” with a length not smaller than 3 MSA. The ideal PA which orients the MSA vertical direction parallel to the direction of the main filaments is within the schedulable range for both fields. Given the extended nature of our target, a range of PAs can be used as well in order to cover the filamentary structures and an optimal configuration can be provided once the PA is assigned. For similar reasons, continuum pre-imaging and Target Acquisition are not needed for our observations. A small nod and sub-pixel dither pattern will be used to mitigate the effect of open shutters, light-leakages and detector defects, as well as to improve PSF sampling. Open shutters in other quadrants and the fix slits will be used to obtain a

“master background”.

Observations for each field can be executed in single visits of duration 12.2 hours including overheads, estimated with the JWST ETC and APT in order to reach the required SN level. The observations, which are mostly read-out noise limited, are split in 21 exposures of about 27 minutes each per field in order to avoid excessive cosmic ray hits. In order to reduce data volume and flow, we will use the "NRSIRS2" read-out pattern splitting each integrations in 22 groups. Given the faint and diffuse nature of our targets, saturation and persistence are not an issue for our observations.

Proposal 1835 - Targets - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	MQN03-PA28	RA: 00 44 33.7558 (11.1406492d) Dec: -26 11 45.50 (-26.19597d) Equinox: J2000		
<i>Comments:</i> <i>Description=[]</i>				
(2)	MQN01-PA45	RA: 00 41 32.5500 (10.3856250d) Dec: -49 36 20.95 (-49.60582d) Equinox: J2000		
<i>Comments:</i> <i>Description=[]</i>				
(3)	QSOMQN01	RA: 00 41 31.4401 (10.3810004d) Dec: -49 36 11.69 (-49.60325d) Equinox: J2000	Proper Motion RA: 0 arcsec/yr Proper Motion Dec: 0 arcsec/yr Parallax: 0" Epoch of Position: 2000.0	
<i>Comments:</i> <i>Category=Unidentified</i> <i>Description=[Visible sources]</i> <i>Extended=NO</i>				
(6)	MQN01_APT_allcat_v3	RA: 00 41 33.0635 (10.3877646d) Dec: -49 36 18.94 (-49.60526d) Equinox: J2000		
<i>Comments:</i> <i>Description=[]</i>				
(7)	MQN03_APT_allcat_v3	RA: 00 44 34.5267 (11.1438612d) Dec: -26 11 33.62 (-26.19267d) Equinox: J2000		
<i>Comments:</i> <i>Description=[]</i>				
(8)	MQN03_APT_allcat_v092023	RA: 00 44 34.4799 (11.1436663d) Dec: -26 11 33.45 (-26.19263d) Equinox: J2000		
<i>Comments:</i> <i>Description=[]</i>				
(9)	MQN03_APT_allcat_v092023 b	RA: 00 44 34.4448 (11.1435200d) Dec: -26 11 32.01 (-26.19223d) Equinox: J2000		
<i>Comments:</i> <i>Description=[]</i>				

Fixed Targets

Proposal 1835 - Observation 1 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

Wed Sep 27 17:00:57 GMT 2023

Observation	Proposal 1835, Observation 1: MQN03_Plan2023h5 Diagnostic Status: Warning Observing Template: NIRSpec MultiObject Spectroscopy										
	(MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#1) has 1 primary slits affected by failed closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#2) has 1 primary slits affected by failed closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#3) has 1 primary slits affected by failed closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#4) has 1 primary slits affected by failed closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#5) has 3 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#6) has 3 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1 (#7) has 3 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1-2 (#10) has 2 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1-2 (#11) has 2 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1-2 (#12) has 2 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1-2 (#13) has 2 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1-2 (#8) has 2 master background shutters affected by failed open or closed shutters. (MQN03_Plan2023h5 (Obs 1)) Warning (Form): Config c1-2 (#9) has 2 master background shutters affected by failed open or closed shutters. (Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Diagnosics											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous		
	(7)	MQN03_APT_allcat_v3	RA: 00 44 34.5267 (11.1438612d) Dec: -26 11 33.62 (-26.19267d) Equinox: J2000								
<i>Comments:</i>											
<i>Description=[]</i>											
Acquisition	#	Reference Star Bin	Target	Filter	MSA Configuration	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	Filter: F140X; Readout: NRSRAPID; 8 sources in 4 quads; [Reduced Accuracy]	SAME	F140X	Auto Acq MSA Config	NRSRAPID	3	1	4	171.788	
Template	TA Method	Obtain Confirmation Images		Science Aperture	Primary Candidate List	Filler Candidate List	Spectral Overlap Map		Spectral Overlap Threshold		
	MSATA	No		MSA Center	MQN03_APT_allcat_v3 (587 sources)		jwst-nirspec-hr		1.5		
Reference Stars	Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude	
	1	2004	11.171403	-26.166441	22.84	1	2030	11.132222	-26.159181	22.52	
	1	2012	11.120846	-26.192579	21.41	1	2032	11.153317	-26.161189	22.5	
	1	2019	11.156291	-26.153962	22.18	1	2033	11.141631	-26.161476	22.81	
	1	2028	11.155719	-26.158075	21.93	1	2042	11.118882	-26.174723	22.71	

Proposal 1835 - Observation 1 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

#	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
1	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760578784077 3			1	1	1546.422
2	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760569434389 44		0.22264	1	1	1546.422
3	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760560084878 53		0.44528	1	1	1546.422
4	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760550497866 13		0.67358	1	1	1546.422
5	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760541148293 576		0.89623	1	1	1546.422
6	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760531403342 39		1.1283	1	1	1546.422
7	1 (G235H/F170LP)	c1		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760522054550 975		1.35094	1	1	1546.422
8	2 (G235H/F170LP)	c1-2		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760498762283 98		1.90566	1	2	3092.845
9	2 (G235H/F170LP)	c1-2		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760489176461 036		2.13396	1	2	3092.845
10	2 (G235H/F170LP)	c1-2		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760480066112 69		2.35094	1	2	3092.845
11	1 (G235H/F170LP)	c1-2		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760469529673 905		2.60189	1	1	1546.422
12	1 (G235H/F170LP)	c1-2		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760460182052 65		2.82453	1	1	1546.422
13	1 (G235H/F170LP)	c1-2		11.129731249999 999 Degrees - 26.169272222222 22 Degrees	35.760451468149 68		3.03208	1	1	1546.422

Spectral Elements

Proposal 1835 - Observation 1 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

Special Requirements

Aperture PA Range 13 to 43 Degrees (V3 234.42543030000002 to 264.4254303)
MSA Scheduled Aperture PA 35.7543 to 35.7543 Degrees (V3 257.17972 to 257.17972)

Proposal 1835 - Observation 4 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

Wed Sep 27 17:00:57 GMT 2023

Observation	Proposal 1835, Observation 4: MQN03_PlanSep2023c4 Diagnostic Status: Warning Observing Template: NIRSpec MultiObject Spectroscopy										
	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous		
	(9)	MQN03_APT_allcat_v092023 b	RA: 00 44 34.4448 (11.1435200d) Dec: -26 11 32.01 (-26.19223d) Equinox: J2000								
<i>Comments: Description=[]</i>											
Acquisition	#	Reference Star Bin	Target	Filter	MSA Configuration	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 3 quads; [Reduced Accuracy]	SAME	F140X	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153	
Template	TA Method	Obtain Confirmation Images		Science Aperture	Primary Candidate List	Filler Candidate List	Spectral Overlap Map		Spectral Overlap Threshold		
	MSATA	No		MSA Center	MQN03_APT_allcat_v09202 3b (623 sources)		jwst-nirspec-hr		1.5		
Reference Stars	Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude	
	1	2001	11.183357	-26.204174	23.03	1	2031	11.191308	-26.160702	23.29	
	1	2004	11.171403	-26.166441	22.84	1	2032	11.153317	-26.161189	22.5	
	1	2022	11.184184	-26.161806	23.56	1	2033	11.141631	-26.161476	22.81	
	1	2026	11.152361	-26.158307	22.93	1	2036	11.131508	-26.169541	24.18	

Proposal 1835 - Observation 4 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

#	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
1	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61073175344 868			1	1	1546.422
2	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61073420599 848		0.22264	1	1	1546.422
3	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61073665849 3		0.44528	1	1	1546.422
4	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61073917327 8		0.67358	1	1	1546.422
5	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61074162577 083		0.89623	1	1	1546.422
6	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61074418196 628		1.1283	1	1	1546.422
7	1 (G235H/F170LP)	c1		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61074663423 616		1.35094	1	1	1546.422
8	2 (G235H/F170LP)	c1-2		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61075274396 336		1.90566	1	2	3092.845
9	2 (G235H/F170LP)	c1-2		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61075525837 688		2.13396	1	2	3092.845
10	2 (G235H/F170LP)	c1-2		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61075764806 225		2.35094	1	2	3092.845
11	1 (G235H/F170LP)	c1-2		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61076041180 706		2.60189	1	1	1546.422
12	1 (G235H/F170LP)	c1-2		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61076286371 147		2.82453	1	1	1546.422
13	1 (G235H/F170LP)	c1-2		11.162267916666 666 Degrees - 26.181087222222 23 Degrees	188.61076514938 202		3.03208	1	1	1546.422

Spectral Elements

Proposal 1835 - Observation 4 - Unraveling the knots of gaseous Cosmic Web filaments at $z \sim 3$ through H-alpha emission observations

Special Requirements

MSA Scheduled Aperture PA 188.6190 to 188.6190 Degrees (V3 50.044388 to 50.044388)

Observation	<p>Proposal 1835, Observation 2: MQN01_Plan2023ns</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec MultiObject Spectroscopy</p>
	<p>Diagnosics</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#1) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#1) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#2) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#2) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#3) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#3) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#4) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#4) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#5) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#5) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#6) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#6) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#7) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#7) has 2 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1 (#8) has 3 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#10) has 3 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#11) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#11) has 2 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#12) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#12) has 2 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#13) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#13) has 2 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#14) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#14) has 2 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-2 (#9) has 3 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#15) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#15) has 2 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#16) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#16) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#17) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#17) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#18) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#18) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#19) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#19) has 1 primary slits affected by failed closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#20) has 1 master background shutters affected by failed open or closed shutters.</p> <p>(MQN01_Plan2023ns (Obs 2)) Warning (Form): Config c1-3 (#20) has 1 primary slits affected by failed closed shutters.</p> <p>(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>

Proposal 1835 - Observation 2 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous		
	(6)	MQN01_APT_allcat_v3	RA: 00 41 33.0635 (10.3877646d) Dec: -49 36 18.94 (-49.60526d) Equinox: J2000								
<i>Comments:</i> Description=[]											
Acquisition	#	Reference Star Bin	Target	Filter	MSA Configuration	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 3 quads; [Reduced Accuracy]	SAME	F140X	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153	
Template	TA Method		Obtain Confirmation Images	Science Aperture	Primary Candidate List	Filler Candidate List	Spectral Overlap Map		Spectral Overlap Threshold		
	MSATA		No	MSA Center	MQN01_APT_allcat_v3 (548 sources)		jwst-nirspec-g235h		1.5		
Reference Stars	Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude	
	1	2003	10.386026	-49.614120	24.2	1	2012	10.393010	-49.597826	24.33	
	1	2005	10.393112	-49.609531	23.04	1	2037	10.354581	-49.583700	22.34	
	1	2006	10.384064	-49.605768	24.04	1	2044	10.393484	-49.562990	22.43	
	1	2008	10.393120	-49.604050	23.09	1	2045	10.367778	-49.556940	23.48	

Proposal 1835 - Observation 2 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

#	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
1	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390521734060 47		0.0	1	1	1546.422
2	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390547590746 69		-0.22264	1	1	1546.422
3	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390495877851 066		0.22264	1	1	1546.422
4	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390470022118 39		0.44528	1	1	1546.422
5	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390443509571		0.67358	1	1	1546.422
6	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390417653642 544		0.89623	1	1	1546.422
7	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390390704294 454		1.1283	1	1	1546.422
8	1 (G235H/F170LP)	c1		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390364850500 69		1.35094	1	1	1546.422
9	1 (G235H/F170LP)	c1-2		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390300436401 59		1.90566	1	1	1546.422
10	1 (G235H/F170LP)	c1-2		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390273927059 49		2.13396	1	1	1546.422
11	1 (G235H/F170LP)	c1-2		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390248732617 73		2.35094	1	1	1546.422
12	1 (G235H/F170LP)	c1-2		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390219594343 506		2.60189	1	1	1546.422
13	1 (G235H/F170LP)	c1-2		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390193743702 93		2.82453	1	1	1546.422
14	1 (G235H/F170LP)	c1-2		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390169645585 11		3.03208	1	1	1546.422

Proposal 1835 - Observation 2 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

#	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
15	1 (G235H/F170LP)	c1-3		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390105241608 19		3.58679	1	1	1546.422
16	1 (G235H/F170LP)	c1-3		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390079393074 06		3.80943	1	1	1546.422
17	1 (G235H/F170LP)	c1-3		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390050258315 81		4.06038	1	1	1546.422
18	1 (G235H/F170LP)	c1-3		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390026163822 604		4.26792	1	1	1546.422
19	1 (G235H/F170LP)	c1-3		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.390000315583 805		4.49057	1	1	1546.422
20	1 (G235H/F170LP)	c1-3		10.385809166666 666 Degrees - 49.584483333333 31 Degrees	42.389975126053 62		4.70755	1	1	1546.422
Special Requirements	Aperture PA Range 30 to 60 Degrees (V3 251.42543030000002 to 281.4254303)									
	MSA Scheduled Aperture PA 42.3890 to 42.3890 Degrees (V3 263.81442 to 263.81442)									
	2 After 3 by 60 Days to <None specified>									

Proposal 1835 - Observation 3 - Unraveling the knots of gaseous Cosmic Web filaments at z~3 through H-alpha emission observations

Wed Sep 27 17:00:57 GMT 2023

Observation	Proposal 1835, Observation 3: MQN01_preimaging Diagnostic Status: Warning Observing Template: NIRCam Imaging <i>Comments: Any PA is fine but offsets should be adjusted once assigned PA is known in order to match Module B with NIRSpec quadrant 4 FoV. Current offsets assume same PA as the assigned NIRSpec PA</i>																													
	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.																													
Diagnostics																														
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(3)</td> <td>QSOMQN01</td> <td>RA: 00 41 31.4401 (10.3810004d) Dec: -49 36 11.69 (-49.60325d) Equinox: J2000</td> <td>Proper Motion RA: 0 arcsec/yr Proper Motion Dec: 0 arcsec/yr Parallax: 0" Epoch of Position: 2000.0</td> <td></td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(3)	QSOMQN01	RA: 00 41 31.4401 (10.3810004d) Dec: -49 36 11.69 (-49.60325d) Equinox: J2000	Proper Motion RA: 0 arcsec/yr Proper Motion Dec: 0 arcsec/yr Parallax: 0" Epoch of Position: 2000.0		<i>Comments: Category=Unidentified Description=[Visible sources] Extended=NO</i>																		
	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous																									
(3)	QSOMQN01	RA: 00 41 31.4401 (10.3810004d) Dec: -49 36 11.69 (-49.60325d) Equinox: J2000	Proper Motion RA: 0 arcsec/yr Proper Motion Dec: 0 arcsec/yr Parallax: 0" Epoch of Position: 2000.0																											
Template	<table border="1"> <thead> <tr> <th>Module</th> <th>Subarray</th> <th>Target Placement</th> </tr> </thead> <tbody> <tr> <td>ALL</td> <td>FULL</td> <td>Module Gap</td> </tr> </tbody> </table>	Module	Subarray	Target Placement	ALL	FULL	Module Gap																							
	Module	Subarray	Target Placement																											
ALL	FULL	Module Gap																												
Dithers	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Dither Type</th> <th>Primary Dithers</th> <th>Subpixel Dither Type</th> <th>Dither Size</th> <th>Subpixel Positions</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>INTRAMODULEX</td> <td>8</td> <td>STANDARD</td> <td></td> <td>1</td> </tr> </tbody> </table>	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions	1	INTRAMODULEX	8	STANDARD		1																	
	#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions																								
1	INTRAMODULEX	8	STANDARD		1																									
Spectral Elements	<table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Dithers</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F150W2</td> <td>F322W2</td> <td>SHALLOW4</td> <td>4</td> <td>1</td> <td>8</td> <td>8</td> <td>1631.989</td> <td></td> </tr> </tbody> </table>	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	1	F150W2	F322W2	SHALLOW4	4	1	8	8	1631.989										
	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID																				
1	F150W2	F322W2	SHALLOW4	4	1	8	8	1631.989																						
Special Requirements	Aperture PA Range 20 to 30 Degrees (V3 20.0713531 to 30.0713531) Offset 95.0 arcsec, 0.0 arcsec 2 After 3 by 60 Days to <None specified>																													