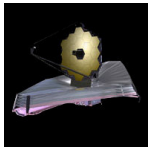

1747 - Linking Bright Galaxy Properties to IGM Opacity and Environment in the Early Epoch of Reionization with NIRSpec

Cycle: 1, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
NIRSpec_MOS_Prism				
	11	0037-3337_MSA	NIRSpec MultiObject Spectroscopy	(22) BORG-0037-3337
	12	0314-6712_MSA	NIRSpec MultiObject Spectroscopy	(18) BORG-0314-6712
	13	0440-5244_MSA	NIRSpec MultiObject Spectroscopy	(26) BORG-0440-5244
	1	0853+0309_MSA	NIRSpec MultiObject Spectroscopy	(23) BORG-0853+0309
	14	0859+4114_MSA	NIRSpec MultiObject Spectroscopy	(13) BORG-0859+4114
	6	1033+5051_MSA	NIRSpec MultiObject Spectroscopy	(15) BORG-1033+5051
	4	1437+5044_MSA	NIRSpec MultiObject Spectroscopy	(16) BORG-1437+5044
	7	2203+1851_MSA	NIRSpec MultiObject Spectroscopy	(17) BORG-2203+1851
	16	0409-5317_MSA	NIRSpec MultiObject Spectroscopy	(24) BORG-0409-5317
	17	0955+4528_MSA	NIRSpec MultiObject Spectroscopy	(25) BORG-0955+4528

ABSTRACT

Lya observations of luminous z~8 galaxies with red Spitzer/IRAC 3.6-4.5 micron colors have resulted in significantly higher detection rates than in galaxies without such an excess or in magnitude-limited samples, despite them lying in a predominantly neutral medium. The detection of Lya in such galaxies challenges our already limited understanding of the Reionization process and is perhaps suggestive of an extreme subset of the general population, characterised by particularly efficient ionizing capabilities. However, the vast majority of such galaxies have been found in small and concentrate patches of the sky, and thus whether they are all intrinsically extreme or simply trace clustered environments remains untested. To test this theory, observations of rest-frame optical galaxy properties are necessary since Lya is sensitive to the surrounding HI and thus not a direct probe of the galaxy, while observations over large areas of the sky are a prerequisite to disentangling the combined effects of clustering and cosmic variance. We therefore propose NIRSpec/prism spectroscopy of the 10 best, bright z~8 galaxy candidates from the SuperBoRG survey, a compilation of HST imaging over 316 independent spanning an effective area of ~0.41 deg2, x2 larger than current legacy surveys. The long wavelength coverage of prism observations ensures both Lya and rest-frame optical features are simultaneously observed, allowing us to link the state of the IGM with intrinsic galaxy properties, while the (pure-)parallel nature of the SuperBoRG survey ensures we limit the effects of clustering and cosmic variance, and will provide a unique addition to upcoming ERS/GTO legacy data sets.

OBSERVING DESCRIPTION

Pinpointing the birth of the first stars and galaxies and determining their role in transforming the Universe from a neutral state to a fully ionized one remains one of the holy grails of modern observational cosmology and one of the main motivations for the arrival of the James Webb Space Telescope (JWST). Observations of the Lyman-alpha (Lya) resonant emission line in z>7 galaxies as a probe of the opacity of the circumgalactic (CGM) and intergalactic media (IGM) have yielded mixed results. Thus far, successful measurements of the line at z~8 have yielded only a handful of convincing detections, which in turn have been exclusive to the most luminous and exceptional objects. The detection and high equivalent widths (EWs) of the line in a primarily neutral medium signifies the presence of an early (re)ionized bubble, the likes of which allow Lya to travel from the galaxy unimpeded until it is shifted out of resonance and no longer attenuated by surrounding HI. The revelation and presence of these early bubbles is as unexpected as it is puzzling. Are the host galaxies particularly efficient ionizers with extreme properties, or do they reside in clustered overdensities? Are they the sources responsible for an accelerated Reionination process? In order to answer these questions and determine the primary drivers of such early ionized bubbles, one must first disentangle (i) the neutral state of the surrounding IGM, (ii) the intrinsic properties of the host galaxies, and (iii) the effect of galaxy clustering and environment. Observations of Lya and rest-frame optical galaxy properties are required to separate the first two, while an appropriate sample across large areas of the sky is necessary to disentangle the third and suppress the effects of cosmic variance. JWST is the only facility that can definitively answer these questions and the long-awaited arrival of its unique spectroscopic IR

capabilities now provides us with an opportunity to do so.

In this proposal, therefore, we aim to use the unique NIRSpec/prism capabilities to simultaneously observe Lya and the rest-frame optical properties of z~8 galaxies from a unique compilation of existing (pure-)parallel observations covering ~0.4 deg2 known as the SuperBoRG survey, with the aim of disentangling the aforementioned effects in a predominantly neutral medium and determine the main drivers of early Cosmic Reionization. We propose fixed slit spectroscopy for the 10 best and bright (H~25-26 AB) z~8-9 galaxies from the survey, with the aim of simultaneously observing Lya and rest-frame optical emission lines that are unaffacted by the IGM, namely [OII]3726,3729 A, [OIII]4959,5007 A and Hbeta, whose absolute fluxes and relative ratios provide estimates of the gas-phase metallicity, specific star formation rate, dust attenuation (from the so-called ``Balmer decrement''), and the strength of the surrounding radiation field. Additional, secondary measurements of the rest-frame UV+optical stellar continuum will add unprecedented constraints on the SFR and stellar masses of both young and old stellar populations, as well as their UV slopes, dust contents and stellar ages (from e.g., the rest-frame 4000 A break). We propose to do this in MOS mode in order to fill the MSA with additional "filler" galaxies of a wide variety of magnitudes and redshifts, where rest-frame UV-to-optical spectroscopy can be conducted simultaenously to the main targets in order to gain unique and unprecedented observations of 0<z<10 galaxies from (pure-)parallel observations and provide the community with a lasting data set with which to charaterise SFRs, stellar masses, metallicities and dust contents (from emission line measurements such as Halpha, [NII], [OIII], and Hbeta, as well as continuum measurements across the full wavelength range) across large areas of the sky. The proposed observations will provide a unique and necessary complement to upcoming ERS and GTO observations of legacy fields, which are unable to probe the effective area or independent sightlines afforded by the SuperBoRG survey.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(13)	BORG-0859+4114	RA: 08 59 19.6992 (134.8320800d) Dec: +41 14 18.09 (41.23836d) Equinox: J2000		
Comments: *Description=[]*				
(15)	BORG-1033+5051	RA: 10 32 51.0312 (158.2126300d) Dec: +50 51 30.45 (50.85846d) Equinox: J2000		
Comments: *Description=[]*				
(16)	BORG-1437+5044	RA: 14 36 51.9360 (219.2164000d) Dec: +50 43 23.44 (50.72318d) Equinox: J2000		
Comments: *Description=[]*				
(17)	BORG-2203+1851	RA: 22 02 49.4763 (330.7061513d) Dec: +18 51 3.13 (18.85087d) Equinox: J2000		
Comments: *Description=[]*				
(18)	BORG-0314-6712	RA: 03 13 44.3765 (48.4349021d) Dec: -67 12 9.68 (-67.20269d) Equinox: J2000		
Comments: *Description=[]*				
(22)	BORG-0037-3337	RA: 00 37 9.0523 (9.2877179d) Dec: -33 37 16.49 (-33.62125d) Equinox: J2000		
Comments: *Description=[]*				
(23)	BORG-0853+0309	RA: 08 52 43.6296 (133.1817900d) Dec: +03 09 20.69 (3.15575d) Equinox: J2000		
Comments: *Description=[]*				
(24)	BORG-0409-5317	RA: 04 09 16.6471 (62.3193629d) Dec: -53 16 39.86 (-53.27774d) Equinox: J2000		
Comments: *Description=[]*				
(25)	BORG-0955+4528	RA: 09 55 16.8048 (148.8200200d) Dec: +45 28 34.74 (45.47632d) Equinox: J2000		
Comments: *Description=[]*				

	(26)	BORG-0440-5244	RA: 04 39 50.2790 (69.9594958d) Dec: -52 43 54.48 (-52.73180d) Equinox: J2000
	Comments: *Description=[]*		

Observation

Proposal 1747, Observation 11: 0037-3337_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(0037-3337_MSA (Obs 11)) Warning (Form): Config c1 (#1) has 1 primary slit traces affected by failed open shutters.

(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(22)	BORG-0037-3337	RA: 00 37 9.0523 (9.2877179d) Dec: -33 37 16.49 (-33.62125d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	BORG-0037-3337 (1114 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	248	9.290017	-33.630596	23.085804826539963	1	755	9.308116	-33.620602	22.996800649539104
1	329	9.268384	-33.628838	21.300613861707667	1	780	9.264037	-33.621510	22.058363415662633
1	648	9.297854	-33.622124	22.649796538039276	1	1086	9.312221	-33.616646	23.632076855034576
1	652	9.269608	-33.622608	23.133170417176455	1	1121	9.285059	-33.615826	22.748442964814693

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	9.277996125 Degrees -33.60834583333332 Degrees	177.8888513879858			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 177.8835 to 177.8835 Degrees (V3 39.308903 to 39.308903)

Observation

Proposal 1747, Observation 12: 0314-6712_MSA

Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(0314-6712_MSA (Obs 12)) Warning (Form): Config c1 (#1) has 1 primary slit traces affected by failed open shutters.

(0314-6712_MSA (Obs 12)) Warning (Form): Config c1 (#1) has 1 primary slits affected by failed closed shutters.

(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(18)	BORG-0314-6712	RA: 03 13 44.3765 (48.4349021d) Dec: -67 12 9.68 (-67.20269d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPIDD1; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD1	3	1	4	257.682	

Template

TA Method	Obtain Confirmation Images	Science Aperture	Primary Candidate List	Filler Candidate List	Spectral Overlap Map	Spectral Overlap Threshold
MSATA	No	MSA Center	BORG-0314-6712 (1485 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	171	48.457573	-67.219131	23.495353380718278	1	733	48.384106	-67.208542	22.039568643906073
1	380	48.424244	-67.212967	23.076447296218113	1	838	48.436195	-67.207077	23.567696148783263
1	511	48.430176	-67.211662	23.915156380596848	1	1300	48.379887	-67.202362	23.817227275045646
1	604	48.394615	-67.208740	22.239966486173124	1	1476	48.388058	-67.199936	23.824111658796788

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	48.41663458333334 Degrees -67.19206472222222 Degrees	14.778966249423044			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 14.7621 to 14.7621 Degrees (V3 236.18753 to 236.18753)

Observation

Proposal 1747, Observation 13: 0440-5244_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(26)	BORG-0440-5244	RA: 04 39 50.2790 (69.9594958d) Dec: -52 43 54.48 (-52.73180d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	BORG-0440-5244 (1047 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	283	69.988167	-52.740528	22.207528187697797	1	508	69.953262	-52.734901	21.910458418496084
1	323	69.955582	-52.739140	22.778934033531733	1	515	69.943199	-52.734814	22.566391794007508
1	408	69.963776	-52.737061	22.554205922053264	1	564	69.940491	-52.733578	23.078850885666192
1	443	69.932426	-52.734894	21.90431314602288	1	1194	69.948822	-52.719963	23.260990718487186

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	69.98867220833334 Degrees -52.72210305555558 Degrees	115.62272478950109			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 115.6459 to 115.6459 Degrees (V3 337.07138 to 337.07138)

Observation

Proposal 1747, Observation 1: 0853+0309_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 1:1) Warning (Form): The recommended value is 8 Reference Stars for this template.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(23)	BORG-0853+0309	RA: 08 52 43.6296 (133.1817900d) Dec: +03 09 20.69 (3.15575d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 6 sources in 1 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	BORG-0853+0309 (1112 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	101	133.182617	3.140544	23.335558576668326	1	167	133.184891	3.142259	22.312084055311068
1	131	133.184906	3.140640	21.79578261786333	1	177	133.181152	3.141526	23.381403955642575
1	137	133.182083	3.141629	22.6759412091751	1	233	133.183746	3.144977	21.617164007400767

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	133.17193416666666 Degrees 3.1480158333333335 Degrees	69.76563513478565			5	5	4449.611

Special Requirements	MSA Scheduled Aperture PA 69.7662 to 69.7662 Degrees (V3 291.19165 to 291.19165)

Observation

Proposal 1747, Observation 14: 0859+4114_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(Visit 14:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(13)	BORG-0859+4114	RA: 08 59 19.6992 (134.8320800d) Dec: +41 14 18.09 (41.23836d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	Primary (20 sources)	Filler (510 sources)	jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	53	134.828018	41.221046	22.229678228666977	1	625	134.843384	41.236980	21.778724743963487
1	74	134.842239	41.221912	22.6377101661626	1	1125	134.830307	41.246307	22.494667874357084
1	313	134.836014	41.230446	22.71555343814655	1	1127	134.834259	41.250908	21.85762968215277
1	612	134.835556	41.236427	22.931328847601797	1	1136	134.834579	41.250042	21.844583672076034

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	134.84992795833332 Degrees 41.24432222222222 Degrees	260.97223438795567			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 260.9605 to 260.9605 Degrees (V3 122.385925 to 122.385925)

Observation

Proposal 1747, Observation 6: 1033+5051_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject 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
(15)	BORG-1033+5051	RA: 10 32 51.0312 (158.2126300d) Dec: +50 51 30.45 (50.85846d) Equinox: J2000		

Comments:
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: F110W; Readout: NRSRAPIDD6; 8 sources in 3 quads; [Optimal TA Accuracy]	SAME	F110W	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	BORG-1033+5051 (832 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	30	158.190628	50.838146	22.07301707062755	1	1502	158.209961	50.865410	23.63631352352808
1	447	158.206253	50.849369	23.295407433170872	1	1544	158.189380	50.863564	22.870701861958686
1	1282	158.202759	50.871281	22.258189182548698	1	1625	158.241170	50.861309	23.558736965655597
1	1382	158.186188	50.868671	23.418946267252885	1	1660	158.215698	50.860538	22.647165267457645

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	158.22424920833333 Degrees 50.85222944444445 Degrees	285.1936252125278			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 285.1846 to 285.1846 Degrees (V3 146.61005 to 146.61005)

Observation

Proposal 1747, Observation 4: 1437+5044_MSA

Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject 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
(16)	BORG-1437+5044	RA: 14 36 51.9360 (219.2164000d) Dec: +50 43 23.44 (50.72318d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	BORG-1437+5044 (1367 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	516	219.223404	50.715233	23.267825103249756	1	1475	219.236480	50.727558	23.604237530656498
1	550	219.221405	50.715248	23.431055875209417	1	1491	219.178055	50.727753	21.90131421578031
1	618	219.222000	50.716175	23.393628220428972	1	1705	219.221710	50.730373	22.115059023472362
1	703	219.222200	50.717762	23.346323661925872	1	1823	219.228010	50.732021	23.511614503178173

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	219.200058875 Degrees 50.740846944444 44 Degrees	284.551566010220 54			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 284.5642 to 284.5642 Degrees (V3 145.98965 to 145.98965)

Observation

Proposal 1747, Observation 7: 2203+1851_MSA

Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(17)	BORG-2203+1851	RA: 22 02 49.4763 (330.7061513d) Dec: +18 51 3.13 (18.85087d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPIDD1; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD1	3	1	4	257.682	

Template

TA Method	Obtain Confirmation Images	Science Aperture	Primary Candidate List	Filler Candidate List	Spectral Overlap Map	Spectral Overlap Threshold
MSATA	No	MSA Center	BORG-2203+1851 (532 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	9	330.699430	18.829151	23.821024518888272	1	668	330.708313	18.847759	22.69075154650499
1	369	330.711060	18.841860	22.73970581977712	1	782	330.708893	18.849985	22.631449261906518
1	422	330.703613	18.842819	23.43739344255939	1	812	330.708130	18.850969	22.791553069388407
1	487	330.696503	18.844793	22.555170631591373	1	821	330.707123	18.850870	22.43812592287727

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	330.71596058333336 Degrees 18.832379166666666 Degrees	12.155894653299697			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 12.1528 to 12.1528 Degrees (V3 233.5782 to 233.5782)

Observation

Proposal 1747, Observation 16: 0409-5317_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(Visit 16:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(24)	BORG-0409-5317	RA: 04 09 16.6471 (62.3193629d) Dec: -53 16 39.86 (-53.27774d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	BORG-0409-5317 (1239 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	547	62.319752	-53.288513	22.89292974079217	1	1085	62.331532	-53.263504	22.577212671554214
1	626	62.321449	-53.287579	21.81132497315631	1	1201	62.326122	-53.268475	22.540051622429452
1	717	62.294666	-53.286476	23.016402674939336	1	1333	62.316891	-53.277737	21.7132497888933
1	731	62.322697	-53.286888	23.19369555021337	1	1844	62.299870	-53.282654	22.442552523561325

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	62.296058583333 35 Degrees -53.262690277777 78 Degrees	121.35815784997537			5	5	4084.889

Special Requirements	MSA Scheduled Aperture PA 121.3395 to 121.3395 Degrees (V3 342.7649 to 342.7649)

Observation

Proposal 1747, Observation 17: 0955+4528_MSA Mon Sep 25 13:01:17 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec MultiObject Spectroscopy

Diagnostics

(Visit 17:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(25)	BORG-0955+4528	RA: 09 55 16.8048 (148.8200200d) Dec: +45 28 34.74 (45.47632d) Equinox: J2000		

Comments:
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: CLEAR; Readout: NRSRAPID; 8 sources in 2 quads; [Optimal TA Accuracy]	SAME	CLEAR	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	BORG-0955+4528 (675 sources)		jwst-nirspec-prism	1.5

Reference Stars

Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
1	321	148.790850	45.468983	22.2872179727706	1	903	148.817337	45.488670	21.39589873745883
1	661	148.823850	45.477921	22.67670607036714	1	908	148.812958	45.487843	21.653205190259904
1	748	148.827480	45.480995	22.55394852529809	1	909	148.812927	45.488441	21.76540906557181
1	815	148.828445	45.480827	22.32107235605846	1	943	148.841415	45.486012	22.541858794631047

Spectral Elements

#	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 (PRISM/CLEAR)	c1	5 Shutter Slitlet	148.7986472083333 Degrees 45.489602222222224 Degrees	66.85367800437405			5	5	2698.945

Special Requirements	MSA Scheduled Aperture PA 66.8689 to 66.8689 Degrees (V3 288.2943 to 288.2943)