



9165 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright $z > 10$ Galaxies?

Cycle: 4, Proposal Category: GO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Ryan Endsley (PI)	University of Texas at Austin
Prof. Daniel P. Stark (CoI) (CoPI)	University of California - Berkeley
Dr. Michael Topping (CoI)	University of Arizona
Dr. Mengtao Tang (CoI)	University of Arizona
Prof. John Chisholm (CoI)	University of Texas at Austin
Prof. Charlotte Mason (CoI) (ESA Member)	University of Copenhagen, Niels Bohr Institute

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
uncover_37126				
	1	uncover_37126_LRS	MIRI Low Resolution Spectroscopy	(1) uncover_37126
	2	uncover_37126_LRS	MIRI Low Resolution Spectroscopy	(1) uncover_37126
	3	uncover_37126_LRS	MIRI Low Resolution Spectroscopy	(1) uncover_37126
	4	uncover_37126_F560 W	MIRI Imaging	(1) uncover_37126
uncover_26815				
	5	uncover_26815_LRS	MIRI Low Resolution Spectroscopy	(3) uncover_26185
	9	uncover_26815_LRS	MIRI Low Resolution Spectroscopy	(3) uncover_26185
	10	uncover_26815_LRS	MIRI Low Resolution Spectroscopy	(3) uncover_26185
	8	uncover_26815_F560 W	MIRI Imaging	(3) uncover_26185
ceers_80073				

JWST Proposal 9165 (Created: Tuesday, September 2, 2025, 3:00:22PM Eastern Standard Time) - Overview

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
	11	ceers_80873_LRS	MIRI Low Resolution Spectroscopy	(5) ceers_80073
	15	ceers_80873_LRS	MIRI Low Resolution Spectroscopy	(5) ceers_80073
	16	ceers_80873_LRS	MIRI Low Resolution Spectroscopy	(5) ceers_80073
	14	ceers_80873_F560W	MIRI Imaging	(5) ceers_80073
macs0647_jd1				
	34	macs0647_jd1_F560W	MIRI Imaging	(11) macs0647_jd1
ghz2				
	35	ghz2_F560W	MIRI Imaging	(12) ghz2
gnz11				
	36	gnz11_F560W	MIRI Imaging	(13) gnz11

ABSTRACT

Over the past two years, several independent studies have reported an astonishingly high number of bright $z > 10$ galaxy candidates identified from deep JWST/NIRCam imaging. A growing collection of NIRSpc confirmations have solidified the picture that bright $z \sim 12-14$ galaxies are > 10 times more abundant than predicted by nearly every pre-JWST model. While relatively exotic solutions have been proposed to resolve this tension, new JWST data at slightly lower redshifts is hinting at a simpler explanation. Galaxies at $z \sim 6-8$ are found to be experiencing much more bursty star formation histories (SFHs) relative to their lower-redshift counterparts, and these strong bursts make low-mass galaxies temporarily appear much brighter due to the sudden formation of many O stars. Several models have now demonstrated that a strong evolution in burstiness at $z > 10$ can explain the high abundance of $z = 10-14$ systems. Here, we propose to quantify the evolution in burstiness at $z > 10$ by completing MIRI follow-up of the eight brightest spec-confirmed $z = 10-14$ galaxies. Past work at $z \sim 0-8$ have demonstrated that the optical [OIII] and H-alpha equivalent widths (EWs) and the H-alpha-to-UV luminosity ratio (LHa/Luv) are excellent tracers of galaxy burstiness. With our proposed data, we will measure the median EWs and LHa/Luv of bright $z = 10-14$ systems and compare to published findings at $z \sim 6-8$. If we find that all of these properties increase substantially at $z > 10$, it would firmly imply that very strong bursts of star formation are a key contributor to the stunning abundance of $z > 10$ systems. Our data will also enable tests of other proposed explanations for the high $z > 10$ galaxy counts measured with JWST.

OBSERVING DESCRIPTION

We design our observations following successfully-executed and approved past programs (e.g., GO 3703, GO 4586). From the MIRI LRS observations, we aim to detect the optical [OIII] doublet and H-alpha lines at 5-sigma under the conservative assumption of no evolution in burstiness (EWs) from $z \sim 6-8$. These LRS observations deliver simultaneous measurements of the [OIII] and H-alpha lines, and do not resolve the [OIII] doublet, thereby delivering the higher SNR over MRS (at fixed exposure time). We adopt ALONG SLIT NOD dithering with the FASTR1 readout pattern for

LRS, splitting the total requisite exposure time into multiple visits where appropriate. Following GO 3703, we include target acquisition (TA) observations to prevent slit losses from off-nominal source placements.

We also conduct MIRI F560W imaging to constraint the rest-optical continuum around the lines (necessary for EW measurements). The imaging depth is set to reach 5-sigma sensitivity assuming the F444W flux density and typical $z\sim 6-8$ line EWs. We adopt a 6 or 12 point CYCLING dither pattern.

Proposal 9165 - Targets - Does Bursty Star Formation Explain the Astonishing Abundance of Bright $z > 10$ Galaxies?

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	uncover_37126	RA: 00 14 21.6266 (3.5901108d) Dec: -30 21 35.07 (-30.35974d) Equinox: J2000	Epoch of Position: 2023	
<p><i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO</p>				
(2)	acqStar_uncover_37126	RA: 00 14 19.7527 (3.5823029d) Dec: -30 21 16.29 (-30.35453d) Equinox: J2000	Proper Motion RA: -2.160429266951468 mas/yr Proper Motion Dec: -4.606480590636059 mas/yr Parallax: 0.0016933163940464273" Epoch of Position: 2016	
<p><i>Comments: Acquisition star for target uncover_37126. Coordinates, PM, and epoch from Gaia DR3.</i> Category=Star Description=[G stars] Extended=NO</p>				
(3)	uncover_26185	RA: 00 14 16.0970 (3.5670708d) Dec: -30 22 40.30 (-30.37786d) Equinox: J2000	Epoch of Position: 2023	
<p><i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO</p>				
(4)	acqStar_uncover_26185	RA: 00 14 16.3855 (3.5682729d) Dec: -30 22 2.73 (-30.36743d) Equinox: J2000	Proper Motion RA: 37.13983393602101 mas/yr Proper Motion Dec: -2.6180411925989486 mas/yr Parallax: 0.0036153262837062314" Epoch of Position: 2016	
<p><i>Comments: Acquisition star for target uncover_26185. Coordinates, PM, and epoch from Gaia DR3.</i> Category=Star Description=[G stars] Extended=NO</p>				
(5)	ceers_80073	RA: 14 19 43.6944 (214.9320600d) Dec: +52 50 30.73 (52.84187d) Equinox: J2000	Epoch of Position: 2023	
<p><i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO</p>				
(6)	acqStar_ceers_80073	RA: 14 19 38.9149 (214.9121454d) Dec: +52 50 8.59 (52.83572d) Equinox: J2000	Proper Motion RA: 2.594760536533219 mas/yr Proper Motion Dec: -11.561373490446456 mas/yr Parallax: 0.0005156451918971698" Epoch of Position: 2016	
<p><i>Comments: Acquisition star for target ceers_80073. Coordinates, PM, and epoch from Gaia DR3.</i> Category=Star Description=[G stars] Extended=NO</p>				

Fixed Targets

Proposal 9165 - Targets - Does Bursty Star Formation Explain the Astonishing Abundance of Bright $z > 10$ Galaxies?

(9)	gs_z14_0	RA: 03 32 19.9050 (53.0829375d) Dec: -27 51 20.27 (-27.85563d) Equinox: J2000	Epoch of Position: 2023
<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>			
(10)	acqStar_gs_z14_0	RA: 03 32 16.0425 (53.0668437d) Dec: -27 52 12.08 (-27.87002d) Equinox: J2000	Proper Motion RA: 31.780238292807134 mas/yr Proper Motion Dec: 1.0651459782336832 mas/yr Parallax: 0.0018401772204626279 " Epoch of Position: 2016
<p><i>Comments: Acquisition star for target gs_z14_0. Coordinates, PM, and epoch from Gaia DR3.</i> <i>Category=Star</i> <i>Description=[G stars]</i> <i>Extended=NO</i></p>			
(11)	macs0647_jd1	RA: 06 47 55.7310 (101.9822125d) Dec: +70 14 35.76 (70.24327d) Equinox: J2000	Epoch of Position: 2023
<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>			
(12)	ghz2	RA: 00 13 59.7564 (3.4989850d) Dec: -30 19 29.18 (-30.32477d) Equinox: J2000	Epoch of Position: 2023
<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>			
(13)	gnz11	RA: 12 36 25.4600 (189.1060833d) Dec: +62 14 31.40 (62.24206d) Equinox: J2000	Epoch of Position: 2023
<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>			

Proposal 9165 - Observation 1 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	<p>Proposal 9165, Observation 1: uncover_37126_LRS</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Low Resolution Spectroscopy</p>								
Diagnostics	<p>(uncover_37126_LRS (Obs 1)) Warning (Form): Observers are responsible for checking that target acquisition is feasible.</p> <p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(1)	uncover_37126	RA: 00 14 21.6266 (3.5901108d) Dec: -30 21 35.07 (-30.35974d) Equinox: J2000	Epoch of Position: 2023					
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	2 acqStar_uncover_3712 6	F560W	FASTGRPAVG	4	1	1	44.401	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	80	16	32	1	2	7187.354	

Proposal 9165 - Observation 2 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 2: uncover_37126_LRS Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy								
	(uncover_37126_LRS (Obs 2)) Warning (Form): Observers are responsible for checking that target acquisition is feasible. (Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(1)	uncover_37126	RA: 00 14 21.6266 (3.5901108d) Dec: -30 21 35.07 (-30.35974d) Equinox: J2000	Epoch of Position: 2023					
<i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO									
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	2 acqStar_uncover_3712 6	F560W	FASTGRPAVG	4	1	1	44.401	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	80	16	32	1	2	7187.354	

Proposal 9165 - Observation 3 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 3: uncover_37126_LRS Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy								
Diagnostics	(uncover_37126_LRS (Obs 3)) Warning (Form): Observers are responsible for checking that target acquisition is feasible. (Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(1)	uncover_37126	RA: 00 14 21.6266 (3.5901108d) Dec: -30 21 35.07 (-30.35974d) Equinox: J2000	Epoch of Position: 2023					
	<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	2 acqStar_uncover_3712 6	F560W	FASTGRPAVG	4	1	1	44.401	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	80	16	32	1	2	7187.354	

Proposal 9165 - Observation 4 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 4: uncover_37126_F560W Diagnostic Status: Warning Observing Template: MIRI Imaging										
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			
	(1)	uncover_37126	RA: 00 14 21.6266 (3.5901108d) Dec: -30 21 35.07 (-30.35974d) Equinox: J2000			Epoch of Position: 2023					
	Comments: Category=Galaxy Description=[High-redshift galaxies] Extended=NO										
Template	Subarray										
	FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	12						DEFAULT	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F560W	FASTR1	100	1	1	Dither 1	12	12	3330.048	
	2	F560W	FASTR1	100	1	1	Dither 1	12	12	3330.048	

Proposal 9165 - Observation 5 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 5: uncover_26815_LRS Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy								
	(uncover_26815_LRS (Obs 5)) Warning (Form): Observers are responsible for checking that target acquisition is feasible. (Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(3)	uncover_26185	RA: 00 14 16.0970 (3.5670708d) Dec: -30 22 40.30 (-30.37786d) Equinox: J2000	Epoch of Position: 2023					
<i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO									
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4 acqStar_uncover_2618 5	F560W	FAST	4	1	1	11.1	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	60	16	32	1	2	5411.328	

Proposal 9165 - Observation 9 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	<p>Proposal 9165, Observation 9: uncover_26815_LRS</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Low Resolution Spectroscopy</p>								
Diagnostics	<p>(uncover_26815_LRS (Obs 9)) Warning (Form): Observers are responsible for checking that target acquisition is feasible.</p> <p>(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(3)	uncover_26185	RA: 00 14 16.0970 (3.5670708d) Dec: -30 22 40.30 (-30.37786d) Equinox: J2000	Epoch of Position: 2023					
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4 acqStar_uncover_2618 5	F560W	FAST	4	1	1	11.1	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	60	16	32	1	2	5411.328	

Proposal 9165 - Observation 10 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	<p>Proposal 9165, Observation 10: uncover_26815_LRS</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Low Resolution Spectroscopy</p>								
Diagnostics	<p>(uncover_26815_LRS (Obs 10)) Warning (Form): Observers are responsible for checking that target acquisition is feasible.</p> <p>(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(3)	uncover_26185	RA: 00 14 16.0970 (3.5670708d) Dec: -30 22 40.30 (-30.37786d) Equinox: J2000	Epoch of Position: 2023					
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4 acqStar_uncover_2618 5	F560W	FAST	4	1	1	11.1	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	60	16	32	1	2	5411.328	

Proposal 9165 - Observation 8 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 8: uncover_26815_F560W Diagnostic Status: Warning Observing Template: MIRI Imaging										
Diagnostics	(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous			
	(3)	uncover_26185	RA: 00 14 16.0970 (3.5670708d) Dec: -30 22 40.30 (-30.37786d) Equinox: J2000			Epoch of Position: 2023					
	<i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO										
Template	Subarray FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	12						DEFAULT	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F560W	FASTR1	75	1	1	Dither 1	12	12	2497.536	
	2	F560W	FASTR1	75	1	1	Dither 1	12	12	2497.536	

Proposal 9165 - Observation 11 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	<p>Proposal 9165, Observation 11: ceers_80873_LRS</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Low Resolution Spectroscopy</p>								
Diagnostics	<p>(ceers_80873_LRS (Obs 11)) Warning (Form): Observers are responsible for checking that target acquisition is feasible.</p> <p>(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(5)	ceers_80073	RA: 14 19 43.6944 (214.9320600d) Dec: +52 50 30.73 (52.84187d) Equinox: J2000	Epoch of Position: 2023					
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	6 acqStar_ceers_80073	F560W	FASTGRPAVG	4	1	1	44.401	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	80	16	32	1	2	7187.354	

Proposal 9165 - Observation 15 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 15: ceers_80873_LRS Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy								
	(ceers_80873_LRS (Obs 15)) Warning (Form): Observers are responsible for checking that target acquisition is feasible. (Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(5)	ceers_80073	RA: 14 19 43.6944 (214.9320600d) Dec: +52 50 30.73 (52.84187d) Equinox: J2000	Epoch of Position: 2023					
Comments: Category=Galaxy Description=[High-redshift galaxies] Extended=NO									
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	6 acqStar_ceers_80073	F560W	FASTGRPAVG	4	1	1	44.401	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	80	16	32	1	2	7187.354	

Proposal 9165 - Observation 16 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 16: ceers_80873_LRS Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy								
	(ceers_80873_LRS (Obs 16)) Warning (Form): Observers are responsible for checking that target acquisition is feasible. (Visit 16:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections			Miscellaneous		
	(5)	ceers_80073	RA: 14 19 43.6944 (214.9320600d) Dec: +52 50 30.73 (52.84187d) Equinox: J2000	Epoch of Position: 2023					
<i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO									
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID
	1	6 acqStar_ceers_80073	F560W	FASTGRPAVG	4	1	1	44.401	
Template	Subarray				Obtain Verification Image?				
	FULL				false				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	ALONG SLIT NOD							
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	Optional ETC ID
	1	FASTR1	80	16	32	1	2	7187.354	

Proposal 9165 - Observation 14 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	<p>Proposal 9165, Observation 14: ceers_80873_F560W</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Imaging</p>										
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			
	(5)	ceers_80073	RA: 14 19 43.6944 (214.9320600d) Dec: +52 50 30.73 (52.84187d) Equinox: J2000			Epoch of Position: 2023					
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>										
Template	<p>Subarray</p> <p>FULL</p>										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	12						DEFAULT	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F560W	FASTR1	80	1	1	Dither 1	12	12	2664.038	
	2	F560W	FASTR1	80	1	1	Dither 1	12	12	2664.038	

Proposal 9165 - Observation 34 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 34: macs0647_jd1_F560W Diagnostic Status: Warning Observing Template: MIRI Imaging										
Diagnostics	(Visit 34:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous			
	(11)	macs0647_jd1	RA: 06 47 55.7310 (101.9822125d) Dec: +70 14 35.76 (70.24327d) Equinox: J2000			Epoch of Position: 2023					
	Comments: Category=Galaxy Description=[High-redshift galaxies] Extended=NO										
Template	Subarray										
	FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	6						DEFAULT	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F560W	FASTR1	15	1	1	Dither 1	6	6	249.754	

Proposal 9165 - Observation 35 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	Proposal 9165, Observation 35: ghz2_F560W Diagnostic Status: Warning Observing Template: MIRI Imaging										
Diagnostics	(Visit 35:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous			
	(12)	ghz2	RA: 00 13 59.7564 (3.4989850d) Dec: -30 19 29.18 (-30.32477d) Equinox: J2000			Epoch of Position: 2023					
	<i>Comments:</i> Category=Galaxy Description=[High-redshift galaxies] Extended=NO										
Template	Subarray FULL										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	12						DEFAULT	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F560W	FASTR1	100	2	1	Dither 1	12	24	6693.396	
	2	F560W	FASTR1	100	2	1	Dither 1	12	24	6693.396	

Proposal 9165 - Observation 36 - Does Bursty Star Formation Explain the Astonishing Abundance of Bright z>10 Galaxies?

Tue Sep 02 20:00:22 GMT 2025

Observation	<p>Proposal 9165, Observation 36: gnz11_F560W</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Imaging</p>										
Diagnostics	(Visit 36:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous			
	(13)	gnz11	RA: 12 36 25.4600 (189.1060833d) Dec: +62 14 31.40 (62.24206d) Equinox: J2000			Epoch of Position: 2023					
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[High-redshift galaxies]</i> <i>Extended=NO</i></p>										
Template	<p>Subarray</p> <p>FULL</p>										
Dithers	#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size	
	1	CYCLING	1	12						DEFAULT	
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F560W	FASTR1	20	1	1	Dither 1	12	12	666.01	