



## 5997 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at $z = 5-8$ over the entire SFR-M plane

Cycle: 3, Proposal Category: GO

### INVESTIGATORS

<i>Name</i>	<i>Institution</i>
<b>Tobias Jakob Looser (PI) (ESA Member)</b>	<b>University of Cambridge</b>
Dr. Francesco D'Eugenio (CoI) (ESA Member) (CoPI) (Contact)	University of Cambridge, Kavli Institute for Cosmology
Prof. Roberto Maiolino (CoI) (ESA Member)	University of Cambridge
Mr. Tibor Dome (CoI) (ESA Member)	University of Cambridge
Dr. Kevin Hainline (CoI) (US Admin CoI)	University of Arizona
Dr. Joris Witstok (CoI) (ESA Member)	University of Cambridge
Dr. Daniel J. Eisenstein (CoI)	Harvard University
Dr. Emma Curtis-Lake (CoI) (ESA Member)	University of Hertfordshire
Dr. Stefano Carniani (CoI) (ESA Member)	Scuola Normale Superiore, Pisa
Dr. Stephane Charlot (CoI) (ESA Member)	CNRS, Institut d'Astrophysique de Paris
Prof. Andrew Bunker (CoI) (ESA Member)	University of Oxford
Dr. Renske Smit (CoI) (ESA Member)	Liverpool John Moores University
Dr. Jacopo Chevallard (CoI) (ESA Member)	CNRS, Institut d'Astrophysique de Paris
Dr. Chris J. Willott (CoI) (CSA Member)	NRC Herzberg Institute of Astrophysics
Dr. Mirko Curti (CoI) (ESA Member)	European Southern Observatory - Germany
Dr. Santiago Arribas (CoI) (ESA Member)	Consejo Superior de Investigaciones Cientificas
Dr. Bruno Rodriguez Del Pino (CoI) (ESA Member)	Centro de Astrobiologia (CSIC/INTA) Inst. Nac. de Tec. Aero.
Dr. Eiichi Egami (CoI)	University of Arizona
Dr. Hannah Uebler (CoI) (ESA Member)	University of Cambridge
Dr. Benjamin D. Johnson (CoI)	Harvard University
Prof. Brant Robertson (CoI)	University of California - Santa Cruz

<i>Name</i>	<i>Institution</i>
Ms. Rachana Bhatawdekar (CoI) (ESA Member)	ESA-European Space Astronomy Centre
Dr. Anna G de Graaff (CoI) (ESA Member)	Max Planck Institute for Astronomy
Dr. Nimisha Kumari (CoI) (ESA Member)	Space Telescope Science Institute - ESA - JWST
Dr. Jan Scholtz (CoI) (ESA Member)	University of Cambridge, Kavli Institute for Cosmology
Ms. Natalia C. Villanueva (CoI) (ESA Member)	University of Cambridge
Isaac Laseter (CoI)	University of Wisconsin - Madison
Prof. Peter Jakobsen (CoI) (ESA Member)	University of Copenhagen, Niels Bohr Institute
Dr. Christopher Nicholas Andrew Willmer (CoI)	University of Arizona
Dr. Sandro Tacchella (CoI) (ESA Member)	University of Cambridge

## OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
NIRSpec Mask1 Primary				
	1	ipa23, ipa31, ipa33	NIRSpec MultiObject Spectroscopy	(2) 5997_obs1_trim_ref_updated
NIRSpec Mask2 Primary				
	2	oasis_south	NIRSpec MultiObject Spectroscopy	(1) bursty_prop
NIRSpec Mask2 Primary				
	3	ipa2, ipa3, ipa4	NIRSpec MultiObject Spectroscopy	(3) 5997_obs3_trim_ref_updated

## ABSTRACT

Within the first year of operation, JWST collected overwhelming evidence for stochastic (“bursty”) star-formation histories (SFH) at early cosmic epochs ( $z > 5$ ). However, understanding and quantifying the physical mechanisms responsible for this increased burstiness requires an unbiased view of galaxies throughout all phases of their SFHs, i.e., including during faint ‘off-burst’ phases found below the star-forming main sequence. This proposal advocates for the first unbiased investigation of stochastic SFHs at high redshift, using a mass- and SFR-limited sample reaching down to  $M = 10^8 M_{\odot}$  and  $SFR = 0.15 M_{\odot} \text{ yr}^{-1}$ . We will use two 28-hour NIRSpec/MSA pointings with the prism to observe a representative sample of 223 galaxies at  $5 < z < 8$ , including up to six quenched galaxies and twenty low-sSFR “lulling” galaxies. This sample will help us to answer these questions: I) what is the duty cycle of star formation? II) what is the fraction of (temporarily- or mini-)quenched galaxies? and III) how fast do galaxies quench? The proposed sample will provide the first statistical benchmark for testing the efficiency of feedback models in numerical simulations at  $5 < z < 8$ . The impact of our findings will extend to the theory of star formation regulation, to our understanding of stellar and supernovae feedback, and of SMBH growth.

**OBSERVING DESCRIPTION**

We propose ultra-deep NIRSpec prism spectroscopy of faint galaxies to establish a mass-complete sample at  $5 < z < 8$ .

We aim to detect the continuum at approx 3 microns to constrain the UV slope, Balmer break and emission line EWs of the targets.

We propose two pointings with NIRSpec/MSA PRISM/CLEAR, each with 28 h on source.

Ultra-deep NIRCам imaging observations with complementary F430M, F460M and F480M filters will be carried out in parallel.

Proposal 5997 - Targets - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the entire ...

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	
	(1)	bursty_prop	RA: 03 32 26.5289 (53.1105371d) Dec: -27 49 17.68 (-27.82158d) Equinox: J2000			
	<i>Comments:</i> <i>Description=[]</i>					
	(2)	5997_obs1_trim_ref_updated	RA: 03 32 42.2558 (53.1760658d) Dec: -27 46 46.45 (-27.77957d) Equinox: J2000			
<i>Comments:</i> <i>Description=[]</i>						
(3)	5997_obs3_trim_ref_updated	RA: 03 32 20.8305 (53.0867937d) Dec: -27 52 0.88 (-27.86691d) Equinox: J2000				
<i>Comments:</i> <i>Description=[]</i>						

Proposal 5997 - Observation 1 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at z = 5–8 over the ...

Fri Sep 06 19:01:07 GMT 2024

<b>Observation</b>	<p><b>Proposal 5997, Observation 1: ipa23, ipa31, ipa33</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec MultiObject Spectroscopy</p> <p>Coordinated Parallel Template(s): NIRCам Imaging</p>																																											
	<b>Diagnostics</b>	<p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa31 (#5) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa31 (#6) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa31 (#7) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa31 (#8) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa33 (#10) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa33 (#11) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa33 (#12) has 1 primary slits affected by failed closed shutters.</p> <p>(ipa23, ipa31, ipa33 (Obs 1)) Warning (Form): Config c1 : ipa33 (#9) has 1 primary slits affected by failed closed shutters.</p> <p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																																										
<b>Fixed Targets</b>		<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>(2)</td> <td>5997_obs1_trim_ref_updated</td> <td>RA: 03 32 42.2558 (53.1760658d) Dec: -27 46 46.45 (-27.77957d) Equinox: J2000</td> <td></td> <td></td> </tr> </tbody> </table> <p><i>Comments:</i> <i>Description=[]</i></p>											#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(2)	5997_obs1_trim_ref_updated	RA: 03 32 42.2558 (53.1760658d) Dec: -27 46 46.45 (-27.77957d) Equinox: J2000																								
	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous																																							
(2)	5997_obs1_trim_ref_updated	RA: 03 32 42.2558 (53.1760658d) Dec: -27 46 46.45 (-27.77957d) Equinox: J2000																																										
<b>Acquisition</b>	<table border="1"> <thead> <tr> <th>NIRSpec MultiObject Spectroscopy</th> <th>Reference Star Bin</th> <th>Target</th> <th>Filter</th> <th>MSA Configuration</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]</td> <td>SAME</td> <td>CLEAR</td> <td>Auto Acq MSA Config</td> <td>NRSRAPIDD6</td> <td>3</td> <td>1</td> <td>4</td> <td>687.153</td> <td></td> </tr> <tr> <td>2</td> <td>Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]</td> <td>SAME</td> <td>CLEAR</td> <td>Auto Acq MSA Config</td> <td>NRSRAPIDD6</td> <td>3</td> <td>1</td> <td>4</td> <td>687.153</td> <td></td> </tr> </tbody> </table>											NIRSpec MultiObject Spectroscopy	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: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153		2	Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153	
	NIRSpec MultiObject Spectroscopy	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: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153																																		
2	Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153																																			
<b>Template</b>	<b>NIRSpec MultiObject Spectroscopy</b>					<b>NIRCам Imaging</b>																																						
	<p>TA Method: MSATA</p> <p>Obtain Confirmation Images: No</p> <p>Science Aperture: MSA Center</p> <p>Primary Candidate List: 5997_obs1_trim_ref_updated (34394 sources)</p> <p>Filler Candidate List: null</p> <p>Spectral Overlap Map: jwst-nirspec-prism</p> <p>Spectral Overlap Threshold: 1.5</p>					<p>Module: ALL</p> <p>Subarray: FULL</p>																																						

Proposal 5997 - Observation 1 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

Reference Stars	Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
	1	120384	53.149873	-27.787520	25.06	1	205044	53.162593	-27.789736	24.33
	1	141936	53.154282	-27.761414	25.19	1	207983	53.197981	-27.780133	25.33
	1	204042	53.198618	-27.793421	25.4	1	214075	53.196912	-27.760530	23.8
	1	204298	53.151282	-27.792472	24.48	1	214796	53.166729	-27.757546	25.38
Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude	
2	201125	53.166739	-27.804253	25.4	2	207983	53.197981	-27.780133	25.33	
2	204042	53.198618	-27.793421	25.4	2	212164	53.197758	-27.767832	23.81	
2	204298	53.151282	-27.792472	24.48	2	214075	53.196912	-27.760530	23.8	
2	205044	53.162593	-27.789736	24.33	2	214796	53.166729	-27.757546	25.38	
Dithers	#	Dither Type								
	1	NONE								

Proposal 5997 - Observation 1 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

	NIRSpec MultiObject Spectroscopy	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
Spectral Elements	1	1 (PRISM/CLEAR)	c1 : ipa23	3 Shutter Slitlet	53.177215 Degrees - 27.781669444444 447 Degrees	99.574063231468 78			3	6	8403.201
	2	1 (PRISM/CLEAR)	c1 : ipa23	3 Shutter Slitlet	53.177215 Degrees - 27.781669444444 447 Degrees	99.574063231468 78			3	6	8403.201
	3	1 (PRISM/CLEAR)	c1 : ipa23	3 Shutter Slitlet	53.177215 Degrees - 27.781669444444 447 Degrees	99.574063231468 78			3	6	8403.201
	4	1 (PRISM/CLEAR)	c1 : ipa23	3 Shutter Slitlet	53.177215 Degrees - 27.781669444444 447 Degrees	99.574063231468 78			3	6	8403.201
	5	1 (PRISM/CLEAR)	c1 : ipa31	3 Shutter Slitlet	53.177364583333 33 Degrees - 27.781766666666 67 Degrees	99.573993597972 99			3	6	8403.201
	6	1 (PRISM/CLEAR)	c1 : ipa31	3 Shutter Slitlet	53.177364583333 33 Degrees - 27.781766666666 67 Degrees	99.573993597972 99			3	6	8403.201
	7	1 (PRISM/CLEAR)	c1 : ipa31	3 Shutter Slitlet	53.177364583333 33 Degrees - 27.781766666666 67 Degrees	99.573993597972 99			3	6	8403.201
	8	1 (PRISM/CLEAR)	c1 : ipa31	3 Shutter Slitlet	53.177364583333 33 Degrees - 27.781766666666 67 Degrees	99.573993597972 99			3	6	8403.201
	9	1 (PRISM/CLEAR)	c1 : ipa33	3 Shutter Slitlet	53.177186666666 664 Degrees - 27.781816666666 657 Degrees	99.574076205889 27			3	6	8403.201
	10	1 (PRISM/CLEAR)	c1 : ipa33	3 Shutter Slitlet	53.177186666666 664 Degrees - 27.781816666666 657 Degrees	99.574076205889 27			3	6	8403.201
	11	1 (PRISM/CLEAR)	c1 : ipa33	3 Shutter Slitlet	53.177186666666 664 Degrees - 27.781816666666 657 Degrees	99.574076205889 27			3	6	8403.201
	12	1 (PRISM/CLEAR)	c1 : ipa33	3 Shutter Slitlet	53.177186666666 664 Degrees - 27.781816666666 657 Degrees	99.574076205889 27			3	6	8403.201

Proposal 5997 - Observation 1 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

	NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
<b>Spectral Elements</b>	1	F150W	F480M	DEEP8	7	2	6	3	8278.05	
	2	F162M+F150W2	F335M	DEEP8	7	2	6	3	8278.05	
	3	F182M	F300M	DEEP8	7	2	6	3	8278.05	
	4	F210M	F250M	DEEP8	7	2	6	3	8278.05	
	5	F210M	F250M	DEEP8	7	2	6	3	8278.05	
	6	F182M	F300M	DEEP8	7	2	6	3	8278.05	
	7	F162M+F150W2	F335M	DEEP8	7	2	6	3	8278.05	
	8	F150W	F480M	DEEP8	7	2	6	3	8278.05	
	9	F150W	F480M	DEEP8	7	2	6	3	8278.05	
	10	F162M+F150W2	F335M	DEEP8	7	2	6	3	8278.05	
	11	F182M	F300M	DEEP8	7	2	6	3	8278.05	
	12	F210M	F250M	DEEP8	7	2	6	3	8278.05	
<b>Special Requirements</b>	Group Visits within 53.0 Days Aperture PA Range 99.5746 to 99.5746 Degrees (V3 321.0000303 to 321.0000303) [MSA Selected] Visits Same PA No Parallel Attachments MSA Scheduled Aperture PA 99.5746 to 99.5746 Degrees (V3 321.0000303 to 321.0000303)									

<b>Observation</b>	<b>Proposal 5997, Observation 2: oasis_south</b> <b>Diagnostic Status: Error</b> Observing Template: NIRSpec MultiObject Spectroscopy Coordinated Parallel Template(s): NIRCам Imaging																																											
	<b>Diagnostics</b>	(oasis_south (Obs 2)) Error (Form): No Aperture PA Range requirement contains the 49.7705697 Degrees Aperture PA assigned by the scheduling system. (oasis_south (Obs 2)) Error (Form): This observation was created with an Aperture PA of 30.0000 but it has been assigned an Aperture PA of 49.7706 (Aperture PA) Error (Form): This observation was created with an Aperture PA of 30.0000 but it has been assigned an Aperture PA of 49.7706 (Visit 2:1) Error (Form): Reference stars are required but none were found for this visit (Visit 2:2) Error (Form): Reference stars are required but none were found for this visit (oasis_south (Obs 2)) Warning (Form): Config c1 (#1) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#1) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#2) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#2) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#3) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#3) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#4) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c1 (#4) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c2 (#5) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c2 (#6) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c2 (#7) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c2 (#8) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#10) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#10) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#11) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#11) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#12) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#12) has 1 primary slits affected by failed closed shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#9) has 1 primary slit traces affected by failed open shutters. (oasis_south (Obs 2)) Warning (Form): Config c3 (#9) has 1 primary slits affected by failed closed shutters. (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.																																										
<b>Fixed Targets</b>		<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>(1)</td> <td>bursty_prop</td> <td>RA: 03 32 26.5289 (53.1105371d) Dec: -27 49 17.68 (-27.82158d) Equinox: J2000</td> <td></td> <td></td> </tr> <tr> <td colspan="5"><i>Comments:</i></td> </tr> <tr> <td colspan="5"><i>Description=[]</i></td> </tr> </tbody> </table>											#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(1)	bursty_prop	RA: 03 32 26.5289 (53.1105371d) Dec: -27 49 17.68 (-27.82158d) Equinox: J2000			<i>Comments:</i>					<i>Description=[]</i>																
	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous																																							
(1)	bursty_prop	RA: 03 32 26.5289 (53.1105371d) Dec: -27 49 17.68 (-27.82158d) Equinox: J2000																																										
<i>Comments:</i>																																												
<i>Description=[]</i>																																												
<b>Acquisition</b>	<table border="1"> <thead> <tr> <th>NIRSpec MultiObject Spectroscopy</th> <th>Reference Star Bin</th> <th>Target</th> <th>Filter</th> <th>MSA Configuration</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>SAME</td> <td>F140X</td> <td>Auto Acq MSA Config</td> <td>NRSRAPID</td> <td>3</td> <td>1</td> <td>4</td> <td>171.788</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>SAME</td> <td>F140X</td> <td>Auto Acq MSA Config</td> <td>NRSRAPID</td> <td>3</td> <td>1</td> <td>4</td> <td>171.788</td> <td></td> </tr> </tbody> </table>											NIRSpec MultiObject Spectroscopy	Reference Star Bin	Target	Filter	MSA Configuration	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	1		SAME	F140X	Auto Acq MSA Config	NRSRAPID	3	1	4	171.788		2		SAME	F140X	Auto Acq MSA Config	NRSRAPID	3	1	4	171.788	
	NIRSpec MultiObject Spectroscopy	Reference Star Bin	Target	Filter	MSA Configuration	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID																																	
	1		SAME	F140X	Auto Acq MSA Config	NRSRAPID	3	1	4	171.788																																		
2		SAME	F140X	Auto Acq MSA Config	NRSRAPID	3	1	4	171.788																																			

Proposal 5997 - Observation 2 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

<b>Template</b>	<b>NIRSpec MultiObject Spectroscopy</b> TA Method: MSATA Obtain Confirmation Images: No Science Aperture: MSA Center Primary Candidate List: bursty_prop (28200 sources) Filler Candidate List: bursty_prop (28200 sources) Spectral Overlap Map: jwst-nirspec-prism Spectral Overlap Threshold: 1.5	<b>NIRCam Imaging</b> Module: ALL Subarray: FULL
	<b>Reference Stars</b>	
<b>Dithers</b>	#	<b>Dither Type</b>
	1	NONE

Proposal 5997 - Observation 2 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

	NIRSpec MultiObject Spectroscopy	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
Spectral Elements	1	1 (PRISM/CLEAR)	c1	3 Shutter Slitlet	53.091111 Degrees - 27.876878611111 124 Degrees	30.008963443703 248			3	6	8403.201
	2	1 (PRISM/CLEAR)	c1	3 Shutter Slitlet	53.091111 Degrees - 27.876878611111 124 Degrees	30.008963443703 248			3	6	8403.201
	3	1 (PRISM/CLEAR)	c1	3 Shutter Slitlet	53.091111 Degrees - 27.876878611111 124 Degrees	30.008963443703 248			3	6	8403.201
	4	1 (PRISM/CLEAR)	c1	3 Shutter Slitlet	53.091111 Degrees - 27.876878611111 124 Degrees	30.008963443703 248			3	6	8403.201
	5	1 (PRISM/CLEAR)	c2	3 Shutter Slitlet	53.09103825 Degrees - 27.876841388888 863 Degrees	30.00899753522			3	6	8403.201
	6	1 (PRISM/CLEAR)	c2	3 Shutter Slitlet	53.09103825 Degrees - 27.876841388888 863 Degrees	30.00899753522			3	6	8403.201
	7	1 (PRISM/CLEAR)	c2	3 Shutter Slitlet	53.09103825 Degrees - 27.876841388888 863 Degrees	30.00899753522			3	6	8403.201
	8	1 (PRISM/CLEAR)	c2	3 Shutter Slitlet	53.09103825 Degrees - 27.876841388888 863 Degrees	30.00899753522			3	6	8403.201
	9	1 (PRISM/CLEAR)	c3	3 Shutter Slitlet	53.090965499999 996 Degrees - 27.876804166666 66 Degrees	30.009031626742 708			3	6	8403.201
	10	1 (PRISM/CLEAR)	c3	3 Shutter Slitlet	53.090965499999 996 Degrees - 27.876804166666 66 Degrees	30.009031626742 708			3	6	8403.201
	11	1 (PRISM/CLEAR)	c3	3 Shutter Slitlet	53.090965499999 996 Degrees - 27.876804166666 66 Degrees	30.009031626742 708			3	6	8403.201
	12	1 (PRISM/CLEAR)	c3	3 Shutter Slitlet	53.090965499999 996 Degrees - 27.876804166666 66 Degrees	30.009031626742 708			3	6	8403.201

Proposal 5997 - Observation 2 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

	NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
<b>Spectral Elements</b>	1	F140M	F430M	DEEP8	7	2	6	3	8278.05	
	2	F140M	F430M	DEEP8	7	2	6	3	8278.05	
	3	F140M	F430M	DEEP8	7	2	6	3	8278.05	
	4	F140M	F430M	DEEP8	7	2	6	3	8278.05	
	5	F140M	F460M	DEEP8	7	2	6	3	8278.05	
	6	F140M	F460M	DEEP8	7	2	6	3	8278.05	
	7	F140M	F460M	DEEP8	7	2	6	3	8278.05	
	8	F140M	F460M	DEEP8	7	2	6	3	8278.05	
	9	F090W	F480M	DEEP8	7	2	6	3	8278.05	
	10	F090W	F480M	DEEP8	7	2	6	3	8278.05	
	11	F090W	F480M	DEEP8	7	2	6	3	8278.05	
	12	F090W	F480M	DEEP8	7	2	6	3	8278.05	
<b>Special Requirements</b>	Group Visits within 53.0 Days Aperture PA Range 100 to 114 Degrees (V3 321.4254303 to 335.4254303) Aperture PA Range 125 to 145 Degrees (V3 346.4254303 to 6.4254303) Aperture PA Range 185 to 195 Degrees (V3 46.4254303 to 56.4254303) Visits Same PA No Parallel Attachments MSA Scheduled Aperture PA 49.7706 to 49.7706 Degrees (V3 271.196 to 271.196)									

Proposal 5997 - Observation 3 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at z = 5–8 over the ...

Fri Sep 06 19:01:07 GMT 2024

<b>Observation</b>	<p><b>Proposal 5997, Observation 3: ipa2, ipa3, ipa4</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec MultiObject Spectroscopy</p> <p>Coordinated Parallel Template(s): NIRCam Imaging</p>																																													
	<p>(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 3:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																																													
<b>Fixed Targets</b>	<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>5997_obs3_trim_ref_updated</td> <td>RA: 03 32 20.8305 (53.0867937d) Dec: -27 52 0.88 (-27.86691d) Equinox: J2000</td> <td></td> <td></td> </tr> </tbody> </table> <p><i>Comments:</i> <i>Description=[]</i></p>											#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(3)	5997_obs3_trim_ref_updated	RA: 03 32 20.8305 (53.0867937d) Dec: -27 52 0.88 (-27.86691d) Equinox: J2000																											
	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous																																									
(3)	5997_obs3_trim_ref_updated	RA: 03 32 20.8305 (53.0867937d) Dec: -27 52 0.88 (-27.86691d) Equinox: J2000																																												
<table border="1"> <thead> <tr> <th></th> <th>NIRSpec MultiObject Spectroscopy</th> <th>Reference Star Bin</th> <th>Target</th> <th>Filter</th> <th>MSA Configuration</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]</td> <td>SAME</td> <td>CLEAR</td> <td>Auto Acq MSA Config</td> <td>NRSRAPIDD6</td> <td>3</td> <td>1</td> <td>4</td> <td>687.153</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ]</td> <td>SAME</td> <td>CLEAR</td> <td>Auto Acq MSA Config</td> <td>NRSRAPIDD6</td> <td>3</td> <td>1</td> <td>4</td> <td>687.153</td> <td></td> </tr> </tbody> </table>												NIRSpec MultiObject Spectroscopy	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: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153		2		Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153	
	NIRSpec MultiObject Spectroscopy	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: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153																																				
2		Filter: CLEAR; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ]	SAME	CLEAR	Auto Acq MSA Config	NRSRAPIDD6	3	1	4	687.153																																				
<b>Template</b>	<b>NIRSpec MultiObject Spectroscopy</b>					<b>NIRCam Imaging</b>																																								
	<p>TA Method: MSATA</p> <p>Obtain Confirmation Images: No</p> <p>Science Aperture: MSA Center</p> <p>Primary Candidate List: 5997_obs3_trim_ref_updated (29605 sources)</p> <p>Filler Candidate List: null</p> <p>Spectral Overlap Map: jwst-nirspec-prism</p> <p>Spectral Overlap Threshold: 1.5</p>					<p>Module: ALL</p> <p>Subarray: FULL</p>																																								

Proposal 5997 - Observation 3 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

Reference Stars	Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
	1	58591	53.100664	-27.858490	25.2	1	165902	53.078854	-27.884155	23.7
	1	74468	53.106343	-27.847529	24.71	1	184399	53.063191	-27.853745	24.89
	1	162856	53.115818	-27.891452	23.5	1	185290	53.120018	-27.852026	24.15
	1	165021	53.067325	-27.886327	24.44	1	187178	53.111997	-27.847836	24.65
Reference Stars	Visit	ID	RA	Dec	Magnitude	Visit	ID	RA	Dec	Magnitude
	2	58591	53.100664	-27.858490	25.2	2	165021	53.067325	-27.886327	24.44
	2	69251	53.116357	-27.852021	25.41	2	165902	53.078854	-27.884155	23.7
	2	74468	53.106343	-27.847529	24.71	2	185290	53.120018	-27.852026	24.15
	2	162856	53.115818	-27.891452	23.5	2	187178	53.111997	-27.847836	24.65
Dithers	#	Dither Type								
	1	NONE								

Proposal 5997 - Observation 3 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

	NIRSpec MultiObject Spectroscopy	Exposure Specification	MSA Configuration	Nod Pattern	Pointing	Aperture PA	Dispersion Offset (Shutters)	Cross-Dispersion Offset (Shutters)	Total Dithers	Total Integrations	Total Exposure Time
Spectral Elements	1	1 (PRISM/CLEAR)	c1 : ipa2	3 Shutter Slitlet	53.092104583333 33 Degrees - 27.868366666666 645 Degrees	194.99752554717 92			3	6	8403.201
	2	1 (PRISM/CLEAR)	c1 : ipa2	3 Shutter Slitlet	53.092104583333 33 Degrees - 27.868366666666 645 Degrees	194.99752554717 92			3	6	8403.201
	3	1 (PRISM/CLEAR)	c1 : ipa2	3 Shutter Slitlet	53.092104583333 33 Degrees - 27.868366666666 645 Degrees	194.99752554717 92			3	6	8403.201
	4	1 (PRISM/CLEAR)	c1 : ipa2	3 Shutter Slitlet	53.092104583333 33 Degrees - 27.868366666666 645 Degrees	194.99752554717 92			3	6	8403.201
	5	1 (PRISM/CLEAR)	c1 : ipa3	3 Shutter Slitlet	53.092060833333 335 Degrees - 27.868508333333 352 Degrees	194.99754619107 446			3	6	8403.201
	6	1 (PRISM/CLEAR)	c1 : ipa3	3 Shutter Slitlet	53.092060833333 335 Degrees - 27.868508333333 352 Degrees	194.99754619107 446			3	6	8403.201
	7	1 (PRISM/CLEAR)	c1 : ipa3	3 Shutter Slitlet	53.092060833333 335 Degrees - 27.868508333333 352 Degrees	194.99754619107 446			3	6	8403.201
	8	1 (PRISM/CLEAR)	c1 : ipa3	3 Shutter Slitlet	53.092060833333 335 Degrees - 27.868508333333 352 Degrees	194.99754619107 446			3	6	8403.201
	9	1 (PRISM/CLEAR)	c1 : ipa4	3 Shutter Slitlet	53.0920225 Degrees - 27.868347222222 212 Degrees	194.99756379606 933			3	6	8403.201
	10	1 (PRISM/CLEAR)	c1 : ipa4	3 Shutter Slitlet	53.0920225 Degrees - 27.868347222222 212 Degrees	194.99756379606 933			3	6	8403.201
	11	1 (PRISM/CLEAR)	c1 : ipa4	3 Shutter Slitlet	53.0920225 Degrees - 27.868347222222 212 Degrees	194.99756379606 933			3	6	8403.201
	12	1 (PRISM/CLEAR)	c1 : ipa4	3 Shutter Slitlet	53.0920225 Degrees - 27.868347222222 212 Degrees	194.99756379606 933			3	6	8403.201

Proposal 5997 - Observation 3 - OASIS: Observing All phases of Stochastic Star formation - A census of galaxies at  $z = 5-8$  over the ...

	NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
<b>Spectral Elements</b>	1	F090W	F277W	DEEP8	7	2	6	3	8278.05	
	2	F115W	F356W	DEEP8	7	2	6	3	8278.05	
	3	F150W	F410M	DEEP8	7	2	6	3	8278.05	
	4	F200W	F444W	DEEP8	7	2	6	3	8278.05	
	5	F200W	F444W	DEEP8	7	2	6	3	8278.05	
	6	F150W	F410M	DEEP8	7	2	6	3	8278.05	
	7	F115W	F356W	DEEP8	7	2	6	3	8278.05	
	8	F090W	F277W	DEEP8	7	2	6	3	8278.05	
	9	F090W	F277W	DEEP8	7	2	6	3	8278.05	
	10	F115W	F356W	DEEP8	7	2	6	3	8278.05	
	11	F150W	F410M	DEEP8	7	2	6	3	8278.05	
	12	F200W	F444W	DEEP8	7	2	6	3	8278.05	
<b>Special Requirements</b>	Group Visits within 53.0 Days Aperture PA Range 100 to 114 Degrees (V3 321.4254303 to 335.4254303) Aperture PA Range 125 to 145 Degrees (V3 346.4254303 to 6.4254303) Aperture PA Range 185 to 195 Degrees (V3 46.4254303 to 56.4254303) Visits Same PA No Parallel Attachments MSA Scheduled Aperture PA 195.0000 to 195.0000 Degrees (V3 56.42543 to 56.42543)									