



2057 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Cycle: 1, Proposal Category: GO

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
RM032				
	1		NIRCam Imaging	(1) RM032
	2		NIRSpec IFU Spectroscopy	(1) RM032

JWST Proposal 2057 (Created: Wednesday, September 22, 2021 at 8:00:40 AM Eastern Standard Time) - Overview

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
RM052				
	3		NIRCam Imaging	(2) RM052
	4		NIRSpec IFU Spectroscopy	(2) RM052
RM275				
	5		NIRCam Imaging	(3) RM275
	6		NIRSpec IFU Spectroscopy	(3) RM275
RM312				
	7		NIRCam Imaging	(4) RM312
	8		NIRSpec IFU Spectroscopy	(4) RM312
RM332				
	9		NIRCam Imaging	(5) RM332
	10		NIRSpec IFU Spectroscopy	(5) RM332
RM387				
	11		NIRCam Imaging	(6) RM387
	12		NIRSpec IFU Spectroscopy	(6) RM387
RM401				
	13		NIRCam Imaging	(7) RM401
	14		NIRSpec IFU Spectroscopy	(7) RM401
RM470				
	15		NIRCam Imaging	(8) RM470
	16		NIRSpec IFU Spectroscopy	(8) RM470
RM549				
	17		NIRCam Imaging	(9) RM549
	18		NIRSpec IFU Spectroscopy	(9) RM549
RM734				
	19		NIRCam Imaging	(10) RM734
	20		NIRSpec IFU Spectroscopy	(10) RM734

ABSTRACT

The measurement of the scaling relations between supermassive black hole (SMBH) mass and the properties of the host galaxy at cosmic noon ($z \sim 2$) is crucial to understanding the co-evolution (or not) of SMBHs and galaxies, the nature of AGN feedback and self-regulated BH growth, and the forecast for the stochastic gravitational wave background from mergers of SMBHs. Given the difficulties of acquiring both reliable BH masses and

host galaxy measurements in this regime, there is currently no consensus on whether or not such correlations exist at $z \sim 2$. We propose pioneering JWST NIRCcam ~ 1 -5 micron imaging and NIRSpec IFU ~ 1 -2 micron spectroscopy to constrain the correlations between SMBH mass and host stellar velocity dispersion, stellar mass and luminosity, using a unique sample of ten $z \sim 2$ quasars with BH masses measured directly from reverberation mapping. This pilot JWST program is poised to deliver the most definitive constraints on the high- z SMBH-galaxy scaling relations to date, paving the way for future more ambitious programs. It will also enable a broad range of science, from stellar populations of massive quasar host galaxies, to kpc-scale quasar-driven outflows (e.g., in [OIII]5007), and provide a benchmark sample for comparative studies of massive galaxies at $z \sim 2$ (e.g., star-forming and quiescent galaxies, obscured AGN hosts, etc).

OBSERVING DESCRIPTION

We will perform NIRCcam imaging and NIRSpec IFU spectroscopy for ten $z \sim 2$ quasars with direct black hole mass estimates based on reverberation mapping. The NIRCcam imaging is primarily used to measure morphology, local environment, and stellar populations of the hosts upon imaging decomposition in multiple bands. The NIRSpec IFU spectroscopy is primarily used to measure the stellar velocity dispersion and [O III] kinematic maps. The ten targets are all within a 1.5-deg-radius field so slew overhead is insignificant.

Each target will have two observations, and each observation can be fit in a single visit. All targets can be considered compact sources (with sizes $< 1''$) in sparse extragalactic fields. All targets are relatively bright, with average J-band magnitude of 19.2 (Vega).

The first visit/observation is NIRCcam imaging in two pairs of short+long-wave filters (F090W+F277W, F150W+F444W). We will use the SUB640 subarray and offset the target to avoid the central detector gaps. For each filter combination, we will adopt a 4-point STANDARD subpixel dither pattern and a total exposure time of ~ 480 or ~ 320 sec. This dither pattern is sufficient to reach Nyquist sampling of the PSF for all filters but F090W, whose PSF is still slightly undersampled. This compromise is acceptable since the F090W filter samples the rest-frame UV and is not primarily used for morphological measurements and stellar mass estimation. Increasing the number of dither points will lead to substantial extra overhead with minimal improvements for our primary science goals. We will use field stars in all NIRCcam pointings for the ten targets to construct a composite PSF reference for our quasar/host decomposition.

The second visit/observation is the NIRSpec IFU spectroscopy. We will use the G140M/F100LP setup. No PSF subtraction is required for the IFU observations. No instrument-level target acquisition is required given the compact sizes of our targets and the pointing accuracy. We will use a 4-point dither pattern with a total exposure time of ~ 2400 sec. For each visit we will include a WAVECAL exposure. The sky background can be considered uniform for our targets and the background level is sufficiently low for our targets, therefore MSA leakage is not important (only mild

fractional increase in background level) and we do not require a separate MSA leakcal exposure. We will manually process the dithered exposures for background subtraction if necessary.

Proposal 2057 - Targets - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	RM032	RA: 14 13 13.5200 (213.3063333d) Dec: +52 55 50.20 (52.93061d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(2)	RM052	RA: 14 12 50.4000 (213.2100000d) Dec: +53 17 19.60 (53.28878d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(3)	RM275	RA: 14 09 51.8100 (212.4658750d) Dec: +53 31 33.80 (53.52606d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(4)	RM312	RA: 14 09 42.4200 (212.4267500d) Dec: +52 35 16.80 (52.58800d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(5)	RM332	RA: 14 08 43.6800 (212.1820000d) Dec: +52 49 41.10 (52.82808d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(6)	RM387	RA: 14 19 5.2500 (214.7718750d) Dec: +53 53 54.20 (53.89839d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(7)	RM401	RA: 14 09 57.2800 (212.4886667d) Dec: +53 50 47.10 (53.84642d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				
(8)	RM470	RA: 14 20 47.4900 (215.1978750d) Dec: +53 48 0.00 (53.80000d) Equinox: J2000		
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>				

Fixed Targets

Proposal 2057 - Targets - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

(9)	RM549	RA: 14 16 31.4600 (214.1310833d) Dec: +54 17 19.80 (54.28883d) Equinox: J2000
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>		
(10)	RM734	RA: 14 14 25.9500 (213.6081250d) Dec: +51 38 1.70 (51.63381d) Equinox: J2000
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>		

Proposal 2057 - Observation 1 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 1</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(1)	RM032	RA: 14 13 13.5200 (213.3063333d) Dec: +52 55 50.20 (52.93061d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 2 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 2 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(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)	RM032	RA: 14 13 13.5200 (213.3063333d) Dec: +52 55 50.20 (52.93061d) Equinox: J2000									
<i>Comments:</i> Category=Galaxy Description=[Quasars]												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 3 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 3</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(2)	RM052	RA: 14 12 50.4000 (213.2100000d) Dec: +53 17 19.60 (53.28878d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 4 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 4 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Diagnosics												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(2)	RM052	RA: 14 12 50.4000 (213.2100000d) Dec: +53 17 19.60 (53.28878d) Equinox: J2000									
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 5 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 5</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(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)	RM275	RA: 14 09 51.8100 (212.4658750d) Dec: +53 31 33.80 (53.52606d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 6 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 6 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(3)	RM275	RA: 14 09 51.8100 (212.4658750d) Dec: +53 31 33.80 (53.52606d) Equinox: J2000									
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 7 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 7</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
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		
	(4)	RM312	RA: 14 09 42.4200 (212.4267500d) Dec: +52 35 16.80 (52.58800d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 8 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 8 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(4)	RM312	RA: 14 09 42.4200 (212.4267500d) Dec: +52 35 16.80 (52.58800d) Equinox: J2000									
<i>Comments:</i> Category=Galaxy Description=[Quasars]												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 9 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 9</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(5)	RM332	RA: 14 08 43.6800 (212.1820000d) Dec: +52 49 41.10 (52.82808d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 10 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 10 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(5)	RM332	RA: 14 08 43.6800 (212.1820000d) Dec: +52 49 41.10 (52.82808d) Equinox: J2000									
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 11 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 11</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(6)	RM387	RA: 14 19 5.2500 (214.7718750d) Dec: +53 53 54.20 (53.89839d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 12 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 12 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(6)	RM387	RA: 14 19 5.2500 (214.7718750d) Dec: +53 53 54.20 (53.89839d) Equinox: J2000									
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 13 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 13</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
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		
	(7)	RM401	RA: 14 09 57.2800 (212.4886667d) Dec: +53 50 47.10 (53.84642d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 14 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 14</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec IFU Spectroscopy</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			
	(7)	RM401	RA: 14 09 57.2800 (212.4886667d) Dec: +53 50 47.10 (53.84642d) Equinox: J2000									
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>											
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 15 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 15</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(8)	RM470	RA: 14 20 47.4900 (215.1978750d) Dec: +53 48 0.00 (53.80000d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module					Subarray				
	B					SUB640				
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 16 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 16</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
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			
	(8)	RM470	RA: 14 20 47.4900 (215.1978750d) Dec: +53 48 0.00 (53.80000d) Equinox: J2000									
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>											
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 17 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 17</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
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		
	(9)	RM549	RA: 14 16 31.4600 (214.1310833d) Dec: +54 17 19.80 (54.28883d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 18 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	Proposal 2057, Observation 18 Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy											
	(Visit 18:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous		
	(9)	RM549	RA: 14 16 31.4600 (214.1310833d) Dec: +54 17 19.80 (54.28883d) Equinox: J2000									
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i>												
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	

Proposal 2057 - Observation 19 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 19</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p>									
Diagnostics	(Visit 19:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(10)	RM734	RA: 14 14 25.9500 (213.6081250d) Dec: +51 38 1.70 (51.63381d) Equinox: J2000							
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>									
Template	Module				Subarray					
	B				SUB640					
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	NONE				STANDARD				4
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W	F277W	SHALLOW4	6	1	4	4	502.383	
	2	F150W	F444W	SHALLOW4	4	1	4	4	334.949	
Special Requirements	Offset -12.0 arcsec, 12.0 arcsec									

Proposal 2057 - Observation 20 - A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon

Wed Sep 22 13:00:41 GMT 2021

Observation	<p>Proposal 2057, Observation 20</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
Diagnostics	(Visit 20:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous			
	(10)	RM734	RA: 14 14 25.9500 (213.6081250d) Dec: +51 38 1.70 (51.63381d) Equinox: J2000									
	<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Quasars]</i></p>											
Template	TA Method											
	NONE											
Dithers	#	Dither Type		Size	Starting Point			Number of Points	Points			
	1	4-POINT-DITHER										
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	G140M/F100LP	NRSIRS2RAPID	41	1	false	true	NONE	4	4	2450.934	