

1205 - Formation Histories and Stellar Masses of Very High-z Quasars

Cycle: 1, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

Folder	Observation	Label	Observing Template	Science Target
Observa	ation Folder			
	1	J134040.24+281328.1_ IFU	NIRSpec IFU Spectroscopy	(1) J134040.24+281328.1
	2	J134040.24+281328.1_ image	NIRCam Imaging	(1) J134040.24+281328.1
	3	2M13404517+2819069 _image	NIRCam Imaging	(2) 2M13404517+2819069
	4	J073103.12+445949.4_ IFU	NIRSpec IFU Spectroscopy	(3) J073103.12+445949.4
	5	J073103.12+445949.4_ image	NIRCam Imaging	(3) J073103.12+445949.4
	6	2M07312822+4505363 _image	NIRCam Imaging	(4) 2M07312822+4505363
	7	ULASJ112001.48+064 124.3_image	NIRCam Imaging	(5) ULASJ112001.48+064124.3
	8	2M11202226+0645117 _image	NIRCam Imaging	(6) 2M11202226+0645117

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Folder	Observation	Label	Observing Template	Science Target
	9	SDSSJ1148+5251_ima ge	NIRCam Imaging	(7) SDSSJ1148+5251
	10	2M11482526+5254161 _image	NIRCam Imaging	(8) 2M11482526+5254161
	11	J2239+0207_IFU	NIRSpec IFU Spectroscopy	(9) J2239+0207
	12	J2239+0207_image	NIRCam Imaging	(9) J2239+0207
	13	2M22390990+0207329 _image	NIRCam Imaging	(10) 2M22390990+0207329
	15	TGSSJ1530+1049_ima	NIRCam Imaging	(11) TGSSJ1530+1049
	16	2M15300980+1050533 _image	NIRCam Imaging	(12) 2M15300980+1050533

ABSTRACT

Attempts to image the hosts of very high redshift quasars have been frustratingly difficult. What detections there are have been made in the near infrared, i.e., rest frame ultraviolet. Hence, it is difficult to interpret the results: a small amount of very recent star formation could dominate the signals. Nonetheless, the limits have raised the question of whether the local Magorrian relation holds this early in galaxy evolution. Dynamical masses from the 157 micron [CII] line, indicate a roughly normal (i.e., Magorrian) ratio of total mass to black hole mass (but of course, with no measure of the relative mass in dark matter, stars, and gas). In this program (ID 1205), we will use a combination of IFU spectroscopy and NIRCam imaging to search much more deeply and definitively for host galaxies around five high redshift AGNs.

OBSERVING DESCRIPTION

The goal of this program is to examine in detail the stellar content of AGN host galaxies at high redshift, to test whether the co-evolution of stars and black holes is in place by z = 5 - 7. We have selected five quasars to test a variety of ways to detect their host galaxies. J073103.12+445949.4 and J134015.03+392630.7 are at $z \sim 5$, which places their Balmer breaks (if they have them) optimally in the NIRSpec medium wavelength range. They also have very massive black holes and large dynamical masses. We will obtain both NIRCam images and very high signal to noise NIRSpec spectra of them, the latter to see if we can detect host galaxies even if they hide behind the quasar psf in the images. J2239+0207 is a sub-Eddington quasar with a massive black hole and large dynamical mass; our estimates are that the host galaxy might account for as much as 10% of the integrated light near 0.5 microns rest. We will search for it in both imaging and a prism NIRSpec spectrum (this strategy is dictated because it is too faint for higher spectral resolution at reasonable signal to noise). SDSS J1148+5251 and ULAS J112001.48+064124.3 are among the highest redshift quasars known, very thoroughly studied, and again with very massive black holes and high dynamical masses. We will obtain images of them but not spectra

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(since their Balmer breaks are not placed advantageously spectrally). In addition, we will image the z = 5.72 radio galaxy TGSS J1530+1049 to test whether its continuum shows a Balmer break and if so to estimate its strength, and thus to determine to what extent it falls off the usual relation between luminous radio galaxies and the stellar masses of their host galaxies.

Proposal 1205 - Targets - Formation Histories and Stellar Masses of Very High-z Quasars

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	J134040.24+281328.1	RA: 13 40 40.2400 (205.1676667d) Dec: +28 13 28.10 (28.22447d) Equinox: J2000		
C		Equiliox. 32000		
Comments: Category=0 Description Extended=1	Galaxy 1=[Active galactic nuclei, Quasar:	s]		
(2)	2M13404517+2819069	RA: 13 40 45.1719 (205.1882162d)	Proper Motion RA: -1.033 mas/yr	
		Dec: +28 19 6.96 (28.31860d)	Proper Motion Dec: -8.133 mas/yr	
		Equinox: J2000	Epoch of Position: 2000	
Comments: Category=S Description Extended=1	Star n=[G stars]			
(3)	J073103.12+445949.4	RA: 07 31 3.1200 (112.7630000d)		
,		Dec: +44 59 49.40 (44.99706d)		
		Equinox: J2000		
Comments:		1		
Category=0	Galaxy 1=[Active galactic nuclei, Ouasar:	ş]		
(4)	2M07312822+4505363	RA: 07 31 28.2253 (112.8676054d)	Proper Motion RA: 3.124 mas/yr	
(4)	21110731202211303303			
(4)	21/10/312022 1303303	Dec: +45 05 36.28 (45.09341d)	Proper Motion Dec: -0.332 mas/yr	
		Equinox: J2000	Proper Motion Dec: -0.332 mas/yr Epoch of Position: 2000	
Comments: Category=S Description	This object was generated by the Star 1=[F stars]			
Comments: Category=S	This object was generated by the Star 1=[F stars]	Equinox: J2000		
Comments: Category=S Description Extended=I	This object was generated by the Star 1=[F stars] NO	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d)		
Comments: Category=S Description Extended=I	This object was generated by the Star 1=[F stars] NO	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d)		
Comments: Category=5 Description Extended=1 (5) Comments: Category=6	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000		
Comments: Category=1 Description Extended=1 (5) Comments: Category=0 Description	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000		
Comments: Category=5 Description Extended=1 (5) Comments: Category=6 Description Extended=1	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy n=[Active galactic nuclei, Quasars	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000	Epoch of Position: 2000	
Comments: Category=5 Description Extended=1 (5) Comments: Category=6 Description Extended=1	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy n=[Active galactic nuclei, Quasars	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d)	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	
Comments: Category=5 Description Extended=1 (5) Comments: Category=6 Description Extended=1	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasar: NO 2M11202226+0645117 Star 1=[G stars]	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d)	Epoch of Position: 2000 Proper Motion RA: -22.471 mas/yr	
Comments: Category=! Description Extended=! (5) Comments: Category=! (6) Comments: Category=! Description Extended=! Description	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasar: NO 2M11202226+0645117 Star 1=[G stars]	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d)	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	
Comments: Category=! Description Extended=! (5) Comments: Category=! (6) Comments: Category=! Description Extended=! Description Extended=!	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasar: NO 2M11202226+0645117 Star n=[G stars] NO	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d) Equinox: J2000 RA: 11 48 16.6400 (177.0693333d)	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	
Comments: Category=! Description Extended=! (5) Comments: Category=! (6) Comments: Category=! Description Extended=! Description Extended=!	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasar: NO 2M11202226+0645117 Star n=[G stars] NO	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d) Equinox: J2000 RA: 11 48 16.6400 (177.0693333d) Dec: +52 51 50.30 (52.86397d)	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	
Comments: Category=! Description Extended=! (5) Comments: Category=! (6) Comments: Category=! Description Extended=! Description Extended=!	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasars NO 2M11202226+0645117 Star 1=[G stars] NO SDSSJ1148+5251	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d) Equinox: J2000 RA: 11 48 16.6400 (177.0693333d)	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	
Comments: Category=! Description Extended=! (5) Comments: Category=! (6) Comments: Category=! Description Extended=! (7) Comments: Category=! (7)	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasar: NO 2M11202226+0645117 Star 1=[G stars] NO SDSSJ1148+5251	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d) Equinox: J2000 RA: 11 48 16.6400 (177.0693333d) Dec: +52 51 50.30 (52.86397d) Equinox: J2000	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	
Comments: Category=! Description Extended=! (5) Comments: Category=! (6) Comments: Category=! Description Extended=! (7) Comments: Category=! (7)	This object was generated by the Star 1=[F stars] NO ULASJ112001.48+064124.3 Galaxy 1=[Active galactic nuclei, Quasars NO 2M11202226+0645117 Star 1=[G stars] NO SDSSJ1148+5251	Equinox: J2000 targetselector and retrieved from the NED database. RA: 11 20 1.4800 (170.0061667d) Dec: +06 41 24.30 (6.69008d) Equinox: J2000 RA: 11 20 22.2608 (170.0927533d) Dec: +06 45 11.43 (6.75317d) Equinox: J2000 RA: 11 48 16.6400 (177.0693333d) Dec: +52 51 50.30 (52.86397d) Equinox: J2000	Proper Motion RA: -22.471 mas/yr Proper Motion Dec: -0.389 mas/yr	

Proposal 1205 - Targets - Formation Histories and Stellar Masses of Very High-z Quasars

(8)	2M11482526+5254161	RA: 11 48 25.2699 (177.1052913d)	Proper Motion RA: 1.463 mas/yr	
		Dec: +52 54 16.22 (52.90451d)	Proper Motion Dec: -1.55 mas/yr	
		Equinox: J2000	Epoch of Position: 2000	
Commen Category Descript				
(9)	J2239+0207	RA: 22 39 47.4800 (339.9478333d)		
		Dec: +02 07 47.40 (2.12983d)		
		Equinox: J2000		
	y=Galaxy tion=[Active galactic nuclei, Quas	ars]		
(10)	2M22390990+0207329	RA: 22 39 9.9106 (339.7912942d)	Proper Motion RA: 2.654 mas/yr	
		Dec: +02 07 32.99 (2.12583d)	Proper Motion Dec: -2.866 mas/yr	
		Equinox: J2000	Epoch of Position: 2000	
Commen Categor; Descript Extended	ry=Star tion=[G stars]			
(11)	TGSSJ1530+1049	RA: 15 30 49.9000 (232.7079167d)		
		Dec: +10 49 31.10 (10.82531d)		
		Equinox: J2000		
		1		
Category Descript	y=Galaxy tion=[Active galactic nuclei, Quas	•		
Categor <u>;</u> Descript Extended	y=Galaxy tion=[Active galactic nuclei, Quas	•	Proper Motion RA: -7.467 mas/yr	
Categor <u>;</u> Descript Extended	y=Galaxy tion=[Active galactic nuclei, Quas d=NO	ars]	Proper Motion RA: -7.467 mas/yr Proper Motion Dec: -12.764 mas/yr	
Categor <u>;</u> Descript Extended	y=Galaxy tion=[Active galactic nuclei, Quas d=NO	ars] RA: 15 30 9.8096 (232.5408733d)	•	
	y=Galaxy tion=[Active galactic nuclei, Quasid=NO] 2M15300980+1050533	RA: 15 30 9.8096 (232.5408733d) Dec: +10 50 53.38 (10.84816d)	Proper Motion Dec: -12.764 mas/yr	

<u>Pro</u>	posal 12	05 - Observa	tion 1 - For	mation Hist	tories and S	Stellar	Masses of	Very High-z	<u>Quasars</u>			
		5, Observation 1: J1									Tue Jun 25 1	3:00:13 GMT 2019
Iặ	Diagnostic S	tatus: Warning										
ĮΞ	Observing Te	mplate: NIRSpec IFU	Spectroscopy									
Se	Comments: L	epending on the final	blind pointing acc	curacy of JWST, w	e may not need tar	get acquis	ition for this sourc	e.				
Observation												
Diagnostics	(Visit 1:1) W	arning (Form): Overh	eads are provision	al until the Visit P	lanner has been rur	1.						
۱,,	#	Name	Targ	et Coordinates			Targ. Coo	rd. Corrections		Miscellaneou	18	
ets	(1)	J134040.24+281328	8.1 RA: 1	3 40 40.2400 (205	5.1676667d)							
Targets			Dec:	+28 13 28.10 (28.2	22447d)							
≝			Equir	nox: J2000								
Fixed	Comments:											
 €	Category=Go Description=	[Active galactic nucle	ri. Ouasars1									
	Extended=No)										
Acquisition	#	Target	TA Method	Subarray	Filter		Readout Pattern		Integrations/Exp	Total Integrations	Time	ETC Wkbk.Calc ID
isi	1	SAME	WATA	SUB2048	F110W	1	NRS	3	1	1	11.746	12587
۱ĕ												
Dithers	#		Dither Type		Size		Starting	Point	Number of	Points	Points	
ΙĔ	1		4-POINT-NOD									
ﻕ												
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Ex p	Leakcal	Dither	Autocal	Total Dithe	rs Total Integrations	Total Exposure Time	e ETC Wkbk.Calc ID
١٤	1	G235M/F170LP	NRSIRS2	25	1	false	true	NONE	4	4	7352.801	
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ments	Sequence Ob	servations 1, 2, 3, Nor	n-interruptible									
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<u>Pro</u>	posal 12	205 - Observation	on 2 - Formatio	n Histories an	nd Stellar Ma	asses of Very H	ligh-z Quasar	S		
		205, Observation 2: J1340							Tue Jun	25 13:00:13 GMT 2019
Observation	Diagnostic S	Status: Warning								
Į≌	Observing T	Cemplate: NIRCam Imagin	ıg							
Se										
18										
Diagnostics	(Visit 2:1) V	Varning (Form): Overhead	ls are provisional until th	ne Visit Planner has bed	en run.					
[<u>"</u>	#	Name	Target Coord	inates		Targ. Coord. Correc	tions	Misce	llaneous	
Targets	(1)	J134040.24+281328.1	RA: 13 40 40.	2400 (205.1676667d)						
E			Dec: +28 13 2	8.10 (28.22447d)						
∟			Equinox: J200	0						
Fixed	Comments:									
Ič	Category=G	łalaxy =[Active galactic nuclei, (Quasars l							
	Extended=N	=[Active galactic nuclei, (NO								
Template	Module					Subarray				
ᆸ	В					SUB400P				
١Ę										
l si	#	-	rimary Dither Type	Primary Di	thers	Subpixel Dither Ty	pe Dithe	er Size	Subpixel P	ositions
Dithers	1	IN	NTRAMODULEBOX	4		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
ΙĔ	1	F210M	F410M	BRIGHT1	5	1	16	16	265.326	
l e	2	F210M	F430M	BRIGHT1	7	1	16	16	371.325	
I۳										
1 #										
Ιĕ										
S										
ts	Sequence Ol	bservations 1, 2, 3, Non-in	terruptible							
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Special Requir										

<u>Prc</u>	posal 12	205 - Observation	n 3 - Formatio	n Histories an	d Stellar Ma	asses of Very H	ligh-z Quasar	s		
Observation	Proposal 12 Diagnostic S	205, Observation 3: 2M134 Status: Warning Template: NIRCam Imaging	104517+2819069_ima						Tue Jun	25 13:00:13 GMT 2019
Diagnostics	(Visit 3:1) V	Varning (Form): Overheads	are provisional until th	ie Visit Planner has bee	en run.					
တ	#	Name	Target Coord			Targ. Coord. Correc		Misce	llaneous	
ge	(2)	2M13404517+2819069		1719 (205.1882162d)		Proper Motion RA: -1				
Targets				96 (28.31860d)		Proper Motion Dec: -8				
Fixed 1	Comments: Category=S Description: Extended=N	tar =[G stars] IO	Equinox: J200	0		Epoch of Position: 20	00			
ig E	Module					Subarray				
Template	В					SUB400P				
เร	#	Pri	mary Dither Type	Primary Di	thers	Subpixel Dither Ty	pe Dithe	er Size	Subpixel P	ositions
Dithers	1	IN	FRAMODULEBOX	4		STANDARD			4	
ents	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
١٤	1	F210M	F410M	BRIGHT1	5	1	16	16	265.326	
▮	2	F210M	F430M	BRIGHT1	5	1	16	16	265.326	
Spectral Elements										
Special Requirements	Sequence O	bservations 1, 2, 3, Non-inte	erruptible							

<u>Pro</u>	posal 1	205 - Observa	<u>ıtion 4 - For</u>	mation Hist	tories and S	tellar	Masses of	Very High-z	Quasars			
		205, Observation 4: J0									Tue Jun 25 1	3:00:13 GMT 2019
Iặ	Diagnostic	Status: Warning										
ĮΞ	Observing 7	Template: NIRSpec IFU	J Spectroscopy									
Se	Comments:	Depending on the final	blind pointing acc	curacy of JWST, we	e may not need tar	get acquisi	ition for this sourc	e.				
Observation												
Diagnostics	(Visit 4:1) V	Warning (Form): Overh	eads are provision	al until the Visit Pl	anner has been rur							
,,	#	Name	Targ	et Coordinates			Targ. Coo	rd. Corrections		Miscellaneou	1S	
E E	(3)	J073103.12+445949	9.4 RA: (7 31 3.1200 (112.7	7630000d)							
Targets			Dec:	+44 59 49.40 (44.9	9706d)							
ΙË			Equir	nox: J2000								
Fixed	Comments:											
 ⊕	Category=0 Description	=[Active galactic nucle	ei, Quasars]									
	Extended=1	VO										
Acquisition	#	Target	TA Method	Subarray	Filter		Readout Pattern		Integrations/Exp	Total Integrations	Time	ETC Wkbk.Calc ID
is	1	SAME	WATA	SUB2048	F110W	N	NRS	3	1	1	11.746	12587
닭												
is s	#		Dither Type		Size		Starting	Point	Number of	Points	Points	
Dithers	1		4-POINT-NOD									
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Ex p	Leakcal	Dither	Autocal	Total Dithe	rs Total Integrations	Total Exposure Time	E ETC Wkbk.Calc ID
ΙĔ	1	G235M/F170LP	NRSIRS2	20	1	false	true	NONE	4	4	5893.912	
Iå												
a												
븅												
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ments	Sequence O	Observations 4, 5, 6, Nor	n-interruptible									
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Special Requirer												
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Pro	posal 1205 - Observa	ation 5 - Formatio	on Histories an	d Stellar M	asses of Very H	ligh-z Quasar	S		
	Proposal 1205, Observation 5: J Diagnostic Status: Warning							Tue Jun	25 13:00:13 GMT 2019
Observation	Observing Template: NIRCam Im	aging							
Diagnostics	(Visit 5:1) Warning (Form): Overl	heads are provisional until t	he Visit Planner has bee	en run.					
S	# Name	Target Coord			Targ. Coord. Correc	tions	Misce	llaneous	
Targets	(3) J073103.12+44594		200 (112.7630000d)						
آ <u>ت</u>		Dec: +44 59 4 Equinox: J200	19.40 (44.99706d)						
Fixed .	Comments: Category=Galaxy Description=[Active galactic nucl Extended=NO	-	,,,						
<u>e</u>	Module				Subarray				
Sat Pat	В				SUB400P				
Template									
ırs	#	Primary Dither Type	Primary Di	thers	Subpixel Dither T	pe Dithe	er Size	Subpixel P	ositions
Dithers	1	INTRAMODULEBOX	4		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
l Ĕ	1 F210M	F410M	BRIGHT1	5	1	16	16	265.326	
Ĭ	2 F210M	F430M	BRIGHT1	7	1	16	16	371.325	
tral									
bec									
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quirements	Sequence Observations 4, 5, 6, No.	n-interruptible							
Special Requir									
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Pro	posal 1	205 - Observatio	n 6 - Formatic	n Histories an	d Stellar Ma	asses of Very H	ligh-z Quasar	S		
		205, Observation 6: 2M07				·			Tue Jun 2	25 13:00:13 GMT 2019
Iĕ	Diagnostic	Status: Warning								
<u>ک</u>	Observing 7	Геmplate: NIRCam Imaging	g							
Observation										
١ö										
Diagnostics	(Visit 6:1) V	Warning (Form): Overheads	s are provisional until th	ne Visit Planner has bed	en run.					
ြ	#	Name	Target Coord			Targ. Coord. Correc		Misce	llaneous	
Targets	(4)	2M07312822+4505363	RA: 07 31 28.	2253 (112.8676054d)		Proper Motion RA: 3.	-			
a [6.28 (45.09341d)		Proper Motion Dec: -	•			
=			Equinox: J200			Epoch of Position: 20	00			
Fixed	Category-S	This object was generated a	by the targetselector an	nd retrieved from the N	ED database.					
证	Description Extended=N	n=[F stars]								
		VO				C				
Template	Module B					SUB400P				
l d	Б					30B400F				
ē										
_	#	Pr	imary Dither Type	Primary Di	thers	Subpixel Dither Ty	vpe Dithe	er Size	Subpixel Po	ositions
je j	1	•	TRAMODULEBOX	4		STANDARD	•		4	
Dithers										
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
ΙË	1	F210M	F410M	BRIGHT1	5	1	16	16	265.326	
l e	2	F210M	F430M	BRIGHT1	5	1	16	16	265.326	
۱ <u>۳</u>										
ΙË										
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ıts	Sequence O	Observations 4, 5, 6, Non-int	terruptible							
ements										
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Special Requir										

Pro	posal 12	05 - Observatio	n 7 - Formatio	on Histories an	d Stellar M	asses of Very H	ligh-z Quasar	S		
	Proposal 120	5, Observation 7: ULAS				-			Tue Jun	25 13:00:13 GMT 2019
Observation	_	atus: Warning								
e	Observing Ter	nplate: NIRCam Imagin	g							
l sq										
_										
Diagnostics	(Visit 7:1) Wa	rning (Form): Overheads	s are provisional until t	he Visit Planner has bee	en run.					
ost										
g										
Ιë										
	#	Name	Target Coord	linates		Targ. Coord. Correc	ctions	Misce	llaneous	
Targets	(5)	ULASJ112001.48+0641		800 (170.0061667d)		g				
Įğ				4.30 (6.69008d)						
≝			Equinox: J200	00						
Fixed	Comments:	1								
Ĉ	Category=Ga Description=[Active galactic nuclei, Q	Quasars]							
<u> </u>	Extended=NO					~ .				
Template	Module B					SUB400P				
틸	В					SUB400P				
Ē										
_	#	Pr	rimary Dither Type	Primary Di	thers	Subpixel Dither Ty	vpe Dithe	er Size	Subpixel P	ositions
Pe	1		TRAMODULEBOX	4		STANDARD			4	
Dithers										
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
Ę	1	F210M	F360M	BRIGHT1	10	1	16	16	530.324	
I₩	2	F210M	F480M	BRIGHT1	7	2	32	16	742.651	
<u></u>										
탕										
١ğ										
_	G O1		431.1-							
ements	Sequence Obs	ervations 7, 8, Non-inter	ruptible							
ĮΨ										
lë										
l 핥										
2										
<u>'ë</u>										
Special Requir										
ΙĞ										

Pro	posal 12	205 - Observatio	n 8 - Formatio	n Histories an	d Stellar Ma	asses of Very H	igh-z Quasars	3		
		05, Observation 8: 2M11				,			Tue Jun	25 13:00:13 GMT 2019
I∺	Diagnostic S	Status: Warning								
ľ≚	Observing T	emplate: NIRCam Imaging	g							
Observation										
lô										
Diagnostics	(Visit 8:1) W	Varning (Form): Overheads			en run.					
ြ	#	Name	Target Coord			Targ. Coord. Correc		Miscell	aneous	
Targets	(6)	2M11202226+0645117		2608 (170.0927533d)		Proper Motion RA: -2				
arç I	Dec: +06 45 11.43 (6.75317d)					Proper Motion Dec: -(
<u> </u>			Equinox: J200	0		Epoch of Position: 200	00			
Fixed	Comments: Category=Si	tar								
证	Description= Extended=N	=[G stars]								
Template	Module B					SUB400P				
틸	D					30B400P				
ē										
	#	Pr	imary Dither Type	Primary Di	thers	Subpixel Dither Ty	pe Dithe	r Size	Subpixel P	ositions
틸	1		TRAMODULEBOX	4		STANDARD	•		4	
Dithers										
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
l e	1	F210M	F360M	BRIGHT1	5	1	16	16	265.326	
iii	2	F210M	F480M	BRIGHT1	5	1	16	16	265.326	
۱ä										
∺										
ĕ										
S										
ts	Sequence Ob	bservations 7, 8, Non-intern	ruptible							
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ΙĔ										
rements										
quireme										
Requireme										
al Requireme										
scial Requireme										
Special Requireme										

Pro	posal 1205 - Observa	ition 9 - Formatio	n Histories an	d Stellar M	asses of Very H	ligh-z Quasar	S		
	Proposal 1205, Observation 9: Sl Diagnostic Status: Warning				-			Tue Jun	25 13:00:13 GMT 2019
Observation	Observing Template: NIRCam Ima	aging							
Diagnostics O	(Visit 9:1) Warning (Form): Overh	eads are provisional until the	ne Visit Planner has bee	en run.					
	# Name	Target Coord	linates		Targ. Coord. Correc	tions	Misce	llaneous	
ed Targets	(7) SDSSJ1148+5251 Comments:	RA: 11 48 16.	6400 (177.0693333d) 0.30 (52.86397d)		ruigi coordi correc		Masce		
Fixed	Category=Galaxy Description=[Active galactic nucle Extended=NO	ei, Quasars]							
ate	Module B				Subarray SUB400P				
Template	B				SUB400P				
sıs	#	Primary Dither Type	Primary Di	thers	Subpixel Dither Ty	pe Dithe	er Size	Subpixel P	ositions
Dithers	1	INTRAMODULEBOX	4		STANDARD			4	
ents	# Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
E E	1 F210M	F360M	BRIGHT1	5	1	16	16	265.326	
Spectral Elements	2 F210M	F410M	BRIGHT1	7	1	16	16	371.325	
Special Requirements	Sequence Observations 9, 10, Non-	-interruptible							

<u>Pro</u>	posal 12	205 - Observatio	n 10 - Formati	on Histories a	and Stellar N	Masses of Very	High-z Quasa	ırs		
Observation	Proposal 120 Diagnostic S	05, Observation 10: 2M1 Status: Warning emplate: NIRCam Imaging	1482526+5254161_ima				.,		Tue Jun	25 13:00:13 GMT 2019
Diagnostics	(Visit 10:1) V	Warning (Form): Overhead	ls are provisional until t	he Visit Planner has b	een run.					
ts	#	Name	Target Coordi	nates		Targ. Coord. Correct		Miscel	laneous	
ge				699 (177.1052913d)		Proper Motion RA: 1	•			
a				5.22 (52.90451d)		Proper Motion Dec: -				
Fixed Targets	Comments: Category=St Description=	ar :[F stars]	Equinox: J2000)		Epoch of Position: 20	000			
te	Module					Subarray				
Template	В					SUB400P				
S	#	Pri	imary Dither Type	Primary D	ithers	Subpixel Dither T	ype Dithe	er Size	Subpixel Po	ositions
Dithers	1	•	TRAMODULEBOX	4		STANDARD		4		
_	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
۱ĕ	1	F210M	F360M	BRIGHT1	5	1	16	16	265.326	
읦	2	F210M	F410M	BRIGHT1	5	1	16	16	265.326	
Spectral Elements										
Special Requirements	Sequence Ob	servations 9, 10, Non-inte	rruptible							

<u>Pro</u>	posal 12	<u> 105 - Observa</u>	tion 11 - Fo	ormation Hi	stories and	Stella	ar Masse	es o	f Very High-	z Quasars			
n	Proposal 120	5, Observation 11: J	2239+0207_IFU									Tue Jun 25 1	3:00:13 GMT 2019
ati	Diagnostic S	tatus: Warning											
Ž	Observing Te	emplate: NIRSpec IFU	Spectroscopy										
Se	Comments: L	Depending on the final	blind pointing acc	curacy of JWST, w	e may not need tar	get acqui	isition for this	sourc	re.				
Observation													
Diagnostics	(Visit 11:1) V	Varning (Form): Overl	heads are provisio	nal until the Visit l	Planner has been ru	ın.							
	#	Name	Targe	et Coordinates			Targ	. Coo	rd. Corrections		Miscellaneou	ıs	
Targets	(9)	J2239+0207	RA: 2	22 39 47.4800 (339	0.9478333d)								
l g			Dec:	+02 07 47.40 (2.12	2983d)								
≝			Equin	ox: J2000									
Fixed	Comments:												
IĚ∣	Category=Go	alaxy :[Active galactic nucle	ei. Quasars l										
	Extended=No	[Active galactic nucle O											
Acquisition	#	Target	TA Method	Subarray	Filter		Readout Pat	tern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
isi	1	SAME	WATA	SUB2048	F110W		NRS		3	1	1	11.746	25213
ļά													
Dithers	#		Dither Type		Size		Sta	rting	Point	Number of	Points	Points	
the	1		4-POINT-NOD										
₫													
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Ex p	Leakca	ıl Dit	ther	Autocal	Total Dithe	rs Total Integrations	Total Exposure Time	e ETC Wkbk.Calc ID
Ĕ	1	PRISM/CLEAR	NRSIRS2	15	1	false	tru	e	NONE	4	4	4435.023	
	2	PRISM/CLEAR	NRSIRS2	15	1	false	tru	e	NONE	4	4	4435.023	
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l ;t													
) be													
S													
ıts	Sequence Ob	servations 11, 12, 13,	Non-interruptible										
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eu													
 													
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Cia													
Special Requirements													
တ													

Pro	posal 1205 - Obser	vation 12 - Format	ion Histories a	ınd Stellar N	Masses of Very	High-z Quasa	ırs		
	Proposal 1205, Observation 1				•			Tue Jun	25 13:00:13 GMT 2019
Iĕ	Diagnostic Status: Warning								
Įξ	Observing Template: NIRCam	Imaging							
Observation									
ŏ									
SS	(Visit 12:1) Warning (Form): (Overheads are provisional until	the Visit Planner has be	een run.					
Diagnostics									
2									
ag									
(0	# Name	Target Coord	inates		Targ. Coord. Correc	tions	Misce	llaneous	
Targets	(9) J2239+0207	RA: 22 39 47.	4800 (339.9478333d)						
l s			7.40 (2.12983d)						
ΙË		Equinox: J200	0						
Fixed	Comments: Category=Galaxy								
定	Description=[Active galactic n	uclei, Quasars]							
	Extended=NO				G .				
Template	Module				Subarray				
١ē	В				SUB400P				
<u>[</u>									
_	#	Primary Dither Type	Primary Di	thers	Subpixel Dither Ty	ne Dithe	er Size	Subpixel P	ositions
je	1	INTRAMODULEBOX	4	tile 13	STANDARD	, pc Ditin	. Size	4	OSITIONS
Dithers									
Spectral Elements	# Short Fi	ter Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
ΙË	1 F210M	F360M	BRIGHT1	10	2	32	16	1060.649	
l a	2 F210M	F480M	BRIGHT1	10	2	32	16	1060.649	
<u>ڇ</u> ا									
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ements	Sequence Observations 11, 12,	13, Non-interruptible							
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<u> Š</u>									
Special Requir									
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Pro	posal 12	205 - Observatio	n 13 - Formati	on Histories a	ınd Stellar N	Masses of Very	High-z Quasa	ırs		
	Proposal 120	05, Observation 13: 2M22							Tue Jun	25 13:00:13 GMT 2019
Observation	_	Status: Warning								
<u>≥</u>	Observing To	emplate: NIRCam Imaging								
pse										
_										
Diagnostics	(Visit 13:1) V	Warning (Form): Overhead	ls are provisional until t	the Visit Planner has be	een run.					
)st										
۱ğ										
jä										
H	#	Name	Target Coord	inates		Targ. Coord. Correc	etions	Misco	llaneous	
Targets	(10)	2M22390990+0207329		106 (339.7912942d)		Proper Motion RA: 2.		IVIISCE	nancous	
Ę	Dec: +02 07 32.99 (2.12583d)					Proper Motion Dec: -:				
_a 			Equinox: J200			Epoch of Position: 20				
Fixed	Comments:									
lĕ	Category=St Description=	ar =[G stars]								
┡	Description= Extended=N	Ö								
ate	Module					Subarray				
<u>اق</u>	В					SUB400P				
Template										
_	#	Pri	imary Dither Type	Primary Di	thers	Subpixel Dither Ty	vne Dithe	er Size	Subpixel P	ositions
Je.	1		TRAMODULEBOX	4		STANDARD	, pe Dille	A GIEC	4	OSITIONS
Dithers										
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
l e	1	F210M	F360M	BRIGHT1	5	1	16	16	265.326	·
	2	F210M	F480M	BRIGHT1	5	1	16	16	265.326	
<u>=</u>										
t t										
l g										
-	G 01		1							
ements	Sequence Or	oservations 11, 12, 13, Non	i-interruptible							
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<u>ia</u>										
Special Requir										
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Pro	oposal 1205 - Observ	ation 15 - Format	ion Histories a	nd Stellar I	Masses of Very	High-z Quasa	ars		
	Proposal 1205, Observation 15:							Tue Jun	25 13:00:13 GMT 2019
Observation	Diagnostic Status: Warning								
≥	Observing Template: NIRCam Ir	maging							
pse									
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Diagnostics	(Visit 15:1) Warning (Form): Ov	erheads are provisional until	the Visit Planner has be	een run.					
St									
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ja J									
屵	Д МТ	Target Coord	!		T	4*	3.6	11	
ţ	# Name (11) TGSSJ1530+1049		Targ. Coord. Correc	ctions	Misce	llaneous			
Targets	(11) 103331330+1049		9000 (232.7079167d) 1.10 (10.82531d)						
<u>a</u> [Equinox: J200							
<u>چ</u> ا	Comments:	Equiliox. 3200							
Fixed	Category=Galaxy	1							
۱۳	Description=[Active galactic nuc Extended=NO	clei, Quasars]							
ţ	Module				Subarray				
	В				SUB400P				
Template									
Dithers	#	Primary Dither Type	Primary Di	thers	Subpixel Dither Ty	pe Dithe	er Size	Subpixel P	ositions
<u>۽</u> ا	1	INTRAMODULEBOX	4		STANDARD			4	
_									
Spectral Elements	# Short Filte	er Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
ΙĔ	1 F210M	F300M	BRIGHT1	10	1	16	16	530.324	
lä	2 F210M	F430M	BRIGHT1	10	1	16	16	530.324	
ā									
텋									
l ğ									
_	0 01 45 45 45								
ements	Sequence Observations 15, 16, N	on-interruptible							
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Special Requir									
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Pro	posal 12	205 - Observatio	n 16 - Formati	ion Histories a	nd Stellar M	lasses of Very	High-z Quasa	ırs		
		05, Observation 16: 2M1					•		Tue Jun	25 13:00:13 GMT 2019
Observation	Diagnostic S	Status: Warning								
I 🛎	Observing T	emplate: NIRCam Imaging	g							
Sel										
١å										
Diagnostics	(Visit 16:1)	Warning (Form): Overhead	ds are provisional until	the Visit Planner has bo	een run.					
	#	Name	Target Coord	inates		Targ. Coord. Correc	tions	Misce	laneous	
Targets	(12) 2M15300980+1050533 RA: 15 30 9.8096 (232.5408733d)					Proper Motion RA: -7				
Į	Dec: +10 50 53.38 (10.84816d)					Proper Motion Dec: -:	•			
] <u>~</u>			Equinox: J200			Epoch of Position: 20				
Fixed	Comments:									
ΙĚ	Category=St	tar =[G stars]								
	Description= Extended=N	0								
Ę.	Module					Subarray				
lë	В					SUB400P				
Template										
_										
l S	#		imary Dither Type	Primary Di	thers	Subpixel Dither Ty	pe Dithe	er Size	Subpixel P	ositions
Dithers	1	IN	TRAMODULEBOX	4		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
Ιŝ	1	F210M	F300M	BRIGHT1	5	1	16	16	265.326	
l e	2	F210M	F430M	BRIGHT1	5	1	16	16	265.326	
۱ä										
ដូ										
Ιĕ										
S										
ıts	Sequence Ob	oservations 15, 16, Non-int	terruptible							
ements										
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Re										
cial Re										
Special Requir										