

1335 - Q-3D: Imaging Spectroscopy of Quasar Hosts with JWST Analyzed with a Powerful New PSF Decomposition and Spectral Analysis Package

Cycle: 1, Proposal Category: ERS

INVESTIGATORS

Name	Institution	E-Mail
Dr. Dominika Wylezalek (PI) (ESA Member)	European Southern Observatory - Germany	dominika.wylezalek@gmail.com
Dr. Nadia L Zakamska (CoI) (US Admin CoI)	The Johns Hopkins University	zakamska@jhu.edu
Prof. Sylvain Veilleux (CoI)	University of Maryland	veilleux@astro.umd.edu
Dr. Jorge Karolt Barrera-Ballesteros (CoI)	Universidad Nacional Autonoma de Mexico (UNAM)	jkbarrerab@astro.unam.mx
Dr. Nora Luetzgendorf (CoI) (ESA Member)	Space Telescope Science Institute - ESA	nluetzge@cosmos.esa.int
Dr. Nicole Nesvadba (CoI) (ESA Member)	Institut d'Astrophysique Spatiale	nicole.nesvadba@ias.u-psud.fr
Prof. David Rupke (CoI)	Rhodes College	rupked@rhodes.edu
Dr. Ai-Lei Sun (CoI)	The Johns Hopkins University	asun27@jhu.edu

OBSERVATIONS

Folder	Observation	Label	Observing Template	Science Target
F2M11	06			
	1	NIRSpec_F2M1106	NIRSpec IFU Spectroscopy	(1) F2M1106-NIRSPEC
	2	MIRI_F2M1106_all	MIRI Medium Resolution Spectroscopy	(2) F2M1106-MIRI
	11	MIRI_F2M1106_all_b	MIRI Medium Resolution Spectroscopy	(3) F2M1106-BG
		g		
XID20	28			
	4	NIRSpec_XID2028	NIRSpec IFU Spectroscopy	(4) XID2028-NIRSPEC
	5	MIRI_XID2028_short	MIRI Medium Resolution Spectroscopy	(5) XID2028-MIRI
	12	MIRI_XID2028_short_	MIRI Medium Resolution Spectroscopy	(6) XID2028-BG
		bg		
SDSSJ	1652			

JWST Proposal 1335 (Created: Tuesday, June 25, 2019 at 12:05:15 PM Eastern Standard Time) - Overview

Folder	Observation	Label	Observing Template	Science Target
	8	NIRSpec_SDSSJ1652	NIRSpec IFU Spectroscopy	(7) SDSSJ1652-NIRSPEC
	9	MIRI_SDSSJ1652_sho	MIRI Medium Resolution Spectroscopy	(8) SDSSJ1652-MIRI
	10	MIRI_SDSSJ1652_sho rt_bg	MIRI Medium Resolution Spectroscopy	(9) SDSSJ1652-BG

ABSTRACT

In the last few years, optical and near-IR IFU observations from the ground have revolutionized extragalactic astronomy. The unprecedented infrared sensitivity, spatial resolution, and spectral coverage of the JWST IFUs will ensure high demand from the community. For a wide range of extragalactic phenomena (e.g. quasars, starbursts, supernovae, gamma ray bursts, tidal disruption events) and beyond (e.g. nebulae, debris disks around bright stars), PSF contamination will be an issue when studying the underlying extended emission. We propose to provide the community with a PSF decomposition and spectral analysis package for high dynamic range JWST IFU observations allowing the user to create science-ready maps of relevant spectral features. Luminous quasars, with their bright central source (quasar) and extended emission (host galaxy), are excellent test cases for this software. Quasars are also of high scientific interest in their own right as they are widely considered to be the main driver in regulating massive galaxy growth. JWST will revolutionize our understanding of black hole-galaxy co-evolution by allowing us to probe the stellar, gas, and dust components of nearby and distant galaxies, spatially and spectrally. We propose to use the IFU capabilities of NIRSpec and MIRI to study the impact of three carefully selected luminous quasars on their hosts. Our program will provide (1) a scientific dataset of broad interest that will serve as a pathfinder for JWST science investigations in IFU mode and (2) a powerful new data analysis tool that will enable frontier science for a wide swath of astrophysical research.

NOI 137, PI: D. Wylezalek, Co-PI: S. Veilleux, N. Zakamska

OBSERVING DESCRIPTION

We will be observing three powerful quasars at 0.4 < z < 3 using a combination of the NIRSpec and MIRI IFUs.

The following observing modes per object are:

F2M1106 -- acquisition: point & shoot for both NIRSpec and MIRI

- NIRSpec IFU with G235H/F170LP:

9-point "small cycling" dither pattern

15 groups and 1 integration per dither position

JWST Proposal 1335 (Created: Tuesday, June 25, 2019 at 12:05:15 PM Eastern Standard Time) - Overview

Readout mode: NRSIRS2RAPID

--> total exposure time on source: 35 min

1 leakage exposure at one dither position: 3.9 min

- NIRSpec IFU with G395H/F290LP:

9-point "small cycling" dither pattern

15 groups and 1 integration per dither position

Readout mode: NRSIRS2RAPID

--> total exposure time on source: 35 min

1 leakage exposure at one dither position: 3.9 min

- MIRI IFU with the SHORT, MEDIUM and LONG wavelength setting:

4-point dither pattern

80 groups and 1 integration per dither position

Readout mode: FAST

--> total exposure time on source: 3 x 15 min = 45 min

1 background image slightly offset from target position for every spectral setting: 3 x 3.7 min = 11 min

XID2028 -- acquisition: point & shoot for both NIRSpec and MIRI

- NIRSpec IFU with G140H/F100LP:

9-point "small cycling" dither pattern

80 groups and 1 integration per dither position

Readout mode: NRSIRS2RAPID

--> total exposure time on source: 2.95 hours

1 leakage exposure at one dither position: 0.33 hours

- MIRI IFU with the SHORT wavelength setting:

4-point dither pattern

325 groups and 3 integrations per dither position

Readout mode: FAST

--> total exposure time on source: 3.0 hours

1 background image slightly offset from target position for every spectral setting: 0.75 hours

JWST Proposal 1335 (Created: Tuesday, June 25, 2019 at 12:05:15 PM Eastern Standard Time) - Overview

SDSSJ1652 -- acquisition: point & shoot for both NIRSpec and MIRI

- NIRSpec IFU with G235H/F170LP:

9-point "small cycling" dither pattern

130 groups and 1 integration per dither position

Readout mode: NRSIRS2RAPID

--> total exposure time on source: 5.25 hours

1 leakage exposure at one dither position: 0.6 hours

- MIRI IFU with the SHORT wavelength setting:

4-point dither pattern

329 groups and 3 integrations per dither position

Readout mode: FAST

--> total exposure time on source: 3.1 hours

1 background image slightly offset from target position for every spectral setting: 0.78 hours

Total request: 18.2 hours science time, 9.4 hours overheads

Proposal 1335 - Targets - Q-3D: Imaging Spectroscopy of Quasar Hosts with JWST Analyzed with a Powerful New PSF Decompositio...

	#	Name	D: IMAGING Spectroscopy of Quasar I Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	F2M1106-NIRSPEC	RA: 11 06 48.3200 (166.7013333d)		
			Dec: +48 07 12.30 (48.12008d)		
			Equinox: J2000		
	Comments: Category=Go	dary			
		[Active galactic nuclei, Emissio	n line galaxies, Quasars]		
	(2)	F2M1106-MIRI	RA: 11 06 48.3200 (166.7013333d)		
			Dec: +48 07 12.30 (48.12008d)		
			Equinox: J2000		
	Comments: Category=Go Description= Extended=NO	[Active galactic nuclei, Emissio	n line galaxies, Quasars]		
	(3)	F2M1106-BG	RA: 11 06 49.6200 (166.7067500d)		
			Dec: +48 07 19.20 (48.12200d)		
			Equinox: J2000		
	Comments: Category=Un Description=	nidentified [Blank field]			
	(4)	XID2028-NIRSPEC	RA: 10 02 11.2700 (150.5469583d)		
ß			Dec: +01 37 6.60 (1.61850d)		
ge			Equinox: J2000		
Fixed Targets	Comments: Category=Ga Description= Extended=NO	[Active galactic nuclei, Emissio	n line galaxies, Quasars]		
Ε̈́	(5)	XID2028-MIRI	RA: 10 02 11.2700 (150.5469583d)		
			Dec: +01 37 6.60 (1.61850d)		
			Equinox: J2000		
	Comments: Category=Ga Description= Extended=No	[Active galactic nuclei, Emissio	n line galaxies, Quasars]		
	(6)	XID2028-BG	RA: 10 02 11.8344 (150.5493100d)		
			Dec: +01 37 24.67 (1.62352d)		
			Equinox: J2000		
	Comments: Category=Un Description=				
	(7)	SDSSJ1652-NIRSPEC	RA: 16 52 2.6448 (253.0110200d)		
			Dec: +17 28 52.39 (17.48122d)		
			Equinox: J2000		
	Comments: Category=Go Description= Extended=No	[Active galactic nuclei, Emissio	n line galaxies, Quasars]		

Proposal 1335 - Targets - Q-3D: Imaging Spectroscopy of Quasar Hosts with JWST Analyzed with a Powerful New PSF Decompositio.. (8) SDSSJ1652-MIRI RA: 16 52 2.6448 (253.0110200d) Dec: +17 28 52.39 (17.48122d) Equinox: J2000 Comments: Comments.
Category=Galaxy
Description=[Active galactic nuclei, Emission line galaxies, Quasars] Extended=NO (9) SDSSJ1652-BG RA: 16 52 2.6640 (253.0111000d) Dec: +17 28 53.98 (17.48166d) Equinox: J2000 Comments: Category=Unidentified Description=[Blank field]

Pro	oposal 1335 - Ol	<u>bservat</u>	<u>ion 1 - Q-3</u>	D: Imagin	<u>g Spectrosc</u>	opy	of Qua	<u>sar Hos</u>	sts with JWST /	<u>Analyzed w</u>	<u>ith a Powe</u>	<u>rful New F</u>	<u>'SF Decom</u>
<u>ا</u> ج	Proposal 1335, Observa	ation 1: NII	RSpec_F2M1106									Tue Jun 25	17:05:15 GMT 2019
Ιž	Diagnostic Status: War	ning											
Į≚	Observing Template: NI	RSpec IFU	Spectroscopy										
Se													
Observation													
Diagnostics	(Visit 1:1) Warning (For	m): Overhe	ads are provisiona	al until the Visit l	Planner has been ru	n.							
سا	# Name		Targe	et Coordinates			1	Targ. Coord	l. Corrections		Miscellaneous		
Targets	(1) F2M1106	-NIRSPEC	RA: 1	1 06 48.3200 (16	66.7013333d)								
arg			Dec:	48 07 12.30 (48	.12008d)								
ΙË			Equin	ox: J2000									
Fixed	Comments:												
ΙÊ	Category=Galaxy Description=[Active gala	actic nuclei	, Emission line ga	laxies, Quasars]	,								
<u></u>	Extended=NO												
ate	TA Method												
틸	VERIFY_ONLY												
Template													
	#		Dither Type		Size			Starting P	oint	Number of Poin	to.	Points	
ě	1		CYCLING		SMALL			1	omi	9	its	Tomis	
Dithers			CTCLING		SWI IEE								
		PV MSA	Filte	r	PV Readout Pat	torn	PV Croup	c/Int	PV Integrations/Exp	DV Total Dithor	rs PV Total	DY	Total Exposure
Pointing Verification	π	Configurat			1 v Keauoui I ai		I v Group	5/11It	1 v Integrations/Exp	1 v 10tai Ditilei	Integratio		me
ca	1	ALLCLOSI	ED F140	X	NRSIRS2RAPID)	2		1	1	1	43	.767
Ξ													
Š													
ρ													
Ιŧ													
Į₫													
	# C	/E314	D. L. A	C	T. 4 4 /F	T1	1	D'4	A 41	T. A. I. D'al	TD . 4 . 1	T. A. I. F.	PEC
lts	# Gram	ng/Filter	Readout Pattern	Groups/Int	Integrations/Ex p	Leak	cai	Dither	Autocal	Total Dithers	Total Integrations	Total Exposur Time	Wkbk.Calc ID
eme	1 G235H		NRSIRS2RAPI D	15	1	false		true	NONE	9	9	2100.8	
Spectral Elements	2 G235H		NRSIRS2RAPI D	15	1	true		false	NONE	1	1	233.422	
ectra	3 G395H		NRSIRS2RAPI D	15	1	false		true	NONE	9	9	2100.8	
Sp	4 G395F		NRSIRS2RAPI D	15	1	true		false	NONE	1	1	233.422	

<u>Pro</u>	oposal 133	<u> 85 - Obser</u>	vation 2 - 0	Q-3D: Im	aging Spe	ctroscopy c	of Quasar H	osts with	JWST Ar	nalyzed with	a Powerf	ul New PS	SF Decom	
on	_		: MIRI_F2M110	06_all								Tue Jun 25 17	7:05:15 GMT 2019	
Ħ,	Diagnostic Sta	_												
Įξ	_	-	dium Resolution											
Observation	Background Ol	oservations:[MIR	RI_F2M1106_all_	_bg (Obs 11)]										
ŏ														
cs	(Visit 2:1) War	rning (Form): Ov	erheads are prov	isional until th	e Visit Planner h	as been run.								
Diagnostics														
ΙĔ														
<u>a</u> j														
尸		. ,		F 4 G 1			TD C	1.0 4			. 11			
ts	#	Name		Target Coordi		2.4\	Targ. Co	ord. Correction	ıs	M	iscellaneous			
Targets	(2)	F2M1106-MIRI			200 (166.701333 20 (48.120084)	3d)								
عّا					2.30 (48.12008d)									
٦	Comments:		Г	Equinox: J2000	,									
Fixed	Category=Gala													
ш.	Description=[A Extended=NO	Active galactic ni	uclei, Emission li	ne galaxies, Q	uasars]									
٦							Target							
≗	1						NONE							
isi														
Acquisition														
_														
Template	AcqFilter				y Channel			aneous Imaging		-	Imager Subarray			
<u>آڅ</u>	F1000W			ALL			YES			FU	JLL			
e.														
_	#			Dither '	Tymo		Ontim	ized For		D:	rection			
ĕ	1			4-Point	Туре			SOURCE			EGATIVE			
Dithers				4-1 OIII			TOINT	SOURCE		111	EGATIVE			
F	#	Wavelength	Detector	Filter	Readout	Groups/Int	Integrations/E	Exposures/Dit	Dither	Total Dithers	Total	Total	ЕТС	
l		Range			Pattern	_	xp	h			Integrations	Exposure Time	Wkbk.Calc ID	
Spectral Elements	1	1	IMAGER	F770W	FAST	80	1	1	Dither 1	4	4	888.013	1	
l e	1	SHORT(A)	MRSLONG		FAST	80	1	1	Dither 1	4	4	888.013		
<u>=</u>	1	SHORT(A)	MRSSHORT		FAST	80	1	1	Dither 1	4	4	888.013		
I۳	2		IMAGER	F770W	FAST	80	1	1	Dither 1	4	4	888.013		
it a	2	MEDIUM(B)	MRSLONG		FAST	80	1	1	Dither 1	4	4	888.013		
l š	2	MEDIUM(B)	MRSSHORT		FAST	80	1	1	Dither 1	4	4	888.013		
လ	3		IMAGER	F770W	FAST	80	1	1	Dither 1	4	4	888.013		
1	3	LONG(C)	MRSLONG		FAST	80	1	1	Dither 1	4	4	888.013		
	3	LONG(C)	MRSSHORT		FAST	80	1	1	Dither 1	4	4	888.013		

<u>Pro</u>	<u>bosal 1335 - Observation 2 - Q-3D: Imaging Spectroscopy of Quasar Hosts with JWST Analyzed with a Powerful New PSF Decom.</u>
ıts	Sequence Observations 2, 11, Non-interruptible
ner	
ren	
Require	
Re	
Special	
ည်	

Pro	posal 13	35 - Obser	vation 11	- Q-3D: Ir	maging Sp	ectroscopy	of Quasar	Hosts with	JWST	Analyzed wit	h a Powe	rful New F	PSF Deco
Ľ	Proposal 133	5, Observation 1	1: MIRI_F2M1	106_all_bg								Tue Jun 25 1	7:05:15 GMT 2019
Iĕ	Diagnostic St	tatus: Warning											
ľ≚	Observing Te	emplate: MIRI Med	dium Resolution	Spectroscopy									
Observation	Background (Observation For: []	MIRI_F2M1106	_all (Obs 2)]									
١ö													
Diagnostics	(Visit 11:1) W	Varning (Form): O	verheads are pro	ovisional until t	he Visit Planner h	as been run.							
ţ	#	Name		Target Coordi			Targ. Co	ord. Correction	S	M	iscellaneous		
Targets	(3)	F2M1106-BG			200 (166.706750	0d)							
٦ď					0.20 (48.12200d)								
٦				Equinox: J2000)								
Fixed	Comments: Category=Un	nidentified											
_	Description=	[Blank field]											
5 # Target													
isiti	1						NONE						
Acquisition													
	AcqFilter			Primar	y Channel		Simult	aneous Imaging		Im	ager Subarray		
) Sa	F1000W			ALL			YES			FU	JLL		
Template													
-													
	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/E xp	Exposures/Dit h	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
Į	1		IMAGER	F770W	FAST	80	1	1	None	1	1	222.003	
Ιĕ	1	SHORT(A)	MRSLONG		FAST	80	1	1	None	1	1	222.003	
<u>=</u>	1	SHORT(A)	MRSSHORT		FAST	80	1	1	None	1	1	222.003	
1 🚆	2		IMAGER	F770W	FAST	80	1	1	None	1	1	222.003	
Spectral Elements	2	MEDIUM(B)	MRSLONG		FAST	80	1	1	None	1	1	222.003	
Ιĕ	2	MEDIUM(B)	MRSSHORT		FAST	80	1	1	None	1	1	222.003	
Ŋ	3		IMAGER	F770W	FAST	80	1	1	None	1	1	222.003	
1	3	LONG(C)	MRSLONG		FAST	80	1	1	None	1	1	222.003	
	3	LONG(C)	MRSSHORT		FAST	80	1	1	None	1	1	222.003	

<u>Pro</u>	<u>oposal 1335 -</u>	 Observation 11 	 Q-3D: Imaging 	Spectroscopy	of Quasar I	<u> Hosts with JWST</u>	Analyzed with a	<u>Powerful New PSI</u>	- <u>Deco</u>
Requirements		ions 2, 11, Non-interruptible							
Special									

	posal 1335 - Observa		aging Spectrosc	opy of Qua	asar Hosts	with JWST.	<u>Analyzed w</u>	<u>ith a Power</u>		
<u>ا</u>	Proposal 1335, Observation 4: NI	RSpec_XID2028							Tue Jun 25 17	:05:15 GMT 2019
aği	Diagnostic Status: Warning									
Observation	Observing Template: NIRSpec IFU	Spectroscopy								
Se										
၂ရ										
Diagnostics	(Visit 4:1) Warning (Form): Overhe	eads are provisional until the	Visit Planner has been rui	1.						
"	# Name	Target Coordin	ates		Targ. Coord. C	orrections		Miscellaneous		
Targets	(4) XID2028-NIRSPEC	RA: 10 02 11.27	00 (150.5469583d)							
عر اع		Dec: +01 37 6.60	0 (1.61850d)							
≝		Equinox: J2000								
Fixed	Comments:									
 症	Category=Galaxy Description=[Active galactic nucle	i, Emission line galaxies, Qu	asars]							
<u> </u>	Extended=NO	-								
ate	TA Method									
ᅙ	VERIFY_ONLY									
Template										
_	#	Dither Type	Size		Starting Poir		Number of Poin	te	Points	
ē	1	CYCLING	SMALL		1	ı	9	ıts	Tomis	
Dithers	•	CTCLING	Siviribe		1					
	# PV MSA	Filter	PV Readout Pat	town DV Crow	ng/Int D	V Integrations/Exp	DV Total Dithor	s PV Total	DV T	Total Exposure
Pointing Verification	" Configuration		1 v Keauout 1 at	tern 1 v Grou	ps/111t 1	v Integrations/Exp	1 v Total Dittle	Integration		
Sa	1 ALLCLOS	ED F140X	NRSIRS2RAPID	2	1		1	1	43.76	57
ĮΞ										
Š										
g										
ΙĘ										
اقِ										
_	# Grating/Filter	Pendent C	Integrations/Ex	Lankan	Dither	Antog-1	Total Dithers	Total	Total Exposure	FTC
Įž	# Graung/Filter	Readout Groups/I Pattern	p	Leakcai	Dittier	Autocal	Total Dittlers	Integrations	Time Exposure	Wkbk.Calc ID
Spectral Elements	1 G140H/F100LP	NRSIRS2RAPI 80 D	1	false	true	NONE	9	9	10635.301	
Ш	2 G140H/F100LP	NRSIRS2RAPI 80	1	true	false	NONE	1	1	1181.7	
tra		D								
၂ ခွ										
ြလ္										

<u>Pr</u>	oposal 133	35 - Obser	vation 5 - 0	Q-3D: Ima	ging Spec	troscopy o	of Quasar H	losts with	JWST Ar	nalyzed with	a Powerf	ul New PS	SF Decom
L	Proposal 1335	5, Observation 5	: MIRI_XID202	8_short								Tue Jun 25 17	:05:15 GMT 2019
Observation	Diagnostic Sta	atus: Warning											
Įξ	Observing Ter	nplate: MIRI Me	dium Resolution	Spectroscopy									
Se	Background O	bservations:[MII	RI_XID2028_sho	rt_bg (Obs 12)]									
Ιŏ													
SS	(Visit 5:1) Wa	rning (Form): Da	ata volume for this	s visit 31758.3 M	IB exceeds half t	he maximum allo	owed of 58000.0 N	ИВ.					
Diagnostics	(Visit 5:1) Wa	rning (Form): Ov	verheads are provi	sional until the	Visit Planner has	been run.							
2	ullet												
ad													
ق													
S	# Name Target Coordinates Targ. Coord. Corrections Miscellaneous												
Targets	(5) XID2028-MIRI RA: 10 02 11.2700 (150.5469583d)												
l g	Dec: +01 37 6.60 (1.61850d)												
=			E	Equinox: J2000									
Fixed	Comments:	lam											
iÊ													
F	Extended=NO												
<u> </u>	#						Target						
Sit							NONE						
Ϊ́Ξ													
Acquisition													
\vdash				Primary (Channel		Simult	aneous Imaging	ţ	In	nager Subarray		
Template	F1000W			ALL			YES			FU	JLL		
ΙĒ													
rs	#			Dither Ty	ре		Optim	ized For		Di	rection		
le e	1			4-Point			POINT	SOURCE		N	EGATIVE		
Dithers													
		Wavelength	Detector	Filter	Readout	Groups/Int	Integrations/E	Exposures/Dit	Dither	Total Dithers	Total	Total	ETC
Spectral Elements		Range			Pattern	•	xp	h			Integrations	Exposure Time	Wkbk.Calc ID
<u> e</u>	1		IMAGER	F1130W	FAST	325	3	1	Dither 1	4	12	10822.656	
19	1	SHORT(A)	MRSLONG		FAST	325	3	1	Dither 1	4	12	10822.656	
ra	1	SHORT(A)	MRSSHORT		FAST	325	3	1	Dither 1	4	12	10822.656	l
l S													
l S	•												

<u>Pr</u>	oposa	al 1335 - Ob	oservation 5	<u>- Q-3D:</u>	Imaging S	<u>pectroscop</u> y	<u>y of Quasa</u>	<u>r Hosts with</u>	<u>1 JWST /</u>	<u>Analyzed w</u>	<u>/ith a Powe</u>	<u>rful New P</u>	SF Deco	<u>m</u>
Requirements		nce Observations 5	, 12, Non-interruptib	le										
Special	5													

<u> </u>	<u>oposai i</u>	<u> </u>	valion iz	<u>- Q-3D: II</u>	naging Spi	ECHOSCOPY	<u>Ul Quasai</u>	10312 WILLI	<u> </u>	<u>Analyzed wit</u>	<u>li a rowe</u>	HULLINGW I	OI Deco
Z	Proposal 13	335, Observation 1	2: MIRI_XID20	028_short_bg								Tue Jun 25 17	7:05:15 GMT 2019
Įặ	Diagnostic	Status: Warning											
I≝	Observing T	Геmplate: MIRI Me	dium Resolution	Spectroscopy									
se	Background	l Observation For: [MIRI_XID2028	_short (Obs 5)]									
Observation													
Diagnostics	_	Warning (Form): C	overheads are pro	visional until t	he Visit Planner h	as been run.							
S	#	Name	,	Target Coordi	nates		Targ. Co	ord. Correction	ıs	M	iscellaneous		
Fixed Targets	(6)	XID2028-BG]	RA: 10 02 11.8	344 (150.549310	Od)							
ā]	Dec: +01 37 24	.67 (1.62352d)								
١Ę]	Equinox: J2000)								
ě	Comments:												
╽╔	Description	Unidentified =[Blank field]											
٦							Target						
≝	1						NONE						
lis													
Acquisition	7												
_													
ate	AcqFilter				y Channel		•	aneous Imaging		-	ager Subarray		
[e	F1000W			ALL			YES			FU	JLL		
Template													
		Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/E xp	Exposures/Dit h	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
			Detector IMAGER	Filter F1130W		Groups/Int			Dither None	Total Dithers		Exposure	
					Pattern		xp	h	i		Integrations	Exposure Time	
		Range	IMAGER		Pattern FAST	325	xp 3	h	None	1	Integrations 3	Exposure Time 2705.664	
		Range SHORT(A)	IMAGER MRSLONG		Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
		Range SHORT(A)	IMAGER MRSLONG		Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
Spectral Elements	1 1 1	SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
Spectral Elements	1 1 1	Range SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
Spectral Elements	1 1 1	SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
Spectral Elements	1 1 1	SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
Spectral Elements	1 1 1	SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
Spectral Elements	1 1 1	SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	
	1 1 1	SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	F1130W	Pattern FAST FAST	325 325	3 3	1 1	None None	1 1	Integrations 3 3	Exposure Time 2705.664 2705.664	

	<u>posal 1335 - Observa</u>			g Spectrosc	opy of C	<u>luasar Ho</u>	sts with JVVS 1 /	Anaiyzed w	<u>ıtn a Powe</u>	rtui New P	of Decom
	Proposal 1335, Observation 8: N	IRSpec_SDSSJ16	52							Tue Jun 25 17	:05:15 GMT 2019
ă	Diagnostic Status: Warning										
ا <u>ک</u> ا	Observing Template: NIRSpec IFU	J Spectroscopy									
se											
၂၀၂											
-	(Visit 8:1) Warning (Form): Data v	olume for this visi	t 35198.37 MB e	exceeds half the max	imum allowe	ed of 58000.0 MI	3.				
Diagnostics	(Visit 8:1) Warning (Form): Overh										
SO	(visit oil) warming (roim). Over	euds are provision		ramer may occurran							
g											
)ia											
	# Name	Torge	et Coordinates			Tora Coor	d. Corrections		Miscellaneous		
Targets	(7) SDSSJ1652-NIRSP		.6 52 2.6448 (253	R 0110200d)		Targ. Coor	u. Corrections		Miscenaneous		
ğ	(7) SDSS 1032 TAIKSI		+17 28 52.39 (17	,							
<u>Γ</u> al			ox: J2000	.+0122d)							
g	Comments:	Equii	IOA. 32000								
Fixed	Category=Galaxy										
┃╚╸┃	Description=[Active galactic nucle Extended=NO	ei, Emission line go	ılaxies, Quasars]	1							
g)	TA Method										
at	VERIFY_ONLY										
Template	VERTI 1_ONE1										
<u> </u>											
-	#	Dither Type		Size		Starting I	Point	Number of Poin	nts	Points	
ا يو ا	1	CYCLING		SMALL		1		9			
Dithers											
_	# PV MSA	Filte		PV Readout Pat	4 DV/C		PV Integrations/Exp	DV/T-4-1 D:41	rs PV Total	DX/	Total Exposure
Pointing Verification	# PV MSA Configura		er	Pv Readout Pat	tern PVG	roups/1nt	Pv Integrations/Exp	PV Total Ditner	rs PV 10tai Integratio		
cat	1 ALLCLOS)X	NRSIRS2RAPID	2		1	1	1	43.7	67
iti)											
e l											
6											
‡.											
۱ظ۱											
ď											
ts	# Grating/Filter	Readout	Groups/Int	Integrations/Ex	Leakcal	Dither	Autocal	Total Dithers	Total	Total Exposure	ETC
Spectral Elements		Pattern		p		<u> </u>			Integrations	Time	Wkbk.Calc ID
W	1 G235H/F170LP	NRSIRS2RAPI D	130	1	false	true	NONE	9	9	17200.301	
画	2. G235H/F170LP	NRSIRS2RAPI	130	1	true	false	NONE	1	1	1911.145	
a	_ G233111170E1	D		•		14150	1.01.12	=	-	->	
텇											
ğ											

<u>Pr</u>	oposal 133	35 - Obser	vation 9 - 0	Q-3D: Ima	ging Spect	roscopy o	f Quasar H	osts with	JWST An	alyzed with	a Powerf	ul New PS	SF Decom
L	Proposal 1335	, Observation 9	: MIRI_SDSSJ1	652_short								Tue Jun 25 17	:05:15 GMT 2019
Observation	Diagnostic Sta	tus: Warning											
Įξ	Observing Ten	nplate: MIRI Me	dium Resolution	Spectroscopy									
Se	Background O	bservations:[MIF	RI_SDSSJ1652_sl	hort_bg (Obs 10)]								
Ιŏ													
SS	(Visit 9:1) War	rning (Form): Da	ata volume for this	s visit 32148.5 M	IB exceeds half th	ne maximum allo	owed of 58000.0 M	ſB.					
Diagnostics	(Visit 9:1) War	rning (Form): Ov	erheads are provi	sional until the	Visit Planner has	been run.							
۱ë													
ad)												
ق													
—	#	Name	Т	arget Coordina	ites		Targ. Co	ord. Correction	ıs	M	liscellaneous		
Targets	(8)	SDSSJ1652-MII	RI R	A: 16 52 2.6448	3 (253.0110200d)								
ar o	'		Ε	Dec: +17 28 52.3	9 (17.48122d)								
ΙË			E	Equinox: J2000									
Fixed	Comments:												
 企		axy Active galactic n	uclei, Emission li	ne galaxies, Qua	isars]								
L	Extended=NO												
<u> </u>	#						Target						
Siti	1						NONE						
ΙΞ	.												
Acquisition													
\vdash				Primary (Channel		Simult	aneous Imaging	<u> </u>	In	nager Subarray		
Template	F560W			ALL			YES			FU	JLL		
ΙĔ	'												
I₽													
S	#			Dither Ty	ре		Optimi	zed For		Di	rection		
Pe	1			4-Point				SOURCE		•	EGATIVE		
Dithers													
		Wavelength	Detector	Filter	Readout	Groups/Int	Integrations/E	Exposures/Dit	Dither	Total Dithers	Total	Total	ETC
Spectral Elements	l"	Range	2000001	1 1101	Pattern	010 up s/1110	xp	h	2141141	10001	Integrations	Exposure Time	Wkbk.Calc ID
l e	1		IMAGER	F1000W	FAST	329	3	1	Dither 1	4	12	10955.858	
	1	SHORT(A)	MRSLONG		FAST	329	3	1	Dither 1	4	12	10955.858	l
ra	1	SHORT(A)	MRSSHORT		FAST	329	3	1	Dither 1	4	12	10955.858	l
S													
S _o	•												

<u>Pro</u>	oposal 1335 - Observation 9 - Q-3D: Imaging Spectroscopy of Quasar Hosts with JWST Analyzed with a Powerful New PSF Decom
nts	Sequence Observations 9, 10, Non-interruptible
l e	
e I	
ŀ≒	
ed	
12	
cial	
ĕ	
S	

<u>Pr</u>	oposal 13	<u> </u>	valion 10	Q 0D. II	naging ope	Juli 0300py	oi Quasai	I 10313 WILL	100001	Alialyzeu wit	ii a i owe	Hai New I	0. 2000
		5, Observation 1											7:05:15 GMT 2019
Ι ặ	Diagnostic St	tatus: Warning											
Į≝	Observing Te	mplate: MIRI Med	dium Resolution	Spectroscopy									
Se	Background C	Observation For: []	MIRI_SDSSJ16	52_short (Obs 9	9)]								
Observation													
Diagnostics	(Visit 10:1) W	Varning (Form): O	verheads are pro	ovisional until tl	ne Visit Planner h	as been run.							
ts	#	Name	1	Target Coordi	nates		Targ. Co	ord. Correction	ıs	M	iscellaneous		
Targets	(9)	SDSSJ1652-BG		RA: 16 52 2.66	40 (253.0111000c	1)							
a.				Dec: +17 28 53	.98 (17.48166d)								
١Ę				Equinox: J2000)								
Fixed	Comments:	i dontifi o d											
ΙĒ	Category=Un Description=	llaentijtea [Blank field]											
Ĕ	#						Target						
≝	1						NONE						
l is													
_													
8													
Acquisition													
_					y Channel		-	aneous Imaging	<u>.</u>		ager Subarray		
_				Primary ALL	y Channel		Simult YES	aneous Imaging	;		ager Subarray		
_					y Channel		-	aneous Imaging	ţ				
Template	AcqFilter F560W	Wavelength Range	Detector		y Channel Readout Pattern	Groups/Int	YES	aneous Imaging Exposures/Dit h				Total Exposure Time	ETC Wkbk.Calc ID
Template	AcqFilter F560W		Detector IMAGER	ALL	Readout	Groups/Int 329	YES Integrations/E	Exposures/Dit		FU	Total	Exposure	ETC Wkbk.Calc ID
Template	AcqFilter F560W			ALL Filter	Readout Pattern		YES Integrations/E xp	Exposures/Dit	Dither	FU Total Dithers	Total Integrations	Exposure Time	ETC Wkbk.Calc ID
Template	AcqFilter F560W	Range	IMAGER	ALL Filter	Readout Pattern FAST	329	YES Integrations/E xp	Exposures/Dit	Dither None	Total Dithers	Total Integrations	Exposure Time 2738.964	ETC Wkbk.Calc ID
Template	AcqFilter F560W	Range SHORT(A)	IMAGER MRSLONG	ALL Filter	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Template	AcqFilter F560W	Range SHORT(A)	IMAGER MRSLONG	ALL Filter	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Spectral Elements Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID
Template	# 1 1 1	Range SHORT(A) SHORT(A)	IMAGER MRSLONG MRSSHORT	ALL Filter F1000W	Readout Pattern FAST FAST	329 329	YES Integrations/E xp 3 3	Exposures/Dit h	Dither None None	Total Dithers 1 1	Total Integrations 3 3	Exposure Time 2738.964 2738.964	ETC Wkbk.Calc ID