



5018 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Cycle: 3, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
2A0335				
	1	2A0335+096	MIRI Medium Resolution Spectroscopy	(1) 2A0335+096
	2	2A0335+096-OFF	MIRI Medium Resolution Spectroscopy	(2) 2A0335+096-OFF
A1795				
	5	A1795	MIRI Medium Resolution Spectroscopy	(5) A1795
	6	A1795-OFF	MIRI Medium Resolution Spectroscopy	(6) A1795-OFF
HYDRA				
	9	HYDRA	MIRI Medium Resolution Spectroscopy	(9) HYDRA
	10	HYDRA-OFF	MIRI Medium Resolution Spectroscopy	(10) HYDRA-OFF
PKS0745				
	13	PKS0745	MIRI Medium Resolution Spectroscopy	(13) PKS0745-19
	14	PKS0745-OFF	MIRI Medium Resolution Spectroscopy	(14) PKS0745-19-OFF
NGC1275				
	15	NGC1275	MIRI Medium Resolution Spectroscopy	(15) NGC1275
	16	NGC1275-OFF	MIRI Medium Resolution Spectroscopy	(16) NGC1275-OFF
A1068				
	17	A1068	MIRI Medium Resolution Spectroscopy	(17) A1068
	18	A1068-OFF	MIRI Medium Resolution Spectroscopy	(18) A1068-OFF

ABSTRACT

Brightest Cluster Galaxies (BCGs) are unique direct evidence of AGN-feedback caught in the act. The large cavities inflated by the AGN-radio lobes have pushed the hot intra-cluster medium and made gigantic bubbles raising buoyantly in the ICM. BCGs lying at the center of cool core clusters (short cooling time) are also surrounded by a huge network of kpc-scale filaments, visible in the optical and detected in warm H₂ and cold CO. Those cold filaments are likely formed via thermal instabilities in the low-entropy cluster core. There is strong evidence that AGN-jets themselves play an important role in the local compression and cooling of this gas. BCGs are thus the best objects to study this key piece of the feedback. Once cooled the gas can settle down in the galaxy and feed the central Black Hole, powering the feedback engine. To understand the detailed circulation of the cold gas is of prime importance. The spatial resolution and sensitivity of JWST with MRS and MIRI can (i) map the H₂ lines tracing the bulk of the mass in the filaments and seek warm dust at large scales; it can also help (ii) determine the main excitation processes in the filaments (and confirm the important role of shocks) via mid-IR line diagnostics and (iii) map the expected central molecular disks, a yet unobserved element of the feedback cycle.

OBSERVING DESCRIPTION

We propose to use MRS and MIRI to observe a sample of 7 BCGs. We want to put the off-position of MRS in order to cover the central source with MIRI. The off-position of MIRI will be chosen in order to cover the central object with MRS. With such an observing strategy, we will use all the pointings for science. The first goal is to map the H₂ S(1) line with MRS. This line together with some other mid-IR lines was already detected by Spitzer for all the sources of the present sample. We now propose to map those line at high spatial resolution in the central region of the BCGs. We want to (i) determine the excitation mechanism of the H₂ (UV vs shocks vs energetic particles) and (ii) seek for compact nuclear disk around the central black hole (such pc-scale disk have already been detected in H₂ at 2.12 μ m in the center of NGC 1275). The second aim is to cover with MIRI the full nebula (kpc-scale filaments) that are ubiquitous around BCGs. BCGs are surrounded by bright low-ionisation H α filaments (LINER-like excitation). We propose to use 3 bands to cover (i) the H₂ S(3) line, (ii) the PAH at 7.7 μ m and (iii) the continuum around 5 μ m. Such a mapping will measure the global extent and content of the warm molecular filamentary structure.

Proposal 5018 - Targets - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

(15)	NGC1275	RA: 03 19 48.1601 (49.9506671d) Dec: +41 30 42.11 (41.51170d) Equinox: J2000	Epoch of Position: 2000
Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]			
(16)	NGC1275-OFF	RA: 03 19 51.7292 (49.9655383d) Dec: +41 31 44.33 (41.52898d) Equinox: J2000	Epoch of Position: 2000
Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]			
(17)	A1068	RA: 10 40 44.5000 (160.1854167d) Dec: +39 57 11.00 (39.95306d) Equinox: J2000	Epoch of Position: 2000
Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]			
(18)	A1068-OFF	RA: 10 40 50.8869 (160.2120288d) Dec: +39 57 23.71 (39.95659d) Equinox: J2000	Epoch of Position: 2000
Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]			

Proposal 5018 - Observation 1 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 1: 2A0335+096												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observations:[2A0335+096-OFF (Obs 2)]												
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)	2A0335+096	RA: 03 38 40.5461 (54.6689421d) Dec: +09 58 12.14 (9.97004d) Equinox: J2000				Epoch of Position: 2000						
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies] Extended=YES												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray			Grating Wheel Direction		
	F1000W	All MRS			YES			FULL			Allow Auto Reorder		
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	2		IMAGER	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	3		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	175209

Proposal 5018 - Observation 1 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 54 to 79 Degrees (V3 54.0 to 79.0) Sequence Observations 1, 2, Non-interruptible
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Proposal 5018 - Observation 2 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 2: 2A0335+096-OFF												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observation For: [2A0335+096 (Obs 1)]												
Diagnostics	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections				Miscellaneous		
	(2)	2A0335+096-OFF	RA: 03 38 41.9199 (54.6746662d) Dec: +09 59 18.12 (9.98837d) Equinox: J2000				Epoch of Position: 2000						
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies] Extended=YES												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
	F1000W	All MRS				YES			FULL		Allow Auto Reorder		
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	2		IMAGER	F770W	FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	3		IMAGER	F1000W	FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 2	2	2	277.504	175209

Proposal 5018 - Observation 2 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 54 to 79 Degrees (V3 54.0 to 79.0) Sequence Observations 1, 2, Non-interruptible
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Proposal 5018 - Observation 5 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 5: A1795												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observations:[A1795-OFF (Obs 6)]												
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		
	(5)	A1795	RA: 13 48 52.4121 (207.2183838d)				Epoch of Position: 2000						
			Dec: +26 35 34.16 (26.59282d)										
			Equinox: J2000										
Acquisition	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray			Grating Wheel Direction		
	F1000W	All MRS			YES			FULL			Allow Auto Reorder		
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3		IMAGER	F1000W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209

Proposal 5018 - Observation 5 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 115 to 151 Degrees (V3 115.0 to 151.0) Sequence Observations 5, 6, Non-interruptible
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Proposal 5018 - Observation 6 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 6: A1795-OFF												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observation For: [A1795 (Obs 5)]												
Diagnostics	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous			
	(6)	A1795-OFF	RA: 13 48 58.6027 (207.2441779d) Dec: +26 35 25.25 (26.59035d) Equinox: J2000				Epoch of Position: 2000						
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
	F1000W	All MRS				YES			FULL		Allow Auto Reorder		
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3		IMAGER	F1000W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209

Proposal 5018 - Observation 6 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 115 to 151 Degrees (V3 115.0 to 151.0) Sequence Observations 5, 6, Non-interruptible
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Proposal 5018 - Observation 9 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 9: HYDRA												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observations:[HYDRA-OFF (Obs 10)]												
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		
	(9)	HYDRA	RA: 09 18 5.6759 (139.5236496d) Dec: -12 05 43.80 (-12.09550d) Equinox: J2000					Epoch of Position: 2000					
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
	F1000W	All MRS				YES			FULL		Allow Auto Reorder		
Dithers	#	Dither Type					Optimized For			Direction			
	1	4-Point					EXTENDED SOURCE			NEGATIVE			
	2	2-Point					EXTENDED SOURCE			NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3		IMAGER	F1000W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209

Proposal 5018 - Observation 9 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 73 to 115 Degrees (V3 73.0 to 115.0) Sequence Observations 9, 10, Non-interruptible
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Proposal 5018 - Observation 10 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 10: HYDRA-OFF												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observation For: [HYDRA (Obs 9)]												
Diagnostics	(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous			
	(10)	HYDRA-OFF	RA: 09 18 8.4971 (139.5354046d) Dec: -12 04 59.07 (-12.08308d) Equinox: J2000				Epoch of Position: 2000						
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray		Grating Wheel Direction			
	F1000W	All MRS			YES			FULL		Allow Auto Reorder			
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3		IMAGER	F1000W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209

Proposal 5018 - Observation 10 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 73 to 115 Degrees (V3 73.0 to 115.0) Sequence Observations 9, 10, Non-interruptible
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Proposal 5018 - Observation 13 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 13: PKS0745												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observations:[PKS0745-OFF (Obs 14)]												
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		
	(13)	PKS0745-19	RA: 07 47 31.3238 (116.8805158d) Dec: -19 17 39.41 (-19.29428d) Equinox: J2000				Epoch of Position: 2000						
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging				Imager Subarray		Grating Wheel Direction	
	F1000W	All MRS				YES				FULL		Allow Auto Reorder	
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3		IMAGER	F1000W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209

Proposal 5018 - Observation 13 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 66 to 110 Degrees (V3 66.0 to 110.0) Sequence Observations 13, 14, Non-interruptible
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Proposal 5018 - Observation 14 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 14: PKS0745-OFF												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observation For: [PKS0745 (Obs 13)]												
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		
	(14)	PKS0745-19-OFF	RA: 07 47 33.8094 (116.8908725d) Dec: -19 16 52.34 (-19.28121d) Equinox: J2000				Epoch of Position: 2000						
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging				Imager Subarray		Grating Wheel Direction	
	F1000W	All MRS				YES				FULL		Allow Auto Reorder	
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3		IMAGER	F1000W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209

Proposal 5018 - Observation 14 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 66 to 110 Degrees (V3 66.0 to 110.0) Sequence Observations 13, 14, Non-interruptible
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Proposal 5018 - Observation 15 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 15: NGC1275												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observations:[NGC1275-OFF (Obs 16)]												
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		
	(15)	NGC1275	RA: 03 19 48.1601 (49.9506671d) Dec: +41 30 42.11 (41.51170d) Equinox: J2000					Epoch of Position: 2000					
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
	F1000W	All MRS				YES			FULL		Allow Auto Reorder		
Dithers	#	Dither Type					Optimized For			Direction			
	1	4-Point					EXTENDED SOURCE			NEGATIVE			
	2	2-Point					EXTENDED SOURCE			NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	2		IMAGER	F770W	FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	3		IMAGER	F1000W	FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	175209
	3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	175209

Proposal 5018 - Observation 15 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 68 to 104 Degrees (V3 68.0 to 104.0) Sequence Observations 15, 16, Non-interruptible
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Proposal 5018 - Observation 16 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 16: NGC1275-OFF												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observation For: [NGC1275 (Obs 15)]												
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		
	(16)	NGC1275-OFF	RA: 03 19 51.7292 (49.9655383d)				Epoch of Position: 2000						
			Dec: +41 31 44.33 (41.52898d)										
			Equinox: J2000										
Acquisition	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray			Grating Wheel Direction		
	F1000W	All MRS			YES			FULL			Allow Auto Reorder		
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				EXTENDED SOURCE				NEGATIVE			
	2	2-Point				EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	1	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	1	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	2		IMAGER	F770W	FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	3		IMAGER	F1000W	FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	3	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 2	2	2	277.504	175209
	3	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 2	2	2	277.504	175209

Proposal 5018 - Observation 16 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 68 to 104 Degrees (V3 68.0 to 104.0) Sequence Observations 15, 16, Non-interruptible
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Proposal 5018 - Observation 17 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 17: A1068												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observations:[A1068-OFF (Obs 18)]												
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		
	(17)	A1068	RA: 10 40 44.5000 (160.1854167d)					Epoch of Position: 2000					
			Dec: +39 57 11.00 (39.95306d)										
			Equinox: J2000										
Acquisition	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
	F1000W	All MRS				YES			FULL		Allow Auto Reorder		
Dithers	#	Dither Type					Optimized For			Direction			
	1	4-Point					EXTENDED SOURCE			NEGATIVE			
	2	2-Point					EXTENDED SOURCE			NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3		IMAGER	F1130W	FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 1	4	4	1054.515	175209

Proposal 5018 - Observation 17 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 109 to 140 Degrees (V3 109.0 to 140.0) Sequence Observations 17, 18, Non-interruptible
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Proposal 5018 - Observation 18 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Observation	Proposal 5018, Observation 18: A1068-OFF												Mon Nov 25 14:00:11 GMT 2024
	Diagnostic Status: Warning												
	Observing Template: MIRI Medium Resolution Spectroscopy												
	Background Observation For: [A1068 (Obs 17)]												
Diagnos	(Visit 18:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates					Targ. Coord. Corrections			Miscellaneous		
	(18)	A1068-OFF	RA: 10 40 50.8869 (160.2120288d) Dec: +39 57 23.71 (39.95659d) Equinox: J2000					Epoch of Position: 2000					
	Comments: Category=Clusters of Galaxies Description=[Brightest cluster galaxies]												
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel				Simultaneous Imaging			Imager Subarray		Grating Wheel Direction		
	F1000W	All MRS				YES			FULL		Allow Auto Reorder		
Dithers	#	Dither Type					Optimized For			Direction			
	1	4-Point					EXTENDED SOURCE			NEGATIVE			
	2	2-Point					EXTENDED SOURCE			NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		IMAGER	F560W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	1	SHORT(A)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2		IMAGER	F770W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	2	MEDIUM(B)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3		IMAGER	F1130W	FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSLONG		FASTR1	95	1	1	Dither 2	2	2	527.258	175209
	3	LONG(C)	MRSSHORT		FASTR1	95	1	1	Dither 2	2	2	527.258	175209

Proposal 5018 - Observation 18 - Feeding the Black-Holes : From cooling filaments to H2 accretion disks

Special Requirements	Aperture PA Range 109 to 140 Degrees (V3 109.0 to 140.0) Sequence Observations 17, 18, Non-interruptible
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