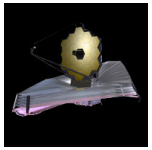

3435 - The JWST Whirlpool Galaxy Treasury

Cycle: 2, Proposal Category: GO

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OBSERVATIONS

Folder	***Observation***	***Label***	***Observing Template***	***Science Target***
Observation Folder				
	1	NGC5194-NIRMCam	NIRCam Imaging	(2) M51-NIRCAM

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	13	NGC5194-NIRMCam-justSkipped	NIRCam Imaging	(16) M51-NIRCAM-justSkipped
	999	NGC5194-NIRMCam-justSkipped-june25	NIRCam Imaging	(17) M51-NIRCAM-justSkipped-june25
	2	NGC5194-MIRI	MIRI Imaging	(1) M51-MIRI
	3	NGC5194-MIRI-bkg	MIRI Imaging	(3) M51-MIRI-OFF
	4	NIRSPEC Arm 1 Medium	NIRSpec IFU Spectroscopy	(5) M51-NE-AURORAL
	5	NIRSPEC Arm 2 Medium	NIRSpec IFU Spectroscopy	(9) M51-SE-AURORAL
	12	NIRSPEC Arm 2 Medium Update	NIRSpec IFU Spectroscopy	(14) M51-SE-AURORAL-updated
	6	NIRSPEC Arm 3 Medium	NIRSpec IFU Spectroscopy	(10) M51-N-AURORAL
	7	MIRI IFU off	MIRI Medium Resolution Spectroscopy	(8) M51-MIRI-SPEC-BKG
	8	MIRI IFU Arm 1	MIRI Medium Resolution Spectroscopy	(6) M51-NE-AURORAL-MIRI
	9	MIRI IFU Arm 2	MIRI Medium Resolution Spectroscopy	(15) M51-SE-AURORAL-MIRI-updated
	10	MIRI IFU Arm 3	MIRI Medium Resolution Spectroscopy	(13) M51-N-AURORAL-MIRI
	11	MIRI IFU off	MIRI Medium Resolution Spectroscopy	(8) M51-MIRI-SPEC-BKG

ABSTRACT

Characterizing the interplay between the interstellar medium (ISM) and star formation (SF) on small scales (<50pc) and connecting it to the global galaxy properties is crucial to understand galaxy evolution. A unique target for such a study is the iconic Whirlpool Galaxy M51: its almost face-on orientation, outstanding ancillary data, and rich variety of ISM environments is ideal to address fundamental questions about SF, gas, dust, and feedback. JWST will provide crucial missing information about the small-scale dusty ISM and embedded SF. We propose wide-field imaging of M51 in a thorough set of narrow-, medium-, and wide-band filters covering key ISM emission lines, dust features, and continuum. We also propose three spectral maps cutting across different regions of the spiral arm structure. This efficient 14-band imaging and spectroscopy program will create an indispensable dataset, ideally suited to 1) constrain the life cycle of star-forming regions; 2) quantify the dust production rate; 3) and characterize the evolution of small dust grains. We will also produce for the JWST community science-ready catalogs, photometric and spectroscopic mosaics, and extracted line maps in addition to optimized recipes and filter combinations for continuum removal in narrow-band filters. This comprehensive Treasury survey of M51 will be an invaluable resource for the entire extragalactic community.

OBSERVING DESCRIPTION

We will observe M51 with NIRCAM and MIRI imaging and NIRSpec and MIRI IFU mapping.

We will obtain imaging mosaics of the main disk of M51 using NIRCam and MIRI. We will also target 4- pointing (~3"x12") spectral "strips" for three regions toward spiral arms, with NIRSpec and MIRI IFUs. We will obtain simultaneous observations with the MIRI imager during the MIRI IFU observations.

The NIRCam mosaic will be executed for 8 filters in total: F164N, F212N, F140M, F182M, F210M, F300M, F360M, F430M. MIRI mosaics will utilize 6 filters (F1000W, F1130W, F1280W, F1500W, F1800W, F2100W).

We will use the the G140M, G235M, and G395M gratings for NIRSpec observations. For MIRI IFU observations we will use all 3 grating settings of MRS.

Read-out patterns will be BRIGHT2 (NIRCam), NRSIRSRAPID2 (NIRSpec), and FASTR1 (MIRI imaging), and SLOWR1 (MIRI MRS).

To assess leakage through the MSA slits we will obtain leakcals for every grating setting, position, and dither of the NIRSpec strips. Spectral offs will be obtained for the MIRI IFUs towards an off-galaxy position. Imaging offs for MIRI will be obtained with a single pointing towards the off-galaxy position.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	M51-MIRI	RA: 13 29 52.1786 (202.4674108d) Dec: +47 11 59.97 (47.19999d) Equinox: J2000	Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Spiral galaxies]* *Extended=YES*				
(2)	M51-NIRCAM	RA: 13 29 52.1786 (202.4674108d) Dec: +47 11 59.97 (47.19999d) Equinox: J2000	Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Spiral galaxies]* *Extended=YES*				
(3)	M51-MIRI-OFF	RA: 13 30 34.5900 (202.6441250d) Dec: +47 07 58.00 (47.13278d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Spiral galaxies]*				
(5)	M51-NE-AURORAL	RA: 13 30 1.4020 (202.5058417d) Dec: +47 12 51.36 (47.21427d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Spiral arms]*				
(6)	M51-NE-AURORAL-MIRI	RA: 13 30 1.4020 (202.5058417d) Dec: +47 12 51.36 (47.21427d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Spiral arms]*				
(8)	M51-MIRI-SPEC-BKG	RA: 13 29 24.5017 (202.3520904d) Dec: +47 17 58.40 (47.29956d) Equinox: J2000	Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Spiral galaxies]* *Extended=YES*				
(9)	M51-SE-AURORAL	RA: 13 29 44.2000 (202.4341667d) Dec: +47 10 23.58 (47.17322d) Equinox: J2000		
Comments: *Category=Galaxy* *Description=[Spiral arms]*				

(10)	M51-N-AURORAL	RA: 13 29 55.7000 (202.4820833d) Dec: +47 11 45.24 (47.19590d) Equinox: J2000	
Comments: *Category=Galaxy* *Description=[Spiral arms]*			
(12)	M51-SE-AURORAL-MIRI	RA: 13 29 44.2000 (202.4341667d) Dec: +47 10 23.58 (47.17322d) Equinox: J2000	
Comments: *Category=Galaxy* *Description=[Spiral arms]*			
(13)	M51-N-AURORAL-MIRI	RA: 13 29 55.7000 (202.4820833d) Dec: +47 11 45.24 (47.19590d) Equinox: J2000	
Comments: *Category=Galaxy* *Description=[Spiral arms]*			
(14)	M51-SE-AURORAL-updated	RA: 13 29 44.1176 (202.4338233d) Dec: +47 10 23.98 (47.17333d) Equinox: J2000	
Comments: *Category=Galaxy* *Description=[Spiral arms]*			
(15)	M51-SE-AURORAL-MIRI-updated	RA: 13 29 44.1176 (202.4338233d) Dec: +47 10 23.98 (47.17333d) Equinox: J2000	
Comments: *Category=Galaxy* *Description=[Spiral arms]*			
(16)	M51-NIRCAM-justSkipped	RA: 13 29 51.6638 (202.4652658d) Dec: +47 11 46.80 (47.19633d) Equinox: J2000	Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Spiral galaxies]* *Extended=YES*			
(17)	M51-NIRCAM-justSkipped-june25	RA: 13 29 51.4187 (202.4642446d) Dec: +47 11 45.05 (47.19585d) Equinox: J2000	Epoch of Position: 2015.5
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Spiral galaxies]* *Extended=YES*			

Observation

Proposal 3435, Observation 1: NGC5194-NIRMCam Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

Diagnostics

(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:5) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:6) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:7) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:8) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:9) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 1:10) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	M51-NIRCAM	RA: 13 29 52.1786 (202.4674108d) Dec: +47 11 59.97 (47.19999d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Spiral galaxies]
Extended=YES

Template

Module	Subarray	Target Placement
ALL	FULL	Module Gap

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	FULLBOX	4TIGHT	STANDARD		2

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F250M	BRIGHT2	4	1	8	8	687.153	145461.5
2	F212N	F360M	BRIGHT2	5	1	8	8	858.942	145461.4
3	F140M	F250M	BRIGHT2	4	1	8	8	687.153	
4	F182M	F360M	BRIGHT2	4	1	8	8	687.153	
5	F210M	F430M	BRIGHT2	4	1	8	8	687.153	

Special Requirements	
	Sequence Visits within 53.0 Days Aperture PA Range 134.92542306 to 135.92542306 Degrees (V3 135.0 to 136.0) Visits Same PA Same V3 PA 1, 2 (Aperture PAs differ)

Observation

Proposal 3435, Observation 13: NGC5194-NIRMCam-justSkipped Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

Diagnostics

(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 13:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(16)	M51-NIRCAM-justSkipped	RA: 13 29 51.6638 (202.4652658d) Dec: +47 11 46.80 (47.19633d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Spiral galaxies]
Extended=YES

Template

Module	Subarray	Target Placement
ALL	FULL	Module Gap

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	2	10.0	42.105	0.0	0.0	DEFAULT

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEX	2	STANDARD		2

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F250M	BRIGHT2	4	1	4	4	343.577	145461.5
2	F212N	F360M	BRIGHT2	5	1	4	4	429.471	145461.4
3	F182M	F360M	BRIGHT2	4	1	4	4	343.577	
4	F210M	F430M	BRIGHT2	4	1	4	4	343.577	

Special Requirements	
	Sequence Visits within 53.0 Days Aperture PA Range 134.92542306 to 135.92542306 Degrees (V3 135.0 to 136.0) Visits Same PA

Observation

Proposal 3435, Observation 999: NGC5194-NIRMCam-justSkipped-june25 Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

Diagnostics

(Visit 999:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 999:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(17)	M51-NIRCAM-justSkipped-june25	RA: 13 29 51.4187 (202.4642446d) Dec: +47 11 45.05 (47.19585d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Spiral galaxies]
Extended=YES

Template

Module	Subarray	Target Placement
ALL	FULL	Module Gap

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	2	10.0	42.105	0.0	0.0	DEFAULT

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEX	2	STANDARD		2

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F250M	BRIGHT2	4	1	4	4	343.577	145461.5
2	F212N	F360M	BRIGHT2	5	1	4	4	429.471	145461.4
3	F182M	F360M	BRIGHT2	4	1	4	4	343.577	
4	F210M	F430M	BRIGHT2	4	1	4	4	343.577	

Special Requirements	
	Sequence Visits within 53.0 Days Aperture PA Range 127.92542306 to 135.92542306 Degrees (V3 128.0 to 136.0) Visits Same PA

Observation

Proposal 3435, Observation 2: NGC5194-MIRI Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Background Observations:[NGC5194-MIRI-bkg (Obs 3)]

Diagnostics

(NGC5194-MIRI (Obs 2)) Warning (Form): Target requiring background exposure selected for template that doesn't require background exposure

(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 2:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 2:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 2:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 2:5) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(NGC5194-MIRI (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	M51-MIRI	RA: 13 29 52.1786 (202.4674108d) Dec: +47 11 59.97 (47.19999d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Spiral galaxies]
Extended=YES

Template

Subarray
FULL

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	5	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	10	4		6	1			DEFAULT

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1000W	FASTR1	20	1	1	Dither 1	4	4	222.003	145461.19
2	F1130W	FASTR1	20	1	1	Dither 1	4	4	222.003	145461.20
3	F1280W	FASTR1	20	1	1	Dither 1	4	4	222.003	145461.21
4	F1500W	FASTR1	20	1	1	Dither 1	4	4	222.003	145461.22
5	F1800W	FASTR1	20	1	1	Dither 1	4	4	222.003	145461.23
6	F2100W	FASTR1	20	1	1	Dither 1	4	4	222.003	145461.24

Special Requirements	
	Group Visits within 53.0 Days Visits Same PA Sequence Observations 2, 3, Non-interruptible Same V3 PA 1, 2 (Aperture PAs differ) Same Aperture PA 2, 3

Observation

Proposal 3435, Observation 3: NGC5194-MIRI-bkg Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Background Observation For: [NGC5194-MIRI (Obs 2)]

Coordinated Parallel Template(s): NIRCam Imaging

Diagnostics

(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(NGC5194-MIRI-bkg (Obs 3)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	M51-MIRI-OFF	RA: 13 30 34.5900 (202.6441250d) Dec: +47 07 58.00 (47.13278d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral galaxies]

Template

MIRI Imaging	NIRCam Imaging
Subarray: FULL	Module: ALL Subarray: FULL

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	10	4		6	1			DEFAULT

Spectral Elements

MIRI Imaging	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F1000W	FASTR1	35	1	1	Dither 1	4	4	388.506	
2	F1130W	FASTR1	35	1	1	Dither 1	4	4	388.506	
3	F1280W	FASTR1	35	1	1	Dither 1	4	4	388.506	
4	F1500W	FASTR1	35	1	1	Dither 1	4	4	388.506	
5	F1800W	FASTR1	35	1	1	Dither 1	4	4	388.506	
6	F2100W	FASTR1	35	1	1	Dither 1	4	4	388.506	

Spectral Elements

NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F250M	SHALLOW2	2	1	4	4	300.63	
2	F212N	F360M	SHALLOW2	2	1	4	4	300.63	
3	F140M	F250M	SHALLOW2	2	1	4	4	300.63	
4	F182M	F360M	SHALLOW2	2	1	4	4	300.63	
5	F210M	F430M	SHALLOW2	2	1	4	4	300.63	
6	F212N	F250M	SHALLOW2	2	1	4	4	300.63	

Special Requirements	
	No Parallel Attachments Sequence Observations 2, 3, Non-interruptible Same Aperture PA 2, 3

Observation

Proposal 3435, Observation 4: NIRSPEC Arm 1 Medium Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 4:1) Warning (Form): Data Excess over lower threshold

(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	M51-NE-AURORAL	RA: 13 30 1.4020 (202.5058417d) Dec: +47 12 51.36 (47.21427d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Template

TA Method	HFF Readout Mode
NONE	false

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	4	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	4	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G140M/F100LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
2	G140M/F100LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
3	G235M/F170LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
4	G235M/F170LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
5	G395M/F290LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
6	G395M/F290LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	

Special Requirements	Aperture PA Range 330 to 340 Degrees (V3 191.02835083 to 201.02835083)

Observation

Proposal 3435, Observation 5: NIRSPEC Arm 2 Medium Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 5:1) Warning (Form): Data Excess over lower threshold

(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(9)	M51-SE-AURORAL	RA: 13 29 44.2000 (202.4341667d) Dec: +47 10 23.58 (47.17322d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Template

TA Method	HFF Readout Mode
NONE	false

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	4	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	4	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G140M/F100LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
2	G140M/F100LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
3	G235M/F170LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
4	G235M/F170LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
5	G395M/F290LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
6	G395M/F290LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	

Special Requirements	Aperture PA Range 330 to 340 Degrees (V3 191.02835083 to 201.02835083)

Observation

Proposal 3435, Observation 12: NIRSPEC Arm 2 Medium Update Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 12:1) Warning (Form): Data Excess over lower threshold

(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(14)	M51-SE-AURORAL-updated	RA: 13 29 44.1176 (202.4338233d) Dec: +47 10 23.98 (47.17333d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Template

TA Method	HFF Readout Mode
NONE	false

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
4	1	20.0	15.0	-25.0	0.0	DEFAULT

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	4	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G140M/F100LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
2	G140M/F100LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
3	G235M/F170LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
4	G235M/F170LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
5	G395M/F290LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
6	G395M/F290LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	

Special Requirements	Aperture PA Range 265.97164917 to 265.97164917 Degrees (V3 127.0 to 127.0)

Observation

Proposal 3435, Observation 6: NIRSPEC Arm 3 Medium Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Diagnostics

(Visit 6:1) Warning (Form): Data Excess over lower threshold

(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(10)	M51-N-AURORAL	RA: 13 29 55.7000 (202.4820833d) Dec: +47 11 45.24 (47.19590d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Template

TA Method	HFF Readout Mode
NONE	false

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	4	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	CYCLING	SMALL	1	4	

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G140M/F100LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
2	G140M/F100LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
3	G235M/F170LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
4	G235M/F170LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	
5	G395M/F290LP	NRSIRS2RAPID	13	1	false	true	NONE	4	4	816.978	
6	G395M/F290LP	NRSIRS2RAPID	13	1	true	true	NONE	4	4	816.978	

Special Requirements	Aperture PA Range 330 to 340 Degrees (V3 191.02835083 to 201.02835083)

Observation

Proposal 3435, Observation 7: MIRI IFU off Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [MIRI IFU Arm 1 (Obs 8), MIRI IFU Arm 2 (Obs 9), MIRI IFU Arm 3 (Obs 10)]

Diagnostics

(MIRI IFU off (Obs 7)) Warning (Form): Imager Filter overlap.

(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(8)	M51-MIRI-SPEC-BKG	RA: 13 29 24.5017 (202.3520904d) Dec: +47 17 58.40 (47.29956d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Spiral galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
FND	All MRS	YES	FULL	Allow Auto Reorder

Dithers

#	Dither Type	Optimized For	Direction
1	4-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	F1280W	FASTR1	20	1	1	Dither 1	4	4	222.003	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	20	1	1	Dither 1	4	4	222.003	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F770W	FASTR1	20	1	1	Dither 1	4	4	222.003	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	Sequence Observations 7, 8, 9, 10, 11, Non-interruptible

Observation

Proposal 3435, Observation 8: MIRI IFU Arm 1 Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[MIRI IFU off (Obs 7), MIRI IFU off (Obs 11)]

Comments: The dither pattern is not optimal for F2550W as indicated by the "Imager Filter overlap" warning. While the imaging might be better at shorter wavelengths, we have strong interest in the team to use F2550W and these parallel observations provide the depth to get reasonable detections at those wavelengths so we will continue with this filter.

Diagnostics

(MIRI IFU Arm 1 (Obs 8)) Warning (Form): Imager Filter overlap.

(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(6)	M51-NE-AURORAL-MIRI	RA: 13 30 1.4020 (202.5058417d) Dec: +47 12 51.36 (47.21427d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
F560W	All MRS	YES	FULL	Allow Auto Reorder

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	4	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Optimized For	Direction
1	4-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	F1280W	FASTR1	20	1	1	Dither 1	4	4	222.003	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	20	1	1	Dither 1	4	4	222.003	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F770W	FASTR1	20	1	1	Dither 1	4	4	222.003	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	
	Aperture PA Range 140 to 150 Degrees (V3 140.0 to 150.0) Sequence Observations 7, 8, 9, 10, 11, Non-interruptible

Observation

Proposal 3435, Observation 9: MIRI IFU Arm 2 Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[MIRI IFU off (Obs 7), MIRI IFU off (Obs 11)]

Comments: The dither pattern is not optimal for F2550W as indicated by the "Imager Filter overlap" warning. While the imaging might be better at shorter wavelengths, we have strong interest in the team to use F2550W and these parallel observations provide the depth to get reasonable detections at those wavelengths so we will continue with this filter.

Diagnostics

(MIRI IFU Arm 2 (Obs 9)) Warning (Form): Imager Filter overlap.

(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(15)	M51-SE-AURORAL-MIRI-updated	RA: 13 29 44.1176 (202.4338233d) Dec: +47 10 23.98 (47.17333d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
FND	All MRS	YES	FULL	Allow Auto Reorder

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	4	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Optimized For	Direction
1	4-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	F1280W	FASTR1	20	1	1	Dither 1	4	4	222.003	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	20	1	1	Dither 1	4	4	222.003	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F770W	FASTR1	20	1	1	Dither 1	4	4	222.003	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	
	Aperture PA Range 140 to 150 Degrees (V3 140.0 to 150.0) Sequence Observations 7, 8, 9, 10, 11, Non-interruptible

Observation

Proposal 3435, Observation 10: MIRI IFU Arm 3 Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[MIRI IFU off (Obs 7), MIRI IFU off (Obs 11)]

Comments: The dither pattern is not optimal for F2550W as indicated by the "Imager Filter overlap" warning. While the imaging might be better at shorter wavelengths, we have strong interest in the team to use F2550W and these parallel observations provide the depth to get reasonable detections at those wavelengths so we will continue with this filter.

Diagnostics

(MIRI IFU Arm 3 (Obs 10)) Warning (Form): Imager Filter overlap.

(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(13)	M51-N-AURORAL-MIRI	RA: 13 29 55.7000 (202.4820833d) Dec: +47 11 45.24 (47.19590d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Spiral arms]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
FND	All MRS	YES	FULL	Allow Auto Reorder

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift (deg)	Column shift (deg)	Tile Order
1	4	10.0	10.0	0.0	0.0	DEFAULT

Dithers

#	Dither Type	Optimized For	Direction
1	4-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	F1280W	FASTR1	20	1	1	Dither 1	4	4	222.003	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	20	1	1	Dither 1	4	4	222.003	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F770W	FASTR1	20	1	1	Dither 1	4	4	222.003	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	
	Aperture PA Range 140 to 150 Degrees (V3 140.0 to 150.0) Sequence Observations 7, 8, 9, 10, 11, Non-interruptible

Observation

Proposal 3435, Observation 11: MIRI IFU off Thu Jun 05 22:00:15 GMT 2025

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [MIRI IFU Arm 1 (Obs 8), MIRI IFU Arm 2 (Obs 9), MIRI IFU Arm 3 (Obs 10)]

Diagnostics

(MIRI IFU off (Obs 11)) Warning (Form): Imager Filter overlap.

(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(8)	M51-MIRI-SPEC-BKG	RA: 13 29 24.5017 (202.3520904d) Dec: +47 17 58.40 (47.29956d) Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Spiral galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray	Grating Wheel Direction
FND	All MRS	YES	FULL	Allow Auto Reorder

Dithers

#	Dither Type	Optimized For	Direction
1	4-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	F1280W	FASTR1	20	1	1	Dither 1	4	4	222.003	
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2		IMAGER	F1000W	FASTR1	20	1	1	Dither 1	4	4	222.003	
2	MEDIUM(B)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
3		IMAGER	F770W	FASTR1	20	1	1	Dither 1	4	4	222.003	
3	SHORT(A)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
3	SHORT(A)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	

Special Requirements	Sequence Observations 7, 8, 9, 10, 11, Non-interruptible