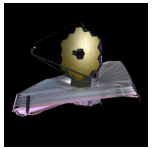

1701 - Dissecting the Prototypical Starbursts NGC 253 and M 82 and Their Cool Galactic Winds

Cycle: 1, Proposal Category: GO

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OBSERVATIONS

Folder	***Observation***	***Label***	***Observing Template***	***Science Target***
NGC253 MIRI Imaging				
	1	Outflow-Imaging NGC 253	MIRI Imaging	(24) NGC-253-MIRIMOS
	2	Center NGC253	MIRI Imaging	(21) NGC-253-IM-CENTER
NGC253 MIRI MRS				
	11	MRS-SSCs-EAST	MIRI Medium Resolution Spectroscopy	(3) NGC-253-MRS-EAST
	12	MRS-SSCs-CENTER	MIRI Medium Resolution Spectroscopy	(4) NGC-253-MRS-CENTER
	13	MRS-SSCs-WEST	MIRI Medium Resolution Spectroscopy	(5) NGC-253-MRS-WEST
	14	MRS-SSCs-SOUTHWEST	MIRI Medium Resolution Spectroscopy	(25) NGC-253-MRS-SOUTHWEST
	15	Background: MRS-SSCs-BACKGROUND	MIRI Medium Resolution Spectroscopy	(6) NGC-253-BKGD
NGC253 NIRCam Imaging				
	21	NGC253 NIRCam Wind	NIRCam Imaging	(21) NGC-253-IM-CENTER
	53	NGC253 NIRCam Wind repeat obs 21	NIRCam Imaging	(21) NGC-253-IM-CENTER
	22	NGC253 NIRCam Center	NIRCam Imaging	(21) NGC-253-IM-CENTER

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	54	NGC253 NIRCam Center repeat obs 22	NIRCam Imaging	(21) NGC-253-IM-CENTER
M82 MIRI Imaging				
	31	Center M82	MIRI Imaging	(7) M-82-IM-CENTER
	32	Outflow-Imaging M82	MIRI Imaging	(7) M-82-IM-CENTER
M82 MIRI MRS				
	41	MRS-SSCs-EAST	MIRI Medium Resolution Spectroscopy	(12) M-82-MRS-EAST
	42	MRS-SSCs-far-EAST	MIRI Medium Resolution Spectroscopy	(26) M-82-MRS-FAR-EAST
	43	MRS-SSCs-CENTER-EAST	MIRI Medium Resolution Spectroscopy	(13) M-82-MRS-CENTER-EAST
	44	MRS-SSCs-WEST	MIRI Medium Resolution Spectroscopy	(14) M-82-MRS-WEST
	45	MRS-SSCs-CENTER-WEST	MIRI Medium Resolution Spectroscopy	(15) M-82-MRS-CENTER-WEST
	46	MRS-SSCs-CENTER-NORTH	MIRI Medium Resolution Spectroscopy	(16) M-82-MRS-CENTER-NORTH
	47	MRS-SSCs-CENTER-SOUTH	MIRI Medium Resolution Spectroscopy	(17) M-82-MRS-CENTER-SOUTH
	48	Background: MRS-SSCs-BACKGROUND	MIRI Medium Resolution Spectroscopy	(18) M-82-BKGD
M82 NIRCam Imaging				
	51	M82 NIRCam Wind	NIRCam Imaging	(7) M-82-IM-CENTER
	52	M82 NIRCam Center	NIRCam Imaging	(7) M-82-IM-CENTER

ABSTRACT

Starbursts, their galactic winds, and the physical mechanisms regulating them, are key to understand the evolution of galaxies through cosmic time. We propose to use the unparalleled capabilities of JWST to perform imaging and spectroscopic observations of NGC253 and M82, the nearest archetypal examples of the starburst phenomenon and the hosts of notable starburst-driven multi-phase winds. We will obtain MIRI MRS spectroscopy of their cores and MIRI/NIRCam imaging of their multi-phase outflows. Infrared and millimeter/radio imaging have revealed the presence of super star clusters (SSCs) in both objects -- the engines of the starbursts -- the youngest of which are still in formation and highly obscured. MIRI MRS spectroscopy of these starburst regions is our best tool to study these SSCs, enabling determination of their physical conditions, stellar populations, and feedback on their surroundings. We will also obtain MIRI and NIRCam imaging to trace dust and shocks in the cool, mass-dominant component of the outflowing gas through PAHs bands and band-ratios and the [FeII] and H2 v=1-0 transitions. At the unprecedented

spatial resolution enabled by JWST, these data will reveal the details of the massive stellar clusters, the physics of the launching mechanisms of the cool wind, and the evolution of the neutral and molecular material as it is entrained by the hot galactic wind. The comparison of NGC253 (a nuclear bar-driven starburst in a large spiral galaxy) with M82 (an interaction-driven starburst in a dwarf galaxy) will allow us to characterize and compare the physics of SSC formation and wind launching in two distinctly different starburst environments.

OBSERVING DESCRIPTION

For both galaxies we carry out 3 types of observations:

1) MRS spectroscopy covering the area of the starburst and nascent clusters as determined from mm-wave spectroscopy and IR observations, as well as the base of the molecular wind. This requires 4 pointings in NGC253 and 7 pointings in M82. We enable simultaneous MIRI imaging in the same filters as described below. IRAC 8 um images have been used to select background positions which avoid bright emission but are still close to the galaxies. MRS and MIRI imager observations are sequenced, sharing a single MIRI MRS+Imager background.

2) MIRI imaging in 1130W and 770W, with 560W as the "off PAH" filter for continuum subtraction. Full array observations are obtained along the outflow, in a 4x1 mosaic with PA constraints, as the most efficient way of covering the required area. The PA constraints are designed to allow a reasonably wide scheduling window (1 and 1.5 months, respectively). The central region corresponding to the starburst is imaged in a second observation with the SUB128 sub-array in the same filters, to avoid saturation problems on the starburst. The background observations for MIRI are obtained with the simultaneous imaging turned on during the MRS background. For this reason the MRS-MRS background, and MIRI imaging are sequenced.

3) NIRCam imaging in the F164N, F212N, and F335M ([FeII], H2 v=1-0, and 3.3 um PAH) with F140M, F250M, and F360M as "continuum" filters bracketing the observations and enabling continuum color corrections. Full array observations are obtained along the outflow, in a 4x1 mosaic with PA constraints, as the most efficient way of covering the required area. The PA constraints are designed to allow a reasonably wide scheduling window (1 and 1.5 months, respectively). The central region corresponding to the starburst is imaged in a second unconstrained observation with the SUB640 array and RAPID readout to avoid saturation problems. Care was taken to keep the data rate for the large mosaic within the guideline of 0.68 MB/s using a MEDIUM8 readout pattern. No background observation is needed for NIRCam.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	NGC-253-MRS-EAST	RA: 00 47 33.2423 (11.8885096d) Dec: -25 17 16.04 (-25.28779d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Disk galaxies, Starburst galaxies]* *Extended=YES*				
(4)	NGC-253-MRS-CENTER	RA: 00 47 33.0653 (11.8877721d) Dec: -25 17 18.40 (-25.28844d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Disk galaxies, Starburst galaxies]* *Extended=YES*				
(5)	NGC-253-MRS-WEST	RA: 00 47 32.8796 (11.8869983d) Dec: -25 17 20.69 (-25.28908d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Disk galaxies, Starburst galaxies]* *Extended=YES*				
(6)	NGC-253-BKGD	RA: 00 48 1.3315 (12.0055479d) Dec: -25 22 52.15 (-25.38115d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Calibration* *Description=[Telescope/sky background]* *Extended=NO*				
(7)	M-82-IM-CENTER	RA: 09 55 51.5949 (148.9649788d) Dec: +69 40 45.78 (69.67938d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Starburst galaxies]* *Extended=YES*				
(12)	M-82-MRS-EAST	RA: 09 55 53.7509 (148.9739621d) Dec: +69 40 49.48 (69.68041d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Starburst galaxies]* *Extended=YES*				
(13)	M-82-MRS-CENTER-EAST	RA: 09 55 52.1463 (148.9672762d) Dec: +69 40 47.46 (69.67985d) Equinox: J2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Starburst galaxies]* *Extended=YES*				

(14)	M-82-MRS-WEST	RA: 09 55 49.9046 (148.9579358d) Dec: +69 40 42.48 (69.67847d) Equinox: J2000

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

(15)	M-82-MRS-CENTER-WEST	RA: 09 55 50.4903 (148.9603762d) Dec: +69 40 43.87 (69.67885d) Equinox: J2000

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

(16)	M-82-MRS-CENTER-NORTH	RA: 09 55 51.3064 (148.9637767d) Dec: +69 40 45.97 (69.67944d) Equinox: J2000

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

(17)	M-82-MRS-CENTER-SOUTH	RA: 09 55 52.9583 (148.9706596d) Dec: +69 40 48.22 (69.68006d) Equinox: J2000

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

(18)	M-82-BKGD	RA: 09 50 43.0000 (147.6791667d) Dec: +69 49 50.00 (69.83056d) Equinox: J2000

Comments: Empty region selected based on WISE W4/W3 images and HI observations
Category=Galaxy
Description=[Starburst galaxies]
Extended=NO

(21)	NGC-253-IM-CENTER	RA: 00 47 33.1721 (11.8882171d) Dec: -25 17 16.56 (-25.28793d) Equinox: J2000

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

(24)	NGC-253-MIRIMOS	RA: 00 47 33.0654 (11.8877725d) Dec: -25 17 17.52 (-25.28820d) Equinox: J2000

Comments:
Category=Galaxy
Description=[Starburst galaxies]

	(25)	NGC-253-MRS-SOUTHWEST	RA: 00 47 32.8884 (11.8870350d) Dec: -25 17 24.64 (-25.29018d) Equinox: J2000
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Galaxy* *Description=[Disk galaxies, Starburst galaxies]* *Extended=YES*		
	(26)	M-82-MRS-FAR-EAST	RA: 09 55 54.3272 (148.9763633d) Dec: +69 40 51.65 (69.68101d) Equinox: J2000
	Comments: *Category=Galaxy* *Description=[Starburst galaxies]* *Extended=YES*		

Observation

Proposal 1701, Observation 1: Outflow-Imaging NGC253

Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Comments: full array imaging along the minor axis/outflow axis to measure PAH bands in the outflow. PA is constrained to optimize mosaic along outflow axis. Observations will use as background the imager data acquired with the MRS background, so they are linked in a non-interruptable sequence.

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.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(24)	NGC-253-MIRIMOS	RA: 00 47 33.0654 (11.8877725d) Dec: -25 17 17.52 (-25.28820d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Starburst galaxies]

Template

Subarray
FULL

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift	Column shift	Tile Order
1	4	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	1	4		5	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	F560W	FASTR1	60	1	1	Dither 1	4	4	666.01	60961
2	F770W	FASTR1	60	1	1	Dither 1	4	4	666.01	60961
3	F1130W	FASTR1	60	1	1	Dither 1	4	4	666.01	60961

Special Requirements

Group Visits within 53.0 Days
Aperture PA Range 40 to 60 Degrees (V3 35.16455103 to 55.16455103)
Visits Same PA

Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 2: Center NGC253

Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Comments: fast subarray imaging in the center of the starburst to prevent saturation effects. Observations will use as background the imager data acquired with the MRS background, so they are linked in a non-interruptable sequence.

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
(21)	NGC-253-IM-CENTER	RA: 00 47 33.1721 (11.8882171d) Dec: -25 17 16.56 (-25.28793d) Equinox: J2000		

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

Template

Subarray
SUB128

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift	Column shift	Tile Order
2	2	20.0	20.0	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	4-Point-Sets				1	1	EXTENDED SOURCE	POSITIVE	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	F560W	FASTR1	5	1	1	Dither 1	4	4	2.381	60961
2	F770W	FASTR1	5	1	1	Dither 1	4	4	2.381	60961
3	F1130W	FASTR1	5	1	1	Dither 1	4	4	2.381	60961

Special Requirements	Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 11: MRS-SSCs-EAST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 15)]

Comments: covering submm clusters in starburst center. Observations will use MRS background observation, so they are linked in a non-interruptable sequence.

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	NGC-253-MRS-EAST	RA: 00 47 33.2423 (11.8885096d) Dec: -25 17 16.04 (-25.28779d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963

Special Requirements	Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 12: MRS-SSCs-CENTER Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 15)]

Comments: covering submm clusters in starburst center. Observations will use MRS background observation, so they are linked in a non-interruptable sequence.

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	NGC-253-MRS-CENTER	RA: 00 47 33.0653 (11.8877721d) Dec: -25 17 18.40 (-25.28844d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963

Special Requirements	Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 13: MRS-SSCs-WEST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 15)]

Comments: covering submm clusters in starburst center. Observations will use MRS background observation, so they are linked in a non-interruptable sequence.

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
(5)	NGC-253-MRS-WEST	RA: 00 47 32.8796 (11.8869983d) Dec: -25 17 20.69 (-25.28908d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963

Special Requirements	Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 14: MRS-SSCs-SOUTHWEST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 15)]

Comments: covering submm clusters in starburst center. Observations will use MRS background observation, so they are linked in a non-interruptable sequence.

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
(25)	NGC-253-MRS-SOUTHWEST	RA: 00 47 32.8884 (11.8870350d) Dec: -25 17 24.64 (-25.29018d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	60963
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	60963

Special Requirements	Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 15: Background: MRS-SSCs-BACKGROUND Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [MRS-SSCs-EAST (Obs 11), MRS-SSCs-CENTER (Obs 12), MRS-SSCs-WEST (Obs 13), MRS-SSCs-SOUTHWEST (Obs 14)]

Comments: background observation usable for MRS and for the imager, far away from the galaxy but within existing 8um IRAC image, no bright sources/emission

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
(6)	NGC-253-BKGD	RA: 00 48 1.3315 (12.0055479d) Dec: -25 22 52.15 (-25.38115d) Equinox: J2000		

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Calibration
Description=[Telescope/sky background]
Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	

Special Requirements	Sequence Observations 1, 2, 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1701, Observation 21: NGC253 NIRCam Wind Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

Comments: full array imaging along the minor axis/outflow axis to measure PAH/H2 in the outflow

Diagnostics

(Visit 21:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 21:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 21:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 21:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 21:5) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 21:6) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(21)	NGC-253-IM-CENTER	RA: 00 47 33.1721 (11.8882171d) Dec: -25 17 16.56 (-25.28793d) Equinox: J2000		

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Disk galaxies, Starburst 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	4	SMALL-GRID-DITHER		3

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F212N	F335M	MEDIUM8	4	1	12	12	4895.967	60962
2	F140M	F360M	MEDIUM8	4	1	12	12	4895.967	60962
3	F164N+F150W2	F250M	MEDIUM8	4	1	12	12	4895.967	60962

Special Requirements

Group Visits within 53.0 Days
Aperture PA Range 35 to 65 Degrees (V3 35.0713531 to 65.0713531)
Aperture PA Range 215 to 245 Degrees (V3 215.0713531 to 245.0713531)
Visits Same PA

Observation

Proposal 1701, Observation 53: NGC253 NIRCam Wind repeat obs 21 Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Error

Observing Template: NIRCam Imaging

Comments: full array imaging along the minor axis/outflow axis to measure PAH/H2 in the outflow

Diagnostics

(NGC253 NIRCam Wind repeat obs 21 (Obs 53)) Error (Form): Permission has not been granted for this program to use Special Requirement 'Guide Star in Guider 1'.
(Visit 53:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 53:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 53:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 53:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 53:5) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 53:6) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(21)	NGC-253-IM-CENTER	RA: 00 47 33.1721 (11.8882171d) Dec: -25 17 16.56 (-25.28793d) Equinox: J2000		

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Disk galaxies, Starburst 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	4	SMALL-GRID-DITHER		3

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F212N	F335M	MEDIUM8	4	1	12	12	4895.967	60962
2	F140M	F360M	MEDIUM8	4	1	12	12	4895.967	60962
3	F164N+F150W2	F250M	MEDIUM8	4	1	12	12	4895.967	60962

Special Requirements

Group Visits within 53.0 Days
Aperture PA Range 35 to 43.5 Degrees (V3 35.0713531 to 43.5713531)
Aperture PA Range 215 to 230 Degrees (V3 215.0713531 to 230.0713531)
Visits Same PA
Guide Star in Guider 1

Observation

Proposal 1701, Observation 22: NGC253 NIRCam Center

Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

Comments: fast subarray imaging in the center of the starburst to prevent saturation effects

Diagnostics

(Visit 22:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(21)	NGC-253-IM-CENTER	RA: 00 47 33.1721 (11.8882171d) Dec: -25 17 16.56 (-25.28793d) Equinox: J2000		

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

Template

Module	Subarray	Target Placement
B	SUB640	Module Gap

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEBOX	4	SMALL-GRID-DITHER		4

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F212N	F335M	RAPID	6	1	16	16	469.142	60962
2	F140M	F360M	RAPID	6	1	16	16	469.142	60962
3	F164N+F150W2	F250M	RAPID	6	1	16	16	469.142	60962

Observation

Proposal 1701, Observation 54: NGC253 NIRCam Center repeat obs 22

Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Error

Observing Template: NIRCam Imaging

Comments: fast subarray imaging in the center of the starburst to prevent saturation effects

Diagnostics

(NGC253 NIRCam Center repeat obs 22 (Obs 54)) Error (Form): Permission has not been granted for this program to use Special Requirement 'Guide Star in Guider 1'.

(Visit 54:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(21)	NGC-253-IM-CENTER	RA: 00 47 33.1721 (11.8882171d) Dec: -25 17 16.56 (-25.28793d) Equinox: J2000		

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

Template

Module	Subarray	Target Placement
B	SUB640	Module Gap

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEBOX	4	SMALL-GRID-DITHER		4

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F212N	F335M	RAPID	6	1	16	16	469.142	60962
2	F140M	F360M	RAPID	6	1	16	16	469.142	60962
3	F164N+F150W2	F250M	RAPID	6	1	16	16	469.142	60962

Special Requirements

Aperture PA Range 147.5 to 244.0 Degrees (V3 147.47786814 to 243.97786814)
Aperture PA Range 330.2 to 61.89 Degrees (V3 330.17786814 to 61.86786814)
Guide Star in Guider 1

Observation

Proposal 1701, Observation 31: Center M82

Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 31:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	M-82-IM-CENTER	RA: 09 55 51.5949 (148.9649788d) Dec: +69 40 45.78 (69.67938d) Equinox: J2000		

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

Template

Subarray
SUB128

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift	Column shift	Tile Order
2	2	20.0	20.0	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	4-Point-Sets				1	1	EXTENDED SOURCE	POSITIVE	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	F560W	FASTR1	5	1	1	Dither 1	4	4	2.381	61060
2	F770W	FASTR1	5	1	1	Dither 1	4	4	2.381	61060
3	F1130W	FASTR1	5	1	1	Dither 1	4	4	2.381	61060

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 32: Outflow-Imaging M82 Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Comments: There should be some optimization to the mosaic geometry once we know a bit better the PA for the observation

Diagnostics

(Visit 32:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 32:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 32:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 32:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	M-82-IM-CENTER	RA: 09 55 51.5949 (148.9649788d) Dec: +69 40 45.78 (69.67938d) Equinox: J2000		

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

Template

Subarray
FULL

Mosaic

Rows	Columns	Row Overlap %	Column Overlap %	Row shift	Column shift	Tile Order
1	4	10.0	10.0	0.0	-20.0	DEFAULT

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	1	4		5	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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61060
2	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61060
3	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61060

Special Requirements	
	Group Visits within 53.0 Days Aperture PA Range 30 to 60 Degrees (V3 25.16455103 to 55.16455103) Aperture PA Range 210 to 240 Degrees (V3 205.16455103 to 235.16455103) Visits Same PA Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 41: MRS-SSCs-EAST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 48)]

Diagnostics

(Visit 41:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(12)	M-82-MRS-EAST	RA: 09 55 53.7509 (148.9739621d) Dec: +69 40 49.48 (69.68041d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 42: MRS-SSCs-far-EAST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Visit 42:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(26)	M-82-MRS-FAR-EAST	RA: 09 55 54.3272 (148.9763633d) Dec: +69 40 51.65 (69.68101d) Equinox: J2000		

Comments:
Category=Galaxy
Description=[Starburst galaxies]
Extended=YES

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 43: MRS-SSCs-CENTER-EAST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 48)]

Diagnostics

(Visit 43:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(13)	M-82-MRS-CENTER-EAST	RA: 09 55 52.1463 (148.9672762d) Dec: +69 40 47.46 (69.67985d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 44: MRS-SSCs-WEST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 48)]

Diagnostics

(Visit 44:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(14)	M-82-MRS-WEST	RA: 09 55 49.9046 (148.9579358d) Dec: +69 40 42.48 (69.67847d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	
	Offset -0.09996276059444098 arcsec, 0.7500000653957649 arcsec Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 45: MRS-SSCs-CENTER-WEST Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 48)]

Diagnostics

(Visit 45:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(15)	M-82-MRS-CENTER-WEST	RA: 09 55 50.4903 (148.9603762d) Dec: +69 40 43.87 (69.67885d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	
	Offset -0.0999604834511678 arcsec, 1.1500000653514153 arcsec Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 46: MRS-SSCs-CENTER-NORTH Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 48)]

Diagnostics

(Visit 46:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(16)	M-82-MRS-CENTER-NORTH	RA: 09 55 51.3064 (148.9637767d) Dec: +69 40 45.97 (69.67944d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 47: MRS-SSCs-CENTER-SOUTH Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observations:[Background: MRS-SSCs-BACKGROUND (Obs 48)]

Diagnostics

(Visit 47:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(17)	M-82-MRS-CENTER-SOUTH	RA: 09 55 52.9583 (148.9706596d) Dec: +69 40 48.22 (69.68006d) Equinox: J2000		

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

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	61062
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	61062

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 48: Background: MRS-SSCs-BACKGROUND Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Background Observation For: [MRS-SSCs-EAST (Obs 41), MRS-SSCs-CENTER-EAST (Obs 43), MRS-SSCs-WEST (Obs 44), MRS-SSCs-CENTER-WEST (Obs 45), MRS-SSCs-CENTER-NORTH (Obs 46), MRS-SSCs-CENTER-SOUTH (Obs 47)]

Diagnostics

(Visit 48:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(18)	M-82-BKGD	RA: 09 50 43.0000 (147.6791667d) Dec: +69 49 50.00 (69.83056d) Equinox: J2000		

Comments: Empty region selected based on WISE W4/W3 images and HI observations
Category=Galaxy
Description=[Starburst galaxies]
Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
	ALL	YES	FULL

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	F560W	FASTR1	30	1	1	Dither 1	4	4	333.005	
1	SHORT(A)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	
1	SHORT(A)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	
2		IMAGER	F770W	FASTR1	30	1	1	Dither 1	4	4	333.005	
2	MEDIUM(B)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	
2	MEDIUM(B)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	
3		IMAGER	F1130W	FASTR1	30	1	1	Dither 1	4	4	333.005	
3	LONG(C)	MRSLONG		FASTR1	30	1	1	Dither 1	4	4	333.005	
3	LONG(C)	MRSSHORT		FASTR1	30	1	1	Dither 1	4	4	333.005	

Special Requirements	Sequence Observations 31, 32, 41, 42, 43, 44, 45, 46, 47, 48, Non-interruptible

Observation

Proposal 1701, Observation 51: M82 NIRCam Wind Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Error

Observing Template: NIRCam Imaging

Comments: Specifying guide star in guider 1 to avoid possible failure to acquire guide star with FGS2 which is on M82 disk

Diagnostics

(M82 NIRCam Wind (Obs 51)) Error (Form): Permission has not been granted for this program to use Special Requirement 'Guide Star in Guider 1'.
(Visit 51:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 51:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 51:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 51:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 51:5) Warning (Form): Overheads are provisional until the Visit Planner has been run.
(Visit 51:6) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	M-82-IM-CENTER	RA: 09 55 51.5949 (148.9649788d) Dec: +69 40 45.78 (69.67938d) Equinox: J2000		

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Galaxy
Description=[Starburst 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	4	SMALL-GRID-DITHER		3

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F212N	F335M	MEDIUM8	4	1	12	12	4895.967	61061
2	F140M	F360M	MEDIUM8	4	1	12	12	4895.967	61061
3	F164N+F150W2	F250M	MEDIUM8	4	1	12	12	4895.967	61061

Special Requirements

Group Visits within 53.0 Days
Aperture PA Range 45 to 85 Degrees (V3 45.0713531 to 85.0713531)
Aperture PA Range 225 to 265 Degrees (V3 225.0713531 to 265.0713531)
Visits Same PA
Guide Star in Guider 1

Observation

Proposal 1701, Observation 52: M82 NIRCam Center

Wed Apr 05 20:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

Diagnostics

(Visit 52:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	M-82-IM-CENTER	RA: 09 55 51.5949 (148.9649788d) Dec: +69 40 45.78 (69.67938d) Equinox: J2000		

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

Template

Module	Subarray	Target Placement
B	SUB640	Module Gap

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEBOX	4	SMALL-GRID-DITHER		4

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F212N	F335M	RAPID	6	1	16	16	469.142	61061
2	F140M	F360M	RAPID	6	1	16	16	469.142	61061
3	F164N+F150W2	F250M	RAPID	6	1	16	16	469.142	61061