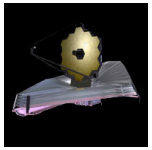

4449 - NIRCam Spectral Calibration

Cycle: 2, Proposal Category: CAL/NIRCAM

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1	NIRCam Grism Mod A SHORT	NIRCam Engineering Imaging	(1) SMP-LMC-58
	2	NIRCam Grism Mod A LONG	NIRCam Engineering Imaging	(1) SMP-LMC-58
	3	NIRCam Grism Mod B SHORT	NIRCam Engineering Imaging	(1) SMP-LMC-58
	4	NIRCam Grism Mod B LONG	NIRCam Engineering Imaging	(1) SMP-LMC-58

ABSTRACT

This program will monitor the calibration of NIRCam's long wavelength (LW) grism, including wavelength calibration and the line-spread function (LSF) characterization. The wavelength solution will be determined by observing a planetary nebula (PN) in the LMC, which has a weak continuum and a rich set of strong spectral lines. The PN is also sufficiently compact to enable the LSF to be measured. The same target was observed both in Commissioning and Cycle 1. We include both grisms in Cycle 2 (GRISMC and GRISMR), on both modules, over the full NIRCam wavelength range.

This calibration program is provisional and may change in response to system developments and the final Cycle 2 science program.

OBSERVING DESCRIPTION

We are obtaining full-frame Grism images of spectral calibrator SMP-LMC-58, a planetary nebula in the LMC.

EXPOSURE SETUP: BRIGHT1, 5 groups, GRISMR and GRISMC with F322W2 and F444W. Direct images are in F405N. Aachieve S/N up to 200 per wavelength in grism mode with both F322W2 and F444W

DIRECT IMAGES: We include one direct image in each observation, using the Engineering Imaging template.

DITHERS: INTRAMODULEX, 4 dithers

SPECIAL REQUIREMENTS: We include offsets to place the target at detector locations that will ensure the full spectrum for both GRISMR and GRISMC falls on the detector.

We put the long-wavelength and short-wavelength observations into different observations since the target needs to move on a different spot on the detector to ensure the full spectrum is captured in each case.

Proposal 4449 - Targets - NIRCam Spectral Calibration

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	SMP-LMC-58	RA: 05 24 20.7650 (81.0865208d) Dec: -70 05 1.52 (-70.08376d) Equinox: J2000		

Comments: Placeholder for wavelength calibrator (an LMC PN)
Kmag = 14.5
Category=Calibration
Description=[Planetary nebulae]

Observation

Proposal 4449, Observation 1: NIRCam Grism Mod A SHORT Mon May 08 19:01:54 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Engineering Imaging

Comments: Part 1

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)	SMP-LMC-58	RA: 05 24 20.7650 (81.0865208d) Dec: -70 05 1.52 (-70.08376d) Equinox: J2000		

Comments: Placeholder for wavelength calibrator (an LMC PN)
Kmag = 14.5
Category=Calibration
Description=[Planetary nebulae]

Template

Module	Subarray
A	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEX	4	STANDARD		1

Spectral Elements

#	Short Pupil	Long Pupil	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	CLEAR	GRISMC	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
2	CLEAR	GRISMR	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
3	CLEAR	F405N	F212N	F444W	RAPID	5	1	4	4	214.735	

Special Requirements

Offset 45.0 arcsec, 50.0 arcsec

Observation

Proposal 4449, Observation 2: NIRCam Grism Mod A LONG Mon May 08 19:01:54 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Engineering Imaging

Comments: Part 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
(1)	SMP-LMC-58	RA: 05 24 20.7650 (81.0865208d) Dec: -70 05 1.52 (-70.08376d) Equinox: J2000		

Comments: Placeholder for wavelength calibrator (an LMC PN)
Kmag = 14.5
Category=Calibration
Description=[Planetary nebulae]

Template

Module	Subarray
A	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEX	4	STANDARD		1

Spectral Elements

#	Short Pupil	Long Pupil	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	CLEAR	GRISMR	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
2	CLEAR	GRISMC	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
3	CLEAR	F405N	F212N	F444W	RAPID	5	1	4	4	214.735	

Special Requirements

Offset -32.9 arcsec, -32.8 arcsec

Observation

Proposal 4449, Observation 3: NIRCam Grism Mod B SHORT Mon May 08 19:01:54 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Engineering Imaging

Comments: Part 1

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	SMP-LMC-58	RA: 05 24 20.7650 (81.0865208d) Dec: -70 05 1.52 (-70.08376d) Equinox: J2000		

Comments: Placeholder for wavelength calibrator (an LMC PN)
Kmag = 14.5
Category=Calibration
Description=[Planetary nebulae]

Template

Module	Subarray
A	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEX	4	STANDARD		1

Spectral Elements

#	Short Pupil	Long Pupil	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	CLEAR	GRISMC	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
2	CLEAR	GRISMR	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
3	CLEAR	F405N	F212N	F444W	RAPID	5	1	4	4	214.735	

Special Requirements

Offset -37.7 arcsec, 51.3 arcsec

Observation

Proposal 4449, Observation 4: NIRCam Grism Mod B LONG Mon May 08 19:01:54 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Engineering Imaging

Comments: Part 1

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	SMP-LMC-58	RA: 05 24 20.7650 (81.0865208d) Dec: -70 05 1.52 (-70.08376d) Equinox: J2000		

Comments: Placeholder for wavelength calibrator (an LMC PN)
Kmag = 14.5
Category=Calibration
Description=[Planetary nebulae]

Template

Module	Subarray
A	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	INTRAMODULEX	4	STANDARD		1

Spectral Elements

#	Short Pupil	Long Pupil	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	CLEAR	GRISMR	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
2	CLEAR	GRISMC	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
3	CLEAR	F405N	F212N	F444W	RAPID	5	1	4	4	214.735	

Special Requirements

Offset 32.1 arcsec, -32.8 arcsec