



6628 - CAL-NRC-310: NIRCcam Spectral Calibration

Cycle: 3, Proposal Category: CAL/NIRCAM

INVESTIGATORS

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	NIRCcam Grism Mod A SHORT	NIRCcam Engineering Imaging	(1) SMP-LMC-58
	2	NIRCcam Grism Mod A LONG	NIRCcam Engineering Imaging	(1) SMP-LMC-58
	3	NIRCcam Grism Mod B SHORT	NIRCcam Engineering Imaging	(1) SMP-LMC-58
	4	NIRCcam Grism Mod B LONG	NIRCcam Engineering Imaging	(1) SMP-LMC-58

ABSTRACT

This program will monitor the calibration of NIRCcam'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 3 (GRISMC and GRISMR), on both modules, over the full NIRCcam wavelength range.

This calibration program may change in response to system developments and the final Cycle 3 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. Achieve 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 6628 - Targets - CAL-NRC-310: NIRCcam 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 <i>Comments: Placeholder for wavelength calibrator (an LMC PN)</i> <i>Kmag = 14.5</i> <i>Category=Calibration</i> <i>Description=[Planetary nebulae]</i>		

Proposal 6628 - Observation 1 - CAL-NRC-310: NIRCcam Spectral Calibration

Mon Oct 14 20:00:09 GMT 2024

Observation	<p>Proposal 6628, Observation 1: NIRCcam Grism Mod A SHORT</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Engineering Imaging</p> <p><i>Comments: Part 1</i></p>											
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									
	<p><i>Comments: Placeholder for wavelength calibrator (an LMC PN)</i></p> <p><i>Kmag = 14.5</i></p> <p><i>Category=Calibration</i></p> <p><i>Description=[Planetary nebulae]</i></p>											
Template	Module		Subarray				No. of Output Channels					
	ALL		FULL				4					
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	4	1	4	4	171.788	
Special Requirements	Offset -135.0 arcsec, 47.0 arcsec											

Proposal 6628 - Observation 2 - CAL-NRC-310: NIRCam Spectral Calibration

Mon Oct 14 20:00:09 GMT 2024

Observation	<p>Proposal 6628, Observation 2: NIRCam Grism Mod A LONG</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Engineering Imaging</p> <p><i>Comments: Part 1</i></p>											
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									
	<p><i>Comments: Placeholder for wavelength calibrator (an LMC PN)</i></p> <p><i>Kmag = 14.5</i></p> <p><i>Category=Calibration</i></p> <p><i>Description=[Planetary nebulae]</i></p>											
Template	Module		Subarray				No. of Output Channels					
	ALL		FULL				4					
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	4	1	4	4	171.788	
Special Requirements	Offset -135.0 arcsec, 50.0 arcsec											

Proposal 6628 - Observation 3 - CAL-NRC-310: NIRCcam Spectral Calibration

Mon Oct 14 20:00:09 GMT 2024

Observation	Proposal 6628, Observation 3: NIRCcam Grism Mod B SHORT Diagnostic Status: Warning Observing Template: NIRCcam Engineering Imaging <i>Comments: Part 1</i>											
	(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 <i>Comments: Placeholder for wavelength calibrator (an LMC PN)</i> <i>Kmag = 14.5</i> <i>Category=Calibration</i> <i>Description=[Planetary nebulae]</i>									
Template	Module		Subarray				No. of Output Channels					
	ALL		FULL				4					
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	4	1	4	4	171.788	
Special Requirements	Offset 40.0 arcsec, 0.0 arcsec											

Proposal 6628 - Observation 4 - CAL-NRC-310: NIRCcam Spectral Calibration

Mon Oct 14 20:00:09 GMT 2024

Observation	<p>Proposal 6628, Observation 4: NIRCcam Grism Mod B LONG</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Engineering Imaging</p> <p><i>Comments: Part 1</i></p>											
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									
	<p><i>Comments: Placeholder for wavelength calibrator (an LMC PN)</i></p> <p><i>Kmag = 14.5</i></p> <p><i>Category=Calibration</i></p> <p><i>Description=[Planetary nebulae]</i></p>											
Template	Module		Subarray				No. of Output Channels					
	ALL		FULL				4					
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	4	1	4	4	171.788	
Special Requirements	Offset 40.0 arcsec, 0.0 arcsec											