



1480 - LW Grism L-Flat Correction

Cycle: 1, 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>
Redesign Feb 2023				
	9	Mod A GRISMR TS F 322W2	NIRCam Grism Time Series	(1) SMP-LMC-58
	10	Mod A DI F322W2	NIRCam Engineering Imaging	(1) SMP-LMC-58
	11	Mod A GRISMR TS F 444W	NIRCam Grism Time Series	(1) SMP-LMC-58
	12	Mod A DI F444W	NIRCam Engineering Imaging	(1) SMP-LMC-58
	6	Mod A GRISMC+R middle	NIRCam Engineering Imaging	(1) SMP-LMC-58
	2	Mod B GRISMC+R middle	NIRCam Engineering Imaging	(1) SMP-LMC-58

ABSTRACT

This program will determine the L-flat correction for longwave (LW) grism observations by observing a rich stellar field (the LMC calibration field or a globular cluster), which will provide a large number of stars across the field for mapping spatial variations in the grism throughput. If the LMC is observed, the LW detector will contain about ~115 stars brighter than $k_{mag}=16$. To detect these stars with $S/N > 5$ per wavelength, observations

should use the SHALLOW2 readout with 5 groups and 3 exposures/dithers. This data can also be used to characterize the spectral trace across the detector. Science data will be used to supplement this program.

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

OBSERVING DESCRIPTION

March 2023 update, MBoyer

In flight data suggested the original observation was of limited use as designed, so this program has been redesigned to obtain additional spectral calibration on more points on the NIRCcam detectors.

Nov 2019 MBoyer

These observations will be collected for both grisms in each module using observations designed with the Engineering Imaging Template. Direct (F405N) and grism exposures through the F322W2 and F444W filters will be collected, which together provide overlapping spectral coverage from 2.4-5 microns and cover the bandpasses for the other allowed filters. We also include observations through F360M to allow for additional analysis where spectral trace overlap is minimized. The F405N filter is used for direct images since it is closest to the non-dispersed wavelength at 3.95 microns. The field will be dithered with 3 positions to place stars over as much of the detectors as possible.

Proposal 1480 - Targets - LW Grism L-Flat Correction

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 1480 - Observation 9 - LW Grism L-Flat Correction

Wed Mar 22 19:00:55 GMT 2023

Observation	<p>Proposal 1480, Observation 9: Mod A GRISM TS F322W2</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Grism Time Series</p>									
Diagnostics	<p>(Mod A GRISM TS F322W2 (Obs 9)) Warning (Form): Record ETC Wkbk.Calc ID used to verify target acquisition.</p> <p>(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>									
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>									
Acquisition	#	Target	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	SUB32TATSGRIS M	F335M	BRIGHT2	3	1	1	0.107	
Template	Subarray					No. of Output Channels				
	FULL					4				
Spectral Elements	#	Short Pupil+Filter	Long Pupil+Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	CLEAR+WLP4	GRISM+R322W2	BRIGHT1	5	2	1	2	203.999	
Special Requirements	<p>Time Series Observation</p> <p>No Parallel Attachments</p> <p>Group Observations 9, 10 within 1 Days</p>									

Proposal 1480 - Observation 10 - LW Grism L-Flat Correction

Wed Mar 22 19:00:55 GMT 2023

Observation	<p>Proposal 1480, Observation 10: Mod A DI F322W2</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Engineering Imaging</p>											
Diagnostics	<p>(Mod A DI F322W2 (Obs 10)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>											
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						
	A					FULL						
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions		
	1	NONE				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	CLEAR	F212N	F322W2	RAPID	2	1	1	1	21.474	
Special Requirements	<p>Fiducial Point Override NRCA5_TAGRISMETS_SCI_F322W2</p> <p>Group Observations 9, 10 within 1 Days</p>											

Proposal 1480 - Observation 11 - LW Grism L-Flat Correction

Wed Mar 22 19:00:55 GMT 2023

Observation	<p>Proposal 1480, Observation 11: Mod A GRISM TS F444W</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Grism Time Series</p>									
Diagnostics	<p>(Mod A GRISM TS F444W (Obs 11)) Warning (Form): Record ETC Wkbk.Calc ID used to verify target acquisition.</p> <p>(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>									
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>									
Acquisition	#	Target	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	SUB32TATSGRISM	F335M	BRIGHT2	3	1	1	0.107	
Template	Subarray					No. of Output Channels				
	FULL					4				
Spectral Elements	#	Short Pupil+Filter	Long Pupil+Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	CLEAR+WLP4	GRISM+F444W	BRIGHT1	5	2	1	2	203.999	
Special Requirements	<p>Time Series Observation</p> <p>No Parallel Attachments</p> <p>Group Observations 11, 12 within 1 Days</p>									

Proposal 1480 - Observation 12 - LW Grism L-Flat Correction

Wed Mar 22 19:00:55 GMT 2023

Observation	<p>Proposal 1480, Observation 12: Mod A DI F444W</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Engineering Imaging</p>											
Diagnostics	<p>(Mod A DI F444W (Obs 12)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>											
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						
	A					FULL						
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions		
	1	NONE				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	CLEAR	F212N	F444W	RAPID	2	1	1	1	21.474	
Special Requirements	<p>Fiducial Point Override NRCA5_TAGRISMETS_SCI_F322W2</p> <p>Group Observations 11, 12 within 1 Days</p>											

Proposal 1480 - Observation 6 - LW Grism L-Flat Correction

Wed Mar 22 19:00:55 GMT 2023

Observation	<p>Proposal 1480, Observation 6: Mod A GRISMC+R middle</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Engineering Imaging</p>											
Diagnostics	<p>(Mod A GRISMC+R middle (Obs 6)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>											
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					
	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	F405N	F212N	F444W	RAPID	5	1	4	4	214.735	
	2	CLEAR	GRISMR	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
	3	CLEAR	GRISMC	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
	4	CLEAR	GRISMR	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
	5	CLEAR	GRISMC	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
Special Requirements	Fiducial Point Override NRCA5_FULL											

Proposal 1480 - Observation 2 - LW Grism L-Flat Correction

Wed Mar 22 19:00:55 GMT 2023

Observation	Proposal 1480, Observation 2: Mod B GRISMC+R middle Diagnostic Status: Warning Observing Template: NIRCcam Engineering Imaging											
Diagnostics	(Mod B GRISMC+R middle (Obs 2)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (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									
	<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					
	B						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	F405N	F212N	F444W	RAPID	5	1	4	4	214.735	
	2	CLEAR	GRISMR	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
	3	CLEAR	GRISMC	F212N	F444W	BRIGHT1	5	1	4	4	386.524	
	4	CLEAR	GRISMR	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
	5	CLEAR	GRISMC	F212N	F322W2	BRIGHT1	5	1	4	4	386.524	
Special Requirements	Fiducial Point Override NRCB5_FULL											