



12539 - CAL-NRC-520: Stellar L-Flat Calibration

Cycle: 5, 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>
Imaging				
	1	LMC L-flat setup	NIRCam Imaging	(1) LMC-CAL-FIELD
Coronagraphy				
	2	LMC L-flat setup	NIRCam Engineering Imaging	(1) LMC-CAL-FIELD

ABSTRACT

This program obtains dithered NIRCam imaging observations of the LMC to supplement filters that currently lack sufficient archival data to generate robust higher-order stellar L-flats.

This calibration program may change in response to system developments and the final Cycle 5 science program.

OBSERVING DESCRIPTION

This program obtains deeper LMC observations to supplement filters that lack sufficient archival data for higher-order stellar L-flat fitting, which is required to accurately calibrate, for example, the corner subarrays used for absolute flux.

Each filter pair observes the LMC using a 17-point INTRASCA (24) dither pattern with the SHALLOW2 readout mode and 5 groups per integration.

Observation 2 is a placeholder for coronagraphy in case existing data is shown to be inadequate.

NIRISS imaging is included in parallel in observation 1 to test the star tracker roll angle determination.

Proposal 12539 - Targets - CAL-NRC-520: Stellar L-Flat Calibration

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	LMC-CAL-FIELD	RA: 05 21 57.6740 (80.4903083d) Dec: -69 29 53.36 (-69.49816d) Equinox: J2000		
Comments: Category=Calibration Description=[Astrometric, External flat field, Photometric]					

Proposal 12539 - Observation 1 - CAL-NRC-520: Stellar L-Flat Calibration

Observation	Proposal 12539, Observation 1: LMC L-flat setup						Thu Mar 05 19:00:19 GMT 2026
	Diagnostic Status: Warning Observing Template: NIRCам Imaging Coordinated Parallel Template(s): NIRISS Imaging						
Diagnostics	(LMC L-flat setup (Obs 1)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.						
	(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.						
	(Visit 1:11) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
	(Visit 1:12) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
	(Visit 1:13) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
	(Visit 1:14) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
	(Visit 1:15) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
	(Visit 1:16) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	LMC-CAL-FIELD	RA: 05 21 57.6740 (80.4903083d) Dec: -69 29 53.36 (-69.49816d) Equinox: J2000 Comments: Category=Calibration Description=[Astrometric, External flat field, Photometric]				
Template	NIRCам Imaging			NIRISS Imaging			
	Module: ALL Subarray: FULL Target Placement: Module gap (large extended source)						
Dithers	#	Primary Dither Type	Primary Dithers	Dither Size	Subpixel Positions	Coordinated Parallel Subpixel Selector	Dither Direct Images Primes
	1	INTRASCA	17	24" (LARGE)	1	NIRCам Only	NO_DITHERING

Proposal 12539 - Observation 1 - CAL-NRC-520: Stellar L-Flat Calibration

Spectral Elements	NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID
	1	F164N+F150W2	F323N+F322W2	SHALLOW2	5	1	17	17	4015.552	
	2	F162M+F150W2	F470N+F444W	SHALLOW2	5	1	17	17	4015.552	
	3	F140M	F250M	SHALLOW2	5	1	17	17	4015.552	
	4	F070W	F430M	SHALLOW2	5	1	17	17	4015.552	
	5	F090W	F460M	SHALLOW2	5	1	17	17	4015.552	
	6	F115W	F277W	SHALLOW2	5	1	17	17	4015.552	
	7	F150W	F356W	SHALLOW2	5	1	17	17	4015.552	
	8	F150W2	F322W2	SHALLOW2	5	1	17	17	4015.552	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	F090W		NISRAPID	6	3	17	51	3833.027	
	2	F115W		NISRAPID	6	3	17	51	3833.027	
	3	F140M		NISRAPID	10	2	17	34	4015.552	
	4	F150W		NISRAPID	6	3	17	51	3833.027	
	5	F200W		NISRAPID	6	3	17	51	3833.027	
	6	F277W		NISRAPID	10	2	17	34	4015.552	
	7	F444W		NISRAPID	10	2	17	34	4015.552	
	8	F356W		NISRAPID	10	2	17	34	4015.552	
Special Requirements	Sequence Visits within 53.0 Days Visits Same PA No Parallel Attachments									

Proposal 12539 - Observation 2 - CAL-NRC-520: Stellar L-Flat Calibration

Observation	Proposal 12539, Observation 2: LMC L-flat setup											Thu Mar 05 19:00:19 GMT 2026	
	Diagnostic Status: Warning												
Diagnostics	Observing Template: NIRCam Engineering Imaging												
	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	(Visit 2:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
	#	Name			Target Coordinates			Targ. Coord. Corrections			Miscellaneous		
Template	(1)	LMC-CAL-FIELD			RA: 05 21 57.6740 (80.4903083d)								
	Dec: -69 29 53.36 (-69.49816d)												
Dithers	Equinox: J2000												
	Comments: Category=Calibration Description=[Astrometric, External flat field, Photometric]												
Spectral Elements	Module			Subarray					No. of Output Channels				
	ALL			FULL					4				
Special Requirements	#	Primary Dither Type			Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions		
	1	INTRASCA			17		STANDARD		24" (LARGE)		1		
Special Requirements	#	Short Pupil	Long Pupil	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	Optional ETC ID	
	1	MASKRND	MASKRND	F200W	F444W	SHALLOW2	5	1	17	17	4015.552		
Special Requirements	Sequence Visits within 53.0 Days												
	Visits Same PA												