



# 1476 - L-Flats, Photometric, and Distortion Monitor

Cycle: 1, Proposal Category: CAL/NIRCAM

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>
<b>Dr. Martha L. Boyer (PI)</b>	<b>Space Telescope Science Institute</b>
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Dr. Vera Kozhurina-Platais (CoI)	Space Telescope Science Institute

## OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Epoch 1: all 16 filter pairs, Lflat setup, 2-3 months post-commissioning				
	1	L-flat setup, ModB at center	NIRCam Imaging	(1) LMC-CAL-FIELD
Epoch 2: 3 filter pairs, astrometry setup				
	3	Module B at center, FG S2	NIRCam Engineering Imaging	(1) LMC-CAL-FIELD
	103	WOPR-88607 - Repeat of 3:2	NIRCam Engineering Imaging	(1) LMC-CAL-FIELD
	6	Module A at center, FG S1	NIRCam Engineering Imaging	(1) LMC-CAL-FIELD
Epoch 3: remaining 16 filter pairs, photometry setup				
	4	Photometric monitoring setup, modA at center	NIRCam Imaging	(1) LMC-CAL-FIELD
	104	WOPR-88703 - Repeat most of 4:1	NIRCam Imaging	(1) LMC-CAL-FIELD

## ABSTRACT

## JWST Proposal 1476 (Created: Friday, April 14, 2023 at 1:00:30 PM Eastern Standard Time) - Overview

This activity will serve 4 calibration activities, all of which can be obtained by observing the LMC calibration field throughout Cycle 1: stellar flats, photometric monitor, astrometry/distortion monitor, and flux array dependence. **Stellar Flats:** The stellar flats (L-flats) are meant to supplement the LP-flats. These observations step well-measured stars across the detector to map changes in response across the frame. HST/WFC3 and HST/ACS stellar flats improved photometric accuracy by 0.6%-6%, depending on the filter. A dense stellar field with minimal crowding is required. Since relatively short exposures are required, stellar flats can be used to monitor changes in the wavelength dependence of the flat field since Commissioning by observing in all (wide, medium, and narrow filters). Stars will be stepped across the detectors at 9 positions. **Photometric Monitor:** Repeat observations of the LMC field will monitor the stability of the photometric zeropoint calibration in all filters. **Astrometry/Distortion Monitor:** Determine the plate scale, orientation, and geometric distortion for each SCA in each NIRCcam module over the full wavelength range. This requires dithering in the LMC calibration field with a representative subset of filters. The LMC calibration field has been carefully chosen and mapped with HST's ACS to facilitate such a calibration. **Characterize absolute flux array-dependence:** Since absolute flux calibrators are bright, they can only be observed on small subarrays. Thus, to check the array dependence, we will include subarray observations of the LMC along with the FULL observations.

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

### **OBSERVING DESCRIPTION**

--- Apr 14 2023 MLB

Repeating failed observations:

WOPR-88607: repeat visit 3:2, which is one of the mosaic tiles in obs 3. Skipped due to guide star reacquisition failure. New visit is a copy of Obs3, with the successful tiles removed from the mosaic. I've added a PA restriction so that it occurs at an ~180 degree flip from the rest of the mosaic tiles to optimize the overlap of B3 with the other SW mod-B detectors. New visit is 103:1

WOPR-88703: repeat visit 4:1, which failed due to a guide reacquisition failure. The first dither pair (F700W/F444W) succeeded during the original observation, so we've removed that filter pair from the repeat. New visit is 104:1

## JWST Proposal 1476 (Created: Friday, April 14, 2023 at 1:00:30 PM Eastern Standard Time) - Overview

--- June 29 2022 MLB (resubmitted)

Obs 1:

- put Module B at the center of the HST CAL field

Obs 3:

- put Module B at the center of the HST CAL field
- switched FGS1 --> FGS2 in parallel so FGS lands in the HAWK-I field
- Changed F070W/F444W --> F210M/F335M

Obs 6 (NEW OBSERVATION):

- duplicate of Obs 3, but with Module A in center and FGS 1 in parallel

Obs 4:

- put module A at the center of the HST CAL field.

--- September 2020 MLB (resubmitted)

Added timing constraints/cadences that reflect an Oct 31, 2021 launch

--- November 2019 MLB (submitted version)

Activity Summary text:

The LMC calibration field is in the CVZ and has  $\sim 6$  stars/arcsec<sup>2</sup> measured in ACS F606W, which results in  $>25,000$  stars in a SW SCA and  $>100,000$  stars in a LW SCA. There is no strong stellar gradient, so the stars will be evenly distributed across the frame. Short exposures provide  $S/N > 4-10$  (depending on filter) for stars with  $K_{mag} = 21$  (K0III star) and allow for the detection of faint stars while minimizing saturation effects. There will be  $>3000$  stars per SCA with  $S/N > 30$  and positions better than 2mas.

There will be 3 observations total. One is designed specifically for stellar flats and can also be used for astrometry and photometric monitoring. One

is designed for photometric monitoring, and one for distortion monitoring.

For stellar flats (epoch 1), we will use a 5-pt INTRASCA (24”) dither. This places a star at 9 positions on each detector. This spacing is non-optimal for both the SW and LW detectors, but with enough stars, we should be able to derive L-flats (simulations are needed). All filters will be obtained for this epoch, which should be obtained 3-4 months after the Astrometry Commissioning program (NIRCam-21). This is the only epoch for creating L-flats. Science data will be used to monitor changes in the L-flat through Cycle 1. This epoch will also be used to monitor astrometry since Commissioning, and as a baseline epoch for photometric monitoring.

For the epoch 2 astrometry monitor, we will use the same setup used in Commissioning: a 2-pt INTRAMODULEBOX dither with a 2x2 mosaic (overlap 50% x 80%), which provides complete overlap between the SW detectors. However, we will only do 1 observation, so the modules will not overlap with each other and only FGS1 will be observed in parallel. This observation will observe in 3 filter pairs, and should occur >3 months after epoch 1.

For the epoch 2 photometry monitor, we will do minimal dithering with all 16 filter pairs. We will use a 2-pt INTRASCA pattern to provide the same pixel sampling obtained in the L-flat epoch. This epoch should occur about >3 months after epoch 2.

For the absolute flux array dependence, we will use SUB160 on Module B with 2 INTRAMODULEBOX dithers and 2 subarray dithers. These will only be taken in 2 filter pair (F070W+F444W & F200W+F277W), using SHALLOW4 with 10 groups and 4 integrations. By include 2 pairs, we can correct for any filter dependence in the L-flats. These should be taken as a non-interruptible sequence with epoch 1 to minimize issues with variable stars.

The stars in the LMC field span a broad magnitude range. The ACS observations suggest stars are as faint as ~23 mag in the K-band. Below are the readout patterns required to reach S/N>3 in FULL frame in every filter for a star with K=21 mag (derived from ETC). These exposure times allow for the detection of faint stars while minimizing saturation effects.

#### Filters Readout Setup

SW Wide filters RAPID, NGROUP=3

SW Medium filters RAPID, NGROUP=3

SW Narrow filters BRIGHT2, NGROUP=4

## JWST Proposal 1476 (Created: Friday, April 14, 2023 at 1:00:30 PM Eastern Standard Time) - Overview

LW Wide filters RAPID, NGROUP=3

LW Medium filters (F250M-F410M) RAPID, NGROUP=3

LW Medium filters (F430M-F480M) BRIGHT2, NGROUP=4

LW Narrow filters SHALLOW4, NGROUP=5

**TIMING CONSTRAINTS:** We will obtain 1 epoch with the stellar flat setup, 1 epoch with the astrometry monitor, and 1 epoch with the photometric monitor setup. The L-flat epoch should be taken about 3-4 months after the astrometry Commissioning activity (NIRCam-21), and the astrometry and photometry monitoring epochs should occur with a minimum cadence of 3 months. These 3 epochs must be spread throughout Cycle 1 because mirror rephasing will affect astrometry. Since this affect is strongest for NIRCam, a minimum of 3 epochs in Cycle 1 is needed. The subarray observations should be taken as a non-interruptible sequence with epoch 1.

--- July 2019 MLB

Fixed timing constraints to spread epochs out over cycle 1.

Added a SUB160 observation in 2 filters pairs that will be used for the absolute flux program. These should be non-interruptible with epoch 1 to make sure we are not affected by stellar variability, etc. These will allow us to check the array dependence of the flux, since the absolute calibrators can only be observed on small subarrays. Including 2 filters per channel to check for any filter dependence of the L-flat.

**NOTE:** Can probably remove the SUB160 observation, but it depends on how Part 4 of the absolute flux program shapes up. Keeping it here for now.

--- Sep 2018 MLB

This is the Slimmer version of CAL-NRC-003. Description of how I shortened each epoch is below.

Goals:

1) Solve for/monitor astrometry

2) monitor photometric stability

3) Create L-flats

Epoch 1:

Designed for L-flats, but not optimally. Obtained for all filters. Places stars at 9 evenly spaced positions on every detector, with the step size that balances both the SW and LW detector sizes. The pattern too large for SW and too small for LW, but with enough stars, we will probably be OK. Need to simulate how this will affect the L-flats. This epoch also provides the photometry baseline for photometric monitoring & it can be used to check the distortion.

Epoch 2:

Near-optimal astrometry setup, similar to Commissioning program. Just 3 filter pairs, but all SW detectors are overlapped onto each other. The slim program sacrifices LW overlap and puts only FGS1 in parallel. This is our final distortion monitor. Should occur about 6 months after epoch 1.

Epoch 3:

Optimal setup for photometric monitoring. All 16 filter pairs, minimal dithering. Uses same dither pattern as Epoch 1 so that the pixel sampling is the same. This is our final dedicated photometric monitor. Additional monitoring will be done with science data. Should occur about 6 months after epoch1. Only way to shorten is to not do every filter: maybe drop the filters that are heavily used in Cycle 1 (b/c can use Science data to monitor those filters). But will leave it as is even for the Slim version.

----- In APT 26.1 (no custom dithers) -----

For the Stellar flats: Each detector is sampled well enough to place a star at 9 positions evenly across the detector. This is achieved with a combination of INTRASCA dithers and a 2x2 mosaic. Adding custom dithers would allow us to drop the mosaic, saving overheads and filter wheel moves.

# Proposal 1476 - Targets - L-Flats, Photometric, and Distortion Monitor

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		
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Calibration</i> <i>Description=[Astrometric, External flat field, Photometric]</i>					

# Proposal 1476 - Observation 1 - L-Flats, Photometric, and Distortion Monitor

Fri Apr 14 18:00:30 GMT 2023

<b>Observation</b>	<p><b>Proposal 1476, Observation 1: L-flat setup, ModB at center</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>													
<b>Diagnostics</b>	<p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:2) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:3) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:5) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:6) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:7) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:8) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:9) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:10) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:11) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:12) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:13) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:14) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:15) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:16) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:17) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:18) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:19) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:20) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:21) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:22) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:23) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:24) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:25) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:26) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:27) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:28) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:29) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:30) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:31) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(Visit 1:32) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>													
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Proposal 1476 - Observation 1 - L-Flats, Photometric, and Distortion Monitor

Template	Module		Subarray				Target Placement			
	ALL		FULL				Module Gap			
Dithers	#	Primary Dither Type		Primary Dithers		Subpixel Dither Type		Dither Size		Subpixel Positions
	1	INTRASCA		9		STANDARD		24" (LARGE)		1
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F070W	F277W	RAPID	2	1	9	9	193.262	
	2	F090W	F356W	RAPID	2	1	9	9	193.262	
	3	F115W	F444W	RAPID	2	1	9	9	193.262	
	4	F150W	F250M	RAPID	2	1	9	9	193.262	
	5	F150W2	F322W2	RAPID	2	1	9	9	193.262	
	6	F200W	F300M	RAPID	2	1	9	9	193.262	
	7	F140M	F335M	RAPID	2	1	9	9	193.262	
	8	F182M	F360M	RAPID	2	1	9	9	193.262	
	9	F210M	F410M	RAPID	2	1	9	9	193.262	
	10	F187N	F430M	BRIGHT2	4	1	9	9	773.047	
	11	F212N	F460M	BRIGHT2	4	1	9	9	773.047	
	12	F162M+F150W2	F480M	BRIGHT2	4	1	9	9	773.047	
	13	F164N+F150W2	F323N+F322W2	BRIGHT1	6	1	9	9	1062.94	
	14	F164N+F150W2	F405N+F444W	BRIGHT1	6	1	9	9	1062.94	
	15	F187N	F466N+F444W	SHALLOW4	5	1	9	9	2319.142	
	16	F212N	F470N+F444W	SHALLOW4	5	1	9	9	2319.142	
Special Requirements	Between Dates 01-JUN-2022:00:00:00 and 12-AUG-2022:00:00:00 Group Visits within 53.0 Days Visits Same PA Offset 85.0 arcsec, 3.0 arcsec									

Proposal 1476 - Observation 3 - L-Flats, Photometric, and Distortion Monitor

<b>Observation</b>	<b>Proposal 1476, Observation 3: Module B at center, FGS2</b> <span style="float: right;">Fri Apr 14 18:00:30 GMT 2023</span> <b>Diagnostic Status: Warning</b> Observing Template: NIRCam Engineering Imaging Coordinated Parallel Template(s): FGS External Calibration																																			
<b>Diagnostics</b>	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 3:2) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 3:3) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 3:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																			
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<b>Template</b>	<b>NIRCam Engineering Imaging</b>					<b>FGS External Calibration</b>																														
Module: ALL					Target type: IMAGE																															
Subarray: FULL					Detector: GUIDER2																															
<b>Mosaic</b>	<b>Rows</b>		<b>Columns</b>		<b>Row Overlap %</b>		<b>Column Overlap %</b>		<b>Row shift</b>		<b>Column shift</b>	<b>Tile Order</b>																								
2		2		50.0		80.0		0.0		0.0	DEFAULT																									
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>			<b>Primary Dithers</b>		<b>Subpixel Dither Type</b>		<b>Dither Size</b>		<b>Subpixel Positions</b>																									
1	INTRAMODULEBOX			2		STANDARD				1																										
<b>Spectral Elements</b>	<b>NIRCam Engineering Imaging</b>	<b>Short Pupil</b>	<b>Long Pupil</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wbk. Calc ID</b>																								
1	CLEAR	CLEAR	F210M	F335M	BRIGHT1	5	1	2	2	193.262																										
2	CLEAR	CLEAR	F150W	F277W	BRIGHT1	5	1	2	2	193.262																										
3	CLEAR	CLEAR	F200W	F356W	BRIGHT1	5	1	2	2	193.262																										
<b>Spectral Elements</b>	<b>FGS External Calibration</b>		<b>Readout Pattern</b>		<b>Groups/Int</b>		<b>Integrations/Exp</b>		<b>Total Dithers</b>		<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wbk. Calc ID</b>																							
1		FGS		2		1		2		2	193.262																									
2		FGS		2		1		2		2	193.262																									
3		FGS		2		1		2		2	193.262																									

## Proposal 1476 - Observation 3 - L-Flats, Photometric, and Distortion Monitor

### Special Requirements

Between Dates 06-NOV-2022:00:00:00 and 06-JAN-2023:00:00:00  
Sequence Visits within 10.0 Days  
Visits Same PA  
Offset 85.0 arcsec, 3.0 arcsec  
No Parallel Attachments  
Guide Star in Guider 1  
  
4 After 3 by 90 Days to 180 Days  
Group Observations 3, 6 within 10 Days

Proposal 1476 - Observation 103 - L-Flats, Photometric, and Distortion Monitor

Fri Apr 14 18:00:30 GMT 2023

<b>Observation</b>	<b>Proposal 1476, Observation 103: WOPR-88607 - Repeat of 3:2</b> <b>Diagnostic Status: Warning</b> Observing Template: NIRCam Engineering Imaging Coordinated Parallel Template(s): FGS External Calibration											
	(Visit 103:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>			
	(1)	LMC-CAL-FIELD	RA: 05 21 57.6740 (80.4903083d) Dec: -69 29 53.36 (-69.49816d) Equinox: J2000									
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Calibration</i> <i>Description=[Astrometric, External flat field, Photometric]</i>												
<b>Template</b>	<b>NIRCam Engineering Imaging</b>						<b>FGS External Calibration</b>					
	Module: ALL Subarray: FULL						Target type: IMAGE Detector: GUIDER2					
<b>Mosaic</b>	<b>Rows</b>	<b>Columns</b>	<b>Row Overlap %</b>		<b>Column Overlap %</b>		<b>Row shift</b>	<b>Column shift</b>	<b>Tile Order</b>			
	2	2	50.0		80.0		0.0	0.0	HILBERT_CURVE			
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>		<b>Subpixel Dither Type</b>		<b>Dither Size</b>	<b>Subpixel Positions</b>			
	1	INTRAMODULEBOX		2		STANDARD			1			
<b>Spectral Elements</b>	<b>NIRCam Engineering Imaging</b>	<b>Short Pupil</b>	<b>Long Pupil</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wbk. Calc ID</b>
	1	CLEAR	CLEAR	F210M	F335M	BRIGHT1	5	1	2	2	193.262	
	2	CLEAR	CLEAR	F150W	F277W	BRIGHT1	5	1	2	2	193.262	
	3	CLEAR	CLEAR	F200W	F356W	BRIGHT1	5	1	2	2	193.262	
<b>Spectral Elements</b>	<b>FGS External Calibration</b>	<b>Readout Pattern</b>		<b>Groups/Int</b>	<b>Integrations/Exp</b>		<b>Total Dithers</b>	<b>Total Integrations</b>		<b>Total Exposure Time</b>	<b>ETC Wbk. Calc ID</b>	
	1	FGS		2	1		2	2		193.262		
	2	FGS		2	1		2	2		193.262		
	3	FGS		2	1		2	2		193.262		

## Proposal 1476 - Observation 103 - L-Flats, Photometric, and Distortion Monitor

### Special Requirements

Aperture PA Range 142 to 155 Degrees (V3 142.0713531 to 155.0713531)  
Offset 85.0 arcsec, 3.0 arcsec  
No Parallel Attachments  
Guide Star in Guider 1

Proposal 1476 - Observation 6 - L-Flats, Photometric, and Distortion Monitor

Fri Apr 14 18:00:30 GMT 2023

<b>Observation</b>	<b>Proposal 1476, Observation 6: Module A at center, FGS1</b> <b>Diagnostic Status: Warning</b> Observing Template: NIRCam Engineering Imaging Coordinated Parallel Template(s): FGS External Calibration																																																											
<b>Diagnostics</b>	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 6:2) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 6:3) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 6:4) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																																											
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<b>Mosaic</b>	<b>Rows</b>		<b>Columns</b>		<b>Row Overlap %</b>		<b>Column Overlap %</b>		<b>Row shift</b>		<b>Column shift</b>		<b>Tile Order</b>																																															
2		2		50.0		80.0		0.0		0.0		DEFAULT																																																
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## Proposal 1476 - Observation 6 - L-Flats, Photometric, and Distortion Monitor

### Special Requirements

Group Visits within 10.0 Days  
Visits Same PA  
Offset -75.0 arcsec, 0.0 arcsec  
No Parallel Attachments  
Guide Star in Guider 2  
  
Group Observations 3, 6 within 10 Days

Proposal 1476 - Observation 4 - L-Flats, Photometric, and Distortion Monitor

Fri Apr 14 18:00:30 GMT 2023

<b>Observation</b>	<p><b>Proposal 1476, Observation 4: Photometric monitoring setup, modA at center</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCcam Imaging</p>									
	<p>(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Miscellaneous</b>		
	(1)	LMC-CAL-FIELD	RA: 05 21 57.6740 (80.4903083d) Dec: -69 29 53.36 (-69.49816d) Equinox: J2000							
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Calibration</i></p> <p><i>Description=[Astrometric, External flat field, Photometric]</i></p>										
<b>Template</b>	<b>Module</b>		<b>Subarray</b>			<b>Target Placement</b>				
	ALL		FULL			Module Gap				
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>	<b>Subpixel Dither Type</b>		<b>Dither Size</b>		<b>Subpixel Positions</b>	
	1	INTRASCA		2	STANDARD		24" (LARGE)		1	
<b>Spectral Elements</b>	<b>#</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	F070W	F444W	RAPID	2	1	2	2	42.947	
	2	F150W	F277W	RAPID	2	1	2	2	42.947	
	3	F200W	F356W	RAPID	2	1	2	2	42.947	
	4	F090W	F300M	RAPID	2	1	2	2	42.947	
	5	F115W	F250M	RAPID	2	1	2	2	42.947	
	6	F150W2	F322W2	RAPID	2	1	2	2	42.947	
	7	F140M	F335M	RAPID	2	1	2	2	42.947	
	8	F182M	F360M	RAPID	2	1	2	2	42.947	
	9	F210M	F410M	RAPID	2	1	2	2	42.947	
	10	F187N	F430M	BRIGHT2	4	1	2	2	171.788	
	11	F212N	F460M	BRIGHT2	4	1	2	2	171.788	
	12	F162M+F150W2	F480M	BRIGHT2	4	1	2	2	171.788	
	13	F164N+F150W2	F323N+F322W2	BRIGHT1	6	1	2	2	236.209	
	14	F164N+F150W2	F405N+F444W	BRIGHT1	6	1	2	2	236.209	
	15	F187N	F466N+F444W	SHALLOW4	5	1	2	2	515.365	
	16	F212N	F470N+F444W	SHALLOW4	5	1	2	2	515.365	

Proposal 1476 - Observation 4 - L-Flats, Photometric, and Distortion Monitor

Special Requirements

Offset -75.0 arcsec, 0.0 arcsec  
4 After 3 by 90 Days to 180 Days

Proposal 1476 - Observation 104 - L-Flats, Photometric, and Distortion Monitor

Fri Apr 14 18:00:30 GMT 2023

<b>Observation</b>	<b>Proposal 1476, Observation 104: WOPR-88703 - Repeat most of 4:1</b> <b>Diagnostic Status: Warning</b> Observing Template: NIRCcam Imaging									
	(Visit 104:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>		<b>Miscellaneous</b>		
	(1)	LMC-CAL-FIELD	RA: 05 21 57.6740 (80.4903083d) Dec: -69 29 53.36 (-69.49816d) Equinox: J2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Calibration</i> <i>Description=[Astrometric, External flat field, Photometric]</i>										
<b>Template</b>	<b>Module</b>		<b>Subarray</b>			<b>Target Placement</b>				
	ALL		FULL			Module Gap				
<b>Dithers</b>	<b>#</b>	<b>Primary Dither Type</b>		<b>Primary Dithers</b>	<b>Subpixel Dither Type</b>		<b>Dither Size</b>		<b>Subpixel Positions</b>	
	1	INTRASCA		2	STANDARD		24" (LARGE)		1	
<b>Spectral Elements</b>	<b>#</b>	<b>Short Filter</b>	<b>Long Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Dithers</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	F150W	F277W	RAPID	2	1	2	2	42.947	
	2	F200W	F356W	RAPID	2	1	2	2	42.947	
	3	F090W	F300M	RAPID	2	1	2	2	42.947	
	4	F115W	F250M	RAPID	2	1	2	2	42.947	
	5	F150W2	F322W2	RAPID	2	1	2	2	42.947	
	6	F140M	F335M	RAPID	2	1	2	2	42.947	
	7	F182M	F360M	RAPID	2	1	2	2	42.947	
	8	F210M	F410M	RAPID	2	1	2	2	42.947	
	9	F187N	F430M	BRIGHT2	4	1	2	2	171.788	
	10	F212N	F460M	BRIGHT2	4	1	2	2	171.788	
	11	F162M+F150W2	F480M	BRIGHT2	4	1	2	2	171.788	
	12	F164N+F150W2	F323N+F322W2	BRIGHT1	6	1	2	2	236.209	
	13	F164N+F150W2	F405N+F444W	BRIGHT1	6	1	2	2	236.209	
	14	F187N	F466N+F444W	SHALLOW4	5	1	2	2	515.365	
	15	F212N	F470N+F444W	SHALLOW4	5	1	2	2	515.365	

Proposal 1476 - Observation 104 - L-Flats, Photometric, and Distortion Monitor

Special Requirements

Offset -75.0 arcsec, 0.0 arcsec