



9282 - CAL-NIS-404: NIRISS Astrometric Calibration

Cycle: 4, Proposal Category: CAL/NIRISS

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Sangmo Tony Sohn (PI)	Space Telescope Science Institute
Dr. Kevin Volk (CoI) (CSA Member)	Space Telescope Science Institute - CSA - JWST
Dr. Andre Martel (CoI)	Space Telescope Science Institute

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	Filter Sequence	NIRISS External Calibration	(1) LMC-NIRISS-FGS-ALIGNMENT
	2	Filter Sequence - Repeat of Obs 1	NIRISS External Calibration	(1) LMC-NIRISS-FGS-ALIGNMENT

ABSTRACT

A re-measurement of the NIRISS distortion and offset from the Guider is requested for trending of any possible changes in the astrometric distortion with time. A single epoch observation will be made in all the NIRISS imaging filters using the same pointing in the Large Magellanic Cloud astrometric field as was used for this purpose in commissioning and in cycles 1 to 3.

This calibration program may change in response to system developments and the final Cycle 4 science program.

OBSERVING DESCRIPTION

The program carries out an astrometric calibration of NIRISS using the same method as what was done during commissioning. It is a continuation of cycle 1 program 1501, cycle 2 program 4471, and cycle 3 program 6656.

JWST Proposal 9282 (Created: Tuesday, July 22, 2025, 9:00:15AM Eastern Standard Time) - Overview

The target field is always visible and there are currently no constraints on when in cycle 4 the observations should be taken.

The program here is based on CAR 1087, the initial NIRISS astrometric calibration.

Proposal 9282 - Targets - CAL-NIS-404: NIRISS Astrometric Calibration

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	LMC-NIRISS-FGS-ALIGNMENT	RA: 05 21 57.3030 (80.4887625d) Dec: -69 29 57.90 (-69.49942d) Equinox: J2000		
Comments: Category=Calibration Description=[Astrometric] Extended=NO					

Proposal 9282 - Observation 1 - CAL-NIS-404: NIRISS Astrometric Calibration

Observation	Proposal 9282, Observation 1: Filter Sequence						Tue Jul 22 14:00:15 GMT 2025
	Diagnostic Status: Warning						
	Observing Template: NIRISS External Calibration						
	Coordinated Parallel Template(s): FGS External Calibration						
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)	LMC-NIRISS-FGS-ALIGNMENT	RA: 05 21 57.3030 (80.4887625d) Dec: -69 29 57.90 (-69.49942d) Equinox: J2000				
	Comments: Category=Calibration Description=[Astrometric] Extended=NO						
Acquisition	NIRISS External Calibration			Target			
	1			NONE			
Template	NIRISS External Calibration			FGS External Calibration			
	Pointing Type: PRIME			Target type: IMAGE			
	AcqTarget: NONE			Detector: GUIDER2			
	Acquisition Mode: null						
Dithers	AcqFilter: F480M						
	#	Pattern Type	Image Dithers	Primary Dithers	Subpixel Positions	Pattern Size	
	1	IMAGING	4				

Proposal 9282 - Observation 1 - CAL-NIS-404: NIRISS Astrometric Calibration

Spectral Elements	NIRISS External Calibration	Subarray	Aperture	Filter Wheel	Pupil Wheel	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	FULL	DEFAULT APERTURE	F277W	CLEARP	NISRAPID	10	3	4	12	1417.254	
	2	FULL	DEFAULT APERTURE	F444W	CLEARP	NISRAPID	10	3	4	12	1417.254	
	3	FULL	DEFAULT APERTURE	F356W	CLEARP	NISRAPID	10	3	4	12	1417.254	
	4	FULL	DEFAULT APERTURE	F430M	CLEARP	NIS	12	3	4	12	6313.221	
	5	FULL	DEFAULT APERTURE	F380M	CLEARP	NISRAPID	15	6	4	24	4122.92	
	6	FULL	DEFAULT APERTURE	F480M	CLEARP	NIS	15	3	4	12	7859.316	
	7	FULL	DEFAULT APERTURE	CLEAR	F090W	NISRAPID	5	3	4	12	773.047	
	8	FULL	DEFAULT APERTURE	CLEAR	F115W	NISRAPID	5	3	4	12	773.047	
	9	FULL	DEFAULT APERTURE	CLEAR	F158M	NISRAPID	5	6	4	24	1546.095	
	10	FULL	DEFAULT APERTURE	CLEAR	F140M	NISRAPID	5	6	4	24	1546.095	
	11	FULL	DEFAULT APERTURE	CLEAR	F150W	NISRAPID	5	3	4	12	773.047	
	12	FULL	DEFAULT APERTURE	CLEAR	F200W	NISRAPID	5	3	4	12	773.047	
Spectral Elements	FGS External Calibration	Readout Pattern		Groups/Int		Integrations/Exp		Total Dithers		Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	FGSRAPID		4		6		4		24	1288.412	
	2	FGSRAPID		4		6		4		24	1288.412	
	3	FGSRAPID		4		6		4		24	1288.412	
	4	FGSRAPID		6		6		4		24	1803.777	
	5	FGSRAPID		6		6		4		24	1803.777	
	6	FGSRAPID		4		6		4		24	1288.412	
	7	FGSRAPID		3		3		4		12	515.365	
	8	FGSRAPID		3		3		4		12	515.365	
	9	FGSRAPID		4		3		4		12	644.206	
	10	FGSRAPID		4		3		4		12	644.206	
	11	FGSRAPID		3		3		4		12	515.365	
	12	FGSRAPID		3		3		4		12	515.365	

Proposal 9282 - Observation 1 - CAL-NIS-404: NIRISS Astrometric Calibration

Special Requirements	No Parallel Attachments Guide Star in Guider 1
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Proposal 9282 - Observation 2 - CAL-NIS-404: NIRISS Astrometric Calibration

Observation	Proposal 9282, Observation 2: Filter Sequence - Repeat of Obs 1						Tue Jul 22 14:00:15 GMT 2025
	Diagnostic Status: Warning						
	Observing Template: NIRISS External Calibration						
	Coordinated Parallel Template(s): FGS External Calibration						
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)	LMC-NIRISS-FGS-ALIGNMENT	RA: 05 21 57.3030 (80.4887625d) Dec: -69 29 57.90 (-69.49942d) Equinox: J2000				
	Comments: Category=Calibration Description=[Astrometric] Extended=NO						
Acquisition	NIRISS External Calibration			Target			
	1			NONE			
Template	NIRISS External Calibration			FGS External Calibration			
	Pointing Type: PRIME			Target type: IMAGE			
	AcqTarget: NONE			Detector: GUIDER2			
	Acquisition Mode: null						
Dithers	AcqFilter: F480M						
	#	Pattern Type	Image Dithers	Primary Dithers	Subpixel Positions	Pattern Size	
	1	IMAGING	4				

Proposal 9282 - Observation 2 - CAL-NIS-404: NIRISS Astrometric Calibration

Spectral Elements	NIRISS External Calibration	Subarray	Aperture	Filter Wheel	Pupil Wheel	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	FULL	DEFAULT APERTURE	F277W	CLEARP	NISRAPID	10	3	4	12	1417.254	
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	5	FGSRAPID		6		6		4		24	1803.777	
	6	FGSRAPID		4		6		4		24	1288.412	
	7	FGSRAPID		3		3		4		12	515.365	
	8	FGSRAPID		3		3		4		12	515.365	
	9	FGSRAPID		4		3		4		12	644.206	
	10	FGSRAPID		4		3		4		12	644.206	
	11	FGSRAPID		3		3		4		12	515.365	
	12	FGSRAPID		3		3		4		12	515.365	

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Special Requirements	No Parallel Attachments Guide Star in Guider 1
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