



1509 - NRM Pixel Linearity

Cycle: 1, Proposal Category: CAL/NIRISS

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		NIRISS Aperture Masking Interferometry	(1) HD-105521
	2		NIRISS Aperture Masking Interferometry	(2) HD-93237
	3		NIRISS Aperture Masking Interferometry	(3) HR-7258

ABSTRACT

NIRISS/AMI observations of three bright stars will be taken to characterize the linearity response of the peak pixels in the PSF to better precision than can be obtained in ground-based linearity measurements. The observations will be taken with dithering between the 4 primary positions, so this will also provide some persistence data for analysis.

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

OBSERVING DESCRIPTION

One of the limiting factors in the precision of NIRISS/AMI observations of bright objects is expected to be the accuracy of the linearity correction values from the ground-based measurements. These values are limited by uncertainties in the stability of the lamp brightness. Stars provide a much

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beter stability than the lamps used in the ground-based measurements. In this program observations of three single stars of different brightnesses will be made in the NIRISS/AMI mode to allow a direct measurement of the linearity coefficients for the pixels in the peak of the PSF at better accuracy than was achieved in the ground measurements

All three measurements are required for the analysis, but the observations may be taken at any time during cycle 1 and do not need to be coordinated.

The observations do not require a phase calibration observation linked to them.

Proposal 1509 - Targets - NRM Pixel Linearity

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-105521	RA: 12 08 54.5892 (182.2274550d) Dec: -41 13 53.77 (-41.23160d) Equinox: J2000	Proper Motion RA: -11.51 mas/yr Proper Motion Dec: -7.76 mas/yr Parallax: 0.002106" Epoch of Position: 2007	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Star</i> <i>Description=[B giants, Emission line stars]</i> <i>Extended=NO</i></p>				
(2)	HD-93237	RA: 10 41 51.5205 (160.4646688d) Dec: -79 46 59.84 (-79.78329d) Equinox: J2000		
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Star</i> <i>Description=[B giants, Emission line stars]</i> <i>Extended=NO</i></p>				
(3)	HR-7258	RA: 19 06 17.0360 (286.5709833d) Dec: +41 24 49.61 (41.41378d) Equinox: J2000		
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Star</i> <i>Description=[B dwarfs]</i> <i>Extended=NO</i></p>				

Fixed Targets

Proposal 1509 - Observation 1 - NRM Pixel Linearity

Fri Aug 12 22:00:55 GMT 2022

Observation	<p>Proposal 1509, Observation 1</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRISS Aperture Masking Interferometry</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)	HD-105521	RA: 12 08 54.5892 (182.2274550d) Dec: -41 13 53.77 (-41.23160d) Equinox: J2000			Proper Motion RA: -11.51 mas/yr Proper Motion Dec: -7.76 mas/yr Parallax: 0.002106" Epoch of Position: 2007				
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Star</i></p> <p><i>Description=[B giants, Emission line stars]</i></p> <p><i>Extended=NO</i></p>									
Acquisition	#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	1 HD-105521	AMIBRIGHT	F480M	NISRAPID	7	1	1	0.384	23220
Template	Subarray					Direct Image				
	SUB80					false				
Dithers	#	Primary Dithers				Subpixel Positions				
	1	4				NONE				
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1	F480M	NISRAPID	24	38	4	152	289.785		
	2	F480M	NISRAPID	24	38	4	152	289.785		

Proposal 1509 - Observation 1 - NRM Pixel Linearity

PSF References

PSF Reference: true

Proposal 1509 - Observation 2 - NRM Pixel Linearity

Fri Aug 12 22:00:55 GMT 2022

Observation	<p>Proposal 1509, Observation 2 Diagnostic Status: Warning Observing Template: NIRISS Aperture Masking Interferometry</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			
	(2)	HD-93237	RA: 10 41 51.5205 (160.4646688d) Dec: -79 46 59.84 (-79.78329d) Equinox: J2000								
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[B giants, Emission line stars] Extended=NO</p>										
Acquisition	#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1	2 HD-93237	AMIBRIGHT	F480M	NISRAPID	11	1	1	0.566	23220	
Template	Subarray				Direct Image						
	SUB80				false						
Dithers	#	Primary Dithers				Subpixel Positions					
	1	4				NONE					
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID		
	1	F480M	NISRAPID	50	45	4	180	696.226			
	2	F480M	NISRAPID	50	45	4	180	696.226			
PSF References	PSF Reference: true										

Proposal 1509 - Observation 3 - NRM Pixel Linearity

Fri Aug 12 22:00:55 GMT 2022

Observation	<p>Proposal 1509, Observation 3</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRISS Aperture Masking Interferometry</p>										
Diagnostics	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous			
	(3)	HR-7258	RA: 19 06 17.0360 (286.5709833d) Dec: +41 24 49.61 (41.41378d) Equinox: J2000								
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Star</i></p> <p><i>Description=[B dwarfs]</i></p> <p><i>Extended=NO</i></p>										
Acquisition	#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1	3 HR-7258	AMIBRIGHT	F480M	NISRAPID	15	1	1	0.748	23220	
Template	Subarray				Direct Image						
	SUB80				false						
Dithers	#	Primary Dithers				Subpixel Positions					
	1	4				NONE					
Spectral Elements	#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID		
	1	F480M	NISRAPID	115	45	4	180	1578.874			
	2	F480M	NISRAPID	115	45	4	180	1578.874			
PSF References	PSF Reference: true										