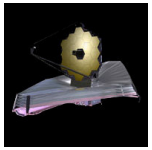

4480 - AMI Mode Calibrator Investigation

Cycle: 2, Proposal Category: CAL/NIRISS

INVESTIGATORS

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OBSERVATIONS

Folder	***Observation***	***Label***	***Observing Template***	***Science Target***
Observation Folder				
	1		NIRISS Aperture Masking Interferometry	(1) HD-150668
	2		NIRISS Aperture Masking Interferometry	(2) HD-149201
	3		NIRISS Aperture Masking Interferometry	(3) HD-149446
	4		NIRISS Aperture Masking Interferometry	(4) IRAS-16516-1517

ABSTRACT

Observations of four single stars as AMI mode calibration sources are requested. The first two have closely matched brightesses and the third star is of similar spectral type but is a factor of 1.5 fainter. The last star is the same brightness as the third star but of a somewhat different spectral type. Cross-calibrations of these stars with each other will give information to guide the requirements needed for selecting AMI phase calibration sources.

This calibration program may change in response to system developments and the final Cycle 2 science program.

OBSERVING DESCRIPTION

We request NIRISS AMI mode observations of several single stars to assess the sensitivity of the AMI phase calibration on the spectral type and brightness of the PSF reference star compared to the main target. The four stars selected are two pairs each closely matched in brightness. The brighter pair have very similar spectral types. The fainter pair have somewhat different spectral types and one of these two stars matches the spectral type of the brighter two stars fairly closely. The stars are also within a relatively small area of sky. We request observations of each of these stars in the NIRISS AMI mode to about the same total number of collected photons. Since the phase calibration is sensitive to the primary mirror wavefront error, the four observations are grouped as a non-interruptable sequence.

Once the data are obtained pairs of stars will be cross-calibrated to see how well or how badly the phase calibration can be doe with stars of different brightess or different spectral type. These results will be used to provide guidance to AMI mode users concerning how closely the properties of the phase calibration target need to match those of the science target for good results.

As the different stars are to be cross-calibrated all four observations need to be done together, so the observations are non-interruptable.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-150668	RA: 16 43 16.3582 (250.8181592d) Dec: -18 27 29.94 (-18.45832d) Equinox: J2000	Proper Motion RA: 7.485075296143181E-5 sec of time/yr Proper Motion Dec: -0.004261000026417605 arcsec/yr Parallax: 0.0029386" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[K giants]* *Extended=NO*				
(2)	HD-149201	RA: 16 34 12.3610 (248.5515042d) Dec: -25 00 4.70 (-25.00131d) Equinox: J2000	Proper Motion RA: -0.0019496895179966895 sec of time/yr Proper Motion Dec: -0.045201000011729775 arcsec/yr Parallax: 0.0045631" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[K giants]* *Extended=NO*				
(3)	HD-149446	RA: 16 35 52.3473 (248.9681138d) Dec: -25 22 54.09 (-25.38169d) Equinox: J2000	Proper Motion RA: -0.0013330790422676163 sec of time/yr Proper Motion Dec: -0.030838999987281568 arcsec/yr Parallax: 0.0038086" Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[K giants]* *Extended=NO*				
(4)	IRAS-16516-1517	RA: 16 54 32.4738 (253.6353075d) Dec: -15 22 9.08 (-15.36919d) Equinox: J2000	Proper Motion RA: 2.6224505716178337E-4 sec of time/yr Proper Motion Dec: 9.49E-4 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[M giants]*				
(5)	HD-153229	RA: 16 58 41.5594 (254.6731642d) Dec: -14 52 11.24 (-14.86979d) Equinox: J2000	Proper Motion RA: -1.1967437845640191E-4 sec of time/yr Proper Motion Dec: -0.02651399995556858 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[F dwarfs]*				

Observation

Proposal 4480, Observation 1

Mon May 01 16:02:55 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRISS Aperture Masking Interferometry

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-150668	RA: 16 43 16.3582 (250.8181592d) Dec: -18 27 29.94 (-18.45832d) Equinox: J2000	Proper Motion RA: 7.485075296143181E-5 sec of time/yr Proper Motion Dec: -0.004261000026417605 arcsec/yr Parallax: 0.0029386" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[K giants]
Extended=NO

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	1 HD-150668	AMIBRIGHT	F480M	NISRAPID	11	1	1	0.566	149571

Template

Subarray	Direct Image
SUB80	false

Dithers

#	Primary Dithers	Subpixel Positions
1	NONE	NONE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F480M	NISRAPID	5	600	1	600	283.872	

PSF References	PSF Reference: true
Special Requirements	No Parallel Attachments Group Observations 1, 2, 3, 4, Non-interruptible

Observation

Proposal 4480, Observation 2

Mon May 01 16:02:55 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRISS Aperture Masking Interferometry

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-149201	RA: 16 34 12.3610 (248.5515042d) Dec: -25 00 4.70 (-25.00131d) Equinox: J2000	Proper Motion RA: -0.0019496895179966895 sec of time/yr Proper Motion Dec: -0.045201000011729775 arcsec/yr Parallax: 0.0045631" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[K giants]
Extended=NO

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 HD-149201	AMIBRIGHT	F480M	NISRAPID	11	1	1	0.566	149571

Template

Subarray	Direct Image
SUB80	false

Dithers

#	Primary Dithers	Subpixel Positions
1	NONE	NONE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F480M	NISRAPID	5	600	1	600	283.872	

PSF References	PSF Reference: true
Special Requirements	No Parallel Attachments Group Observations 1, 2, 3, 4, Non-interruptible

Observation

Proposal 4480, Observation 3

Mon May 01 16:02:55 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRISS Aperture Masking Interferometry

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)	HD-149446	RA: 16 35 52.3473 (248.9681138d) Dec: -25 22 54.09 (-25.38169d) Equinox: J2000	Proper Motion RA: -0.0013330790422676163 sec of time/yr Proper Motion Dec: -0.030838999987281568 arcsec/yr Parallax: 0.0038086" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[K giants]
Extended=NO

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	3 HD-149446	AMIBRIGHT	F480M	NISRAPID	11	1	1	0.566	149571

Template

Subarray	Direct Image
SUB80	false

Dithers

#	Primary Dithers	Subpixel Positions
1	NONE	NONE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F480M	NISRAPID	8	600	1	600	419.664	

PSF References	PSF Reference: true
Special Requirements	No Parallel Attachments Group Observations 1, 2, 3, 4, Non-interruptible

Observation

Proposal 4480, Observation 4

Mon May 01 16:02:55 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRISS Aperture Masking Interferometry

Diagnostics

(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(4)	IRAS-16516-1517	RA: 16 54 32.4738 (253.6353075d) Dec: -15 22 9.08 (-15.36919d) Equinox: J2000	Proper Motion RA: 2.6224505716178337E-4 sec of time/yr Proper Motion Dec: 9.49E-4 arcsec/yr Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[M giants]

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4 IRAS-16516-1517	AMIBRIGHT	F480M	NISRAPID	11	1	1	0.566	149571

Template

Subarray	Direct Image
SUB80	false

Dithers

#	Primary Dithers	Subpixel Positions
1	NONE	NONE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F480M	NISRAPID	8	600	1	600	419.664	

PSF References

PSF Reference: true

Special Requirements	
	No Parallel Attachments Group Observations 1, 2, 3, 4, Non-interruptible