



12596 - F560W boresight offset confirmation

Cycle: 5, Proposal Category: CAL/MIRI

INVESTIGATORS

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
1140				
	1		MIRI Coronagraphic Imaging	(1) HD-167855A
	2		MIRI Coronagraphic Imaging	(2) HD-167855B
1550				
	3		MIRI Coronagraphic Imaging	(1) HD-167855A
	4		MIRI Coronagraphic Imaging	(2) HD-167855B

ABSTRACT

The MIRI 4QPM coronagraphs require the target to be centered on the nulling position to better than 10 mas. Since the filters used for target acquisition and the filters used for science are not the same, the movement of the PSF on the detector when the filter is changed ("boresight offset") must be measured to correspondingly high precision. This program tests the new values measured for the F560W/F1140C and F560W/F1550C filter pairs by performing the target acquisition and centering sequence with a convenient equal-mass binary, where the position of the occulted member can be derived very accurately from the separation measured in the target acquisition exposures.

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

OBSERVING DESCRIPTION

This program used HD 167855, an equal-mass binary with about 4" separation in the northern CVZ.

TIMING CONSTRAINTS: This program must execute at least two months before JWST-GO-4901.

Proposal 12596 - Targets - F560W boresight offset confirmation

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	HD-167855A	RA: 18 11 15.2386 (272.8134942d) Dec: +69 14 59.78 (69.24994d) Equinox: J2000	Proper Motion RA: 10.707 mas/yr Proper Motion Dec: 30.479 mas/yr Parallax: 0.0082679" Epoch of Position: 2000	
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i> <i>Category=Star</i> <i>Description=[G stars]</i>				
Fixed Targets	(2)	HD-167855B	RA: 18 11 14.8878 (272.8120325d) Dec: +69 14 55.85 (69.24885d) Equinox: J2000	Proper Motion RA: 9.405 mas/yr Proper Motion Dec: 30.97299999999995 mas/yr Parallax: 0.0082638" Epoch of Position: 2000	
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i> <i>Category=Star</i> <i>Description=[G stars]</i>				

Proposal 12596 - Observation 1 - F560W boresight offset confirmation

Observation	Proposal 12596, Observation 1											Mon Jun 08 21:00:32 GMT 2026	
	Diagnostic Status: Warning												
Observing Template: MIRI Coronagraphic Imaging													
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-167855A		RA: 18 11 15.2386 (272.8134942d) Dec: +69 14 59.78 (69.24994d) Equinox: J2000			Proper Motion RA: 10.707 mas/yr Proper Motion Dec: 30.479 mas/yr Parallax: 0.0082679" Epoch of Position: 2000						
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.												
	SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.												
	Category=Star Description=[G stars]												
Acquisition	#	Target		Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID		
	1	SAME		F560W	1	FAST	6	1	1	1.438	287716		
Template	Repeat observation												
	YES												
Dithers	#	Dither Type											
	1	NONE											
Spectral Elements	#	Coron Mask/Filter	Subarray	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4QPM/F1140C	MASK1140	4QPM	F1140C	FASTR1	100	10	1	1	10	241.837	

Proposal 12596 - Observation 1 - F560W boresight offset confirmation

PSF References	Additional Justification: false
Special Requirements	Before Date 27-SEP-2026:00:00:00 Aperture PA Range 39.83544897 to 109.83544897 Degrees (V3 35.0 to 105.0) Aperture PA Range 129.83544897 to 199.83544897 Degrees (V3 125.0 to 195.0) Aperture PA Range 219.83544897 to 289.83544897 Degrees (V3 215.0 to 285.0) Aperture PA Range 309.83544897 to 19.83544897 Degrees (V3 305.0 to 15.0) No Parallel Attachments

Proposal 12596 - Observation 2 - F560W boresight offset confirmation

Observation	Proposal 12596, Observation 2											Mon Jun 08 21:00:32 GMT 2026	
	Diagnostic Status: Warning												
Observing Template: MIRI Coronagraphic Imaging													
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-167855B	RA: 18 11 14.8878 (272.8120325d) Dec: +69 14 55.85 (69.24885d) Equinox: J2000				Proper Motion RA: 9.405 mas/yr Proper Motion Dec: 30.97299999999995 mas/yr Parallax: 0.0082638" Epoch of Position: 2000						
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.												
	SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.												
	Category=Star Description=[G stars]												
Acquisition	#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID			
	1	SAME	F560W	2	FAST	6	1	1	1.438	287716			
Template	Repeat observation												
	YES												
Dithers	#	Dither Type											
	1	NONE											
Spectral Elements	#	Coron Mask/Filter	Subarray	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4QPM/F1140C	MASK1140	4QPM	F1140C	FASTR1	100	10	1	1	10	241.837	

Proposal 12596 - Observation 2 - F560W boresight offset confirmation

PSF References	Additional Justification: false
Special Requirements	Before Date 27-SEP-2026:00:00:00 Aperture PA Range 39.83544897 to 109.83544897 Degrees (V3 35.0 to 105.0) Aperture PA Range 129.83544897 to 199.83544897 Degrees (V3 125.0 to 195.0) Aperture PA Range 219.83544897 to 289.83544897 Degrees (V3 215.0 to 285.0) Aperture PA Range 309.83544897 to 19.83544897 Degrees (V3 305.0 to 15.0) No Parallel Attachments

Proposal 12596 - Observation 3 - F560W boresight offset confirmation

Observation	Proposal 12596, Observation 3												Mon Jun 08 21:00:32 GMT 2026
	Diagnostic Status: Warning												
Observing Template: MIRI Coronagraphic Imaging													
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			
	(1)	HD-167855A	RA: 18 11 15.2386 (272.8134942d) Dec: +69 14 59.78 (69.24994d) Equinox: J2000				Proper Motion RA: 10.707 mas/yr Proper Motion Dec: 30.479 mas/yr Parallax: 0.0082679" Epoch of Position: 2000						
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.												
	SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.												
	Category=Star Description=[G stars]												
Acquisition	#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID			
	1	SAME	F560W	1	FAST	6	1	1	1.438	287716			
Template	Repeat observation												
YES													
Dithers	#	Dither Type											
	1	NONE											
Spectral Elements	#	Coron Mask/Filter	Subarray	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4QPM/F1550C	MASK1550	4QPM	F1550C	FASTR1	100	10	1	1	10	241.837	

Proposal 12596 - Observation 3 - F560W boresight offset confirmation

PSF References	Additional Justification: false
Special Requirements	Before Date 27-SEP-2026:00:00:00 Aperture PA Range 39.83544897 to 109.83544897 Degrees (V3 35.0 to 105.0) Aperture PA Range 129.83544897 to 199.83544897 Degrees (V3 125.0 to 195.0) Aperture PA Range 219.83544897 to 289.83544897 Degrees (V3 215.0 to 285.0) Aperture PA Range 309.83544897 to 19.83544897 Degrees (V3 305.0 to 15.0) No Parallel Attachments

Proposal 12596 - Observation 4 - F560W boresight offset confirmation

Observation	Proposal 12596, Observation 4											Mon Jun 08 21:00:32 GMT 2026	
	Diagnostic Status: Warning												
Observing Template: MIRI Coronagraphic Imaging													
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			
	(2)	HD-167855B		RA: 18 11 14.8878 (272.8120325d) Dec: +69 14 55.85 (69.24885d) Equinox: J2000			Proper Motion RA: 9.405 mas/yr Proper Motion Dec: 30.97299999999995 mas/yr Parallax: 0.0082638" Epoch of Position: 2000						
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.												
	SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.												
	Category=Star Description=[G stars]												
Acquisition	#	Target		Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID		
	1	SAME		F560W	2	FAST	6	1	1	1.438	287716		
Template	Repeat observation												
	YES												
Dithers	#	Dither Type											
	1	NONE											
Spectral Elements	#	Coron Mask/Filter	Subarray	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	4QPM/F1550C	MASK1550	4QPM	F1550C	FASTR1	100	10	1	1	10	241.837	

Proposal 12596 - Observation 4 - F560W boresight offset confirmation

PSF References	Additional Justification: false
Special Requirements	Before Date 27-SEP-2026:00:00:00 Aperture PA Range 39.83544897 to 109.83544897 Degrees (V3 35.0 to 105.0) Aperture PA Range 129.83544897 to 199.83544897 Degrees (V3 125.0 to 195.0) Aperture PA Range 219.83544897 to 289.83544897 Degrees (V3 215.0 to 285.0) Aperture PA Range 309.83544897 to 19.83544897 Degrees (V3 305.0 to 15.0) No Parallel Attachments