



9265 - CAL-MIRI-463

Cycle: 3, 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>
Observation Folder				
	5	box 1 top left	MIRI Low Resolution Spectroscopy	(1) HD163466
	2	box 2 center	MIRI Low Resolution Spectroscopy	(1) HD163466
	3	box 3 bottom left	MIRI Low Resolution Spectroscopy	(1) HD163466
	4	box 4 top right	MIRI Low Resolution Spectroscopy	(1) HD163466
	6	box 5 bottom right	MIRI Low Resolution Spectroscopy	(1) HD163466

ABSTRACT

This activity will improve our understanding of the MIRI WFSS mode trace, flux, and ePSF calibrations as a function of position across the MIRI imager.

There are three targets possible:

JWST Proposal 9265 (Created: Tuesday, June 17, 2025, 12:02:13PM Eastern Standard Time) - Overview

HD16366 has been used as ePSF target and also as a flux calibrator though it has not been used in LRS calibration flux calibration programs as much the other 2. The main argument against this source is that it would only be visible in Nov 2025 and does not have a long window.

HR 5467 has been used for MRS as well, it is very bright and might saturate. Current un-saturated LRS slitless observations of it only have 5 groups/integrations so we might be impacted by BFE if not saturation. The ETC

HD 2811 is the faintest of the 3 but visible. It is visible Feb through June 11, 2025. However to achieve the same SNR as in the absolute cal program 1536 we would need 50 hours of observing.

HR 5467 14 38 15.2215 +54 01 24.025 8.279 0.036 16.880 0.035 -18.611 0.039edr3 182.704 63.039 A1 V 5.83 5.756 ok

HD 2811 00 31 18.4899 -43 36 22.998 3.799 0.022 -6.008 0.020 -4.326 0.017edr3 345.623 -42.223 A3 V 7.50 7.043 cycle1 ok

HD 163466 17 52 25.3741 +60 23 46.939 5.208 0.040 -1.983 0.058 42.780 0.055edr3 261.334 83.779 A2 6.86 6.339 cycle1 ok

Since we have an ePSF for slitless observations in the slitless subarray which can help comparisons with the slitless mode, I use HD 163466 even if the data will arrive later than we hope.

OBSERVING DESCRIPTION

This activity includes the subpixel dither strategy used for LRS slit and slitless ePSF observations.

We consider multiple targets used for LRS ePSF and flux calibration.

ETC estimates are using Phoenix stellar models normalized to the available K magnitudes from the SIMBAD data base.

Proposal 9265 - Targets - CAL-MIRI-463

	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
Fixed Targets	(1)	HD163466	RA: 17 52 25.3741 (268.1057254d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -1.983 mas/yr Proper Motion Dec: 42.780 mas/yr Parallax: 0.005208" Epoch of Position: 2000.0	
		Comments: GAIA DR2 coordinates			
		checked with SIMBAD the catalog reference come from Gaia Early Data Release 3			
		Basic data :			
		HD 163466 -- Star			
		Other object types: otypes_help * (HD,AG,...), UV (TD1), NIR (2MASS)			
		ICRS coord. (ep=J2000) : 17 52 25.3741156656 +60 23 46.938537132 (Optical) [0.0390 0.0391 90] A 2020yCat.1350....0G			
		FK4 coord. (ep=B1950 eq=1950) : 17 51 49.1361335190 +60 24 19.184782089 [0.0390 0.0391 90]			
		Gal coord. (ep=J2000) : 089.2375587883131 +30.5589959439377 [0.0390 0.0391 90]			
		Proper motions mas/yr : -1.983 42.780 [0.058 0.055 90] A 2020yCat.1350....0G			
		Radial velocity / Redshift / cz : V(km/s) -16.2 [2] / z(~) -0.000054 [0.000007] / cz -16.20 [2.00] E 1953GCRV..C.....0W Parallaxes (mas): 5.2084 [0.0395] A 2020yCat.1350....0G			
		B 7.04 [0.01] D 2000A&A...355L..27H V 6.85 [0.01] D 2000A&A...355L..27H G 6.830428 [0.002777] C 2020yCat.1350....0G J 6.402 [0.019] C 2003yCat.2246....0C H 6.348 [0.020] C 2003yCat.2246....0C K 6.339 [0.018] C 2003yCat.2246....0C Category=Star Description=[A dwarfs] Extended=NO			

Proposal 9265 - Observation 5 - CAL-MIRI-463

Observation	Proposal 9265, Observation 5: box 1 top left			Tue Jun 17 17:02:13 GMT 2025	
	Diagnostic Status: Warning				
Observing Template: MIRI Low Resolution Spectroscopy					
Diagnostics	(box 1 top left (Obs 5)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.				
	(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.				
Fixed Targets					
	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1) HD163466					
RA: 17 52 25.3741 (268.1057254d)					
Dec: +60 23 46.94 (60.39637d)					
Equinox: J2000					
Proper Motion RA: -1.983 mas/yr					
Proper Motion Dec: 42.780 mas/yr					
Parallax: 0.005208"					
Epoch of Position: 2000.0					
Comments: GAIA DR2 coordinates					
checked with SIMBAD the catalog reference come from Gaia Early Data Release 3					
Basic data :					
HD 163466 -- Star					
Other object types: otypes_help * (HD,AG,...), UV (TD1), NIR (2MASS)					
ICRS coord. (ep=J2000) : 17 52 25.3741156656 +60 23 46.938537132 (Optical) [0.0390 0.0391 90] A 2020yCat.1350....0G					
FK4 coord. (ep=B1950 eq=1950) : 17 51 49.1361335190 +60 24 19.184782089 [0.0390 0.0391 90]					
Gal coord. (ep=J2000) : 089.2375587883131 +30.5589959439377 [0.0390 0.0391 90]					
Proper motions mas/yr : -1.983 42.780 [0.058 0.055 90] A 2020yCat.1350....0G					
Radial velocity / Redshift / cz : V(km/s) -16.2 [2] / z(~) -0.000054 [0.000007] / cz -16.20 [2.00]					
E 1953GCRV..C.....0W					
Parallaxes (mas): 5.2084 [0.0395] A 2020yCat.1350....0G					
B 7.04 [0.01] D 2000A&A...355L...27H					
V 6.85 [0.01] D 2000A&A...355L...27H					
G 6.830428 [0.002777] C 2020yCat.1350....0G					
J 6.402 [0.019] C 2003yCat.2246....0C					
H 6.348 [0.020] C 2003yCat.2246....0C					
K 6.339 [0.018] C 2003yCat.2246....0C					
Category=Star					
Description=[A dwarfs]					
Extended=NO					
Acquisition					
	#	Target			
1					
NONE					
Template					
	AcqFilter	Subarray	Obtain Verification Image?		
F1000W					
FULL					
true					

Proposal 9265 - Observation 5 - CAL-MIRI-463

Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset				
	1	INTRAPIXEL SLIT SCAN CENTER								
Pointing Verification	#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
	1	FASTR1	4	1	1	1	1	11.1		F1000W
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	
	1	FASTR1	7	16	176	1	11	3876.731	91307.01	
Special Requirements	Offset 19.5 arcsec, 58.0 arcsec									
	Group Observations 2, 3, 4, 5, 6, Non-interruptible									

Proposal 9265 - Observation 2 - CAL-MIRI-463

Observation	Proposal 9265, Observation 2: box 2 center			Tue Jun 17 17:02:13 GMT 2025
	Diagnostic Status: Warning			
Observing Template: MIRI Low Resolution Spectroscopy				
Diagnosics	(box 2 center (Obs 2)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended. (Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.			
Fixed Targets				
	#	Name	Target Coordinates	Targ. Coord. Corrections
	(1)	HD163466	RA: 17 52 25.3741 (268.1057254d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -1.983 mas/yr Proper Motion Dec: 42.780 mas/yr Parallax: 0.005208" Epoch of Position: 2000.0
	Comments: GAIA DR2 coordinates checked with SIMBAD the catalog reference come from Gaia Early Data Release 3 Basic data : HD 163466 -- Star Other object types: otypes_help * (HD,AG,...), UV (TD1), NIR (2MASS) ICRS coord. (ep=J2000) : 17 52 25.3741156656 +60 23 46.938537132 (Optical) [0.0390 0.0391 90] A 2020yCat.1350....0G FK4 coord. (ep=B1950 eq=1950) : 17 51 49.1361335190 +60 24 19.184782089 [0.0390 0.0391 90] Gal coord. (ep=J2000) : 089.2375587883131 +30.5589959439377 [0.0390 0.0391 90] Proper motions mas/yr : -1.983 42.780 [0.058 0.055 90] A 2020yCat.1350....0G Radial velocity / Redshift / cz : V(km/s) -16.2 [2] / z(~) -0.000054 [0.000007] / cz -16.20 [2.00] E 1953GCRV..C.....0W Parallaxes (mas): 5.2084 [0.0395] A 2020yCat.1350....0G B 7.04 [0.01] D 2000A&A...355L...27H V 6.85 [0.01] D 2000A&A...355L...27H G 6.830428 [0.002777] C 2020yCat.1350....0G J 6.402 [0.019] C 2003yCat.2246....0C H 6.348 [0.020] C 2003yCat.2246....0C K 6.339 [0.018] C 2003yCat.2246....0C Category=Star Description=[A dwarfs] Extended=NO			
Acquisition	#	Target		
	1	NONE		
Template	AcqFilter	Subarray	Obtain Verification Image?	
	F1000W	FULL	true	

Proposal 9265 - Observation 2 - CAL-MIRI-463

Dithers	#	Dither Type	No. Spectral Steps		Spectral Step Offset		No. Spatial Steps		Spatial Step Offset	
	1	INTRAPIXEL SLIT SCAN CENTER								
Pointing Verification	#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
	1	FASTR1	4	1	1	1	1	11.1		F1000W
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	
	1	FASTR1	7	16	176	1	11	3876.731	91307.01	
Special Requirements	Offset 40.0 arcsec, 28.5 arcsec									
	Group Observations 2, 3, 4, 5, 6, Non-interruptible									

Proposal 9265 - Observation 3 - CAL-MIRI-463

Observation	Proposal 9265, Observation 3: box 3 bottom left			Tue Jun 17 17:02:13 GMT 2025	
	Diagnostic Status: Warning				
Observing Template: MIRI Low Resolution Spectroscopy					
Diagnostics	(box 3 bottom left (Obs 3)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended. (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) HD163466 RA: 17 52 25.3741 (268.1057254d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000 Proper Motion RA: -1.983 mas/yr Proper Motion Dec: 42.780 mas/yr Parallax: 0.005208" Epoch of Position: 2000.0 Comments: GAIA DR2 coordinates checked with SIMBAD the catalog reference come from Gaia Early Data Release 3 Basic data : HD 163466 -- Star Other object types: otypes_help * (HD,AG,...), UV (TD1), NIR (2MASS) ICRS coord. (ep=J2000) : 17 52 25.3741156656 +60 23 46.938537132 (Optical) [0.0390 0.0391 90] A 2020yCat.1350....0G FK4 coord. (ep=B1950 eq=1950) : 17 51 49.1361335190 +60 24 19.184782089 [0.0390 0.0391 90] Gal coord. (ep=J2000) : 089.2375587883131 +30.5589959439377 [0.0390 0.0391 90] Proper motions mas/yr : -1.983 42.780 [0.058 0.055 90] A 2020yCat.1350....0G Radial velocity / Redshift / cz : V(km/s) -16.2 [2] / z(~) -0.000054 [0.000007] / cz -16.20 [2.00] E 1953GCRV..C.....0W Parallaxes (mas): 5.2084 [0.0395] A 2020yCat.1350....0G					
B 7.04 [0.01] D 2000A&A...355L...27H V 6.85 [0.01] D 2000A&A...355L...27H G 6.830428 [0.002777] C 2020yCat.1350....0G J 6.402 [0.019] C 2003yCat.2246....0C H 6.348 [0.020] C 2003yCat.2246....0C K 6.339 [0.018] C 2003yCat.2246....0C Category=Star Description=[A dwarfs] Extended=NO					
Acquisition					
	#	Target			
1 NONE					
Template	AcqFilter		Subarray	Obtain Verification Image?	
	F1000W		FULL	true	

Proposal 9265 - Observation 3 - CAL-MIRI-463

Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset				
	1	INTRAPIXEL SLIT SCAN CENTER								
Pointing Verification	#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
	1	FASTR1	4	1	1	1	1	11.1		F1000W
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	
	1	FASTR1	7	16	176	1	11	3876.731	91307.01	
Special Requirements	Offset 20.0 arcsec, 5.4 arcsec									
	Group Observations 2, 3, 4, 5, 6, Non-interruptible									

Proposal 9265 - Observation 4 - CAL-MIRI-463

Observation	Proposal 9265, Observation 4: box 4 top right			Tue Jun 17 17:02:13 GMT 2025
	Diagnostic Status: Warning			
Observing Template: MIRI Low Resolution Spectroscopy				
Diagnostics	(box 4 top right (Obs 4)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.			
	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.			
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections
	(1)	HD163466	RA: 17 52 25.3741 (268.1057254d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -1.983 mas/yr Proper Motion Dec: 42.780 mas/yr Parallax: 0.005208" Epoch of Position: 2000.0
Comments: GAIA DR2 coordinates				
checked with SIMBAD the catalog reference come from Gaia Early Data Release 3				
Basic data : HD 163466 -- Star Other object types: otypes_help * (HD,AG,...), UV (TD1), NIR (2MASS) ICRS coord. (ep=J2000) : 17 52 25.3741156656 +60 23 46.938537132 (Optical) [0.0390 0.0391 90] A 2020yCat.1350....0G FK4 coord. (ep=B1950 eq=1950) : 17 51 49.1361335190 +60 24 19.184782089 [0.0390 0.0391 90] Gal coord. (ep=J2000) : 089.2375587883131 +30.5589959439377 [0.0390 0.0391 90] Proper motions mas/yr : -1.983 42.780 [0.058 0.055 90] A 2020yCat.1350....0G Radial velocity / Redshift / cz : V(km/s) -16.2 [2] / z(~) -0.000054 [0.000007] / cz -16.20 [2.00] E 1953GCRV..C.....0W Parallaxes (mas): 5.2084 [0.0395] A 2020yCat.1350....0G				
B 7.04 [0.01] D 2000A&A...355L...27H V 6.85 [0.01] D 2000A&A...355L...27H G 6.830428 [0.002777] C 2020yCat.1350....0G J 6.402 [0.019] C 2003yCat.2246....0C H 6.348 [0.020] C 2003yCat.2246....0C K 6.339 [0.018] C 2003yCat.2246....0C Category=Star Description=[A dwarfs] Extended=NO				
Acquisition	#	Target		
	1	NONE		
Template	AcqFilter	Subarray	Obtain Verification Image?	
	F1000W	FULL	true	

Proposal 9265 - Observation 4 - CAL-MIRI-463

Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset				
	1	INTRAPIXEL SLIT SCAN CENTER								
Pointing Verification	#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
	1	FASTR1	4	1	1	1	1	11.1		F1000W
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	
	1	FASTR1	7	16	176	1	11	3876.731	91307.01	
Special Requirements	Offset 58.0 arcsec, 58.0 arcsec									
	Group Observations 2, 3, 4, 5, 6, Non-interruptible									

Proposal 9265 - Observation 6 - CAL-MIRI-463

Observation	Proposal 9265, Observation 6: box 5 bottom right			Tue Jun 17 17:02:13 GMT 2025
	Diagnostic Status: Warning			
Observing Template: MIRI Low Resolution Spectroscopy				
Diagnosics	(box 5 bottom right (Obs 6)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended. (Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.			
Fixed Targets				
	#	Name	Target Coordinates	Targ. Coord. Corrections
	(1)	HD163466	RA: 17 52 25.3741 (268.1057254d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -1.983 mas/yr Proper Motion Dec: 42.780 mas/yr Parallax: 0.005208" Epoch of Position: 2000.0
	Comments: GAIA DR2 coordinates checked with SIMBAD the catalog reference come from Gaia Early Data Release 3 Basic data : HD 163466 -- Star Other object types: otypes_help * (HD,AG,...), UV (TD1), NIR (2MASS) ICRS coord. (ep=J2000) : 17 52 25.3741156656 +60 23 46.938537132 (Optical) [0.0390 0.0391 90] A 2020yCat.1350....0G FK4 coord. (ep=B1950 eq=1950) : 17 51 49.1361335190 +60 24 19.184782089 [0.0390 0.0391 90] Gal coord. (ep=J2000) : 089.2375587883131 +30.5589959439377 [0.0390 0.0391 90] Proper motions mas/yr : -1.983 42.780 [0.058 0.055 90] A 2020yCat.1350....0G Radial velocity / Redshift / cz : V(km/s) -16.2 [2] / z(~) -0.000054 [0.000007] / cz -16.20 [2.00] E 1953GCRV..C.....0W Parallaxes (mas): 5.2084 [0.0395] A 2020yCat.1350....0G B 7.04 [0.01] D 2000A&A...355L...27H V 6.85 [0.01] D 2000A&A...355L...27H G 6.830428 [0.002777] C 2020yCat.1350....0G J 6.402 [0.019] C 2003yCat.2246....0C H 6.348 [0.020] C 2003yCat.2246....0C K 6.339 [0.018] C 2003yCat.2246....0C Category=Star Description=[A dwarfs] Extended=NO			
Acquisition	#	Target		
	1	NONE		
Template	AcqFilter	Subarray	Obtain Verification Image?	
	F1000W	FULL	true	

Proposal 9265 - Observation 6 - CAL-MIRI-463

Dithers	#	Dither Type	No. Spectral Steps		Spectral Step Offset		No. Spatial Steps		Spatial Step Offset	
	1	INTRAPIXEL SLIT SCAN CENTER								
Pointing Verification	#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
	1	FASTR1	4	1	1	1	1	11.1		F1000W
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	
	1	FASTR1	7	16	176	1	11	3876.731	91307.01	
Special Requirements	Offset 58.0 arcsec, 5.4 arcsec									
	Group Observations 2, 3, 4, 5, 6, Non-interruptible									