



1528 - LRS External Flatfield

Cycle: 1, 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				
	1	BD+60 1753 - slit	MIRI Low Resolution Spectroscopy	(1) BD+60-1753
	2	HD 163466 - slitless	MIRI Low Resolution Spectroscopy	(2) HD163466
	3	BD+60 1753 - slit	MIRI Low Resolution Spectroscopy	(1) BD+60-1753
	4	HD 163466 - slitless	MIRI Low Resolution Spectroscopy	(2) HD163466

ABSTRACT

External flatfields will be taken to provide full flatfields for the MIRI LRS. These flats combine the information obtained separately as P-flats and L-flats for the imager. We will utilize the method tested during commissioning in CAR-MIRI-055 which steps a point source along the slit and across the SLITLESS subarray to build a flatfield. As in commissioning, we will use 1-pixel steps in the slit (45 pointings), but for slitless mode, we will use 2-pixel increments and cover the central 52 pixels of the slitless aperture (26 pointings; compared to a width of 68 science pixels), a change from Commissioning.

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

OBSERVING DESCRIPTION

JWST Proposal 1528 (Created: Monday, December 27, 2021 at 5:00:13 PM Eastern Standard Time) - Overview

We will obtain the flatfields in two separate observations for BD+60 1753 in the LRS slit and HD 163466 in the LRS slitless aperture, in Month 1 of Cycle 1 and again in about Month 7.

TIMING CONSTRAINTS:

Observations 1 and 2 should be obtained in Months 1-2 of Cycle 1, and Observations 3-4 should follow in Months 7-8.

The flatfields are essential to the calibration of the LRS, and these observations are needed to confirm the initial observations in Commissioning and build the signal-to-noise to tolerable levels, so the requested observations in Months 1-2 have no flexibility.

Generally, any missed or failed observations should be repeated as soon as possible.

The observing times are constrained with special requirements, assuming a launch date of 25 Dec 2021 and the start of Cycle 1 six months later, on 23 Jun 2022. The visibility of HD 163466 reduces its availability in Month 7 (for Observation 4).

NOTES ON VISIBILITY WINDOWS:

Periods of invisibility in Cycle 1:

BD+60 1753: 27 Sep 22 - 31 Dec 22

HD 180609: 20 Jan 23 - 4 May 23

HD 163466: 5 Nov 22 - 18 Jan 23

BACKUP TARGET:

HD 180609 is the backup target for BD +60 1753. It requires integration times identical to BD+60. For the current schedule, it is not required.

Proposal 1528 - Targets - LRS External Flatfield

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	
(1)	BD+60-1753	RA: 17 24 52.2772 (261.2178217d) Dec: +60 25 50.78 (60.43077d) Equinox: J2000	Proper Motion RA: 3.981 mas/yr Proper Motion Dec: 1.809 mas/yr Parallax: 0.001968" Epoch of Position: 2000.0		
<i>Comments: GAIA DR2 coordinates</i> <i>Category=Star</i> <i>Description=[A dwarfs]</i> <i>Extended=NO</i>					
Fixed Targets	(2)	HD163466	RA: 17 52 25.3757 (268.1057321d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -2.730 mas/yr Proper Motion Dec: 42.672 mas/yr Parallax: 0.005086" Epoch of Position: 2000.0	
	<i>Comments: Gaia DR2 coordinates</i> <i>Category=Star</i> <i>Description=[A dwarfs]</i> <i>Extended=NO</i>				
	(3)	HD180609	RA: 19 12 47.1996 (288.1966650d) Dec: +64 10 37.18 (64.17699d) Equinox: J2000	Proper Motion RA: -3.059 mas/yr Proper Motion Dec: -7.790 mas/yr Parallax: 0.00183" Epoch of Position: 2000.0	
<i>Comments: GAIA DR2 coordinates</i> <i>Category=Star</i> <i>Description=[A dwarfs]</i> <i>Extended=NO</i>					

Proposal 1528 - Observation 1 - LRS External Flatfield

Mon Dec 27 22:00:13 GMT 2021

Observation	<p>Proposal 1528, Observation 1: BD+60 1753 - slit</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Low Resolution Spectroscopy</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)	BD+60-1753	RA: 17 24 52.2772 (261.2178217d) Dec: +60 25 50.78 (60.43077d) Equinox: J2000	Proper Motion RA: 3.981 mas/yr Proper Motion Dec: 1.809 mas/yr Parallax: 0.001968" Epoch of Position: 2000.0						
	<p><i>Comments: GAIA DR2 coordinates</i></p> <p><i>Category=Star</i></p> <p><i>Description=[A dwarfs]</i></p> <p><i>Extended=NO</i></p>									
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1	SAME	F1000W	FAST	4	1	1	11.1	91305.04	
Template	Subarray				Obtain Verification Image?					
	FULL				true					
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset				
	1	1-PIXEL SLIT SCAN								
Pointing Verification	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID			
	1	FAST	4	1	1	11.1	91305.04			

Proposal 1528 - Observation 1 - LRS External Flatfield

Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
		1	FASTR1	10	3	135	1	45	3996.058
Special Requirements	Between Dates 23-JUN-2022 and 22-AUG-2022								

Proposal 1528 - Observation 2 - LRS External Flatfield

Mon Dec 27 22:00:13 GMT 2021

Observation	Proposal 1528, Observation 2: HD 163466 - slitless Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy								
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)	HD163466	RA: 17 52 25.3757 (268.1057321d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -2.730 mas/yr Proper Motion Dec: 42.672 mas/yr Parallax: 0.005086" Epoch of Position: 2000.0					
	<i>Comments: Gaia DR2 coordinates</i> <i>Category=Star</i> <i>Description=[A dwarfs]</i> <i>Extended=NO</i>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	FND	FAST	10	1	1	1.59	91305.06
Template	Subarray				Obtain Verification Image?				
	SLITLESSPRISM				true				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	2-PIXEL SLITLESS SCAN SHORT							
Pointing Verification	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID		
	1	FAST	10	1	1	1.59	91305.06		

Proposal 1528 - Observation 2 - LRS External Flatfield

Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	Special Requirements	1	FASTR1	8	20	540	1	27	768.64
Between Dates 23-JUN-2022 and 22-AUG-2022									

Proposal 1528 - Observation 3 - LRS External Flatfield

Mon Dec 27 22:00:13 GMT 2021

Observation	<p>Proposal 1528, Observation 3: BD+60 1753 - slit</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: MIRI Low Resolution Spectroscopy</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		
	(1)	BD+60-1753	RA: 17 24 52.2772 (261.2178217d) Dec: +60 25 50.78 (60.43077d) Equinox: J2000	Proper Motion RA: 3.981 mas/yr Proper Motion Dec: 1.809 mas/yr Parallax: 0.001968" Epoch of Position: 2000.0					
	<p><i>Comments: GAIA DR2 coordinates</i></p> <p><i>Category=Star</i></p> <p><i>Description=[A dwarfs]</i></p> <p><i>Extended=NO</i></p>								
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	F1000W	FAST	4	1	1	11.1	91305.04
Template	Subarray				Obtain Verification Image?				
	FULL				true				
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset			
	1	1-PIXEL SLIT SCAN							
Pointing Verification	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID		
	1	FAST	4	1	1	11.1	91305.04		

Proposal 1528 - Observation 3 - LRS External Flatfield

Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	Special Requirements	1	FASTR1	10	3	135	1	45	3996.058
Between Dates 23-DEC-2022 and 22-FEB-2023									

Proposal 1528 - Observation 4 - LRS External Flatfield

Mon Dec 27 22:00:13 GMT 2021

Observation	Proposal 1528, Observation 4: HD 163466 - slitless Diagnostic Status: Warning Observing Template: MIRI Low Resolution Spectroscopy									
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)	HD163466	RA: 17 52 25.3757 (268.1057321d) Dec: +60 23 46.94 (60.39637d) Equinox: J2000	Proper Motion RA: -2.730 mas/yr Proper Motion Dec: 42.672 mas/yr Parallax: 0.005086" Epoch of Position: 2000.0						
	Comments: Gaia DR2 coordinates Category=Star Description=[A dwarfs] Extended=NO									
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1	SAME	FND	FAST	10	1	1	1.59	91305.06	
Template	Subarray				Obtain Verification Image?					
	SLITLESSPRISM				true					
Dithers	#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset				
	1	2-PIXEL SLITLESS SCAN SHORT								
Pointing Verification	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID			
	1	FAST	10	1	1	1.59	91305.06			

Proposal 1528 - Observation 4 - LRS External Flatfield

Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	Special Requirements	1	FASTR1	8	20	540	1	27	768.64
	Between Dates 23-DEC-2022 and 22-FEB-2023								