



8387 - CAL-MIRI-422 MRS External Flatfield:

Cycle: 4, 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	IC-418	MIRI Medium Resolution Spectroscopy	(1) IC-418
	2	IC-418-BKG	MIRI Medium Resolution Spectroscopy	(2) IC-418-BKG

ABSTRACT

This activity observes the extended planetary nebula IC 418 to provide illumination throughout the MIRI MRS FOV in order to derive flatfields. This target is the same as the one observed during Cycle 3 (PID 6619). By re-observing the source, we will achieve greater depth, improving the signal-to-noise ratio and precision of the flatfield data. These repeated observations will also enable us to monitor for any potential variations in the instrument's response over time

Observation strategy is the same as in the previous cycle, using a dithered mosaic in order to sample the same locations on the sky with many different detector pixels (required for self-calibration).

This calibration program may change in response to system developments and the final Cycle 4 science program.

OBSERVING DESCRIPTION

This program observes the planetary nebula IC 418 in a 3x3 mosaic with 67% overlap to measure the MRS flatfields in a single non-interruptible sequence of target and background. Each exposure consists of 40 groups per integration in FASTR1 mode, with two integrations, as determined by ETC calculations

We do not obtain simultaneous imaging as the absolute pointing of the observations is not important, and the observing setup can otherwise pose data volume challenges.

The timing of this program within Cycle 4 is unconstrained.

Proposal 8387 - Targets - CAL-MIRI-422 MRS External Flatfield:

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	IC-418	RA: 05 27 28.2060 (81.8675250d) Dec: -12 41 50.28 (-12.69730d) Equinox: J2000	Proper Motion RA: 2.078 mas/yr Proper Motion Dec: 1.45 mas/yr Parallax: 7.341E-4" Epoch of Position: 2000	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Calibration Description=[Planetary nebulae] Extended=YES				
Fixed Targets	(2)	IC-418-BKG	RA: 05 27 22.8601 (81.8452504d) Dec: -12 40 20.87 (-12.67246d) Equinox: J2000	Proper Motion RA: 2.078 mas/yr Proper Motion Dec: 1.45 mas/yr Parallax: 7.341E-4" Epoch of Position: 2000	
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Calibration Description=[Telescope/sky background] Extended=YES				

Proposal 8387 - Observation 1 - CAL-MIRI-422 MRS External Flatfield:

Observation	Proposal 8387, Observation 1: IC-418													Tue Mar 18 23:00:50 GMT 2025
	Diagnostic Status: Warning													
	Observing Template: MIRI Medium Resolution Spectroscopy													
	Background Observations:[IC-418-BKG (Obs 2)]													
Diagnostics	(Visit 1:1) Warning (Form): Data Excess over lower threshold													
	(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)	IC-418	RA: 05 27 28.2060 (81.8675250d)				Proper Motion RA: 2.078 mas/yr							
			Dec: -12 41 50.28 (-12.69730d)				Proper Motion Dec: 1.45 mas/yr							
			Equinox: J2000				Parallax: 7.341E-4"							
							Epoch of Position: 2000							
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.This object was generated by the targetselector and retrieved from the SIMBAD database.													
	Category=Calibration													
	Description=[Planetary nebulae]													
	Extended=YES													
Acquisition	#	Target												
	1	NONE												
Template	AcqFilter	Primary Channel				Simultaneous Imaging				Imager Subarray		Grating Wheel Direction		
		All MRS				NO				FULL		Allow Auto Reorder		
Mosaic	Rows	Columns	Row Overlap %			Column Overlap %			Row shift (deg)		Column shift (deg)		Tile Order	
	3	3	67.0			67.0			0.0		0.0		DEFAULT	
Dithers	#	Dither Type				Optimized For				Direction				
	1	2-Point				EXTENDED SOURCE				NEGATIVE				
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/E xp	Exposures/Dit h	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	
	1	LONG(C)	MRSLONG		FASTR1	40	2	1	Dither 1	2	4	449.556	191265	
	1	LONG(C)	MRSSHORT		FASTR1	40	2	1	Dither 1	2	4	449.556	191265	
	2	MEDIUM(B)	MRSLONG		FASTR1	40	2	1	Dither 1	2	4	449.556	191265	
	2	MEDIUM(B)	MRSSHORT		FASTR1	40	2	1	Dither 1	2	4	449.556	191265	
	3	SHORT(A)	MRSLONG		FASTR1	40	2	1	Dither 1	2	4	449.556	191265	
	3	SHORT(A)	MRSSHORT		FASTR1	40	2	1	Dither 1	2	4	449.556	191265	

Proposal 8387 - Observation 1 - CAL-MIRI-422 MRS External Flatfield:

Special Requirements	Sequence Observations 2, 1 (reordered), Non-interruptible
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Proposal 8387 - Observation 2 - CAL-MIRI-422 MRS External Flatfield:

Observation	Proposal 8387, Observation 2: IC-418-BKG												Tue Mar 18 23:00:51 GMT 2025		
	Diagnostic Status: Warning														
	Observing Template: MIRI Medium Resolution Spectroscopy														
	Background Observation For: [IC-418 (Obs 1)]														
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)	IC-418-BKG		RA: 05 27 22.8601 (81.8452504d)				Proper Motion RA: 2.078 mas/yr				Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Calibration Description=[Telescope/sky background] Extended=YES			
	Dec: -12 40 20.87 (-12.67246d)				Proper Motion Dec: 1.45 mas/yr										
	Equinox: J2000				Parallax: 7.341E-4"										
				Epoch of Position: 2000											
Acquisition															
	#	Target													
	1	NONE													
Template	AcqFilter	Primary Channel				Simultaneous Imaging				Imager Subarray				Grating Wheel Direction	
		All MRS				NO				FULL				Allow Auto Reorder	
Dithers	#	Dither Type						Optimized For				Direction			
	1	2-Point						EXTENDED SOURCE				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wbkbk.Calc ID		
	1	LONG(C)	MRSLONG		FASTR1	40	2	1	Dither 1	2	4	449.556			
	1	LONG(C)	MRSSHORT		FASTR1	40	2	1	Dither 1	2	4	449.556			
	2	MEDIUM(B)	MRSLONG		FASTR1	40	2	1	Dither 1	2	4	449.556			
	2	MEDIUM(B)	MRSSHORT		FASTR1	40	2	1	Dither 1	2	4	449.556			
	3	SHORT(A)	MRSLONG		FASTR1	40	2	1	Dither 1	2	4	449.556			
	3	SHORT(A)	MRSSHORT		FASTR1	40	2	1	Dither 1	2	4	449.556			

Proposal 8387 - Observation 2 - CAL-MIRI-422 MRS External Flatfield:

Special Requirements	Sequence Observations 2, 1 (reordered), Non-interruptible
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