



7890 - Young and pristine: chemical content of disks at the onset of planet formation

Cycle: 4, Proposal Category: GO

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Taurus A				
	1	Taurus_BKG	MIRI Medium Resolution Spectroscopy	(1) Taurus_BKG
	2	L1551-IRS5	MIRI Medium Resolution Spectroscopy	(2) L1551-IRS5
	3	L1551NE	MIRI Medium Resolution Spectroscopy	(3) L1551-NE
Taurus B				

JWST Proposal 7890 (Created: Wednesday, July 2, 2025, 2:00:11PM Eastern Standard Time) - Overview

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
	4	Taurus_BKG_MHO	MIRI Medium Resolution Spectroscopy	(29) Taurus_BKG-MHO
	5	L1489IRS	MIRI Medium Resolution Spectroscopy	(4) L1489IRS
	6	MHO1	MIRI Medium Resolution Spectroscopy	(5) MHO1
	7	MHO2	MIRI Medium Resolution Spectroscopy	(6) MHO2
Taurus C				
	8	Taurus_BKG_FS	MIRI Medium Resolution Spectroscopy	(31) Taurus_BKG-FS
	9	IRAS04169+2702	MIRI Medium Resolution Spectroscopy	(7) IRAS04169+2702
	10	IRAS04181+2654B	MIRI Medium Resolution Spectroscopy	(8) IRAS-04181+2654B
	11	FSTau	MIRI Medium Resolution Spectroscopy	(9) V-FS-Tau
	12	FSTau B	MIRI Medium Resolution Spectroscopy	(10) FSTauB
Ophiuchus A				
	13	Oph_BKG_A	MIRI Medium Resolution Spectroscopy	(11) Oph_BKG_A
	14	WL12	MIRI Medium Resolution Spectroscopy	(12) WL12
	15	GSS30-IRS3	MIRI Medium Resolution Spectroscopy	(14) GSS30-IRS3
	16	YLW16A	MIRI Medium Resolution Spectroscopy	(17) YLW-16A
Ophiuchus B				
	17	Oph_BKG_B	MIRI Medium Resolution Spectroscopy	(30) Oph_BKG_B
	18	RNO91	MIRI Medium Resolution Spectroscopy	(15) RNO91
Corona Australis				
	20	CrA_BKG	MIRI Medium Resolution Spectroscopy	(20) CrA_BKG
	21	RCrAIRS7B	MIRI Medium Resolution Spectroscopy	(21) RCrAIRS7B
	22	RCrAIRS5N	MIRI Medium Resolution Spectroscopy	(22) RCrAIRS5N
	23	RCrAIRS5a	MIRI Medium Resolution Spectroscopy	(23) RCrAIRS5a
	24	RCrAIRS3	MIRI Medium Resolution Spectroscopy	(24) RCrAIRS3

ABSTRACT

The protostellar stage is a critical phase in stellar evolution: the star is still being built up, and a rotating disk of gas and dust is being formed, setting the scene for new solar systems. Observations and models suggest that planet formation starts early, in the embedded phase of star formation, <0.5 Myr after cloud collapse. The main goal of this program is to use the unique capabilities of the MIRI-MRS to characterize the physical and chemical content of the inner (<10 au) warm planet-forming zones of 21 protostellar Class I disks with known host protostellar mass and to compare the results with those found from gas-phase lines in widely studied disks in the Class II stage. Since the effects of radial drift of icy grains enriching the inner

disks and dust traps locking up elements in the outer disk are minimized at early times, these young disks should provide the best view of the pristine chemical conditions and bulk elemental abundances in planet-forming zones. The specific goals of this program are (i) to measure the warm gas composition of young disks which only MIRI can detect, especially of H₂O, CO₂, and organics (C₂H₂ and HCN) and thereby also elemental abundance ratios; (ii) to compare this composition with those of more evolved Class II disks; (iii) to link those comparisons to effects of (species-dependent) radial drift timescales and dust traps. This study will impact both the immediate sub-field of protoplanetary disks by showing the most detailed composition of young disks to date, as well as broader planet formation and exoplanetary characterization fields by revealing the starting chemical mixture for forming planets.

OBSERVING DESCRIPTION

Observations of 21 Class I protoplanetary disks with MIRI MRS full spectral coverage. The observations are taken with a single pointing centered on a protostar, with 4-dither point source pattern. For each group of targets a sky background is obtained and targets are grouped in an uninterrupted sequence.

Proposal 7890 - Targets - Young and pristine: chemical content of disks at the onset of planet formation

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	Taurus_BKG	RA: 04 31 46.1300 (67.9422083d) Dec: +17 59 49.00 (17.99694d) Equinox: J2000		
<i>Comments:</i> Category=Calibration Description=[Telescope/sky background] Extended=NO				
(2)	L1551-IRS5	RA: 04 31 34.1662 (67.8923592d) Dec: +18 08 4.50 (18.13458d) Equinox: J2000		
<i>Comments:</i> Position centered between two binary protostars Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO				
(3)	L1551-NE	RA: 04 31 44.4900 (67.9353750d) Dec: +18 08 31.45 (18.14207d) Equinox: J2000		
<i>Comments:</i> Position centered between two binary protostars Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO				
(4)	L1489IRS	RA: 04 04 42.8500 (61.1785417d) Dec: +26 18 56.30 (26.31564d) Equinox: J2000		
<i>Comments:</i> Category=Star Description=[Protoplanetary disks] Extended=NO				
(5)	MHO1	RA: 04 14 26.3100 (63.6096250d) Dec: +28 06 4.50 (28.10125d) Equinox: J2000	Epoch of Position: 2000	
<i>Comments:</i> This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Star Description=[Protoplanetary disks] Extended=NO				
(6)	MHO2	RA: 04 14 26.4000 (63.6100000d) Dec: +28 05 59.70 (28.09992d) Equinox: J2000	Epoch of Position: 2000	
<i>Comments:</i> This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Star Description=[Protoplanetary disks] Extended=NO				
(7)	IRAS04169+2702	RA: 04 19 58.4494 (64.9935392d) Dec: +27 09 57.07 (27.16585d) Equinox: J2000	Epoch of Position: 2000	
<i>Comments:</i> This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Star Description=[Protoplanetary disks] Extended=NO				

Fixed Targets

Proposal 7890 - Targets - Young and pristine: chemical content of disks at the onset of planet formation

(8)	IRAS-04181+2654B	RA: 04 21 10.3884 (65.2932850d) Dec: +27 01 37.26 (27.02702d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[Protoplanetary disks] Extended=NO</p>			
(9)	V-FS-Tau	RA: 04 22 2.1799 (65.5090829d) Dec: +26 57 30.58 (26.95849d) Equinox: J2000	Proper Motion RA: 10.897 mas/yr Proper Motion Dec: -15.701000052104064 mas/yr Parallax: 0.007469500000000004" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</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. Category=Star Description=[Protoplanetary disks] Extended=NO</p>			
(10)	FSTauB	RA: 04 22 0.7000 (65.5029167d) Dec: +26 57 32.50 (26.95903d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks] Extended=NO</p>			
(11)	Oph_BKG_A	RA: 16 29 16.0400 (247.3168333d) Dec: -24 30 24.00 (-24.50667d) Equinox: J2000	
<p><i>Comments:</i> Category=Calibration Description=[Telescope/sky background] Extended=NO</p>			
(12)	WL12	RA: 16 26 44.2000 (246.6841667d) Dec: -24 34 48.40 (-24.58011d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO</p>			
(14)	GSS30-IRS3	RA: 16 26 21.7200 (246.5905000d) Dec: -24 22 51.08 (-24.38086d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO</p>			
(15)	RNO91	RA: 16 34 29.3000 (248.6220833d) Dec: -15 47 1.40 (-15.78372d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO</p>			

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(17)	YLW-16A	RA: 16 27 28.0274 (246.8667808d) Dec: -24 39 33.51 (-24.65931d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[Protoplanetary disks]</p>			
(20)	CrA_BKG	RA: 19 02 18.2000 (285.5758333d) Dec: -36 59 37.90 (-36.99386d) Equinox: J2000	
<p><i>Comments:</i> Category=Calibration Description=[Telescope/sky background] Extended=NO</p>			
(21)	RCrAIRS7B	RA: 19 01 56.4200 (285.4850833d) Dec: -36 57 28.40 (-36.95789d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO</p>			
(22)	RCrAIRS5N	RA: 19 01 48.4600 (285.4519167d) Dec: -36 57 14.70 (-36.95408d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO</p>			
(23)	RCrAIRS5a	RA: 19 01 48.0300 (285.4501250d) Dec: -36 57 23.03 (-36.95640d) Equinox: J2000	
<p><i>Comments:</i> Category=Star Description=[Protoplanetary disks] Extended=NO</p>			
(24)	RCrAIRS3	RA: 19 02 4.9133 (285.5204721d) Dec: -36 58 56.52 (-36.98237d) Equinox: J2000	Proper Motion RA: 4.017 mas/yr Proper Motion Dec: 1.822999999999997 mas/yr Parallax: 6.504999999999999E-4" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</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. Category=Star Description=[Protoplanetary disks] Extended=YES</p>			
(25)	TA_L1551-IRS5	RA: 04 31 32.1120 (67.8838000d) Dec: +18 07 58.14 (18.13282d) Equinox: J2000	
<p><i>Comments:</i> Category=Calibration Description=[Target acquisition test] Extended=NO</p>			

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(26)	TA_MHO1	RA: 04 14 24.4097 (63.6017071d) Dec: +28 05 59.68 (28.09991d) Equinox: J2000
<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Target acquisition test]</i> <i>Extended=NO</i></p>		
(28)	TA_YLW16A	RA: 16 27 29.4400 (246.8726667d) Dec: -24 39 16.50 (-24.65458d) Equinox: J2000
<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Target acquisition test]</i> <i>Extended=NO</i></p>		
(29)	Taurus_BKG-MHO	RA: 04 14 1.5700 (63.5065417d) Dec: +28 05 46.00 (28.09611d) Equinox: J2000
<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i> <i>Extended=NO</i></p>		
(30)	Oph_BKG_B	RA: 16 34 41.0000 (248.6708333d) Dec: -15 46 16.00 (-15.77111d) Equinox: J2000
<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i> <i>Extended=NO</i></p>		
(31)	Taurus_BKG-FS	RA: 04 21 23.0000 (65.3458333d) Dec: +27 03 20.00 (27.05556d) Equinox: J2000
<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i> <i>Extended=NO</i></p>		

Proposal 7890 - Observation 1 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 1: Taurus_BKG Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [L1551-IRS5 (Obs 2), L1551NE (Obs 3), L1489IRS (Obs 5)]												
	(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)	Taurus_BKG	RA: 04 31 46.1300 (67.9422083d) Dec: +17 59 49.00 (17.99694d) Equinox: J2000 <i>Comments:</i> Category=Calibration Description=[Telescope/sky background] Extended=NO										
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				BACKGROUND				NEGATIVE			
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	1	SHORT(A)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	
	3	LONG(C)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	3	LONG(C)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	

Proposal 7890 - Observation 1 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 1, 2, 3, 5, Non-interruptible

Proposal 7890 - Observation 2 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 2: L1551-IRS5 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG (Obs 1)]												
	(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)	L1551-IRS5	RA: 04 31 34.1662 (67.8923592d) Dec: +18 08 4.50 (18.13458d) Equinox: J2000										
<i>Comments: Position centered between two binary protostars</i> <i>Category=Star</i> <i>Description=[Protoplanetary disks, Protostars]</i> <i>Extended=NO</i>													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	25 TA_L1551-IRS5	F560W	FAST	4	1	1	11.1	227222.22				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	227222.20
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	227222.20
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	227222.21
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	227222.21
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	227222.21
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	227222.21

Proposal 7890 - Observation 2 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 1, 2, 3, 5, Non-interruptible

Proposal 7890 - Observation 3 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 3: L1551NE Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG (Obs 1)]												
	(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)	L1551-NE	RA: 04 31 44.4900 (67.9353750d) Dec: +18 08 31.45 (18.14207d) Equinox: J2000 <i>Comments: Position centered between two binary protostars</i> <i>Category=Star</i> <i>Description=[Protoplanetary disks, Protostars]</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	4	1	1	11.1	227222.24				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	227222.23
	1	SHORT(A)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	227222.23
	2	MEDIUM(B)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	227222.23
	2	MEDIUM(B)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	227222.23
	3	LONG(C)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	227222.23
	3	LONG(C)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	227222.23

Proposal 7890 - Observation 3 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 1, 2, 3, 5, Non-interruptible

Proposal 7890 - Observation 4 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 4: Taurus_BKG_MHO Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [MHO1 (Obs 6), MHO2 (Obs 7)]												
	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(29)	Taurus_BKG-MHO	RA: 04 14 1.5700 (63.5065417d) Dec: +28 05 46.00 (28.09611d) Equinox: J2000										
<i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i> <i>Extended=NO</i>													
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			BACKGROUND			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	SHORT(A)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	1	SHORT(A)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	
	3	LONG(C)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	3	LONG(C)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	

Proposal 7890 - Observation 4 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 4, 6, 7, Non-interruptible

Proposal 7890 - Observation 5 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 5: L1489IRS Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG (Obs 1)]												
	(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections				Miscellaneous				
	(4)	L1489IRS	RA: 04 04 42.8500 (61.1785417d) Dec: +26 18 56.30 (26.31564d) Equinox: J2000										
Comments: Category=Star Description=[Protoplanetary disks] Extended=NO													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel		Simultaneous Imaging			Imager Subarray		Grating Wheel Direction				
	FND	All MRS		NO			FULL		Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For				Direction				
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 5 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 1, 2, 3, 5, Non-interruptible

Proposal 7890 - Observation 6 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 6: MHO1 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG_MHO (Obs 4)]												
	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(5)	MHO1	RA: 04 14 26.3100 (63.6096250d) Dec: +28 06 4.50 (28.10125d) Equinox: J2000			Epoch of Position: 2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[Protoplanetary disks] Extended=NO													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	26 TA_MHO1	F560W	FAST	4	1	1	11.1	227222.25				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 6 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 4, 6, 7, Non-interruptible

Proposal 7890 - Observation 7 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 7: MHO2 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG_MHO (Obs 4)]												
	(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(6)	MHO2	RA: 04 14 26.4000 (63.6100000d) Dec: +28 05 59.70 (28.09992d) Equinox: J2000			Epoch of Position: 2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Star</i> <i>Description=[Protoplanetary disks]</i> <i>Extended=NO</i>													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	26 TA_MHO1	F560W	FAST	4	1	1	11.1	227222.25				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 7 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 4, 6, 7, Non-interruptible

Proposal 7890 - Observation 8 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 8: Taurus_BKG_FS Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [IRAS04169+2702 (Obs 9), IRAS04181+2654B (Obs 10), FSTau (Obs 11), FSTau B (Obs 12)]												
	(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous			
	(31)	Taurus_BKG-FS	RA: 04 21 23.0000 (65.3458333d) Dec: +27 03 20.00 (27.05556d) Equinox: J2000										
<i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i> <i>Extended=NO</i>													
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				BACKGROUND				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	SHORT(A)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	1	SHORT(A)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	
	3	LONG(C)	MRSLONG		FASTR1	20	2	1	Dither 1	2	4	227.553	
	3	LONG(C)	MRSSHORT		FASTR1	20	2	1	Dither 1	2	4	227.553	

Proposal 7890 - Observation 8 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 8, 9, 10, 11, 12, Non-interruptible

Proposal 7890 - Observation 9 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 9: IRAS04169+2702 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG_FS (Obs 8)]												
	(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(7)	IRAS04169+2702	RA: 04 19 58.4494 (64.9935392d) Dec: +27 09 57.07 (27.16585d) Equinox: J2000			Epoch of Position: 2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[Protoplanetary disks] Extended=NO													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	SAME	FND	FAST	4	1	1	11.1	227222.24				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	
	1	SHORT(A)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	
	2	MEDIUM(B)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	
	2	MEDIUM(B)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	
	3	LONG(C)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	
	3	LONG(C)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	

Proposal 7890 - Observation 9 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 8, 9, 10, 11, 12, Non-interruptible

Proposal 7890 - Observation 10 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 10: IRAS04181+2654B Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG_FS (Obs 8)]												
	(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(8)	IRAS-04181+2654B	RA: 04 21 10.3884 (65.2932850d) Dec: +27 01 37.26 (27.02702d) Equinox: J2000			Epoch of Position: 2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[Protoplanetary disks] Extended=NO													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	SAME	FND	FAST	4	1	1	11.1	227222.27				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	20	2	1	Dither 1	4	8	455.107	
	1	SHORT(A)	MRSSHORT		FASTR1	20	2	1	Dither 1	4	8	455.107	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	2	1	Dither 1	4	8	455.107	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	2	1	Dither 1	4	8	455.107	
	3	LONG(C)	MRSLONG		FASTR1	20	2	1	Dither 1	4	8	455.107	
	3	LONG(C)	MRSSHORT		FASTR1	20	2	1	Dither 1	4	8	455.107	

Proposal 7890 - Observation 10 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 8, 9, 10, 11, 12, Non-interruptible

Proposal 7890 - Observation 11 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 11: FSTau Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG_FS (Obs 8)]																																																																																																						
	(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																																																																																						
Diagnostics																																																																																																							
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(9)</td> <td>V-FS-Tau</td> <td>RA: 04 22 2.1799 (65.5090829d) Dec: +26 57 30.58 (26.95849d) Equinox: J2000</td> <td>Proper Motion RA: 10.897 mas/yr Proper Motion Dec: -15.701000052104064 mas/yr Parallax: 0.007469500000000004" Epoch of Position: 2000</td> <td></td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><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></p> <p>Category=Star Description=[Protoplanetary disks] Extended=NO</p>												#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(9)	V-FS-Tau	RA: 04 22 2.1799 (65.5090829d) Dec: +26 57 30.58 (26.95849d) Equinox: J2000	Proper Motion RA: 10.897 mas/yr Proper Motion Dec: -15.701000052104064 mas/yr Parallax: 0.007469500000000004" Epoch of Position: 2000																																																																																		
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(9)	V-FS-Tau	RA: 04 22 2.1799 (65.5090829d) Dec: +26 57 30.58 (26.95849d) Equinox: J2000	Proper Motion RA: 10.897 mas/yr Proper Motion Dec: -15.701000052104064 mas/yr Parallax: 0.007469500000000004" Epoch of Position: 2000																																																																																																				
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Spectral Elements	<table border="1"> <thead> <tr> <th>#</th> <th>Wavelength Range</th> <th>Detector</th> <th>Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Exposures/Dith</th> <th>Dither</th> <th>Total Dithers</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SHORT(A)</td> <td>MRSLONG</td> <td></td> <td>FASTR1</td> <td>10</td> <td>2</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>8</td> <td>233.103</td> <td></td> </tr> <tr> <td>1</td> <td>SHORT(A)</td> <td>MRSSHORT</td> <td></td> <td>FASTR1</td> <td>10</td> <td>2</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>8</td> <td>233.103</td> <td></td> </tr> <tr> <td>2</td> <td>MEDIUM(B)</td> <td>MRSLONG</td> <td></td> <td>FASTR1</td> <td>10</td> <td>2</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>8</td> <td>233.103</td> <td></td> </tr> <tr> <td>2</td> <td>MEDIUM(B)</td> <td>MRSSHORT</td> <td></td> <td>FASTR1</td> <td>10</td> <td>2</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>8</td> <td>233.103</td> <td></td> </tr> <tr> <td>3</td> <td>LONG(C)</td> <td>MRSLONG</td> <td></td> <td>FASTR1</td> <td>10</td> <td>2</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>8</td> <td>233.103</td> <td></td> </tr> <tr> <td>3</td> <td>LONG(C)</td> <td>MRSSHORT</td> <td></td> <td>FASTR1</td> <td>10</td> <td>2</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>8</td> <td>233.103</td> <td></td> </tr> </tbody> </table>												#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID	1	SHORT(A)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103		1	SHORT(A)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103		2	MEDIUM(B)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103		2	MEDIUM(B)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103		3	LONG(C)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103		3	LONG(C)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	
	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID																																																																																										
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	2	MEDIUM(B)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103																																																																																											
	2	MEDIUM(B)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103																																																																																											
	3	LONG(C)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103																																																																																											
3	LONG(C)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103																																																																																												

Proposal 7890 - Observation 11 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 8, 9, 10, 11, 12, Non-interruptible

Proposal 7890 - Observation 12 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 12: FSTau B Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Taurus_BKG_FS (Obs 8)]												
	(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(10)	FSTauB	RA: 04 22 0.7000 (65.5029167d) Dec: +26 57 32.50 (26.95903d) Equinox: J2000										
<i>Comments:</i> Category=Star Description=[Protoplanetary disks] Extended=NO													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	SAME	FND	FAST	4	1	1	11.1	227222.27				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	20	2	1	Dither 1	4	8	455.107	
	1	SHORT(A)	MRSSHORT		FASTR1	20	2	1	Dither 1	4	8	455.107	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	2	1	Dither 1	4	8	455.107	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	2	1	Dither 1	4	8	455.107	
	3	LONG(C)	MRSLONG		FASTR1	20	2	1	Dither 1	4	8	455.107	
	3	LONG(C)	MRSSHORT		FASTR1	20	2	1	Dither 1	4	8	455.107	

Proposal 7890 - Observation 12 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 8, 9, 10, 11, 12, Non-interruptible

Proposal 7890 - Observation 13 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 13: Oph_BKG_A Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [WL12 (Obs 14), GSS30-IRS3 (Obs 15), YLW16A (Obs 16)]												
	(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(11)	Oph_BKG_A	RA: 16 29 16.0400 (247.3168333d) Dec: -24 30 24.00 (-24.50667d) Equinox: J2000										
<i>Comments:</i> Category=Calibration Description=[Telescope/sky background] Extended=NO													
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			BACKGROUND			NEGATIVE					
Spectral Elements	#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	1	SHORT(A)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	
	3	LONG(C)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	3	LONG(C)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	

Proposal 7890 - Observation 13 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 13, 14, 15, 16, Non-interruptible

Proposal 7890 - Observation 14 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 14: WL12 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Oph_BKG_A (Obs 13)]												
	(Visit 14:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(12)	WL12	RA: 16 26 44.2000 (246.6841667d) Dec: -24 34 48.40 (-24.58011d) Equinox: J2000										
Comments: Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging		Imager Subarray		Grating Wheel Direction				
	FND	All MRS			NO		FULL		Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 14 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 13, 14, 15, 16, Non-interruptible

Proposal 7890 - Observation 15 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 15: GSS30-IRS3 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Oph_BKG_A (Obs 13)]												
	(Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(14)	GSS30-IRS3	RA: 16 26 21.7200 (246.5905000d) Dec: -24 22 51.08 (-24.38086d) Equinox: J2000										
<i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	SAME	FND	FAST	4	1	1	11.1	227222.29				
Template	Primary Channel			Simultaneous Imaging			Imager Subarray			Grating Wheel Direction			
	All MRS			NO			FULL			Allow Auto Reorder			
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	20	3	1	Dither 1	4	12	688.21	227222.28
	1	SHORT(A)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	227222.28
	2	MEDIUM(B)	MRSLONG		FASTR1	20	3	1	Dither 1	4	12	688.21	227222.28
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	227222.28
	3	LONG(C)	MRSLONG		FASTR1	20	3	1	Dither 1	4	12	688.21	227222.28
	3	LONG(C)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	227222.28

Proposal 7890 - Observation 15 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 13, 14, 15, 16, Non-interruptible

Proposal 7890 - Observation 16 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 16: YLW16A Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Oph_BKG_A (Obs 13)]												
	(Visit 16:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(17)	YLW-16A	RA: 16 27 28.0274 (246.8667808d) Dec: -24 39 33.51 (-24.65931d) Equinox: J2000			Epoch of Position: 2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[Protoplanetary disks]													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	28 TA_YLW16A	FND	FAST	4	1	1	11.1	227222.24				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 16 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 13, 14, 15, 16, Non-interruptible

Proposal 7890 - Observation 17 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 17: Oph_BKG_B Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [RNO91 (Obs 18)]												
	(Visit 17:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(30)	Oph_BKG_B	RA: 16 34 41.0000 (248.6708333d) Dec: -15 46 16.00 (-15.77111d) Equinox: J2000										
<i>Comments:</i> Category=Calibration Description=[Telescope/sky background] Extended=NO													
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			BACKGROUND			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	SHORT(A)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	1	SHORT(A)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	
	3	LONG(C)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	3	LONG(C)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	

Proposal 7890 - Observation 17 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 17, 18, Non-interruptible

Proposal 7890 - Observation 18 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 18: RNO91 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[Oph_BKG_B (Obs 17)]												
	(Visit 18:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous			
	(15)	RNO91	RA: 16 34 29.3000 (248.6220833d) Dec: -15 47 1.40 (-15.78372d) Equinox: J2000 <i>Comments:</i> <i>Category=Star</i> <i>Description=[Protoplanetary disks, Protostars]</i> <i>Extended=NO</i>										
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray		Grating Wheel Direction			
	FND	All MRS			NO			FULL		Allow Auto Reorder			
Dithers	#	Dither Type				Optimized For				Direction			
	1	4-Point				POINT 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	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 18 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 17, 18, Non-interruptible

Proposal 7890 - Observation 20 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 20: CrA_BKG Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [RCrAIRS7B (Obs 21), RCrAIRS5N (Obs 22)]												
	(Visit 20:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates				Targ. Coord. Corrections			Miscellaneous			
	(20)	CrA_BKG	RA: 19 02 18.2000 (285.5758333d) Dec: -36 59 37.90 (-36.99386d) Equinox: J2000										
<i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i> <i>Extended=NO</i>													
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				BACKGROUND				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	SHORT(A)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	1	SHORT(A)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	
	3	LONG(C)	MRSLONG		FASTR1	20	3	1	Dither 1	2	6	344.105	
	3	LONG(C)	MRSSHORT		FASTR1	20	3	1	Dither 1	2	6	344.105	

Proposal 7890 - Observation 20 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 20, 21, 22, 23, 24, Non-interruptible

Proposal 7890 - Observation 21 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 21: RCrAIRS7B Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[CrA_BKG (Obs 20)]												
	(Visit 21:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(21)	RCrAIRS7B	RA: 19 01 56.4200 (285.4850833d) Dec: -36 57 28.40 (-36.95789d) Equinox: J2000										
<i>Comments:</i> Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	SAME	FND	FAST	4	1	1	11.1	227222.24				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	
	1	SHORT(A)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	
	2	MEDIUM(B)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	
	2	MEDIUM(B)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	
	3	LONG(C)	MRSLONG		FASTR1	10	2	1	Dither 1	4	8	233.103	
	3	LONG(C)	MRSSHORT		FASTR1	10	2	1	Dither 1	4	8	233.103	

Proposal 7890 - Observation 21 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 20, 21, 22, 23, 24, Non-interruptible

Proposal 7890 - Observation 22 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 22: RCrAIRS5N Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[CrA_BKG (Obs 20)]												
	(Visit 22:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections				Miscellaneous				
	(22)	RCrAIRS5N	RA: 19 01 48.4600 (285.4519167d) Dec: -36 57 14.70 (-36.95408d) Equinox: J2000										
Comments: Category=Star Description=[Protoplanetary disks, Protostars] Extended=NO													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel		Simultaneous Imaging		Imager Subarray		Grating Wheel Direction					
	FND	All MRS		NO		FULL		Allow Auto Reorder					
Dithers	#	Dither Type			Optimized For				Direction				
	1	4-Point			POINT 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	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 22 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 20, 21, 22, 23, 24, Non-interruptible

Proposal 7890 - Observation 23 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 23: RCrAIRS5a Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy												
	(Visit 23:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(23)	RCrAIRS5a	RA: 19 01 48.0300 (285.4501250d) Dec: -36 57 23.03 (-36.95640d) Equinox: J2000										
Comments: Category=Star Description=[Protoplanetary disks] Extended=NO													
Acquisition	#	Target											
	1	NONE											
Template	AcqFilter	Primary Channel			Simultaneous Imaging			Imager Subarray		Grating Wheel Direction			
	FND	All MRS			NO			FULL		Allow Auto Reorder			
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	1	SHORT(A)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	2	MEDIUM(B)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSLONG		FASTR1	7	2	1	Dither 1	4	8	166.502	
	3	LONG(C)	MRSSHORT		FASTR1	7	2	1	Dither 1	4	8	166.502	

Proposal 7890 - Observation 23 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 20, 21, 22, 23, 24, Non-interruptible

Proposal 7890 - Observation 24 - Young and pristine: chemical content of disks at the onset of planet formation

Wed Jul 02 19:00:11 GMT 2025

Observation	Proposal 7890, Observation 24: RCrAIRS3 Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy												
	(Visit 24:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.												
Diagnosics													
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous				
	(24)	RCrAIRS3	RA: 19 02 4.9133 (285.5204721d) Dec: -36 58 56.52 (-36.98237d) Equinox: J2000			Proper Motion RA: 4.017 mas/yr Proper Motion Dec: 1.822999999999997 mas/yr Parallax: 6.504999999999999E-4" Epoch of Position: 2000							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</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. Category=Star Description=[Protoplanetary disks] Extended=YES													
Acquisition	#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID				
	1	SAME	FND	FAST	4	1	1	11.1	227222.27				
Template	Primary Channel		Simultaneous Imaging			Imager Subarray			Grating Wheel Direction				
	All MRS		NO			FULL			Allow Auto Reorder				
Dithers	#	Dither Type			Optimized For			Direction					
	1	4-Point			POINT 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 Wkbk.Calc ID
	1	SHORT(A)	MRSLONG		FASTR1	20	3	1	Dither 1	4	12	688.21	
	1	SHORT(A)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	
	2	MEDIUM(B)	MRSLONG		FASTR1	20	3	1	Dither 1	4	12	688.21	
	2	MEDIUM(B)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	
	3	LONG(C)	MRSLONG		FASTR1	20	3	1	Dither 1	4	12	688.21	
	3	LONG(C)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	
	3	LONG(C)	MRSSHORT		FASTR1	20	3	1	Dither 1	4	12	688.21	

Proposal 7890 - Observation 24 - Young and pristine: chemical content of disks at the onset of planet formation

Special Requirements

Sequence Observations 20, 21, 22, 23, 24, Non-interruptible