



4543 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

Cycle: 3, Proposal Category: GTO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
HD97048 NRC Coron				
	1	HD97048 - Roll 1	NIRCam Coronagraphic Imaging	(1) HD-97048
	2	HD97048 - Roll 2	NIRCam Coronagraphic Imaging	(1) HD-97048
	3	HD97048 - Ref Star	NIRCam Coronagraphic Imaging	(6) Ref_I-Car

ABSTRACT

ALMA observations of the Herbig Ae/Be star HD 97048 show a kinematic kink within a sub-mm gap at a separation of 0.45". The postulated planet has not been detected directly by ground-based observations as it would too faint. However, with a predicted mass of 2-3 MJup (from hydro simulations), NIRCam coronagraphy should be sensitive at these separations. We would propose to observe with the M335R mask using simultaneous filters F200W+F444W in two rolls.

OBSERVING DESCRIPTION

TBD

Proposal 4543 - Targets - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	HD-97048	RA: 11 08 3.3110 (167.0137958d) Dec: -77 39 17.49 (-77.65486d) Equinox: J2000	Proper Motion RA: -22.526 mas/yr Proper Motion Dec: 1.291 mas/yr Parallax: 0.0054228" Epoch of Position: 2000	<i>Comments: AOV</i> <i>V = 9, J=7.27, H= 6.67, K=5.94</i> <i>Category=Star</i> <i>Description=[Herbig Ae/Be stars]</i>
(6)	Ref_I-Car	RA: 10 24 23.7055 (156.0987729d) Dec: -74 01 53.80 (-74.03161d) Equinox: J2000	Proper Motion RA: -15.399000000000001 mas/yr Proper Motion Dec: -28.43300005679339 mas/yr Parallax: 0.061434199999999994" Epoch of Position: 2000	<i>Comments: F3V, K=3.25</i> <i>Category=Star</i> <i>Description=[F dwarfs]</i>	

Proposal 4543 - Observation 1 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

Mon Mar 17 17:00:07 GMT 2025

Observation	Proposal 4543, Observation 1: HD97048 - Roll 1 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging									
	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (HD97048 - Roll 1 (Obs 1)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(1)	HD-97048	RA: 11 08 3.3110 (167.0137958d) Dec: -77 39 17.49 (-77.65486d) Equinox: J2000		Proper Motion RA: -22.526 mas/yr Proper Motion Dec: 1.291 mas/yr Parallax: 0.0054228" Epoch of Position: 2000					
<i>Comments: AOV</i> <i>V = 9, J=7.27, H= 6.67, K=5.94</i> <i>Category=Star</i> <i>Description=[Herbig Ae/Be stars]</i>										
Acquisition	#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	F335M	BRIGHT (ND Square)	SHALLOW4	33	1	1	8.279	157622
Template	Module		Occulting Mask		Obtain Astrometric Confirmation Images?		Subarray	Dither Pattern		
	A		MASK335R		true		SUB320A335R	NONE		
Confirmation	#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers			
	1	RAPID	3	3	3	118.104	1			
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F200W	F444W	SHALLOW4	10	30	1	30	1604.174	

Proposal 4543 - Observation 1 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

PSF References	HD97048 - Ref Star (Obs 3) (PSF Reference; Filters [F200W/F444W]) HD97048 - Roll 2 (Obs 2) (Filters [F200W/F444W]) Additional Justification: false
Special Requirements	Offset -0.01 arcsec, -0.018 arcsec No Parallel Attachments Sequence Observations 1, 2, 3, Non-interruptible Aperture PA Offset 2 from 1 by 10 to 14 Degrees (Same offsets in V3)

Proposal 4543 - Observation 2 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

Mon Mar 17 17:00:07 GMT 2025

Observation	<p>Proposal 4543, Observation 2: HD97048 - Roll 2</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Coronagraphic Imaging</p>									
Diagnostics	<p>(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(HD97048 - Roll 2 (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections			Miscellaneous		
	(1)	HD-97048	RA: 11 08 3.3110 (167.0137958d) Dec: -77 39 17.49 (-77.65486d) Equinox: J2000		Proper Motion RA: -22.526 mas/yr Proper Motion Dec: 1.291 mas/yr Parallax: 0.0054228" Epoch of Position: 2000					
	<p><i>Comments: AOV</i> <i>V = 9, J=7.27, H= 6.67, K=5.94</i> <i>Category=Star</i> <i>Description=[Herbig Ae/Be stars]</i></p>									
Acquisition	#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	F335M	BRIGHT (ND Square)	SHALLOW4	33	1	1	8.279	157622
Template	Module		Occulting Mask		Obtain Astrometric Confirmation Images?		Subarray	Dither Pattern		
	A		MASK335R		true		SUB320A335R	NONE		
Confirmation	#	Conf. Readout Pattern		Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers		
	1	RAPID		3	3	3	118.104	1		
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F200W	F444W	SHALLOW4	10	30	1	30	1604.174	

Proposal 4543 - Observation 2 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

PSF References	HD97048 - Ref Star (Obs 3) (PSF Reference; Filters [F200W/F444W]) HD97048 - Roll 1 (Obs 1) (Filters [F200W/F444W]) Additional Justification: false
Special Requirements	Offset -0.01 arcsec, -0.018 arcsec No Parallel Attachments Sequence Observations 1, 2, 3, Non-interruptible Aperture PA Offset 2 from 1 by 10 to 14 Degrees (Same offsets in V3)

Proposal 4543 - Observation 3 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

Mon Mar 17 17:00:07 GMT 2025

Observation	<p>Proposal 4543, Observation 3: HD97048 - Ref Star</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCcam Coronagraphic Imaging</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		
	(6)	Ref_I-Car	RA: 10 24 23.7055 (156.0987729d) Dec: -74 01 53.80 (-74.03161d) Equinox: J2000		Proper Motion RA: -15.399000000000001 mas/yr Proper Motion Dec: -28.43300005679339 mas/yr Parallax: 0.061434199999999994" Epoch of Position: 2000					
	<p>Comments: F3V, K=3.25</p> <p>Category=Star</p> <p>Description=[F dwarfs]</p>									
Acquisition	#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	SAME	F335M	BRIGHT (ND Square)	SHALLOW4	17	1	1	4.266	157622
Template	Module		Occulting Mask		Obtain Astrometric Confirmation Images?		Subarray		Dither Pattern	
	A		MASK335R		true		SUB320A335R		9-POINT-CIRCLE	
Confirmation	#	Conf. Readout Pattern		Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers		
	1	RAPID		3	3	3	118.104	1		
Spectral Elements	#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F200W	F444W	BRIGHT2	10	8	9	72	1617.863	

Proposal 4543 - Observation 3 - Coronagraphic Imaging the Source of the Disk Kinematic Kink around HD 97048

PSF References	PSF Reference: true
Special Requirements	Offset -0.01 arcsec, -0.018 arcsec No Parallel Attachments Sequence Observations 1, 2, 3, Non-interruptible