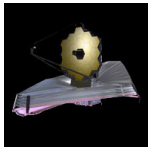

1668 - Searching for low mass planets in debris disk gaps

Cycle: 1, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
HD107146				
	1	BKG-HD107146	MIRI Coronagraphic Imaging	(7) BKG-HD107146
	2	HD107146-roll1	MIRI Coronagraphic Imaging	(1) HD107146
	3	HD107146-roll2	MIRI Coronagraphic Imaging	(1) HD107146
	4	PSF-HD107146	MIRI Coronagraphic Imaging	(4) PSF-HD107146

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	5	BKG-PSF-HD107146	MIRI Coronagraphic Imaging	(8) BKG-PSF-HD107146
HD92945				
	6	BKG-HD92945	MIRI Coronagraphic Imaging	(9) BKG-HD92945
	7	HD92945-roll1	MIRI Coronagraphic Imaging	(2) HD92945
	8	HD92945-roll2	MIRI Coronagraphic Imaging	(2) HD92945
	9	PSF-92945	MIRI Coronagraphic Imaging	(5) PSF-HD92945
	10	BKG-PSF-HD92945	MIRI Coronagraphic Imaging	(10) BKG-PSF-HD92945
HD206893				
	11	BKG-HD206893	MIRI Coronagraphic Imaging	(11) BKG-HD206893
	12	HD206893-roll1	MIRI Coronagraphic Imaging	(3) HD206893
	13	HD206893-roll2	MIRI Coronagraphic Imaging	(3) HD206893
	14	PSF-HD206893	MIRI Coronagraphic Imaging	(6) PSF-HD206893
	15	BKG-PSF-HD206893	MIRI Coronagraphic Imaging	(12) BKG-PSF-HD206893

ABSTRACT

Whilst exoplanet campaigns have discovered thousands of exoplanets at small radii, only rare planets more massive than Jupiter have been detectable at distances greater than 10 au. Nevertheless, these outer regions have instead been explored indirectly through observations of debris disks at tens of au. Over the last decades these observations have indicated the presence of planets shaping their structures, e.g. forcing disk eccentricities or carving gaps in wide disks, but the predicted planets were rarely within the detectable mass range. It is only now with JWST that we can directly detect these types of planets. We propose to use MIRI 15um coronagraphy to detect the planets carving the gaps in three wide belts discovered with ALMA: HD107146, HD92945 and HD206893. We predict the mass of these planets to be in the range 0.2-2 Mjup based on dynamical arguments of planet-disk interactions, and our proposed observations will be able to firmly detect their presence. These putative planets could become the smallest discovered beyond 10 au in any exoplanetary system. Moreover, when combined with the disc structure information, we will be able to constrain both the orbits and dynamical history of these systems. This type of systems with gapped debris disks carved by planets could be the tip of the iceberg of a larger population that ALMA is starting to reveal. Finally, focusing on debris disk systems has the advantage that we know the orientation of these systems (face-on for the proposed targets), they have a higher occurrence rate of cold directly imaged giant planets, and their disks are optically thin and thus any planet would suffer negligible extinction.

OBSERVING DESCRIPTION

We will search for planets using MIRI coronagraphic imaging at 15um in 3 systems with debris disks that show evidence of a planet carving a gap. These are HD107146, HD92945 and HD206893.

The observations will be done using the F1550C filter and using two roll angles to perform angular differential imaging. This also introduces diversity between instrument artifacts and any exoplanet signal. The two roll observations will be followed by a reference star observation to use for reference PSF differential imaging. To account for TA errors, we will perform a 9-point small grid dither on our reference star to obtain a library of reference images that sample the PSF diversity close to the center of the coronagraph.

We will perform 1h integration for the three targets (30min per roll) and shorter integrations for our reference star that will reach the same S/N per dither position.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD107146	RA: 12 19 6.3136 (184.7763067d) Dec: +16 32 51.56 (16.54766d) Equinox: J2000	Proper Motion RA: -0.1746833 arcsec/yr Proper Motion Dec: -0.1490213 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. I updated the PMs with Gaia DR3 Category=Star Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]				
(2)	HD92945	RA: 10 43 28.0168 (160.8667367d) Dec: -29 03 52.21 (-29.06450d) Equinox: J2000	Proper Motion RA: -0.21548354 arcsec/yr Proper Motion Dec: -0.04989219 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. I updated the PMs with Gaia DR3 Category=Star Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]				
(3)	HD206893	RA: 21 45 22.0050 (326.3416875d) Dec: -12 47 0.07 (-12.78335d) Equinox: J2000	Proper Motion RA: 0.0941117 arcsec/yr Proper Motion Dec: -0.0004634 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. I updated the PMs with Gaia DR3 Category=Star Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]				
(4)	PSF-HD107146	RA: 12 46 38.7773 (191.6615721d) Dec: +16 34 39.92 (16.57776d) Equinox: J2000	Proper Motion RA: 0.0143589 arcsec/yr Proper Motion Dec: 0.0159027 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. I updated the PMs with Gaia DR3. Category=Calibration Description=[Coronagraphic, Point spread function]				
(5)	PSF-HD92945	RA: 10 59 30.8796 (164.8786650d) Dec: -16 21 13.48 (-16.35374d) Equinox: J2000	Proper Motion RA: -0.0441698 arcsec/yr Proper Motion Dec: -0.009406127 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. I updated the PMs with Gaia DR3. Category=Calibration Description=[Coronagraphic, Point spread function]				
(6)	PSF-HD206893	RA: 21 56 24.9123 (329.1038013d) Dec: -09 35 9.09 (-9.58586d) Equinox: J2000	Proper Motion RA: 0.01725863 arcsec/yr Proper Motion Dec: 0.0005448 arcsec/yr Epoch of Position: 2015.5	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Calibration Description=[Coronagraphic, Point spread function]				
(7)	BKG-HD107146	RA: 12 19 12.8681 (184.8036171d) Dec: +16 32 30.76 (16.54188d) Equinox: J2000		
Comments: Coordinates picked using WISE maps in Aladin. Category=Calibration Description=[Telescope/sky background]				

(8)	BKG-PSF-HD107146	RA: 12 46 41.9562 (191.6748175d) Dec: +16 35 55.08 (16.59863d) Equinox: J2000
Comments: Coordinates picked using WISE maps in Aladin. *Category=Calibration* *Description=[Coronagraphic, Telescope/sky background]*		
(9)	BKG-HD92945	RA: 10 43 32.8174 (160.8867392d) Dec: -29 02 53.49 (-29.04819d) Equinox: J2000
Comments: Coordinates picked using WISE maps in Aladin. *Category=Calibration* *Description=[Coronagraphic, Telescope/sky background]*		
(10)	BKG-PSF-HD92945	RA: 10 59 37.4217 (164.9059237d) Dec: -16 21 31.32 (-16.35870d) Equinox: J2000
Comments: Coordinates picked using WISE maps in Aladin. *Category=Calibration* *Description=[Coronagraphic, Telescope/sky background]*		
(11)	BKG-HD206893	RA: 21 45 20.4278 (326.3351158d) Dec: -12 45 29.53 (-12.75820d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Coronagraphic, Telescope/sky background]*		
(12)	BKG-PSF-HD206893	RA: 21 56 31.1052 (329.1296050d) Dec: -09 34 43.82 (-9.57884d) Equinox: J2000
Comments: *Category=Calibration* *Description=[Coronagraphic, Telescope/sky background]*		

Observation

Proposal 1668, Observation 1: BKG-HD107146 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observation For: [HD107146-roll1 (Obs 2), HD107146-roll2 (Obs 3)]

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
(7)	BKG-HD107146	RA: 12 19 12.8681 (184.8036171d) Dec: +16 32 30.76 (16.54188d) Equinox: J2000		

Comments: Coordinates picked using WISE maps in Aladin.
Category=Calibration
Description=[Telescope/sky background]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Repeat observation	Background Quadrant
	YES	1

Dithers

#	Dither Type
1	BACKGROUND

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	2	12	3600.473	

PSF References

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 1, 2, 3, 4, 5, Non-interruptible

Observation

Proposal 1668, Observation 2: HD107146-roll1 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-HD107146 (Obs 1), HD107146-roll2 (Obs 3)]

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
(1)	HD107146	RA: 12 19 6.3136 (184.7763067d)	Proper Motion RA: -0.1746833 arcsec/yr	
		Dec: +16 32 51.56 (16.54766d)	Proper Motion Dec: -0.1490213 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3
Category=Star
Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	98	1	1	23.489	120483.9

Template

Repeat observation
NO

Dithers

#	Dither Type
1	NONE

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	1	6	1800.236	120483.3

PSF References

PSF-HD107146 (Obs 4) (PSF Reference; Filters [F1140C])

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 1, 2, 3, 4, 5, Non-interruptible Aperture PA Offset 3 from 2 by -14 to -7 Degrees (Same offsets in V3)

Observation

Proposal 1668, Observation 3: HD107146-roll2 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-HD107146 (Obs 1), HD107146-roll1 (Obs 2)]

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)	HD107146	RA: 12 19 6.3136 (184.7763067d)	Proper Motion RA: -0.1746833 arcsec/yr	
		Dec: +16 32 51.56 (16.54766d)	Proper Motion Dec: -0.1490213 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3
Category=Star
Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	98	1	1	23.489	120483.9

Template

Repeat observation
NO

Dithers

#	Dither Type
1	NONE

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	1	6	1800.236	120483.3

PSF References

PSF-HD107146 (Obs 4) (PSF Reference; Filters [F1140C])

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 1, 2, 3, 4, 5, Non-interruptible Aperture PA Offset 3 from 2 by -14 to -7 Degrees (Same offsets in V3)

Observation

Proposal 1668, Observation 4: PSF-HD107146 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-PSF-HD107146 (Obs 5)]

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
(4)	PSF-HD107146	RA: 12 46 38.7773 (191.6615721d)	Proper Motion RA: 0.0143589 arcsec/yr	
		Dec: +16 34 39.92 (16.57776d)	Proper Motion Dec: 0.0159027 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3.
Category=Calibration
Description=[Coronagraphic, Point spread function]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	6	1	1	1.438	120483.10

Template

Repeat observation
NO

Dithers

#	Dither Type
1	9-POINT-SMALL-GRID

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	275	2	1	9	18	1188.573	120483.4

PSF References

PSF Reference: true

Special Requirements	
	No Parallel Attachments Sequence Observations 1, 2, 3, 4, 5, Non-interruptible

Observation

Proposal 1668, Observation 5: BKG-PSF-HD107146 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observation For: [PSF-HD107146 (Obs 4)]

Diagnostics

(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(8)	BKG-PSF-HD107146	RA: 12 46 41.9562 (191.6748175d) Dec: +16 35 55.08 (16.59863d) Equinox: J2000		

Comments: Coordinates picked using WISE maps in Aladin.
Category=Calibration
Description=[Coronagraphic, Telescope/sky background]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Repeat observation	Background Quadrant
	YES	1

Dithers

#	Dither Type
1	BACKGROUND

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	275	2	1	2	4	264.127	

PSF References

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 1, 2, 3, 4, 5, Non-interruptible

Observation

Proposal 1668, Observation 6: BKG-HD92945 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observation For: [HD92945-roll1 (Obs 7), HD92945-roll2 (Obs 8)]

Diagnostics

(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(9)	BKG-HD92945	RA: 10 43 32.8174 (160.8867392d) Dec: -29 02 53.49 (-29.04819d) Equinox: J2000		

Comments: Coordinates picked using WISE maps in Aladin.
Category=Calibration
Description=[Coronagraphic, Telescope/sky background]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Repeat observation	Background Quadrant
	YES	1

Dithers

#	Dither Type
1	BACKGROUND

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	2	12	3600.473	

PSF References

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 6, 7, 8, 9, 10, Non-interruptible

Observation

Proposal 1668, Observation 7: HD92945-roll1 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-HD92945 (Obs 6), HD92945-roll2 (Obs 8)]

Diagnostics

(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	HD92945	RA: 10 43 28.0168 (160.8667367d)	Proper Motion RA: -0.21548354 arcsec/yr	
		Dec: -29 03 52.21 (-29.06450d)	Proper Motion Dec: -0.04989219 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3
Category=Star
Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	98	1	1	23.489	89319.11

Template

Repeat observation
NO

Dithers

#	Dither Type
1	NONE

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	1	6	1800.236	89319.5

PSF References

PSF-92945 (Obs 9) (PSF Reference; Filters [F1140C])

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 6, 7, 8, 9, 10, Non-interruptible Aperture PA Offset 8 from 7 by 7 to 14 Degrees (Same offsets in V3)

Observation

Proposal 1668, Observation 8: HD92945-roll2 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-HD92945 (Obs 6), HD92945-roll1 (Obs 7)]

Diagnostics

(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	HD92945	RA: 10 43 28.0168 (160.8667367d)	Proper Motion RA: -0.21548354 arcsec/yr	
		Dec: -29 03 52.21 (-29.06450d)	Proper Motion Dec: -0.04989219 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3
Category=Star
Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	98	1	1	23.489	89319.11

Template

Repeat observation
NO

Dithers

#	Dither Type
1	NONE

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	1	6	1800.236	89319.5

PSF References

PSF-92945 (Obs 9) (PSF Reference; Filters [F1140C])

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 6, 7, 8, 9, 10, Non-interruptible Aperture PA Offset 8 from 7 by 7 to 14 Degrees (Same offsets in V3)

Observation

Proposal 1668, Observation 9: PSF-92945 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-PSF-HD92945 (Obs 10)]

Diagnostics

(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	PSF-HD92945	RA: 10 59 30.8796 (164.8786650d)	Proper Motion RA: -0.0441698 arcsec/yr	
		Dec: -16 21 13.48 (-16.35374d)	Proper Motion Dec: -0.009406127 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3.
Category=Calibration
Description=[Coronagraphic, Point spread function]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	4	1	1	0.959	89319.12

Template

Repeat observation
NO

Dithers

#	Dither Type
1	9-POINT-SMALL-GRID

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	145	2	1	9	18	627.722	89319.6

PSF References

PSF Reference: true

Special Requirements	
	No Parallel Attachments Sequence Observations 6, 7, 8, 9, 10, Non-interruptible

Observation

Proposal 1668, Observation 10: BKG-PSF-HD92945 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observation For: [PSF-92945 (Obs 9)]

Diagnostics

(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(10)	BKG-PSF-HD92945	RA: 10 59 37.4217 (164.9059237d) Dec: -16 21 31.32 (-16.35870d) Equinox: J2000		

Comments: Coordinates picked using WISE maps in Aladin.
Category=Calibration
Description=[Coronagraphic, Telescope/sky background]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Repeat observation	Background Quadrant
	YES	1

Dithers

#	Dither Type
1	BACKGROUND

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	145	2	1	2	4	139.494	

PSF References

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 6, 7, 8, 9, 10, Non-interruptible

Observation

Proposal 1668, Observation 11: BKG-HD206893 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observation For: [HD206893-roll1 (Obs 12), HD206893-roll2 (Obs 13)]

Diagnostics

(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(11)	BKG-HD206893	RA: 21 45 20.4278 (326.3351158d) Dec: -12 45 29.53 (-12.75820d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Coronagraphic, Telescope/sky background]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Repeat observation	Background Quadrant
	YES	1

Dithers

#	Dither Type
1	BACKGROUND

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	2	12	3600.473	

PSF References

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1668, Observation 12: HD206893-roll1 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-HD206893 (Obs 11), HD206893-roll2 (Obs 13)]

Diagnostics

(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	HD206893	RA: 21 45 22.0050 (326.3416875d)	Proper Motion RA: 0.0941117 arcsec/yr	
		Dec: -12 47 0.07 (-12.78335d)	Proper Motion Dec: -0.0004634 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3
Category=Star
Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	98	1	1	23.489	89319.13

Template

Repeat observation
NO

Dithers

#	Dither Type
1	NONE

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	1	6	1800.236	89319.7

PSF References

PSF-HD206893 (Obs 14) (PSF Reference; Filters [F1140C])

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 11, 12, 13, 14, 15, Non-interruptible Aperture PA Offset 13 from 12 by -14 to -7 Degrees (Same offsets in V3)

Observation

Proposal 1668, Observation 13: HD206893-roll2 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-HD206893 (Obs 11), HD206893-roll1 (Obs 12)]

Diagnostics

(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	HD206893	RA: 21 45 22.0050 (326.3416875d)	Proper Motion RA: 0.0941117 arcsec/yr	
		Dec: -12 47 0.07 (-12.78335d)	Proper Motion Dec: -0.0004634 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
I updated the PMs with Gaia DR3
Category=Star
Description=[Circumstellar disks, Circumstellar dust, Debris disks, Exoplanets]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	98	1	1	23.489	89319.13

Template

Repeat observation
NO

Dithers

#	Dither Type
1	NONE

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	1251	6	1	1	6	1800.236	89319.7

PSF References

PSF-HD206893 (Obs 14) (PSF Reference; Filters [F1140C])

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 11, 12, 13, 14, 15, Non-interruptible Aperture PA Offset 13 from 12 by -14 to -7 Degrees (Same offsets in V3)

Observation

Proposal 1668, Observation 14: PSF-HD206893 Fri Apr 28 15:00:31 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observations:[BKG-PSF-HD206893 (Obs 15)]

Diagnostics

(Visit 14:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(6)	PSF-HD206893	RA: 21 56 24.9123 (329.1038013d)	Proper Motion RA: 0.01725863 arcsec/yr	
		Dec: -09 35 9.09 (-9.58586d)	Proper Motion Dec: 0.0005448 arcsec/yr	
		Equinox: J2000	Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Calibration
Description=[Coronagraphic, Point spread function]

Acquisition

#	Target	Filter	Quadrant	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	FND	1	FAST	6	1	1	1.438	89319.14

Template

Repeat observation
NO

Dithers

#	Dither Type
1	9-POINT-SMALL-GRID

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	240	2	1	9	18	1037.575	89319.8

PSF References

PSF Reference: true

Special Requirements	
	No Parallel Attachments Sequence Observations 11, 12, 13, 14, 15, Non-interruptible

Observation

Proposal 1668, Observation 15: BKG-PSF-HD206893 Fri Apr 28 15:00:32 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Coronagraphic Imaging

Background Observation For: [PSF-HD206893 (Obs 14)]

Diagnostics

(Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(12)	BKG-PSF-HD206893	RA: 21 56 31.1052 (329.1296050d) Dec: -09 34 43.82 (-9.57884d) Equinox: J2000		

Comments:
Category=Calibration
Description=[Coronagraphic, Telescope/sky background]

Acquisition

#	Target
1	NONE

Template

AcqFilter	Repeat observation	Background Quadrant
	YES	1

Dithers

#	Dither Type
1	BACKGROUND

Spectral Elements

#	Coron Mask/Filter	Mask	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4QPM/F1140C	4QPM	F1140C	FASTR1	240	2	1	2	4	230.572	

PSF References

Additional Justification: false

Special Requirements	
	No Parallel Attachments Sequence Observations 11, 12, 13, 14, 15, Non-interruptible