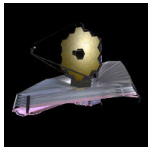

1195 - Coronagraphic Imaging of Young Planets - Part 3

Cycle: 1, Proposal Category: GTO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
HD 95086				
	1	HD 95086 - NIRCam - Roll m5 - MASKLWB	NIRCam Coronagraphic Imaging	(1) HD-95086
	2	HD 95086 - NIRCam - Roll p5 - MASKLWB	NIRCam Coronagraphic Imaging	(1) HD-95086
	3	Ref star - NIRCam - Roll p5 - MASKLWB	NIRCam Coronagraphic Imaging	(2) HD-95752

ABSTRACT

TBD

OBSERVING DESCRIPTION

The NIRCam GTO team will execute a series of coronagraphic measurements using NIRCam. The goals of the program are two-fold. First, to search for previously unknown planets using NIRCam in the F356W and F444W filters with the round 430 mask being used for both filters. This version of the APT file uses F322W2 which we intend to change to F356W when this becomes available in a planned APT update. This program will achieve a sensitivity to masses less than 1 MJup at F444W and will use F356W to reject background stars and galaxies.

The second goal of the program is the physical characterization of the known planets HD95086 b using NIRCam multi-filter photometry. Three

medium-band NIRCam filters will be used in conjunction with the long wavelength bar. The NIRCam observations will use two roll angles (+/-5 deg) and a reference star to assist with suppression of residuals in the coronagraphic image.

Comments:

- F322W2 filter instead of F356W

Proposal 1195 - Targets - Coronagraphic Imaging of Young Planets - Part 3

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-95086	RA: 10 57 3.0215 (164.2625896d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000	Proper Motion RA: -41.113 mas/yr Proper Motion Dec: 12.914 mas/yr Parallax: 0.01194" Epoch of Position: 2000	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Teff ~ 7593 K* *A8III type star* *Kmag=6.789* *Category=Star* *Description=[Exoplanet Systems]* *Extended=NO*				
(2)	HD-95752	RA: 11 01 49.7244 (165.4571850d) Dec: -64 18 14.09 (-64.30391d) Equinox: J2000	Proper Motion RA: -6.618 mas/yr Proper Motion Dec: 1.859 mas/yr Parallax: 0.00036" Epoch of Position: 2000	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *A7Ib/II type star* *Kmag=5.403* *Category=Calibration* *Description=[Coronagraphic]* *Extended=NO*				

Observation

Proposal 1195, Observation 1: HD 95086 - NIRCam - Roll m5 - MASKLWB Thu Mar 12 01:05:03 GMT 2020

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-95086	RA: 10 57 3.0215 (164.2625896d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000	Proper Motion RA: -41.113 mas/yr Proper Motion Dec: 12.914 mas/yr Parallax: 0.01194" Epoch of Position: 2000	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Teff ~ 7593 K
A8III type star
Kmag=6.789
Category=Star
Description=[Exoplanet Systems]
Extended=NO

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	25020.1

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKLWB	true	SUB320	NONE

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	3	1	1	32.21	1

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F356W	DEEP8	11	3	1	3	670.35	25020.2
2	F444W	DEEP8	10	5	1	5	1010.345	25020.3

PSF References	Ref star - NIRCam - Roll p5 - MASKLWB (Obs 3) (PSF Reference; Filters [F356W, F444W]) Additional Justification: false
Special Requirements	Aperture PA Range 321.92 to 332.60 Degrees (V3 321.53677219 to 332.21677219) Sequence Observations 1, 2, 3, Non-interruptible Aperture PA Offset 2 from 1 by 7 to 14 Degrees (Same offsets in V3)

Observation

Proposal 1195, Observation 2: HD 95086 - NIRCam - Roll p5 - MASKLWB Thu Mar 12 01:05:03 GMT 2020

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

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)	HD-95086	RA: 10 57 3.0215 (164.2625896d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000	Proper Motion RA: -41.113 mas/yr Proper Motion Dec: 12.914 mas/yr Parallax: 0.01194" Epoch of Position: 2000	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Teff ~ 7593 K
A8III type star
Kmag=6.789
Category=Star
Description=[Exoplanet Systems]
Extended=NO

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	25020.1

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKLWB	true	SUB320	NONE

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	3	1	1	32.21	1

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F356W	DEEP8	11	3	1	3	670.35	25020.2
2	F444W	DEEP8	10	5	1	5	1010.345	25020.3

PSF References	Ref star - NIRCam - Roll p5 - MASKLWB (Obs 3) (PSF Reference; Filters [F356W, F444W]) Additional Justification: false
Special Requirements	Sequence Observations 1, 2, 3, Non-interruptible Aperture PA Offset 2 from 1 by 7 to 14 Degrees (Same offsets in V3)

Observation

Proposal 1195, Observation 3: Ref star - NIRCam - Roll p5 - MASKLWB Thu Mar 12 01:05:03 GMT 2020

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

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
(2)	HD-95752	RA: 11 01 49.7244 (165.4571850d) Dec: -64 18 14.09 (-64.30391d) Equinox: J2000	Proper Motion RA: -6.618 mas/yr Proper Motion Dec: 1.859 mas/yr Parallax: 0.00036" Epoch of Position: 2000	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

A7Ib/II type star
Kmag=5.403
Category=Calibration
Description=[Coronagraphic]
Extended=NO

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)	BRIGHT2	33	1	1	3.363	25020.11

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKLWB	false	SUB320	5-POINT-BAR

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F356W	DEEP8	7	1	5	5	689.633	25020.12
2	F444W	DEEP8	10	1	5	5	1010.345	25020.13

PSF References

PSF Reference: true

Special Requirements	Sequence Observations 1, 2, 3, Non-interruptible