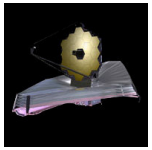

4454 - Commissioning NIRCam Dual Channel (SW+LW) Coronagraphy

Cycle: 2, Proposal Category: CAL/NIRCAM

INVESTIGATORS

Name	*Institution*
Dr. David A. Golimowski (PI)	**Space Telescope Science Institute**
Dr. Martha L. Boyer (CoI) (Contact)	Space Telescope Science Institute
Julien Girard (CoI) (Contact)	Space Telescope Science Institute
Dr. Mario Gennaro (CoI) (Contact)	Space Telescope Science Institute
Dr. Jarron Michael Leisenring (CoI) (Contact)	University of Arizona

OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
MASK210R, F210M+F335M				
	1	STAR1, STARE	NIRCam Coronagraphic Imaging	(1) HD-114174-STAR1-COMPANION
	2	STAR2, SGD	NIRCam Coronagraphic Imaging	(2) HD-111733-STAR2
MASK335R, F210M+F335M				
	3	STAR1, STARE	NIRCam Coronagraphic Imaging	(1) HD-114174-STAR1-COMPANION
	4	STAR2, SGD	NIRCam Coronagraphic Imaging	(2) HD-111733-STAR2
MASK430R, F210M+F430M				
	5	STAR1, STARE	NIRCam Coronagraphic Imaging	(1) HD-114174-STAR1-COMPANION
	6	STAR2, SGD	NIRCam Coronagraphic Imaging	(2) HD-111733-STAR2
MASKLWB, F182M+F250M->F182M+F335M->F210M+F335M->F210M+F480M				
	7	STAR1, STARE	NIRCam Coronagraphic Imaging	(1) HD-114174-STAR1-COMPANION
	8	STAR2, SGD	NIRCam Coronagraphic Imaging	(2) HD-111733-STAR2
MASKSWB, F182M+F250M->F210M+F250M->F210M+F335M				
	9	STAR1, STARE	NIRCam Coronagraphic Imaging	(1) HD-114174-STAR1-COMPANION
	10	STAR2, SGD	NIRCam Coronagraphic Imaging	(2) HD-111733-STAR2

ABSTRACT

Perform an end-to-end test of NIRCam Dual Channel (LW+SW) Coronagraphy (available in late Cycle 1) for each occulting mask to demonstrate basic functionality of the mode, correct commanding of new subarrays, and proper data flow and processing through DMS.

This calibration program may change in response to system developments and the final Cycle 2 science program.

OBSERVING DESCRIPTION

STRATEGY

We repeat part of the NIRCam coronagraphic-suppression verification program executed during post-launch Commissioning (CAR-907, NRC-31, PID 1441) to demonstrate the successful implementation of dual-channel (i.e., simultaneous LW and SW) NIRCam coronagraphy in late Cycle 1. The scope of this program is limited to the verification of OSS commanding (as implemented via OPGS), DMS processing of science and engineering products, and basic coronagraphic performance via Reference-star Differential Imaging (RDI). Assessment of the Angular Differential Imaging (ADI) performance in dual-channel mode is deferred to our Cycle 2 Calibration program. Consequently, this program will be executed using a single PA_V3 orientation, rather than the roll-offset approach used in PID 1441.

We use the same "science" target (HD 114174: G3IV + WD close binary, K=5.2) and one of the three PSF-reference stars (HD 111733: K=5.1) used in PID 1441 to allow direct comparison of the performances of the single-channel and dual-channel modes. These targets are visible between mid-May and early-July 2023, a window well-suited to the initial public offering of dual-mode coronagraphy in Cycle 2. Likewise, we use the same Small Grid Dither (SGD) patterns used in PID 1441 for the PSF-reference images to assess their effects on the simultaneous SW and LW images for each occulter, as well as the expected improvements in target acquisition (TA) resulting from the recent changes to the TA centroid algorithm for the bar occulters.

OBSERVING SEQUENCE

For each occulter, we obtain coronagraphic images of the binary "science" target at the nominal TA position (i.e., no SGDs) and the PSF-reference star at the maximum number of SGD positions for that occulter (i.e., 9-PT-CIRCLE for round masks and 5-PT-BAR for bar masks). These maximal SGD patterns mitigate the effect of presently large TA uncertainties on coronagraphic-contrast measurements.

For the round occulters, simultaneous SW and LW images are recorded through the nominal filters F210M and F335M (for MASK210R and MASK335R) or F430M (for MASK430R), respectively.

For the bar occulters, multiple sets of simultaneous SW and LW images are recorded for both the science and PSF-reference targets to investigate (1) the coronagraphic suppression along the bars and (2) the effect of changing filters at a fixed bar position. Two positions along the LW bar match those used in PID 1441 to allow direct comparison of the efficacy of the centroid algorithms used then and now. The filter combinations used at each bar position are:

MASKLWB: (F182M, F250M) -> (F182M, F335M) -> (F210M, F335M) -> (F210M, F480M)
MASKSWB: (F182M, F250M) -> (F210M, F250M) -> (F210M, F335M)

As in PID 1441, the readout patterns for the round and bar occulters are SHALLOW4 and BRIGHT2, respectively. The durations of all "science" exposures are ~1700-1900 sec; the total duration of the dithered PSF-reference exposures closely matches those of the corresponding "science" exposures.

All observations include RAPID astrometric confirmation images to determine precisely the positions of the stars behind each mask.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-114174-STAR1-COMPANION	RA: 13 08 51.1117 (197.2129654d) Dec: +05 12 15.52 (5.20431d) Equinox: J2000	Proper Motion RA: 0.005714557831237684 sec of time/yr Proper Motion Dec: -0.6802579999202862 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+114174

Star with a white dwarf companion at ~0.5" with delta_L~10, ideal to test Coronagraphic suppression of 1e-4 or better at or inside the IWA with NIRCam

G5IV-V + D type star
2MASS Ks =5.202
Category=Star
Description=[G stars]
Extended=NO

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	HD-111733-STAR2	RA: 12 51 20.2179 (192.8342412d) Dec: +08 12 37.64 (8.21046d) Equinox: J2000	Proper Motion RA: -0.002227498109176724 sec of time/yr Proper Motion Dec: 0.003189 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+111733

G5 type star
2MASS Ks = 5.067
Category=Star
Description=[G stars]
Extended=NO

Observation

Proposal 4454, Observation 1: STAR1, STARE

Thu May 25 20:03:39 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

Diagnostics

(STAR1, STARE (Obs 1)) Warning (Form): PSF Reference observations should be SEQ NON-INT.

(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-114174-STAR1-COMPANION	RA: 13 08 51.1117 (197.2129654d) Dec: +05 12 15.52 (5.20431d) Equinox: J2000	Proper Motion RA: 0.005714557831237684 sec of time/yr Proper Motion Dec: -0.6802579999202862 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+114174

Star with a white dwarf companion at ~0.5" with delta_L~10, ideal to test Coronagraphic suppression of 1e-4 or better at or inside the IWA with NIRCam

G5IV-V + D type star
2MASS Ks =5.202
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	1 HD-114174-STAR1-COMPANION	F210M	BRIGHT (ND Square)	SHALLOW4	9	1	1	8.195	155972.6

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASK210R	true	SUB640A210R	NONE

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	5	1	1	53.684	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	F210M	F335M	BRIGHT2	10	18	1	18	1582.616	155972.14

PSF References

STAR2, SGD (Obs 2) (PSF Reference; Filters [F210M/F335M])

Additional Justification: false

Special Requirements

Before Date 15-JUN-2023:00:00:00
Offset 0.007 arcsec, -0.002 arcsec
No Parallel Attachments

Group Observations 1, 2, Non-interruptible

Observation

Proposal 4454, Observation 2: STAR2, SGD

Thu May 25 20:03:39 GMT 2023

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
(2)	HD-111733-STAR2	RA: 12 51 20.2179 (192.8342412d) Dec: +08 12 37.64 (8.21046d) Equinox: J2000	Proper Motion RA: -0.002227498109176724 sec of time/yr Proper Motion Dec: 0.003189 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+111733

G5 type star
2MASS Ks = 5.067
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 HD-111733-STAR2	F210M	BRIGHT (ND Square)	SHALLOW4	9	1	1	8.195	155972.6

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASK210R	true	SUB640A210R	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	5	1	1	53.684	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	F210M	F335M	BRIGHT2	10	2	9	18	1582.616	155972.20

PSF References	PSF Reference: true
Special Requirements	Offset 0.007 arcsec, -0.002 arcsec No Parallel Attachments Group Observations 1, 2, Non-interruptible

Observation

Proposal 4454, Observation 3: STAR1, STARE

Thu May 25 20:03:39 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

Diagnostics

(STAR1, STARE (Obs 3)) Warning (Form): PSF Reference observations should be SEQ NON-INT.

(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)	HD-114174-STAR1-COMPANION	RA: 13 08 51.1117 (197.2129654d) Dec: +05 12 15.52 (5.20431d) Equinox: J2000	Proper Motion RA: 0.005714557831237684 sec of time/yr Proper Motion Dec: -0.6802579999202862 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+114174

Star with a white dwarf companion at ~0.5" with delta_L~10, ideal to test Coronagraphic suppression of 1e-4 or better at or inside the IWA with NIRCam

G5IV-V + D type star
2MASS Ks =5.202
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	1 HD-114174-STAR1-COMPANION	F335M	BRIGHT (ND Square)	DEEP8	9	1	1	8.48	155972.7

Template

Module	Coronagraphic 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	5	1	1	53.684	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	F210M	F335M	SHALLOW4	10	36	1	36	1925.009	155972.23

PSF References

STAR2, SGD (Obs 4) (PSF Reference; Filters [F210M/F335M])

Additional Justification: false

Special Requirements

Before Date 15-JUN-2023:00:00:00
Offset -0.01 arcsec, 0.006 arcsec
No Parallel Attachments

Group Observations 3, 4, Non-interruptible

Observation

Proposal 4454, Observation 4: STAR2, SGD

Thu May 25 20:03:39 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

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
(2)	HD-111733-STAR2	RA: 12 51 20.2179 (192.8342412d) Dec: +08 12 37.64 (8.21046d) Equinox: J2000	Proper Motion RA: -0.002227498109176724 sec of time/yr Proper Motion Dec: 0.003189 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+111733

G5 type star
2MASS Ks = 5.067
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 HD-111733-STAR2	F335M	BRIGHT (ND Square)	DEEP8	9	1	1	8.48	155972.7

Template

Module	Coronagraphic 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	5	1	1	53.684	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	F210M	F335M	SHALLOW4	10	4	9	36	1925.009	155972.27

PSF References	PSF Reference: true
Special Requirements	Offset -0.01 arcsec, 0.006 arcsec No Parallel Attachments Group Observations 3, 4, Non-interruptible

Observation

Proposal 4454, Observation 5: STAR1, STARE

Thu May 25 20:03:40 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

Diagnostics

(STAR1, STARE (Obs 5)) Warning (Form): PSF Reference observations should be SEQ NON-INT.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-114174-STAR1-COMPANION	RA: 13 08 51.1117 (197.2129654d) Dec: +05 12 15.52 (5.20431d) Equinox: J2000	Proper Motion RA: 0.005714557831237684 sec of time/yr Proper Motion Dec: -0.6802579999202862 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+114174

Star with a white dwarf companion at ~0.5" with delta_L~10, ideal to test Coronagraphic suppression of 1e-4 or better at or inside the IWA with NIRCam

G5IV-V + D type star
2MASS Ks =5.202
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	1 HD-114174-STAR1-COMPANION	F335M	BRIGHT (ND Square)	DEEP8	9	1	1	8.48	155972.7

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASK430R	true	SUB320A430R	NONE

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	5	1	1	53.684	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	F210M	F430M	SHALLOW4	10	36	1	36	1925.009	155972.29

PSF References

STAR2, SGD (Obs 6) (PSF Reference; Filters [F210M/F430M])

Additional Justification: false

Special Requirements

Before Date 15-JUN-2023:00:00:00
Offset 0.017 arcsec, -0.015 arcsec
No Parallel Attachments

Group Observations 5, 6, Non-interruptible

Observation

Proposal 4454, Observation 6: STAR2, SGD

Thu May 25 20:03:40 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

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
(2)	HD-111733-STAR2	RA: 12 51 20.2179 (192.8342412d) Dec: +08 12 37.64 (8.21046d) Equinox: J2000	Proper Motion RA: -0.002227498109176724 sec of time/yr Proper Motion Dec: 0.003189 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+111733

G5 type star
2MASS Ks = 5.067
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 HD-111733-STAR2	F335M	BRIGHT (ND Square)	DEEP8	9	1	1	8.48	155972.7

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASK430R	true	SUB320A430R	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	5	1	1	53.684	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	F210M	F430M	SHALLOW4	10	4	9	36	1925.009	155972.33

PSF References	PSF Reference: true
Special Requirements	Offset 0.017 arcsec, -0.015 arcsec No Parallel Attachments Group Observations 5, 6, Non-interruptible

Observation

Proposal 4454, Observation 7: STAR1, STARE

Thu May 25 20:03:40 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

Diagnostics

(STAR1, STARE (Obs 7)) Warning (Form): PSF Reference observations should be SEQ NON-INT.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-114174-STAR1-COMPANION	RA: 13 08 51.1117 (197.2129654d) Dec: +05 12 15.52 (5.20431d) Equinox: J2000	Proper Motion RA: 0.005714557831237684 sec of time/yr Proper Motion Dec: -0.6802579999202862 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+114174

Star with a white dwarf companion at ~0.5" with delta_L~10, ideal to test Coronagraphic suppression of 1e-4 or better at or inside the IWA with NIRCam

G5IV-V + D type star
2MASS Ks =5.202
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	1 HD-114174-STAR1-COMPANION	F335M	BRIGHT (ND Square)	DEEP8	9	1	1	8.48	155972.7

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKLWB	true	SUB400X256ALWB	NONE

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	5	1	1	53.684	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	F182M	F250M	BRIGHT2	10	80	1	80	1787.411	155972.35
2	F182M	F335M	BRIGHT2	10	80	1	80	1787.411	155972
3	F210M	F335M	BRIGHT2	10	80	1	80	1787.411	155972
4	F210M	F480M	BRIGHT2	10	80	1	80	1787.411	155972

PSF References

STAR2, SGD (Obs 8) (PSF Reference; Filters [F182M/F250M, F182M/F335M, F210M/F335M, F210M/F480M])

Additional Justification: false

Special Requirements

Before Date 15-JUN-2023:00:00:00
Offset 0.0 arcsec, 0.057 arcsec
No Parallel Attachments

Group Observations 7, 8, Non-interruptible

Observation

Proposal 4454, Observation 8: STAR2, SGD

Thu May 25 20:03:40 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

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)	HD-111733-STAR2	RA: 12 51 20.2179 (192.8342412d) Dec: +08 12 37.64 (8.21046d) Equinox: J2000	Proper Motion RA: -0.002227498109176724 sec of time/yr Proper Motion Dec: 0.003189 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+111733

G5 type star
2MASS Ks = 5.067
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 HD-111733-STAR2	F335M	BRIGHT (ND Square)	DEEP8	9	1	1	8.48	155972.7

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKLWB	true	SUB400X256ALWB	5-POINT-BAR

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	5	1	1	53.684	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	F182M	F250M	BRIGHT2	10	16	5	80	1787.411	155972
2	F182M	F335M	BRIGHT2	10	16	5	80	1787.411	155972
3	F210M	F335M	BRIGHT2	10	16	5	80	1787.411	155972
4	F210M	F480M	BRIGHT2	10	16	5	80	1787.411	155972

PSF References	PSF Reference: true
Special Requirements	Offset 0.0 arcsec, 0.057 arcsec No Parallel Attachments Group Observations 7, 8, Non-interruptible

Observation

Proposal 4454, Observation 9: STAR1, STARE

Thu May 25 20:03:40 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

Diagnostics

(STAR1, STARE (Obs 9)) Warning (Form): PSF Reference observations should be SEQ NON-INT.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HD-114174-STAR1-COMPANION	RA: 13 08 51.1117 (197.2129654d) Dec: +05 12 15.52 (5.20431d) Equinox: J2000	Proper Motion RA: 0.005714557831237684 sec of time/yr Proper Motion Dec: -0.6802579999202862 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+114174

Star with a white dwarf companion at ~0.5" with delta_L~10, ideal to test Coronagraphic suppression of 1e-4 or better at or inside the IWA with NIRCam

G5IV-V + D type star
2MASS Ks =5.202
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	1 HD-114174-STAR1-COMPANION	F210M	BRIGHT (ND Square)	SHALLOW4	9	1	1	8.195	155972.6

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKSWB	true	SUB640ASWB	NONE

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	5	1	1	53.684	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	F182M	F250M	BRIGHT2	10	20	1	20	1758.462	155972
2	F210M	F250M	BRIGHT2	10	20	1	20	1758.462	155972
3	F210M	F335M	BRIGHT2	10	20	1	20	1758.462	155972.37

PSF References

STAR2, SGD (Obs 10) (PSF Reference; Filters [F182M/F250M, F210M/F250M, F210M/F335M])

Additional Justification: false

Special Requirements

Before Date 15-JUN-2023:00:00:00
Offset 0.0 arcsec, -0.006 arcsec
No Parallel Attachments

Group Observations 9, 10, Non-interruptible

Observation

Proposal 4454, Observation 10: STAR2, SGD

Thu May 25 20:03:40 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRCam Coronagraphic Imaging

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
(2)	HD-111733-STAR2	RA: 12 51 20.2179 (192.8342412d) Dec: +08 12 37.64 (8.21046d) Equinox: J2000	Proper Motion RA: -0.002227498109176724 sec of time/yr Proper Motion Dec: 0.003189 arcsec/yr Epoch of Position: 2015.5	

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

http://simbad.harvard.edu/simbad/sim-basic?Ident=HD+111733

G5 type star
2MASS Ks = 5.067
Category=Star
Description=[G stars]
Extended=NO

Acquisition

#	Target	Filter	Target Brightness	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 HD-111733-STAR2	F210M	BRIGHT (ND Square)	SHALLOW4	9	1	1	8.195	155972.6

Template

Module	Coronagraphic Mask	Obtain Astrometric Confirmation Images?	Subarray	Dither Pattern
A	MASKSWB	true	SUB640ASWB	5-POINT-BAR

Confirmation

#	Conf. Readout Pattern	Conf. Groups/Int	Conf. Integrations/Exp	Conf. Total Integrations	Conf. Total Exposure Time	Conf. Total Dithers
1	RAPID	5	1	1	53.684	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	F182M	F250M	BRIGHT2	10	4	5	20	1758.462	155972
2	F210M	F250M	BRIGHT2	10	4	5	20	1758.462	155972
3	F210M	F335M	BRIGHT2	10	4	5	20	1758.462	155972

PSF References	PSF Reference: true
Special Requirements	Offset 0.0 arcsec, -0.006 arcsec No Parallel Attachments Group Observations 9, 10, Non-interruptible