



6905 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Cycle: 4, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

| <i>Folder</i> | <i>Observation</i> | <i>Label</i> | <i>Observing Template</i> | <i>Science Target</i> |
|----------------------------------|--------------------|----------------------|------------------------------|-----------------------|
| AF Lep BAR/narrow coronagraphy | | | | |
| | 1 | AF Lep Roll 1 | NIRCam Coronagraphic Imaging | (1) V-AF-Lep |
| | 2 | AF Lep Roll 2 | NIRCam Coronagraphic Imaging | (1) V-AF-Lep |
| | 3 | AF Lep PSF Reference | NIRCam Coronagraphic Imaging | (5) AF-Lep-PSF |
| HD 95086 BAR/narrow coronagraphy | | | | |
| | 4 | HD 95086 Roll 1 | NIRCam Coronagraphic Imaging | (2) HD-95086 |

JWST Proposal 6905 (Created: Tuesday, July 1, 2025, 4:00:11PM Eastern Standard Time) - Overview

| <i>Folder</i> | <i>Observation</i> | <i>Label</i> | <i>Observing Template</i> | <i>Science Target</i> |
|-----------------------------------|--------------------|-------------------------|------------------------------|-----------------------|
| | 5 | HD 95086 Roll 2 | NIRCam Coronagraphic Imaging | (2) HD-95086 |
| | 6 | HD 95086 PSF Reference | NIRCam Coronagraphic Imaging | (6) HD95086-PSF |
| HIP 99770 BAR/narrow coronagraphy | | | | |
| | 7 | HIP 99770 Roll 1 | NIRCam Coronagraphic Imaging | (3) HIP-99770 |
| | 8 | HIP 99770 Roll 2 | NIRCam Coronagraphic Imaging | (3) HIP-99770 |
| | 9 | HIP 99770 PSF Reference | NIRCam Coronagraphic Imaging | (7) HIP99770-PSF |
| HR 2562 BAR/narrow coronagraphy | | | | |
| | 10 | HR 2562 Roll 1 | NIRCam Coronagraphic Imaging | (4) HR2562 |
| | 11 | HR 2562 Roll 2 | NIRCam Coronagraphic Imaging | (4) HR2562 |
| | 12 | HR 2562 PSF Reference | NIRCam Coronagraphic Imaging | (8) HR2562-PSF |

ABSTRACT

Early JWST data on the multi-planet system HR 8799 suggests that a simple JWST NIRCam diagnostic, based on photometric signatures of CO₂ and CO abundances, might empirically capture the link between formation processes and composition for directly imaged giant planets. We propose a small program that repeats this early experiment on four other amenable directly imaged systems in order to establish, or rule out, the significance of this tantalizing result, and to sort these companions into the metal-rich or solar-metallicity populations. We will use the wedge-shaped LWBAR coronagraph's "narrow" offset position to image four closely separated companions in the L-T transition. The high throughput of this underutilized mode make this an efficient program that will result in information-rich images of each system at previously invisible wavelengths.

OBSERVING DESCRIPTION

We will observe four directly imaged exoplanet systems, AF Lep b, HD 95086 b, HIP 99770 B, HR 2562 B with the NIRCam LWBAR coronagraph and the F410M, F430M, and F460M filters to measure the relative strength of CO and CO₂ absorption in their atmospheres. The observations will yield parallel F210M observations on the SW detector. Each observation will require observing the target with a roll angle offset to facilitate ADI, and a separate PSF reference star to facilitate RDI.

We have chosen PSF reference stars that are of a similar spectral type, similar brightness, and are nearby on the sky.

We require PA angles that place the known planets roughly perpendicular to the LWBAR (determined using the JWST CVT).

AF Lep b is also observable in the latter half of the year from +250d-310d, but this places the telescope in the MAZ, so we avoid this observability window.

Wkbk 219735 used for target acquisition ETC; parameters achieve SNR > 100 without saturation.

Proposal 6905 - Targets - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous |
|--|------------|---|---|---------------|
| (1) | V-AF-Lep | RA: 05 27 4.7633 (81.7698471d) Dec: -11 54 3.47 (-11.90096d) Equinox: J2000 | Proper Motion RA: 16.915 mas/yr Proper Motion Dec: -49.31799992391461 mas/yr Parallax: 0.0372539" Epoch of Position: 2000 | |
| <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><i>Category=Star</i> <i>Description=[Exoplanet Systems, F dwarfs]</i></p> | | | | |
| (2) | HD-95086 | RA: 10 57 3.0216 (164.2625900d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000 | Proper Motion RA: -41.128 mas/yr Proper Motion Dec: 12.861 mas/yr Parallax: 0.011565899999999999" Epoch of Position: 2000 | |
| <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><i>Category=Star</i> <i>Description=[A dwarfs, Exoplanet Systems]</i></p> | | | | |
| (3) | HIP-99770 | RA: 20 14 32.0324 (303.6334683d) Dec: +36 48 22.70 (36.80631d) Equinox: J2000 | Proper Motion RA: 68.09 mas/yr Proper Motion Dec: 69.404 mas/yr Parallax: 0.0245456" Epoch of Position: 2000 | |
| <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><i>Category=Star</i> <i>Description=[A dwarfs, Brown dwarfs, Exoplanet Systems]</i></p> | | | | |
| (4) | HR2562 | RA: 06 50 1.0151 (102.5042296d) Dec: -60 14 56.92 (-60.24914d) Equinox: J2000 | Proper Motion RA: 4.83 mas/yr Proper Motion Dec: 108.527 mas/yr Parallax: 0.0294738" Epoch of Position: 2000 | |
| <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><i>Category=Star</i> <i>Description=[Brown dwarfs, F stars]</i></p> | | | | |
| (5) | AF-Lep-PSF | RA: 05 07 24.9632 (76.8540133d) Dec: -12 29 28.57 (-12.49127d) Equinox: J2000 | Proper Motion RA: 135.782 mas/yr Proper Motion Dec: -107.3060000408077 mas/yr Parallax: 0.0269847" Epoch of Position: 2000 | |
| <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><i>Category=Star</i> <i>Description=[F dwarfs]</i></p> | | | | |

Fixed Targets

Proposal 6905 - Targets - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | | | |
|---|--------------|--|---|
| (6) | HD95086-PSF | RA: 11 06 37.6379 (166.6568246d) Dec: -67 55 26.62 (-67.92406d) Equinox: J2000 | Proper Motion RA: -23.893 mas/yr Proper Motion Dec: 13.866999999999999 mas/yr Parallax: 0.0052332" Epoch of Position: 2000 |
| <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><i>Category=Star</i> <i>Description=[A dwarfs]</i></p> | | | |
| (7) | HIP99770-PSF | RA: 20 18 28.6552 (304.6193967d) Dec: +36 59 59.30 (36.99981d) Equinox: J2000 | Proper Motion RA: 40.228 mas/yr Proper Motion Dec: 20.979 mas/yr Parallax: 0.016724799999999998" Epoch of Position: 2000 |
| <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><i>Category=Star</i> <i>Description=[A dwarfs]</i></p> | | | |
| (8) | HR2562-PSF | RA: 06 24 13.8424 (96.0576767d) Dec: -60 16 52.76 (-60.28132d) Equinox: J2000 | Proper Motion RA: -31.722 mas/yr Proper Motion Dec: 30.938 mas/yr Parallax: 0.0107891" Epoch of Position: 2000 |
| <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><i>Category=Star</i> <i>Description=[A dwarfs]</i></p> | | | |

Proposal 6905 - Observation 1 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| | | | | | | | | | | |
|--|--|------------------------------|---|--------------------------|--|-------------------------|---------------------------------|---------------------------|----------------------------------|----------------------------|
| Observation | Proposal 6905, Observation 1: AF Lep Roll 1 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging | | | | | | | | | |
| | (AF Lep Roll 1 (Obs 1)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (AF Lep 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) | V-AF-Lep | RA: 05 27 4.7633 (81.7698471d) Dec: -11 54 3.47 (-11.90096d) Equinox: J2000 | | Proper Motion RA: 16.915 mas/yr Proper Motion Dec: -49.31799992391461 mas/yr Parallax: 0.0372539" Epoch of Position: 2000 | | | | | |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <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> <i>Category=Star</i> <i>Description=[Exoplanet Systems, F dwarfs]</i> | | | | | | | | | | |
| Acquisition | # | Target | Filter | Target Brightness | Readout Pattern | Groups/Int | Integrations/Exp | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | 1 V-AF-Lep | F335M | BRIGHT (ND Square) | SHALLOW4 | 17 | 1 | 1 | 4.266 | 219735 |
| Template | Module | | Occulting 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 | | 4 | 1 | | 1 | | 42.947 | 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 | F410M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 20 | 1 | 20 | 1063.37 | |
| | 3 | F210M | F460M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | |

Proposal 6905 - Observation 1 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|---|
| PSF References | AF Lep PSF Reference (Obs 3) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) AF Lep Roll 2 (Obs 2) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 62 to 93 Degrees (V3 61.583417 to 92.583417) Aperture PA Range 260 to 300 Degrees (V3 259.583417 to 299.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 1, 2, 3, Non-interruptible Aperture PA Offset 2 from 1 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 2 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | Proposal 6905, Observation 2: AF Lep Roll 2 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|--------------------------|--------------------------|---------------------------|---------------------|---------------------|---------------------|------------------|--------|-----------------------|---|--------------------------|--------------------------|---------------------------|---------------------|---|--|------------------|------------|-------|--------------------|----------|----|----|---|-------|---------|--|---|-------|-------|----------|----|----|---|----|---------|--|---|-------|-------|----------|----|----|---|----|---------|--|
| | (AF Lep Roll 2 (Obs 2)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (AF Lep Roll 2 (Obs 2)) Informational (Form): The Visit Planner and Spike may produce different schedulability results. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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>(1)</td> <td>V-AF-Lep</td> <td>RA: 05 27 4.7633 (81.7698471d) Dec: -11 54 3.47 (-11.90096d) Equinox: J2000</td> <td>Proper Motion RA: 16.915 mas/yr Proper Motion Dec: -49.31799992391461 mas/yr Parallax: 0.0372539" 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><i>Category=Star</i> <i>Description=[Exoplanet Systems, F dwarfs]</i></p> | | | | | | | | | | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | (1) | V-AF-Lep | RA: 05 27 4.7633 (81.7698471d) Dec: -11 54 3.47 (-11.90096d) Equinox: J2000 | Proper Motion RA: 16.915 mas/yr Proper Motion Dec: -49.31799992391461 mas/yr Parallax: 0.0372539" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) | V-AF-Lep | RA: 05 27 4.7633 (81.7698471d) Dec: -11 54 3.47 (-11.90096d) Equinox: J2000 | Proper Motion RA: 16.915 mas/yr Proper Motion Dec: -49.31799992391461 mas/yr Parallax: 0.0372539" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1 V-AF-Lep</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>17</td> <td>1</td> <td>1</td> <td>4.266</td> <td>219735</td> </tr> </tbody> </table> | | | | | | | | | | # | Target | Filter | Target Brightness | Readout Pattern | Groups/Int | Integrations/Exp | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | 1 V-AF-Lep | F335M | BRIGHT (ND Square) | SHALLOW4 | 17 | 1 | 1 | 4.266 | 219735 | | | | | | | | | | | | | | | | | | | | | |
| # | Target | Filter | Target Brightness | Readout Pattern | Groups/Int | Integrations/Exp | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 V-AF-Lep | F335M | BRIGHT (ND Square) | SHALLOW4 | 17 | 1 | 1 | 4.266 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Confirmation Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>true</td> <td>SUB400X256ALWB</td> <td>NONE</td> </tr> </tbody> </table> | | | | | | | | | | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | A | MASKLWB | true | SUB400X256ALWB | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | true | SUB400X256ALWB | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Confirmation | <table border="1"> <thead> <tr> <th>#</th> <th>Conf. Readout Pattern</th> <th>Conf. Groups/Int</th> <th>Conf. Integrations/Exp</th> <th>Conf. Total Integrations</th> <th>Conf. Total Exposure Time</th> <th>Conf. Total Dithers</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RAPID</td> <td>4</td> <td>1</td> <td>1</td> <td>42.947</td> <td>1</td> </tr> </tbody> </table> | | | | | | | | | | # | Conf. Readout Pattern | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations | Conf. Total Exposure Time | Conf. Total Dithers | 1 | RAPID | 4 | 1 | 1 | 42.947 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Conf. Readout Pattern | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations | Conf. Total Exposure Time | Conf. Total Dithers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | RAPID | 4 | 1 | 1 | 42.947 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>12</td> <td>1</td> <td>12</td> <td>638.022</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>20</td> <td>1</td> <td>20</td> <td>1063.37</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>16</td> <td>1</td> <td>16</td> <td>850.696</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | | 2 | F210M | F430M | SHALLOW4 | 10 | 20 | 1 | 20 | 1063.37 | | 3 | F210M | F460M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | |
| | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | F210M | F410M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 20 | 1 | 20 | 1063.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 2 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|---|
| PSF References | AF Lep PSF Reference (Obs 3) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) AF Lep Roll 1 (Obs 1) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 62 to 93 Degrees (V3 61.583417 to 92.583417) Aperture PA Range 260 to 300 Degrees (V3 259.583417 to 299.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 1, 2, 3, Non-interruptible Aperture PA Offset 2 from 1 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 3 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | <p>Proposal 6905, Observation 3: AF Lep PSF Reference</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Coronagraphic Imaging</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|-----------------|------------------|------------------|--------------------|---------------------|------------------|--|--------|----------------|---|--------------------------|-----------------|------------------|------------------|---|---|------------------|---|-------|-------|--------------------|----------|----|---|----|---------|--------|---|-------|-------|----------|----|---|---|----|----------|--|---|-------|-------|----------|----|---|---|----|---------|--|
| Diagnostics | <p>(AF Lep PSF Reference (Obs 3)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (5) | AF-Lep-PSF | RA: 05 07 24.9632 (76.8540133d) Dec: -12 29 28.57 (-12.49127d) Equinox: J2000 | Proper Motion RA: 135.782 mas/yr Proper Motion Dec: -107.3060000408077 mas/yr Parallax: 0.0269847" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition | <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SAME</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>17</td> <td>1</td> <td>1</td> <td>4.266</td> <td>219735</td> </tr> </tbody> </table> | | | | | | | | | | # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | |
| # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Confirmation Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>false</td> <td>SUB400X256ALWB</td> <td>5-POINT-BAR</td> </tr> </tbody> </table> | | | | | | | | | | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>3</td> <td>5</td> <td>15</td> <td>797.527</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>5</td> <td>5</td> <td>25</td> <td>1329.212</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>4</td> <td>5</td> <td>20</td> <td>1063.37</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 3 | 5 | 15 | 797.527 | | 2 | F210M | F430M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | 3 | F210M | F460M | SHALLOW4 | 10 | 4 | 5 | 20 | 1063.37 | |
| # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | F210M | F410M | SHALLOW4 | 10 | 3 | 5 | 15 | 797.527 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | F210M | F430M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 4 | 5 | 20 | 1063.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSF References | <p>PSF Reference: true</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 3 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Special Requirements

Fiducial Point Override NRCA5_MASKLWB_NARROW

Group Observations 1, 2, 3, Non-interruptible

Proposal 6905 - Observation 4 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | Proposal 6905, Observation 4: HD 95086 Roll 1 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|--|--|----------------------------|--------------------------|---------------------------|---------------------------|---------------------|--|--|------------------|---|-------|--------|--------------------|----------|----|---|----|---------|--------|---|-------|-------|----------|----|----|---|----|---------|--|---|-------|-------|----------|----|----|---|----|---------|--|--|--|--|--|--|--|--|--|--|
| | (HD 95086 Roll 1 (Obs 4)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (HD 95086 Roll 1 (Obs 4)) Informational (Form): The Visit Planner and Spike may produce different schedulability results. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnosics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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>(2)</td> <td>HD-95086</td> <td>RA: 10 57 3.0216 (164.2625900d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000</td> <td>Proper Motion RA: -41.128 mas/yr Proper Motion Dec: 12.861 mas/yr Parallax: 0.011565899999999999" Epoch of Position: 2000</td> <td></td> </tr> </tbody> </table> | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | (2) | HD-95086 | RA: 10 57 3.0216 (164.2625900d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000 | Proper Motion RA: -41.128 mas/yr Proper Motion Dec: 12.861 mas/yr Parallax: 0.011565899999999999" Epoch of Position: 2000 | | <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><i>Category=Star</i> <i>Description=[A dwarfs, Exoplanet Systems]</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (2) | HD-95086 | RA: 10 57 3.0216 (164.2625900d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000 | Proper Motion RA: -41.128 mas/yr Proper Motion Dec: 12.861 mas/yr Parallax: 0.011565899999999999" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition | <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SAME</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>65</td> <td>1</td> <td>1</td> <td>16.305</td> <td>219735</td> </tr> </tbody> </table> | # | 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 | 65 | 1 | 1 | 16.305 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | 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 | 65 | 1 | 1 | 16.305 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>true</td> <td>SUB400X256ALWB</td> <td>NONE</td> </tr> </tbody> </table> | Module | Occulting Mask | Obtain Astrometric Images? | Subarray | Dither Pattern | A | MASKLWB | true | SUB400X256ALWB | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Module | Occulting Mask | Obtain Astrometric Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | true | SUB400X256ALWB | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Confirmation | <table border="1"> <thead> <tr> <th>#</th> <th>Conf. Readout Pattern</th> <th>Conf. Groups/Int</th> <th>Conf. Integrations/Exp</th> <th>Conf. Total Integrations</th> <th>Conf. Total Exposure Time</th> <th>Conf. Total Dithers</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RAPID</td> <td>6</td> <td>1</td> <td>1</td> <td>64.421</td> <td>1</td> </tr> </tbody> </table> | # | Conf. Readout Pattern | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations | Conf. Total Exposure Time | Conf. Total Dithers | 1 | RAPID | 6 | 1 | 1 | 64.421 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Conf. Readout Pattern | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations | Conf. Total Exposure Time | Conf. Total Dithers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | RAPID | 6 | 1 | 1 | 64.421 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>10</td> <td>1</td> <td>10</td> <td>531.685</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>20</td> <td>1</td> <td>20</td> <td>1063.37</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>16</td> <td>1</td> <td>16</td> <td>850.696</td> <td></td> </tr> </tbody> </table> | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 10 | 1 | 10 | 531.685 | | 2 | F210M | F430M | SHALLOW4 | 10 | 20 | 1 | 20 | 1063.37 | | 3 | F210M | F460M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | | | | | | | | | | |
| | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | F210M | F410M | SHALLOW4 | 10 | 10 | 1 | 10 | 531.685 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 20 | 1 | 20 | 1063.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 4 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|---|
| PSF References | HD 95086 PSF Reference (Obs 6) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) HD 95086 Roll 2 (Obs 5) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 95 to 165 Degrees (V3 94.583417 to 164.583417) Aperture PA Range 310 to 350 Degrees (V3 309.583417 to 349.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 4, 5, 6, Non-interruptible Aperture PA Offset 5 from 4 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 5 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| | | | | | | | | | | |
|--|--|-----------------------|--|------------------------|--|---------------------------|---------------------|--------------------|---------------------|------------------|
| Observation | Proposal 6905, Observation 5: HD 95086 Roll 2 Diagnostic Status: Warning Observing Template: NIRCcam Coronagraphic Imaging | | | | | | | | | |
| | (HD 95086 Roll 2 (Obs 5)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (HD 95086 Roll 2 (Obs 5)) Informational (Form): The Visit Planner and Spike may produce different schedulability results. | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | Targ. Coord. Corrections | | | Miscellaneous | | |
| | (2) | HD-95086 | RA: 10 57 3.0216 (164.2625900d) Dec: -68 40 2.45 (-68.66735d) Equinox: J2000 | | Proper Motion RA: -41.128 mas/yr Proper Motion Dec: 12.861 mas/yr Parallax: 0.011565899999999999" Epoch of Position: 2000 | | | | | |
| Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. 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=[A dwarfs, Exoplanet Systems] | | | | | | | | | | |
| 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 | 65 | 1 | 1 | 16.305 | 219735 |
| Template | Module | | Occulting 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 | 6 | 1 | 1 | 64.421 | 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 | F410M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | |
| | 3 | F210M | F460M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | |

Proposal 6905 - Observation 5 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|---|
| PSF References | HD 95086 PSF Reference (Obs 6) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) HD 95086 Roll 1 (Obs 4) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 95 to 165 Degrees (V3 94.583417 to 164.583417) Aperture PA Range 310 to 350 Degrees (V3 309.583417 to 349.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 4, 5, 6, Non-interruptible Aperture PA Offset 5 from 4 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 6 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | <p>Proposal 6905, Observation 6: HD 95086 PSF Reference</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Coronagraphic Imaging</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|--|---|-----------------|------------------|------------------|--------------------|---------------------|------------------|--|--------|----------------|---|--------------------------|-----------------|------------------|------------------|--|---|------------------|---|-------|-------|--------------------|----------|----|---|----|---------|--------|---|-------|-------|----------|----|---|---|----|----------|--|---|-------|-------|----------|----|---|---|----|---------|--|
| Diagnostics | <p>(HD 95086 PSF Reference (Obs 6)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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>(6)</td> <td>HD95086-PSF</td> <td>RA: 11 06 37.6379 (166.6568246d) Dec: -67 55 26.62 (-67.92406d) Equinox: J2000</td> <td>Proper Motion RA: -23.893 mas/yr Proper Motion Dec: 13.866999999999999 mas/yr Parallax: 0.0052332" 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><i>Category=Star</i> <i>Description=[A dwarfs]</i></p> | | | | | | | | | | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | (6) | HD95086-PSF | RA: 11 06 37.6379 (166.6568246d) Dec: -67 55 26.62 (-67.92406d) Equinox: J2000 | Proper Motion RA: -23.893 mas/yr Proper Motion Dec: 13.866999999999999 mas/yr Parallax: 0.0052332" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (6) | HD95086-PSF | RA: 11 06 37.6379 (166.6568246d) Dec: -67 55 26.62 (-67.92406d) Equinox: J2000 | Proper Motion RA: -23.893 mas/yr Proper Motion Dec: 13.866999999999999 mas/yr Parallax: 0.0052332" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition | <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SAME</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>65</td> <td>1</td> <td>1</td> <td>16.305</td> <td>219735</td> </tr> </tbody> </table> | | | | | | | | | | # | 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 | 65 | 1 | 1 | 16.305 | 219735 | | | | | | | | | | | | | | | | | | | | |
| # | 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 | 65 | 1 | 1 | 16.305 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Confirmation Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>false</td> <td>SUB400X256ALWB</td> <td>5-POINT-BAR</td> </tr> </tbody> </table> | | | | | | | | | | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>3</td> <td>5</td> <td>15</td> <td>797.527</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>5</td> <td>5</td> <td>25</td> <td>1329.212</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>4</td> <td>5</td> <td>20</td> <td>1063.37</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 3 | 5 | 15 | 797.527 | | 2 | F210M | F430M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | 3 | F210M | F460M | SHALLOW4 | 10 | 4 | 5 | 20 | 1063.37 | |
| # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | F210M | F410M | SHALLOW4 | 10 | 3 | 5 | 15 | 797.527 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | F210M | F430M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 4 | 5 | 20 | 1063.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSF References | <p>PSF Reference: true</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 6 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Special Requirements

Fiducial Point Override NRCA5_MASKLWB_NARROW

Group Observations 4, 5, 6, Non-interruptible

Proposal 6905 - Observation 7 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| | | | | | | | | | | |
|--|--|-----------------------|---|------------------------|---|---------------------------|---------------------|--------------------|---------------------|------------------|
| Observation | Proposal 6905, Observation 7: HIP 99770 Roll 1 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging | | | | | | | | | |
| | (HIP 99770 Roll 1 (Obs 7)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (HIP 99770 Roll 1 (Obs 7)) Informational (Form): The Visit Planner and Spike may produce different schedulability results. | | | | | | | | | |
| Diagnosics | | | | | | | | | | |
| | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | Targ. Coord. Corrections | | | Miscellaneous | | |
| | (3) | HIP-99770 | RA: 20 14 32.0324 (303.6334683d) Dec: +36 48 22.70 (36.80631d) Equinox: J2000 | | Proper Motion RA: 68.09 mas/yr Proper Motion Dec: 69.404 mas/yr Parallax: 0.0245456" Epoch of Position: 2000 | | | | | |
| Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. 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=[A dwarfs, Brown dwarfs, Exoplanet Systems] | | | | | | | | | | |
| 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 | 219735 |
| Template | Module | | Occulting 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 | 4 | 1 | 1 | 42.947 | 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 | F410M | SHALLOW4 | 10 | 4 | 1 | 4 | 212.674 | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | |
| | 3 | F210M | F460M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | |

Proposal 6905 - Observation 7 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|---|
| PSF References | HIP 99770 PSF Reference (Obs 9) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) HIP 99770 Roll 2 (Obs 8) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 80 to 150 Degrees (V3 79.583417 to 149.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 7, 8, 9, Non-interruptible Aperture PA Offset 7 from 8 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 8 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| | | | | | | | | | | |
|---|---|------------------------------|---|---|--|----------------------------------|----------------------------|---------------------------|----------------------------|-------------------------|
| Observation | <p>Proposal 6905, Observation 8: HIP 99770 Roll 2</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Coronagraphic Imaging</p> | | | | | | | | | |
| | <p>(HIP 99770 Roll 2 (Obs 8)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> <p>(HIP 99770 Roll 2 (Obs 8)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p> | | | | | | | | | |
| Diagnosics | | | | | | | | | | |
| | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | | Miscellaneous | | | |
| | (3) | HIP-99770 | RA: 20 14 32.0324 (303.6334683d) Dec: +36 48 22.70 (36.80631d) Equinox: J2000 | Proper Motion RA: 68.09 mas/yr Proper Motion Dec: 69.404 mas/yr Parallax: 0.0245456" Epoch of Position: 2000 | | | | | | |
| <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><i>Category=Star</i></p> <p><i>Description=[A dwarfs, Brown dwarfs, Exoplanet Systems]</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 | 17 | 1 | 1 | 4.266 | 219735 |
| Template | Module | | Occulting 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 | 4 | 1 | 1 | 42.947 | 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 | F410M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | |
| | 3 | F210M | F460M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | |

Proposal 6905 - Observation 8 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|---|
| PSF References | HIP 99770 PSF Reference (Obs 9) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) HIP 99770 Roll 1 (Obs 7) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 80 to 150 Degrees (V3 79.583417 to 149.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 7, 8, 9, Non-interruptible Aperture PA Offset 7 from 8 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 9 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | <p>Proposal 6905, Observation 9: HIP 99770 PSF Reference</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Coronagraphic Imaging</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|-----------------|------------------|------------------|--------------------|---------------------|------------------|--|--------|----------------|---|--------------------------|-----------------|------------------|------------------|---|---|------------------|---|-------|-------|--------------------|----------|----|---|----|---------|--------|---|-------|-------|----------|----|---|---|----|----------|--|---|-------|-------|----------|----|---|---|----|----------|--|
| Diagnostics | <p>(HIP 99770 PSF Reference (Obs 9)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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>(7)</td> <td>HIP99770-PSF</td> <td>RA: 20 18 28.6552 (304.6193967d) Dec: +36 59 59.30 (36.99981d) Equinox: J2000</td> <td>Proper Motion RA: 40.228 mas/yr Proper Motion Dec: 20.979 mas/yr Parallax: 0.016724799999999998" 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><i>Category=Star</i> <i>Description=[A dwarfs]</i></p> | | | | | | | | | | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | (7) | HIP99770-PSF | RA: 20 18 28.6552 (304.6193967d) Dec: +36 59 59.30 (36.99981d) Equinox: J2000 | Proper Motion RA: 40.228 mas/yr Proper Motion Dec: 20.979 mas/yr Parallax: 0.016724799999999998" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (7) | HIP99770-PSF | RA: 20 18 28.6552 (304.6193967d) Dec: +36 59 59.30 (36.99981d) Equinox: J2000 | Proper Motion RA: 40.228 mas/yr Proper Motion Dec: 20.979 mas/yr Parallax: 0.016724799999999998" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition | <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SAME</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>33</td> <td>1</td> <td>1</td> <td>8.279</td> <td>219735</td> </tr> </tbody> </table> | | | | | | | | | | # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | |
| # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Confirmation Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>false</td> <td>SUB400X256ALWB</td> <td>5-POINT-BAR</td> </tr> </tbody> </table> | | | | | | | | | | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>4</td> <td>5</td> <td>20</td> <td>1063.37</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>6</td> <td>5</td> <td>30</td> <td>1595.054</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>5</td> <td>5</td> <td>25</td> <td>1329.212</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 4 | 5 | 20 | 1063.37 | | 2 | F210M | F430M | SHALLOW4 | 10 | 6 | 5 | 30 | 1595.054 | | 3 | F210M | F460M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | |
| # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | F210M | F410M | SHALLOW4 | 10 | 4 | 5 | 20 | 1063.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | F210M | F430M | SHALLOW4 | 10 | 6 | 5 | 30 | 1595.054 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSF References | <p>PSF Reference: true</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 9 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Special Requirements

Fiducial Point Override NRCA5_MASKLWB_NARROW

Group Observations 7, 8, 9, Non-interruptible

Proposal 6905 - Observation 10 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| | | | | | | | | | | |
|--|---|------------------------------|---|-------------------------------|---|----------------------------------|----------------------------|---------------------------|----------------------------|-------------------------|
| Observation | Proposal 6905, Observation 10: HR 2562 Roll 1 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging | | | | | | | | | |
| | (HR 2562 Roll 1 (Obs 10)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (HR 2562 Roll 1 (Obs 10)) Informational (Form): The Visit Planner and Spike may produce different schedulability results. | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | Targ. Coord. Corrections | | | Miscellaneous | | |
| | (4) | HR2562 | RA: 06 50 1.0151 (102.5042296d) Dec: -60 14 56.92 (-60.24914d) Equinox: J2000 | | Proper Motion RA: 4.83 mas/yr Proper Motion Dec: 108.527 mas/yr Parallax: 0.0294738" Epoch of Position: 2000 | | | | | |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <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> <i>Category=Star</i> <i>Description=[Brown dwarfs, F 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 | 17 | 1 | 1 | 4.266 | 219735 |
| Template | Module | | Occulting 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 | 4 | 1 | 1 | 42.947 | 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 | F410M | SHALLOW4 | 10 | 4 | 1 | 4 | 212.674 | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | |
| | 3 | F210M | F460M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | |

Proposal 6905 - Observation 10 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|--|
| PSF References | HR 2562 PSF Reference (Obs 12) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) HR 2562 Roll 2 (Obs 11) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 73 to 163 Degrees (V3 72.583417 to 162.583417) Aperture PA Range 265 to 360 Degrees (V3 264.583417 to 359.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 10, 11, 12, Non-interruptible Aperture PA Offset 11 from 10 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 11 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | Proposal 6905, Observation 11: HR 2562 Roll 2 Diagnostic Status: Warning Observing Template: NIRCam Coronagraphic Imaging | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|--------------------------|--------------------------|---------------------------|---------------------|---------------------|---------------------|------------------|--------|-----------------------|---|--------------------------|--------------------------|---------------------------|---------------------|---|---|------------------|------|-------|--------------------|----------|----|---|---|-------|---------|--|---|-------|-------|----------|----|----|---|----|---------|--|---|-------|-------|----------|----|----|---|----|---------|--|
| | (HR 2562 Roll 2 (Obs 11)) Warning (Form): The selected fiducial point is not a standard option for the instrument. (Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (HR 2562 Roll 2 (Obs 11)) Informational (Form): The Visit Planner and Spike may produce different schedulability results. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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>(4)</td> <td>HR2562</td> <td>RA: 06 50 1.0151 (102.5042296d) Dec: -60 14 56.92 (-60.24914d) Equinox: J2000</td> <td>Proper Motion RA: 4.83 mas/yr Proper Motion Dec: 108.527 mas/yr Parallax: 0.0294738" 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><i>Category=Star</i> <i>Description=[Brown dwarfs, F stars]</i></p> | | | | | | | | | | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | (4) | HR2562 | RA: 06 50 1.0151 (102.5042296d) Dec: -60 14 56.92 (-60.24914d) Equinox: J2000 | Proper Motion RA: 4.83 mas/yr Proper Motion Dec: 108.527 mas/yr Parallax: 0.0294738" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) | HR2562 | RA: 06 50 1.0151 (102.5042296d) Dec: -60 14 56.92 (-60.24914d) Equinox: J2000 | Proper Motion RA: 4.83 mas/yr Proper Motion Dec: 108.527 mas/yr Parallax: 0.0294738" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SAME</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>17</td> <td>1</td> <td>1</td> <td>4.266</td> <td>219735</td> </tr> </tbody> </table> | | | | | | | | | | # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | | |
| # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Confirmation Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>true</td> <td>SUB400X256ALWB</td> <td>NONE</td> </tr> </tbody> </table> | | | | | | | | | | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | A | MASKLWB | true | SUB400X256ALWB | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | true | SUB400X256ALWB | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Confirmation | <table border="1"> <thead> <tr> <th>#</th> <th>Conf. Readout Pattern</th> <th>Conf. Groups/Int</th> <th>Conf. Integrations/Exp</th> <th>Conf. Total Integrations</th> <th>Conf. Total Exposure Time</th> <th>Conf. Total Dithers</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RAPID</td> <td>4</td> <td>1</td> <td>1</td> <td>42.947</td> <td>1</td> </tr> </tbody> </table> | | | | | | | | | | # | Conf. Readout Pattern | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations | Conf. Total Exposure Time | Conf. Total Dithers | 1 | RAPID | 4 | 1 | 1 | 42.947 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Conf. Readout Pattern | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations | Conf. Total Exposure Time | Conf. Total Dithers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | RAPID | 4 | 1 | 1 | 42.947 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>8</td> <td>1</td> <td>8</td> <td>425.348</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>16</td> <td>1</td> <td>16</td> <td>850.696</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>12</td> <td>1</td> <td>12</td> <td>638.022</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | | 2 | F210M | F430M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | | 3 | F210M | F460M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | |
| | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | F210M | F410M | SHALLOW4 | 10 | 8 | 1 | 8 | 425.348 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | F210M | F430M | SHALLOW4 | 10 | 16 | 1 | 16 | 850.696 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 12 | 1 | 12 | 638.022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 11 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

| | |
|-----------------------------|--|
| PSF References | HR 2562 PSF Reference (Obs 12) (PSF Reference; Filters [F210M/F410M, F210M/F430M, F210M/F460M]) HR 2562 Roll 1 (Obs 10) (Filters [F210M/F410M, F210M/F430M, F210M/F460M]) Additional Justification: false |
| Special Requirements | Aperture PA Range 73 to 163 Degrees (V3 72.583417 to 162.583417) Aperture PA Range 265 to 360 Degrees (V3 264.583417 to 359.583417) No Parallel Attachments Fiducial Point Override NRCA5_MASKLWB_NARROW Group Observations 10, 11, 12, Non-interruptible Aperture PA Offset 11 from 10 by 7 to 14 Degrees (Same offsets in V3) |

Proposal 6905 - Observation 12 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Tue Jul 01 21:00:11 GMT 2025

| Observation | <p>Proposal 6905, Observation 12: HR 2562 PSF Reference</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Coronagraphic Imaging</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|-----------------|------------------|------------------|--------------------|---------------------|------------------|--|--------|----------------|---|--------------------------|-----------------|------------------|------------------|---|---|------------------|---|-------|-------|--------------------|----------|----|---|----|----------|--------|---|-------|-------|----------|----|---|---|----|----------|--|---|-------|-------|----------|----|---|---|----|----------|--|
| Diagnostics | <p>(HR 2562 PSF Reference (Obs 12)) Warning (Form): The selected fiducial point is not a standard option for the instrument.</p> <p>(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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>(8)</td> <td>HR2562-PSF</td> <td>RA: 06 24 13.8424 (96.0576767d) Dec: -60 16 52.76 (-60.28132d) Equinox: J2000</td> <td>Proper Motion RA: -31.722 mas/yr Proper Motion Dec: 30.938 mas/yr Parallax: 0.0107891" 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><i>Category=Star</i> <i>Description=[A dwarfs]</i></p> | | | | | | | | | | # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | (8) | HR2562-PSF | RA: 06 24 13.8424 (96.0576767d) Dec: -60 16 52.76 (-60.28132d) Equinox: J2000 | Proper Motion RA: -31.722 mas/yr Proper Motion Dec: 30.938 mas/yr Parallax: 0.0107891" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (8) | HR2562-PSF | RA: 06 24 13.8424 (96.0576767d) Dec: -60 16 52.76 (-60.28132d) Equinox: J2000 | Proper Motion RA: -31.722 mas/yr Proper Motion Dec: 30.938 mas/yr Parallax: 0.0107891" Epoch of Position: 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition | <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</th> <th>Target Brightness</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SAME</td> <td>F335M</td> <td>BRIGHT (ND Square)</td> <td>SHALLOW4</td> <td>33</td> <td>1</td> <td>1</td> <td>8.279</td> <td>219735</td> </tr> </tbody> </table> | | | | | | | | | | # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | |
| # | 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 | 219735 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Template | <table border="1"> <thead> <tr> <th>Module</th> <th>Occulting Mask</th> <th>Obtain Astrometric Confirmation Images?</th> <th>Subarray</th> <th>Dither Pattern</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>MASKLWB</td> <td>false</td> <td>SUB400X256ALWB</td> <td>5-POINT-BAR</td> </tr> </tbody> </table> | | | | | | | | | | Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Module | Occulting Mask | Obtain Astrometric Confirmation Images? | Subarray | Dither Pattern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | MASKLWB | false | SUB400X256ALWB | 5-POINT-BAR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spectral Elements | <table border="1"> <thead> <tr> <th>#</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</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>F210M</td> <td>F410M</td> <td>SHALLOW4</td> <td>10</td> <td>5</td> <td>5</td> <td>25</td> <td>1329.212</td> <td></td> </tr> <tr> <td>2</td> <td>F210M</td> <td>F430M</td> <td>SHALLOW4</td> <td>10</td> <td>6</td> <td>5</td> <td>30</td> <td>1595.054</td> <td></td> </tr> <tr> <td>3</td> <td>F210M</td> <td>F460M</td> <td>SHALLOW4</td> <td>10</td> <td>5</td> <td>5</td> <td>25</td> <td>1329.212</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 | F210M | F410M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | 2 | F210M | F430M | SHALLOW4 | 10 | 6 | 5 | 30 | 1595.054 | | 3 | F210M | F460M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | |
| # | Short Filter | Long Filter | Readout Pattern | Groups/Int | Integrations/Exp | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | F210M | F410M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | F210M | F430M | SHALLOW4 | 10 | 6 | 5 | 30 | 1595.054 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | F210M | F460M | SHALLOW4 | 10 | 5 | 5 | 25 | 1329.212 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSF References | <p>PSF Reference: true</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 6905 - Observation 12 - The Bleeding Wedge: Constraining Metal Enrichment of Close-in Companions to Trace Formation

Special Requirements

Fiducial Point Override NRCA5_MASKLWB_NARROW

Group Observations 10, 11, 12, Non-interruptible