



## 4727 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Cycle: 3, Proposal Category: GO

### INVESTIGATORS

| <i>Name</i>                             | <i>Institution</i>                      |
|---|---|
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| Dr. Benjamin Tofflemire (CoI) (CoPI)    | University of Texas at Austin           |
| Christian Rab (CoI) (ESA Member) (CoPI) | Ludwig Maximilian Universitat of Munich |
| Dr. Sebastiaan Krijt (CoI) (ESA Member) | University of Exeter                    |
| Dr. Karin Oberg (CoI)                   | Harvard University                      |
| Sarah Smith (CoI)                       | Texas State University                  |
| Mr. Adrien Houge (CoI) (ESA Member)     | University of Exeter                    |
| Dr. James Muzerolle Page (CoI)          | Space Telescope Science Institute       |
| Dr. Peter Abraham (CoI) (ESA Member)    | Konkoly Observatory                     |
| Dr. Joan Najita (CoI)                   | NOIRLab - (AZ)                          |

### OBSERVATIONS

| <i>Folder</i>      | <i>Observation</i> | <i>Label</i> | <i>Observing Template</i>           | <i>Science Target</i> |
|--------------------|--------------------|--------------|-------------------------------------|-----------------------|
| Observation Folder |                    |              |                                     |                       |
|                    | 1                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 2                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 3                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 4                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 5                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 6                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 7                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 8                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |
|                    | 9                  | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |

| <i>Folder</i> | <i>Observation</i> | <i>Label</i> | <i>Observing Template</i>           | <i>Science Target</i> |
|---------------|--------------------|--------------|-------------------------------------|-----------------------|
|               | 12                 | DQ Tau       | MIRI Medium Resolution Spectroscopy | (1) V-DQ-Tau          |

## **ABSTRACT**

The chemical composition of protoplanetary disks determines the core and atmospheric composition of forming planets. While disk chemical models, for simplicity, typically assume steady-state conditions, the irradiation of the inner planet-forming zone in disks can vary dramatically during the unstable accretion phases that are typical of T Tauri stars at ~1-3 Myr. Stellar accretion variability leads to UV flares that change the heating, excitation, and photo-dissociation conditions in the inner disk. As inner disk chemistry studies are ramping up with JWST-MIRI observations from cycle 1, molecular spectra show broad trends and large scatters that expand those previously seen with Spitzer-IRS and still challenge current static models. This program will take the rare opportunity of a real-time experiment to clarify the role of accretion flares in altering the chemistry of planet-forming regions. A system with periodic flares of up to 10 times the accretion luminosity will be monitored with MIRI-MRS to measure cold water "bursts" from ice sublimation when the snowline recedes during the flare, and UV-driven dissociation and re-formation of C, N, O, H chemistry. The results from this experiment will provide groundbreaking insights on the ice mass reservoir at the snowline and on the formation and survival of water and organic molecules in planet-forming regions. This program will inaugurate studies of time-dependent inner disk chemistry, support fundamental developments in disk and planet formation models, and help clarify the interpretation of broad chemical trends and scatters observed in large disk samples observed with JWST.

## **OBSERVING DESCRIPTION**

This is a MIRI MRS program to observe molecular spectra at 4.9-28 micron tracing the chemistry of the inner warm regions in the Class II protoplanetary disk of DQ Tau. The system will be monitored over 9 epochs during the periodic accretion flares occurring in the system at known dates (3 epochs for 3 flares). The requested sensitivity has been optimized to detect changes in molecular chemistry during and after the accretion flares, in terms of temperature, gas mass, and excitation of multiple molecules, to monitor their processes in inner disks (dissociation, re-formation, sublimation, condensation). Integration times are set to reach a S/N ~400 at ~12-18 um, as demonstrated feasible with MIRI disk spectra observed in cycle 1. The dates of DQ Tau flares in the observable window in 2024 are: Sep 11th, 26th, Oct 12th. We request a group of 3 linked observations around each of these flares.

Proposal 4727 - Targets - Snowline pulsations and UV photo-chemistry in planet-forming regions

| Fixed Targets   | #   | Name     | Target Coordinates  | Targ. Coord. Corrections  | Miscellaneous |
|---|-----|----------|---|---|---------------|
|   | (1) | V-DQ-Tau | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |               |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |     |          |   |   |               |

Proposal 4727 - Observation 1 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |   |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|---|---|-------------------------|---|------------------------|------------------------|---|---------------------------|----------------------------|--------------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 1: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   | (Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.   |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Fixed Targets</b>  | <b>#</b>  | <b>Name</b>             | <b>Target Coordinates</b>   |                        |                        | <b>Targ. Coord. Corrections</b>   |                           |                            | <b>Miscellaneous</b>           |                      |                           |                            |                         |
|   | (1)   | V-DQ-Tau                | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                        |                        | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                           |                            |                                |                      |                           |                            |                         |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |   |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Acquisition</b>  | <b>#</b>  | <b>Target</b>           | <b>Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>      | <b>Integrations/Exp</b>   | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b>        |                      |                           |                            |                         |
|   | 1   | 1 V-DQ-Tau              | FND   | FAST                   | 4                      | 1   | 1                         | 11.1                       | 55778.63                       |                      |                           |                            |                         |
| <b>Template</b>   | <b>Primary Channel</b>  |                         | <b>Simultaneous Imaging</b>   |                        |                        | <b>Imager Subarray</b>  |                           |                            | <b>Grating Wheel Direction</b> |                      |                           |                            |                         |
|   | All MRS   |                         | YES   |                        |                        | FULL  |                           |                            | Allow Auto Reorder             |                      |                           |                            |                         |
| <b>Dithers</b>  | <b>#</b>  | <b>Dither Type</b>      |   |                        |                        | <b>Optimized For</b>  |                           |                            | <b>Direction</b>               |                      |                           |                            |                         |
|   | 1   | 4-Point                 |   |                        |                        | POINT SOURCE  |                           |                            | NEGATIVE                       |                      |                           |                            |                         |
| <b>Spectral Elements</b>  | <b>#</b>  | <b>Wavelength Range</b> | <b>Detector</b>   | <b>Filter</b>          | <b>Readout Pattern</b> | <b>Groups/Int</b>   | <b>Integrations/Exp</b>   | <b>Exposures/Dith</b>      | <b>Dither</b>                  | <b>Total Dithers</b> | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b> |
|   | 1   |                         | IMAGER  | F770W                  | FASTR1                 | 10  | 5                         | 1                          | Dither 1                       | 4                    | 20                        | 599.409                    |                         |
|   | 1   | SHORT(A)                | MRSLONG   |                        | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 1   | SHORT(A)                | MRSSHORT  |                        | FASTR1                 | 17  | 6                         | 1                          | Dither 1                       | 4                    | 24                        | 1187.717                   |                         |
|   | 2   |                         | IMAGER  | F770W                  | FASTR1                 | 10  | 5                         | 1                          | Dither 1                       | 4                    | 20                        | 599.409                    |                         |
|   | 2   | MEDIUM(B)               | MRSLONG   |                        | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 2   | MEDIUM(B)               | MRSSHORT  |                        | FASTR1                 | 17  | 6                         | 1                          | Dither 1                       | 4                    | 24                        | 1187.717                   |                         |
|   | 3   |                         | IMAGER  | F770W                  | FASTR1                 | 10  | 5                         | 1                          | Dither 1                       | 4                    | 20                        | 599.409                    |                         |
|   | 3   | LONG(C)                 | MRSLONG   |                        | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 3   | LONG(C)                 | MRSSHORT  |                        | FASTR1                 | 17  | 6                         | 1                          | Dither 1                       | 4                    | 24                        | 1187.717                   |                         |

## Proposal 4727 - Observation 1 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 10-SEP-2024:02:52:46 and 12-SEP-2024:02:52:46

Group Observations 1, 2, 3 within 16 Days

Proposal 4727 - Observation 2 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |   |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|---|---|-------------------------|---|------------------------|------------------------|---|---------------------------|----------------------------|--------------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 2: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   | (Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.   |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Fixed Targets</b>  | <b>#</b>  | <b>Name</b>             | <b>Target Coordinates</b>   |                        |                        | <b>Targ. Coord. Corrections</b>   |                           |                            | <b>Miscellaneous</b>           |                      |                           |                            |                         |
|   | (1)   | V-DQ-Tau                | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                        |                        | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                           |                            |                                |                      |                           |                            |                         |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |   |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Acquisition</b>  | <b>#</b>  | <b>Target</b>           | <b>Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>      | <b>Integrations/Exp</b>   | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b>        |                      |                           |                            |                         |
|   | 1   | 1 V-DQ-Tau              | FND   | FAST                   | 4                      | 1   | 1                         | 11.1                       | 55778.63                       |                      |                           |                            |                         |
| <b>Template</b>   | <b>Primary Channel</b>  |                         | <b>Simultaneous Imaging</b>   |                        |                        | <b>Imager Subarray</b>  |                           |                            | <b>Grating Wheel Direction</b> |                      |                           |                            |                         |
|   | All MRS   |                         | YES   |                        |                        | FULL  |                           |                            | Allow Auto Reorder             |                      |                           |                            |                         |
| <b>Dithers</b>  | <b>#</b>  | <b>Dither Type</b>      |   |                        | <b>Optimized For</b>   |   |                           | <b>Direction</b>           |                                |                      |                           |                            |                         |
|   | 1   | 4-Point                 |   |                        | POINT SOURCE           |   |                           | NEGATIVE                   |                                |                      |                           |                            |                         |
| <b>Spectral Elements</b>  | <b>#</b>  | <b>Wavelength Range</b> | <b>Detector</b>   | <b>Filter</b>          | <b>Readout Pattern</b> | <b>Groups/Int</b>   | <b>Integrations/Exp</b>   | <b>Exposures/Dith</b>      | <b>Dither</b>                  | <b>Total Dithers</b> | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b> |
|   | 1   |                         | IMAGER  | F770W                  | FASTR1                 | 10  | 5                         | 1                          | Dither 1                       | 4                    | 20                        | 599.409                    |                         |
|   | 1   | SHORT(A)                | MRSLONG   |                        | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 1   | SHORT(A)                | MRSSHORT  |                        | FASTR1                 | 17  | 6                         | 1                          | Dither 1                       | 4                    | 24                        | 1187.717                   |                         |
|   | 2   |                         | IMAGER  | F770W                  | FASTR1                 | 10  | 5                         | 1                          | Dither 1                       | 4                    | 20                        | 599.409                    |                         |
|   | 2   | MEDIUM(B)               | MRSLONG   |                        | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 2   | MEDIUM(B)               | MRSSHORT  |                        | FASTR1                 | 17  | 6                         | 1                          | Dither 1                       | 4                    | 24                        | 1187.717                   |                         |
|   | 3   |                         | IMAGER  | F770W                  | FASTR1                 | 10  | 5                         | 1                          | Dither 1                       | 4                    | 20                        | 599.409                    |                         |
|   | 3   | LONG(C)                 | MRSLONG   |                        | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 3   | LONG(C)                 | MRSSHORT  |                        | FASTR1                 | 17  | 6                         | 1                          | Dither 1                       | 4                    | 24                        | 1187.717                   |                         |

Proposal 4727 - Observation 2 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 04-SEP-2024:02:52:46 and 08-SEP-2024:02:52:46

Group Observations 1, 2, 3 within 16 Days

Proposal 4727 - Observation 3 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
|---|---|------------------|---|-----------------|-----------------|---|--------------------|---------------------|-------------------------|---------------|--------------------|---------------------|------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 3: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
|   | (Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
| <b>Fixed Targets</b>  | #   | Name             | Target Coordinates  |                 |                 | Targ. Coord. Corrections  |                    |                     | Miscellaneous           |               |                    |                     |                  |
|   | (1)   | V-DQ-Tau         | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                 |                 | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                    |                     |                         |               |                    |                     |                  |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
| <b>Acquisition</b>  | #   | Target           | Filter  | Readout Pattern | Groups/Int      | Integrations/Exp  | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID        |               |                    |                     |                  |
|   | 1   | 1 V-DQ-Tau       | FND   | FAST            | 4               | 1   | 1                  | 11.1                | 55778.63                |               |                    |                     |                  |
| <b>Template</b>   | Primary Channel   |                  | Simultaneous Imaging  |                 |                 | Imager Subarray   |                    |                     | Grating Wheel Direction |               |                    |                     |                  |
|   | All MRS   |                  | YES   |                 |                 | FULL  |                    |                     | Allow Auto Reorder      |               |                    |                     |                  |
| <b>Dithers</b>  | #   | Dither Type      |   |                 | Optimized For   |   |                    | Direction           |                         |               |                    |                     |                  |
|   | 1   | 4-Point          |   |                 | POINT SOURCE    |   |                    | NEGATIVE            |                         |               |                    |                     |                  |
| <b>Spectral Elements</b>  | #   | Wavelength Range | Detector  | Filter          | Readout Pattern | Groups/Int  | Integrations/Exp   | Exposures/Dith      | Dither                  | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
|   | 1   |                  | IMAGER  | F770W           | FASTR1          | 10  | 5                  | 1                   | Dither 1                | 4             | 20                 | 599.409             |                  |
|   | 1   | SHORT(A)         | MRSLONG   |                 | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|   | 1   | SHORT(A)         | MRSSHORT  |                 | FASTR1          | 17  | 6                  | 1                   | Dither 1                | 4             | 24                 | 1187.717            |                  |
|   | 2   |                  | IMAGER  | F770W           | FASTR1          | 10  | 5                  | 1                   | Dither 1                | 4             | 20                 | 599.409             |                  |
|   | 2   | MEDIUM(B)        | MRSLONG   |                 | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|   | 2   | MEDIUM(B)        | MRSSHORT  |                 | FASTR1          | 17  | 6                  | 1                   | Dither 1                | 4             | 24                 | 1187.717            |                  |
|   | 3   |                  | IMAGER  | F770W           | FASTR1          | 10  | 5                  | 1                   | Dither 1                | 4             | 20                 | 599.409             |                  |
|   | 3   | LONG(C)          | MRSLONG   |                 | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|   | 3   | LONG(C)          | MRSSHORT  |                 | FASTR1          | 17  | 6                  | 1                   | Dither 1                | 4             | 24                 | 1187.717            |                  |

Proposal 4727 - Observation 3 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 13-SEP-2024:02:52:46 and 17-SEP-2024:02:52:46

Group Observations 1, 2, 3 within 16 Days

Proposal 4727 - Observation 4 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
|---|---|------------------|---|-----------------|-----------------|---|--------------------|---------------------|-------------------------|---------------|--------------------|---------------------|------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 4: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
|   | (Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
| <b>Fixed Targets</b>  | #   | Name             | Target Coordinates  |                 |                 | Targ. Coord. Corrections  |                    |                     | Miscellaneous           |               |                    |                     |                  |
|   | (1)   | V-DQ-Tau         | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                 |                 | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                    |                     |                         |               |                    |                     |                  |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
| <b>Acquisition</b>  | #   | Target           | Filter  | Readout Pattern | Groups/Int      | Integrations/Exp  | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID        |               |                    |                     |                  |
|   | 1   | 1 V-DQ-Tau       | FND   | FAST            | 4               | 1   | 1                  | 11.1                | 55778.63                |               |                    |                     |                  |
| <b>Template</b>   | Primary Channel   |                  | Simultaneous Imaging  |                 |                 | Imager Subarray   |                    |                     | Grating Wheel Direction |               |                    |                     |                  |
|   | All MRS   |                  | YES   |                 |                 | FULL  |                    |                     | Allow Auto Reorder      |               |                    |                     |                  |
| <b>Dithers</b>  | #   | Dither Type      |   |                 | Optimized For   |   |                    | Direction           |                         |               |                    |                     |                  |
|   | 1   | 4-Point          |   |                 | POINT SOURCE    |   |                    | NEGATIVE            |                         |               |                    |                     |                  |
| <b>Spectral Elements</b>  | #   | Wavelength Range | Detector  | Filter          | Readout Pattern | Groups/Int  | Integrations/Exp   | Exposures/Dith      | Dither                  | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
|   | 1   |                  | IMAGER  | F770W           | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|   | 1   | LONG(C)          | MRSLONG   |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|   | 1   | LONG(C)          | MRSSHORT  |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|   | 2   |                  | IMAGER  | F770W           | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|   | 2   | MEDIUM(B)        | MRSLONG   |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|   | 2   | MEDIUM(B)        | MRSSHORT  |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|   | 3   |                  | IMAGER  | F770W           | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|   | 3   | SHORT(A)         | MRSLONG   |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|   | 3   | SHORT(A)         | MRSSHORT  |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |

Proposal 4727 - Observation 4 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 25-SEP-2024:22:07:02 and 27-SEP-2024:22:07:02

Group Observations 4, 5, 6 within 16 Days

Proposal 4727 - Observation 5 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|---|--|-------------------------|---|------------------------|------------------------|---|---------------------------|----------------------------|--------------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 5: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   | (Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 5:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements. |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Diagnosics</b>   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Fixed Targets</b>  | <b>#</b>   | <b>Name</b>             | <b>Target Coordinates</b>   |                        |                        | <b>Targ. Coord. Corrections</b>   |                           |                            | <b>Miscellaneous</b>           |                      |                           |                            |                         |
|   | (1)  | V-DQ-Tau                | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                        |                        | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                           |                            |                                |                      |                           |                            |                         |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Acquisition</b>  | <b>#</b>   | <b>Target</b>           | <b>Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>      | <b>Integrations/Exp</b>   | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b>        |                      |                           |                            |                         |
|   | 1  | 1 V-DQ-Tau              | FND   | FAST                   | 4                      | 1   | 1                         | 11.1                       | 55778.63                       |                      |                           |                            |                         |
| <b>Template</b>   | <b>Primary Channel</b>   |                         | <b>Simultaneous Imaging</b>   |                        |                        | <b>Imager Subarray</b>  |                           |                            | <b>Grating Wheel Direction</b> |                      |                           |                            |                         |
|   | All MRS  |                         | YES   |                        |                        | FULL  |                           |                            | Allow Auto Reorder             |                      |                           |                            |                         |
| <b>Dithers</b>  | <b>#</b>   | <b>Dither Type</b>      |   |                        |                        | <b>Optimized For</b>  |                           |                            | <b>Direction</b>               |                      |                           |                            |                         |
|   | 1  | 4-Point                 |   |                        |                        | POINT SOURCE  |                           |                            | NEGATIVE                       |                      |                           |                            |                         |
| <b>Spectral Elements</b>  | <b>#</b>   | <b>Wavelength Range</b> | <b>Detector</b>   | <b>Filter</b>          | <b>Readout Pattern</b> | <b>Groups/Int</b>   | <b>Integrations/Exp</b>   | <b>Exposures/Dith</b>      | <b>Dither</b>                  | <b>Total Dithers</b> | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b> |
|   | 1  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 1  | LONG(C)                 | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 1  | LONG(C)                 | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 3  | SHORT(A)                | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  | SHORT(A)                | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |

## Proposal 4727 - Observation 5 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 29-SEP-2024:22:07:02 and 01-OCT-2024:22:07:02

Group Observations 4, 5, 6 within 16 Days

Proposal 4727 - Observation 6 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

| <b>Observation</b>       | <b>Proposal 4727, Observation 6: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|--------------------------|---|---|---|--------------------------|-----------------|------------------|--------------------|---------------------|------------------|---------------|--------------------|---------------------|------------------|----------------------|--------------------|--------------------------|-----------------|------------------|--------------------|---|---|---------------|--------------------|---------------------|------------------|---|---|--------|-------|----------|----|---|---|----------|---|----|----------|--|---|---------|---------|--|--------|----|---|---|----------|---|----|----------|--|---|---------|----------|--|--------|----|---|---|----------|---|----|----------|--|---|--|--------|-------|--------|----|---|---|----------|---|----|----------|--|---|-----------|---------|--|--------|----|---|---|----------|---|----|----------|--|---|-----------|----------|--|--------|----|---|---|----------|---|----|----------|--|---|--|--------|-------|--------|----|---|---|----------|---|----|----------|--|---|----------|---------|--|--------|----|---|---|----------|---|----|----------|--|---|----------|----------|--|--------|----|---|---|----------|---|----|----------|--|
|                          | (Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 6:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements.  |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| <b>Diagnosics</b>        |   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          |   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| <b>Fixed Targets</b>     | <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-DQ-Tau</td> <td>RA: 04 46 53.0575 (71.7210729d)<br/>Dec: +17 00 0.14 (17.00004d)<br/>Equinox: J2000</td> <td>Proper Motion RA: 4.906 mas/yr<br/>Proper Motion Dec: -13.29599997461628 mas/yr<br/>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><br/>                 Category=Star<br/>                 Description=[Pre-main sequence stars, Protoplanetary disks]<br/>                 Extended=NO</p>   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     | #                | Name                 | Target Coordinates | Targ. Coord. Corrections | Miscellaneous   | (1)              | V-DQ-Tau           | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | #   | Name  | Target Coordinates  | Targ. Coord. Corrections | Miscellaneous   |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
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|                          |   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| <b>Acquisition</b>       | <table border="1"> <thead> <tr> <th>#</th> <th>Target</th> <th>Filter</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-DQ-Tau</td> <td>FND</td> <td>FAST</td> <td>4</td> <td>1</td> <td>1</td> <td>11.1</td> <td>55778.63</td> </tr> </tbody> </table>   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     | #                | Target               | Filter             | Readout Pattern          | Groups/Int      | Integrations/Exp | Total Integrations | Total Exposure Time   | ETC Wkbk.Calc ID  | 1             | 1 V-DQ-Tau         | FND                 | FAST             | 4 | 1 | 1      | 11.1  | 55778.63 |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | #   | Target  | Filter  | Readout Pattern          | Groups/Int      | Integrations/Exp | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| 1                        | 1 V-DQ-Tau  | FND   | FAST  | 4                        | 1               | 1                | 11.1               | 55778.63            |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          |   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
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|                          | Primary Channel   | Simultaneous Imaging  | Imager Subarray   | Grating Wheel Direction  |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| All MRS                  | YES   | FULL  | Allow Auto Reorder  |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          |   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| <b>Dithers</b>           | <table border="1"> <thead> <tr> <th>#</th> <th>Dither Type</th> <th>Optimized For</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4-Point</td> <td>POINT SOURCE</td> <td>NEGATIVE</td> </tr> </tbody> </table>   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     | #                | Dither Type          | Optimized For      | Direction                | 1               | 4-Point          | POINT SOURCE       | NEGATIVE  |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | #   | Dither Type   | Optimized For   | Direction                |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| 1                        | 4-Point   | POINT SOURCE  | NEGATIVE  |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          |   |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| <b>Spectral Elements</b> | <table border="1"> <thead> <tr> <th>#</th> <th>Wavelength Range</th> <th>Detector</th> <th>Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Exposures/Dith</th> <th>Dither</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></td> <td>IMAGER</td> <td>F770W</td> <td>FASTR1</td> <td>26</td> <td>4</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>16</td> <td>1187.717</td> <td></td> </tr> <tr> <td>1</td> <td>LONG(C)</td> <td>MRSLONG</td> <td></td> <td>FASTR1</td> <td>35</td> <td>3</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>12</td> <td>1187.717</td> <td></td> </tr> <tr> <td>1</td> <td>LONG(C)</td> <td>MRSSHORT</td> <td></td> <td>FASTR1</td> <td>35</td> <td>3</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>12</td> <td>1187.717</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>IMAGER</td> <td>F770W</td> <td>FASTR1</td> <td>26</td> <td>4</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>16</td> <td>1187.717</td> <td></td> </tr> <tr> <td>2</td> <td>MEDIUM(B)</td> <td>MRSLONG</td> <td></td> <td>FASTR1</td> <td>35</td> <td>3</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>12</td> <td>1187.717</td> <td></td> </tr> <tr> <td>2</td> <td>MEDIUM(B)</td> <td>MRSSHORT</td> <td></td> <td>FASTR1</td> <td>35</td> <td>3</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>12</td> <td>1187.717</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>IMAGER</td> <td>F770W</td> <td>FASTR1</td> <td>26</td> <td>4</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>16</td> <td>1187.717</td> <td></td> </tr> <tr> <td>3</td> <td>SHORT(A)</td> <td>MRSLONG</td> <td></td> <td>FASTR1</td> <td>35</td> <td>3</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>12</td> <td>1187.717</td> <td></td> </tr> <tr> <td>3</td> <td>SHORT(A)</td> <td>MRSSHORT</td> <td></td> <td>FASTR1</td> <td>35</td> <td>3</td> <td>1</td> <td>Dither 1</td> <td>4</td> <td>12</td> <td>1187.717</td> <td></td> </tr> </tbody> </table> |   |   |                          |                 |                  |                    |                     |                  |               |                    |                     | #                | Wavelength Range     | Detector           | Filter                   | Readout Pattern | Groups/Int       | Integrations/Exp   | Exposures/Dith  | Dither  | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID | 1 |   | IMAGER | F770W | FASTR1   | 26 | 4 | 1 | Dither 1 | 4 | 16 | 1187.717 |  | 1 | LONG(C) | MRSLONG |  | FASTR1 | 35 | 3 | 1 | Dither 1 | 4 | 12 | 1187.717 |  | 1 | LONG(C) | MRSSHORT |  | FASTR1 | 35 | 3 | 1 | Dither 1 | 4 | 12 | 1187.717 |  | 2 |  | IMAGER | F770W | FASTR1 | 26 | 4 | 1 | Dither 1 | 4 | 16 | 1187.717 |  | 2 | MEDIUM(B) | MRSLONG |  | FASTR1 | 35 | 3 | 1 | Dither 1 | 4 | 12 | 1187.717 |  | 2 | MEDIUM(B) | MRSSHORT |  | FASTR1 | 35 | 3 | 1 | Dither 1 | 4 | 12 | 1187.717 |  | 3 |  | IMAGER | F770W | FASTR1 | 26 | 4 | 1 | Dither 1 | 4 | 16 | 1187.717 |  | 3 | SHORT(A) | MRSLONG |  | FASTR1 | 35 | 3 | 1 | Dither 1 | 4 | 12 | 1187.717 |  | 3 | SHORT(A) | MRSSHORT |  | FASTR1 | 35 | 3 | 1 | Dither 1 | 4 | 12 | 1187.717 |  |
|                          | #   | Wavelength Range  | Detector  | Filter                   | Readout Pattern | Groups/Int       | Integrations/Exp   | Exposures/Dith      | Dither           | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 1   |   | IMAGER  | F770W                    | FASTR1          | 26               | 4                  | 1                   | Dither 1         | 4             | 16                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 1   | LONG(C)   | MRSLONG   |                          | FASTR1          | 35               | 3                  | 1                   | Dither 1         | 4             | 12                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 1   | LONG(C)   | MRSSHORT  |                          | FASTR1          | 35               | 3                  | 1                   | Dither 1         | 4             | 12                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 2   |   | IMAGER  | F770W                    | FASTR1          | 26               | 4                  | 1                   | Dither 1         | 4             | 16                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 2   | MEDIUM(B)   | MRSLONG   |                          | FASTR1          | 35               | 3                  | 1                   | Dither 1         | 4             | 12                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 2   | MEDIUM(B)   | MRSSHORT  |                          | FASTR1          | 35               | 3                  | 1                   | Dither 1         | 4             | 12                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 3   |   | IMAGER  | F770W                    | FASTR1          | 26               | 4                  | 1                   | Dither 1         | 4             | 16                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
|                          | 3   | SHORT(A)  | MRSLONG   |                          | FASTR1          | 35               | 3                  | 1                   | Dither 1         | 4             | 12                 | 1187.717            |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |
| 3                        | SHORT(A)  | MRSSHORT  |   | FASTR1                   | 35              | 3                | 1                  | Dither 1            | 4                | 12            | 1187.717           |                     |                  |                      |                    |                          |                 |                  |                    |   |   |               |                    |                     |                  |   |   |        |       |          |    |   |   |          |   |    |          |  |   |         |         |  |        |    |   |   |          |   |    |          |  |   |         |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |           |         |  |        |    |   |   |          |   |    |          |  |   |           |          |  |        |    |   |   |          |   |    |          |  |   |  |        |       |        |    |   |   |          |   |    |          |  |   |          |         |  |        |    |   |   |          |   |    |          |  |   |          |          |  |        |    |   |   |          |   |    |          |  |

Proposal 4727 - Observation 6 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 03-OCT-2024:22:07:02 and 06-OCT-2024:00:00:00

Group Observations 4, 5, 6 within 16 Days

Proposal 4727 - Observation 7 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|---|--|-------------------------|---|------------------------|------------------------|---|---------------------------|----------------------------|--------------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 7: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   | (Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 7:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements. |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Diagnosics</b>   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Fixed Targets</b>  | <b>#</b>   | <b>Name</b>             | <b>Target Coordinates</b>   |                        |                        | <b>Targ. Coord. Corrections</b>   |                           |                            | <b>Miscellaneous</b>           |                      |                           |                            |                         |
|   | (1)  | V-DQ-Tau                | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                        |                        | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                           |                            |                                |                      |                           |                            |                         |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Acquisition</b>  | <b>#</b>   | <b>Target</b>           | <b>Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>      | <b>Integrations/Exp</b>   | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b>        |                      |                           |                            |                         |
|   | 1  | 1 V-DQ-Tau              | FND   | FAST                   | 4                      | 1   | 1                         | 11.1                       | 55778.63                       |                      |                           |                            |                         |
| <b>Template</b>   | <b>Primary Channel</b>   |                         | <b>Simultaneous Imaging</b>   |                        |                        | <b>Imager Subarray</b>  |                           |                            | <b>Grating Wheel Direction</b> |                      |                           |                            |                         |
|   | All MRS  |                         | YES   |                        |                        | FULL  |                           |                            | Allow Auto Reorder             |                      |                           |                            |                         |
| <b>Dithers</b>  | <b>#</b>   | <b>Dither Type</b>      |   |                        |                        | <b>Optimized For</b>  |                           |                            | <b>Direction</b>               |                      |                           |                            |                         |
|   | 1  | 4-Point                 |   |                        |                        | POINT SOURCE  |                           |                            | NEGATIVE                       |                      |                           |                            |                         |
| <b>Spectral Elements</b>  | <b>#</b>   | <b>Wavelength Range</b> | <b>Detector</b>   | <b>Filter</b>          | <b>Readout Pattern</b> | <b>Groups/Int</b>   | <b>Integrations/Exp</b>   | <b>Exposures/Dith</b>      | <b>Dither</b>                  | <b>Total Dithers</b> | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b> |
|   | 1  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 1  | SHORT(A)                | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 1  | SHORT(A)                | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 3  | LONG(C)                 | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  | LONG(C)                 | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |

Proposal 4727 - Observation 7 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 11-OCT-2024:17:21:19 and 13-OCT-2024:17:21:19

Group Observations 7, 8, 9 within 16 Days

Proposal 4727 - Observation 8 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|---|--|-------------------------|---|------------------------|------------------------|---|---------------------------|----------------------------|--------------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 8: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   | (Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 8:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements. |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Diagnosics</b>   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Fixed Targets</b>  | <b>#</b>   | <b>Name</b>             | <b>Target Coordinates</b>   |                        |                        | <b>Targ. Coord. Corrections</b>   |                           |                            | <b>Miscellaneous</b>           |                      |                           |                            |                         |
|   | (1)  | V-DQ-Tau                | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                        |                        | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                           |                            |                                |                      |                           |                            |                         |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Acquisition</b>  | <b>#</b>   | <b>Target</b>           | <b>Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>      | <b>Integrations/Exp</b>   | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b>        |                      |                           |                            |                         |
|   | 1  | 1 V-DQ-Tau              | FND   | FAST                   | 4                      | 1   | 1                         | 11.1                       | 55778.63                       |                      |                           |                            |                         |
| <b>Template</b>   | <b>Primary Channel</b>   |                         | <b>Simultaneous Imaging</b>   |                        |                        | <b>Imager Subarray</b>  |                           |                            | <b>Grating Wheel Direction</b> |                      |                           |                            |                         |
|   | All MRS  |                         | YES   |                        |                        | FULL  |                           |                            | Allow Auto Reorder             |                      |                           |                            |                         |
| <b>Dithers</b>  | <b>#</b>   | <b>Dither Type</b>      |   |                        | <b>Optimized For</b>   |   |                           | <b>Direction</b>           |                                |                      |                           |                            |                         |
|   | 1  | 4-Point                 |   |                        | POINT SOURCE           |   |                           | NEGATIVE                   |                                |                      |                           |                            |                         |
| <b>Spectral Elements</b>  | <b>#</b>   | <b>Wavelength Range</b> | <b>Detector</b>   | <b>Filter</b>          | <b>Readout Pattern</b> | <b>Groups/Int</b>   | <b>Integrations/Exp</b>   | <b>Exposures/Dith</b>      | <b>Dither</b>                  | <b>Total Dithers</b> | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b> |
|   | 1  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 1  | SHORT(A)                | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 1  | SHORT(A)                | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 3  | LONG(C)                 | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  | LONG(C)                 | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |

Proposal 4727 - Observation 8 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 13-OCT-2024:17:21:19 and 15-OCT-2024:17:21:19

Group Observations 7, 8, 9 within 16 Days

Proposal 4727 - Observation 9 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|---|--|-------------------------|---|------------------------|------------------------|---|---------------------------|----------------------------|--------------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| <b>Observation</b>  | <b>Proposal 4727, Observation 9: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   | (Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 9:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements. |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Diagnosics</b>   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
|   |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Fixed Targets</b>  | <b>#</b>   | <b>Name</b>             | <b>Target Coordinates</b>   |                        |                        | <b>Targ. Coord. Corrections</b>   |                           |                            | <b>Miscellaneous</b>           |                      |                           |                            |                         |
|   | (1)  | V-DQ-Tau                | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                        |                        | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                           |                            |                                |                      |                           |                            |                         |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i><br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |  |                         |   |                        |                        |   |                           |                            |                                |                      |                           |                            |                         |
| <b>Acquisition</b>  | <b>#</b>   | <b>Target</b>           | <b>Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>      | <b>Integrations/Exp</b>   | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b>        |                      |                           |                            |                         |
|   | 1  | 1 V-DQ-Tau              | FND   | FAST                   | 4                      | 1   | 1                         | 11.1                       | 55778.63                       |                      |                           |                            |                         |
| <b>Template</b>   | <b>Primary Channel</b>   |                         | <b>Simultaneous Imaging</b>   |                        |                        | <b>Imager Subarray</b>  |                           |                            | <b>Grating Wheel Direction</b> |                      |                           |                            |                         |
|   | All MRS  |                         | YES   |                        |                        | FULL  |                           |                            | Allow Auto Reorder             |                      |                           |                            |                         |
| <b>Dithers</b>  | <b>#</b>   | <b>Dither Type</b>      |   |                        |                        | <b>Optimized For</b>  |                           |                            | <b>Direction</b>               |                      |                           |                            |                         |
|   | 1  | 4-Point                 |   |                        |                        | POINT SOURCE  |                           |                            | NEGATIVE                       |                      |                           |                            |                         |
| <b>Spectral Elements</b>  | <b>#</b>   | <b>Wavelength Range</b> | <b>Detector</b>   | <b>Filter</b>          | <b>Readout Pattern</b> | <b>Groups/Int</b>   | <b>Integrations/Exp</b>   | <b>Exposures/Dith</b>      | <b>Dither</b>                  | <b>Total Dithers</b> | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>ETC Wkbk.Calc ID</b> |
|   | 1  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 1  | SHORT(A)                | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 1  | SHORT(A)                | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 2  | MEDIUM(B)               | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  |                         | IMAGER  | F770W                  | FASTR1                 | 26  | 4                         | 1                          | Dither 1                       | 4                    | 16                        | 1187.717                   |                         |
|   | 3  | LONG(C)                 | MRSLONG   |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |
|   | 3  | LONG(C)                 | MRSSHORT  |                        | FASTR1                 | 35  | 3                         | 1                          | Dither 1                       | 4                    | 12                        | 1187.717                   |                         |

Proposal 4727 - Observation 9 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 17-OCT-2024:17:21:19 and 20-OCT-2024:17:21:19

Group Observations 7, 8, 9 within 16 Days

Proposal 4727 - Observation 12 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Mon Sep 23 19:00:11 GMT 2024

|  |  |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
|--|--|------------------|---|-----------------|-----------------|---|--------------------|---------------------|-------------------------|---------------|--------------------|---------------------|------------------|
| <b>Observation</b>   | <b>Proposal 4727, Observation 12: DQ Tau</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: MIRI Medium Resolution Spectroscopy<br>Comments: Repeat of skipped observation 2.   |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
|  | (Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 12:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements. |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
| <b>Fixed Targets</b>   | #  | Name             | Target Coordinates  |                 |                 | Targ. Coord. Corrections  |                    |                     | Miscellaneous           |               |                    |                     |                  |
|  | (1)  | V-DQ-Tau         | RA: 04 46 53.0575 (71.7210729d)<br>Dec: +17 00 0.14 (17.00004d)<br>Equinox: J2000 |                 |                 | Proper Motion RA: 4.906 mas/yr<br>Proper Motion Dec: -13.29599997461628 mas/yr<br>Epoch of Position: 2000 |                    |                     |                         |               |                    |                     |                  |
| Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.<br>Category=Star<br>Description=[Pre-main sequence stars, Protoplanetary disks]<br>Extended=NO |  |                  |   |                 |                 |   |                    |                     |                         |               |                    |                     |                  |
| <b>Acquisition</b>   | #  | Target           | Filter  | Readout Pattern | Groups/Int      | Integrations/Exp  | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID        |               |                    |                     |                  |
|  | 1  | 1 V-DQ-Tau       | FND   | FAST            | 4               | 1   | 1                  | 11.1                | 55778.63                |               |                    |                     |                  |
| <b>Template</b>  | Primary Channel  |                  | Simultaneous Imaging  |                 |                 | Imager Subarray   |                    |                     | Grating Wheel Direction |               |                    |                     |                  |
|  | All MRS  |                  | YES   |                 |                 | FULL  |                    |                     | Allow Auto Reorder      |               |                    |                     |                  |
| <b>Dithers</b>   | #  | Dither Type      |   |                 | Optimized For   |   |                    | Direction           |                         |               |                    |                     |                  |
|  | 1  | 4-Point          |   |                 | POINT SOURCE    |   |                    | NEGATIVE            |                         |               |                    |                     |                  |
| <b>Spectral Elements</b>   | #  | Wavelength Range | Detector  | Filter          | Readout Pattern | Groups/Int  | Integrations/Exp   | Exposures/Dith      | Dither                  | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
|  | 1  |                  | IMAGER  | F770W           | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|  | 1  | SHORT(A)         | MRSLONG   |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|  | 1  | SHORT(A)         | MRSSHORT  |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|  | 2  |                  | IMAGER  | F770W           | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|  | 2  | MEDIUM(B)        | MRSLONG   |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|  | 2  | MEDIUM(B)        | MRSSHORT  |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|  | 3  |                  | IMAGER  | F770W           | FASTR1          | 26  | 4                  | 1                   | Dither 1                | 4             | 16                 | 1187.717            |                  |
|  | 3  | LONG(C)          | MRSLONG   |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |
|  | 3  | LONG(C)          | MRSSHORT  |                 | FASTR1          | 35  | 3                  | 1                   | Dither 1                | 4             | 12                 | 1187.717            |                  |

Proposal 4727 - Observation 12 - Snowline pulsations and UV photo-chemistry in planet-forming regions

Special Requirements

Between Dates 07-OCT-2024:00:00:00 and 10-OCT-2024:00:00:00