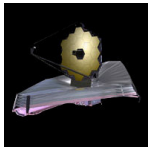

3181 - Monitor a variable planetary mass companion with NIRSpec IFU

Cycle: 2, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1	TWA-28	NIRSpec IFU Spectroscopy	(3) TWA-28
	2	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	3	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	4	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	5	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	6	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	7	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	8	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	9	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	10	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	11	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	12	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	13	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	14	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	15	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	16	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	17	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	18	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	19	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	20	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	21	TWA-27	NIRSpec IFU Spectroscopy	(2) TWA-27-AB
	22	TWA-28	NIRSpec IFU Spectroscopy	(3) TWA-28

ABSTRACT

Variability is prevalent among brown dwarfs and likely common in directly imaged exoplanets. Spectral variability has revealed 3D atmospheric structures and probed underlying atmospheric dynamics in brown dwarfs and wide-separated planetary-mass companions. Temporal spectral variations also induce significant uncertainties for interpreting spectral snapshots, underscoring an urgent need for precision spectral time series of directly imaged exoplanets. Observing spectral variability in directly imaged exoplanets has been proven to be challenging with ground-based AO instruments. JWST commissioning and ERS results show that NIRSpec IFU is an ideal instrument for precision high-contrast spectroscopic time-series observations.

We propose a pilot study to demonstrate the time-series observing capability of NIRSpec IFU. We identify 2M1207b, a known variable 4 Jupiter-mass companion, as the best target and craft a NIRSpec IFU PRISM monitoring campaign. We will jointly adopt reference star and spectral differential imaging to eliminate flux contamination from the host star and expect to achieve 0.1\% light curve precision. The broad wavelength coverage and excellent photometric stability of JWST will allow us to unveil the cloud structures and probe spatial variations of CO-methane chemistry in a planetary atmosphere in unprecedented detail. We will also characterize possible systematic noise in IFU high-contrast time-series observations and build the foundation for an exoplanet monitoring survey. Our program will establish NIRSpec IFU as a powerful planet mapper and

an essential instrument for probing clouds and circulation in planetary atmospheres.

OBSERVING DESCRIPTION

We use NIRSpec IFU PRISM to monitor the planetary mass companion 2M1207b.

The program is composed of 22 observations. The first and the last observations target a PSF reference star TWA-28. The PSF will be used in reference star differential imaging. The PSF reference exposures will be conducted using PRISM/CLEAR, group number of 10, integration number of 1, and a four-point dither. We observe the PSF reference at the beginning and the end of the time sequence to account for possible PSF evolution during the course of the observations.

Observations 2 to 21 are for the science target 2M1207Ab (TWA-27 AB). The companion and the host are separated by 0.78 arcsec. The NIRPSPEC IFU will include both sources in the field of view. The science exposures will be conducted using PRISM/CLEAR, group number of 10, integration number of 2, and a four-point dither. The twenty science exposures form a 12-hr baseline to cover one full rotation of 2M1207b.

We link the 22 observations using sequence observations, non-interruptible links to form a proper time sequence.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d) Dec: -39 32 54.61 (-39.54850d) Equinox: J2000	Proper Motion RA: -64.040 mas/yr Proper Motion Dec: -23.678 mas/yr Parallax: 0.0154624" Epoch of Position: 2016.0	
Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN. *Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.* *Centering on this position is needed to have both objects in the fieldwhen dithering* *Category=Star* *Description=[Brown dwarfs, M dwarfs]* *Extended=NO*				
(3)	TWA-28	RA: 11 02 9.7479 (165.5406162d) Dec: -34 30 35.79 (-34.50994d) Equinox: J2000	Proper Motion RA: -69.490 mas/yr Proper Motion Dec: -14.521 mas/yr Parallax: 0.0168794" Epoch of Position: 2016.0	
Comments: 30 Nov 2022: Updated using Gaia DR3 coordinates and proper motion with 2016 Epoch *J 13.034 [0.024] C 2003yCat.2246....0C* *H 12.356 [0.022] C 2003yCat.2246....0C* *K 11.887 [0.024] C 2003yCat.2246....0C* *M8.5p D* *Category=Star* *Description=[M dwarfs]* *Extended=NO*				

Observation

Proposal 3181, Observation 1: TWA-28 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA constraints (following the same set-up as program GTO-1270) are to avoid bright stars in MSA.

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	TWA-28	RA: 11 02 9.7479 (165.5406162d) Dec: -34 30 35.79 (-34.50994d) Equinox: J2000	Proper Motion RA: -69.490 mas/yr Proper Motion Dec: -14.521 mas/yr Parallax: 0.0168794" Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated using Gaia DR3 coordinates and proper motion with 2016 Epoch
J 13.034 [0.024] C 2003yCat.2246....0C
H 12.356 [0.022] C 2003yCat.2246....0C
K 11.887 [0.024] C 2003yCat.2246....0C
M8.5p D
Category=Star
Description=[M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	1	false	true	NONE	4	4	641.911	141776.8

Special Requirements	
	Aperture PA Range 81.892575 to 113.892575 Degrees (V3 302.92004082 to 334.92004082) Aperture PA Range 210.892975 to 268.892975 Degrees (V3 71.92044082 to 129.92044082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 2: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 3: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 4: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 5: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 6: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 7: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 8: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 9: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 10: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 11: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 12: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 13: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 14: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 15: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 16: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 16:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 17: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 17:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 18: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 18:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 19: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 19:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 20: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 20:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 21: TWA-27 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA range set to avoid bright sources in the MSA field of view. The constraints are identical to those used in Program GTO-1270, which resulted in successful observations (Luhman+2023)

Diagnostics

(Visit 21:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(2)	TWA-27-AB	RA: 12 07 33.3950 (181.8891458d)	Proper Motion RA: -64.040 mas/yr	
		Dec: -39 32 54.61 (-39.54850d)	Proper Motion Dec: -23.678 mas/yr	
		Equinox: J2000	Parallax: 0.0154624"	
			Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated coordinates for Gaia DR3 of TWA-27, still keeping the delta from 27A as before (see below). Epoch 2016. Changed EXTENDED field to NO from UNKNOWN.
Position intermediate between TWA 27 and its low companion located 770 mas from the BD and at position angle of 135.5.
Centering on this position is needed to have both objects in the fieldwhen dithering
Category=Star
Description=[Brown dwarfs, M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	2	false	true	NONE	4	8	1283.822	141776.7

Special Requirements	
	Aperture PA Range 68.892575 to 128.892575 Degrees (V3 289.92004082 to 349.92004082) Aperture PA Range 210.892575 to 224.892575 Degrees (V3 71.92004082 to 85.92004082) Aperture PA Range 243.892575 to 256.892575 Degrees (V3 104.92004082 to 117.92004082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible

Observation

Proposal 3181, Observation 22: TWA-28 Sun Nov 05 22:01:04 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRSpec IFU Spectroscopy

Comments: PA constraints (following the same set-up as program GTO-1270) are to avoid bright stars in MSA.

Diagnostics

(Visit 22:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	TWA-28	RA: 11 02 9.7479 (165.5406162d) Dec: -34 30 35.79 (-34.50994d) Equinox: J2000	Proper Motion RA: -69.490 mas/yr Proper Motion Dec: -14.521 mas/yr Parallax: 0.0168794" Epoch of Position: 2016.0	

Comments: 30 Nov 2022: Updated using Gaia DR3 coordinates and proper motion with 2016 Epoch
J 13.034 [0.024] C 2003yCat.2246....0C
H 12.356 [0.022] C 2003yCat.2246....0C
K 11.887 [0.024] C 2003yCat.2246....0C
M8.5p D
Category=Star
Description=[M dwarfs]
Extended=NO

Template

TA Method
NONE

Dithers

#	Dither Type	Size	Starting Point	Number of Points	Points
1	4-POINT-DITHER				

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Leakcal	Dither	Autocal	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	PRISM/CLEAR	NRSIRS2RAPID	10	1	false	true	NONE	4	4	641.911	141776.8

Special Requirements	
	Aperture PA Range 81.892575 to 113.892575 Degrees (V3 302.92004082 to 334.92004082) Aperture PA Range 210.892975 to 268.892975 Degrees (V3 71.92044082 to 129.92044082) Sequence Observations 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, Non-interruptible