3557 - A JWST Search for Missing Methane

Cycle: 2, Proposal Category: GO

INVESTIGATORS

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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
TOI-1231 b				
	1	NIRISS	NIRISS Single-Object Slitless Spectroscopy	(1) TOI-1231
	2	G395H	NIRSpec Bright Object Time Series	(1) TOI-1231
	3	MIRI	MIRI Low Resolution Spectroscopy	(1) TOI-1231
	14	MIRI	MIRI Low Resolution Spectroscopy	(1) TOI-1231
LTT 3780 c				
	4	NIRISS	NIRISS Single-Object Slitless Spectroscopy	(3) LTT-3780
	5	G395H	NIRSpec Bright Object Time Series	(3) LTT-3780
	6	MIRI	MIRI Low Resolution Spectroscopy	(3) LTT-3780
	13	MIRI	MIRI Low Resolution Spectroscopy	(3) LTT-3780
TOI-1468 c				
	7	NIRISS	NIRISS Single-Object Slitless Spectroscopy	(5) TOI-1468
	8	G395H	NIRSpec Bright Object Time Series	(5) TOI-1468
	9	MIRI	MIRI Low Resolution Spectroscopy	(5) TOI-1468
	16	MIRI	MIRI Low Resolution Spectroscopy	(5) TOI-1468
TOI-270 d				

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
	10	NIRISS	NIRISS Single-Object Slitless Spectroscopy	(7) TOI-270
	12	MIRI	MIRI Low Resolution Spectroscopy	(7) TOI-270
	15	MIRI	MIRI Low Resolution Spectroscopy	(8) TOI-270-BKG

ABSTRACT

The “Missing Methane problem” is one of the central mysteries in the exploration of exoplanetary atmospheres. Whereas methane (CH4) is ubiquitous in the atmospheres of solar system giant planets, it has yet to be robustly detected in temperate exoplanetary atmospheres. Molecules such as CH4 and ammonia (NH3) are expected to be prominent carriers of carbon and nitrogen in H2-rich atmospheres at temperatures below ~800 K. The presence or absence of CH4 in such atmospheres has major implications for our understanding of planet formation, atmospheric processes, and searches for chemical signatures in habitable-zone exoplanets. We propose a comprehensive JWST program to address this long-standing problem with high-precision transmission spectra over the 1-10 micron range for a homogeneous sample of four temperate mini-Neptunes orbiting bright M dwarfs. These observations will be obtained using a combination of NIRISS, NIRSpec G395H and MIRI LRS instruments. The observations will provide unprecedented constraints on the atmospheric compositions of these targets, robustly resolving the Missing Methane problem and providing important insights into disequilibrium processes in the atmospheres. These observations will also allow us to a) constrain theories of planet formation and evolution of sub-Neptune planets by determining their atmospheric metallicities and elemental ratios, b) build the first mass-metallicity (M-Z) relation in the sub-Neptune regime and c) test the extension of solar system M-Z relation in C/H to lower masses. Our program will pave the way for future searches of hydrocarbons and signatures of chemical disequilibrium in habitable-zone exoplanets.

OBSERVING DESCRIPTION

We will observe a homogeneous sample of four exoplanets: TOI-1231 b, TOI-732 c, TOI-1468 c and TOI-270 d. These targets are selected to have very similar equilibrium temperatures (330-400 K), very similar bright M dwarf host stars and masses and radii that permit H2-rich atmospheres, as well as spanning the Neptune/mini-Neptune regime.

Each planet will be observed using transit spectroscopy and a transmission spectrum produced for each spanning the wavelength range 0.6-10 microns. To do this each planet will be observed in primary transit using NIRISS SOSS, NIRSpec G395H and MIRI LRS, once for each instrument. A total of 12 transit observations will thus be performed.   Each observation will last twice the transit duration and phase constraints have been added to allow for a 1 hour scheduling window.

Additional exposures will be taken for target acqisition and also an additional F2777W exposure taken for each NIRISS SOSS observation.

Update: For one of the targets, TOI-270 d, the NIRISS and NIRSpec observations are no longer observed as part of this program due to duplication with other programs.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	TOI-1231	RA: 10 26 59.3375 (156.7472396d) Dec: -52 28 4.16 (-52.46782d) Equinox: J2000	Proper Motion RA: -89.39406558542368 mas/yr Proper Motion Dec: 361.546043558718 mas/yr Parallax: 0.03638958468436626" Epoch of Position: 2016	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. The coordinates, proper motion and parallax values have been updated to those from the GAIA DR3 release. Category=Star Description=[M dwarfs] Extended=NO				
(2)	2MASS10265697-5227497	RA: 10 26 56.9498 (156.7372908d) Dec: -52 27 49.77 (-52.46382d) Equinox: J2000	Proper Motion RA: -7.367549470491923 mas/yr Proper Motion Dec: 2.0520299162323536 mas/yr Parallax: 0.0002885817131765268" Epoch of Position: 2016	
Comments: This object was generated by the targetselector and retrieved from the 2MASS database, with RA, dec, PM and parallax values updated with reference to GAIA DR3 Category=Unidentified Description=[Infrared sources] Extended=NO				
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. RA, Dec, PM and parallax values all updated from GAIA DR3 Category=Star Description=[M dwarfs] Extended=NO				
(4)	2MASS10183398-1143258	RA: 10 18 33.9795 (154.6415813d) Dec: -11 43 25.93 (-11.72387d) Equinox: J2000	Proper Motion RA: -9.09771943973233 mas/yr Proper Motion Dec: -2.0168442601536163 mas/yr Parallax: 0.0006351750194182461" Epoch of Position: 2016	
Comments: Object found on 2MASS database within spiltting distance; updated values from GAIA DR3 Category=Unidentified Description=[Infrared sources] Extended=NO				
(5)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390716" Epoch of Position: 2016	
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Values updated from GAIA DR3. Category=Star Description=[M dwarfs] Extended=NO				
(6)	2MASS01063708+1914087	RA: 01 06 37.0958 (16.6545658d) Dec: +19 14 8.53 (19.23570d) Equinox: J2000	Proper Motion RA: 4.540172040101361 mas/yr Proper Motion Dec: -16.877101691900325 mas/yr Parallax: 0.001897511796050514" Epoch of Position: 2016	
Comments: Category=Unidentified Description=[Infrared sources]				

	(7)	TOI-270	RA: 04 33 39.8638 (68.4160992d) Dec: -51 57 26.75 (-51.95743d) Equinox: J2000	Proper Motion RA: 83.08204378717042 mas/yr Proper Motion Dec: -269.8034870673143 mas/yr Parallax: 0.044489913488441964" Epoch of Position: 2016
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. *Category=Star* *Description=[M dwarfs]*			
	(8)	TOI-270-BKG	RA: 04 33 36.7000 (68.4029167d) Dec: -51 57 14.50 (-51.95403d) Equinox: J2000	
	Comments: *Category=Unidentified* *Description=[Blank field]*			

Observation

Proposal 3557, Observation 1: NIRISS

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRISS Single-Object Slitless Spectroscopy

Diagnostics

(NIRISS (Obs 1)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

(Exposure) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	TOI-1231	RA: 10 26 59.3375 (156.7472396d) Dec: -52 28 4.16 (-52.46782d) Equinox: J2000	Proper Motion RA: -89.39406558542368 mas/yr Proper Motion Dec: 361.546043558718 mas/yr Parallax: 0.03638958468436626" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. The coordinates, proper motion and parallax values have been updated to those from the GAIA DR3 release.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	SOSSFAINT	F480M	NISRAPID	7	1	1	0.384	146467

Template

Subarray	Include Short First Exposure and F277W Exposure?
SUBSTRIP256	true

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	NISRAPID	2	1195	1	1195	19720.464	146467
2	NISRAPID	12	10	1	10	714.425	140975

Special Requirements

Phase 0.994225753091717 to 0.995944278957277 with period 24.245586 Days and zero-phase 2458685.1163 HJD
Aperture PA Range 70 to 70 Degrees (V3 69.43873283 to 69.43873283)
Aperture PA Range 115 to 115 Degrees (V3 114.43873283 to 114.43873283)
Aperture PA Range 330 to 330 Degrees (V3 329.43873283 to 329.43873283)
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 2: G395H

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRSpec Bright Object Time Series

Diagnostics

(G395H (Obs 2)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	TOI-1231	RA: 10 26 59.3375 (156.7472396d) Dec: -52 28 4.16 (-52.46782d) Equinox: J2000	Proper Motion RA: -89.39406558542368 mas/yr Proper Motion Dec: 361.546043558718 mas/yr Parallax: 0.03638958468436626" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. The coordinates, proper motion and parallax values have been updated to those from the GAIA DR3 release.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	2 2MASS10265697 -5227497	WATA	SUB32	F110W	NRSRAPID	3	1	1	0.08	146468

Template

Subarray
SUB2048

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395H/F290LP	NRSRAPID	7	2726	1	1	2726	19726.644	146467

Special Requirements

Phase 0.994225753091717 to 0.995944278957277 with period 24.245586 Days and zero-phase 2458685.1163 HJD
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 3: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI (Obs 3)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	TOI-1231	RA: 10 26 59.3375 (156.7472396d) Dec: -52 28 4.16 (-52.46782d) Equinox: J2000	Proper Motion RA: -89.39406558542368 mas/yr Proper Motion Dec: 361.546043558718 mas/yr Parallax: 0.03638958468436626" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. The coordinates, proper motion and parallax values have been updated to those from the GAIA DR3 release.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1000W	FAST	6	1	1	0.954	197726

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	6	1	1	1	1	0.954		F1000W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	12	11284	11284	1	1	23329.737	197726

Special Requirements

Phase 0.99250722272261571 to 0.9942257530917173 with period 24.245586 Days and zero-phase 2460430.797120 HJD
Time Series Observation
No Parallel Attachments

Sequence Observations 3, 14, Non-interruptible

Observation

Proposal 3557, Observation 14: MIRI Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

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
(1)	TOI-1231	RA: 10 26 59.3375 (156.7472396d) Dec: -52 28 4.16 (-52.46782d) Equinox: J2000	Proper Motion RA: -89.39406558542368 mas/yr Proper Motion Dec: 361.546043558718 mas/yr Parallax: 0.03638958468436626" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. The coordinates, proper motion and parallax values have been updated to those from the GAIA DR3 release.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1000W	FAST	6	1	1	0.954	197726

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	6	1	1	1	1	0.954		F1000W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	12	30	30	1	1	61.867	197726

Special Requirements

Offset -48.0 arcsec, 10.0 arcsec
Time Series Observation
No Parallel Attachments

Sequence Observations 3, 14, Non-interruptible

Observation

Proposal 3557, Observation 4: NIRISS

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRISS Single-Object Slitless Spectroscopy

Diagnostics

(NIRISS (Obs 4)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

(Exposure) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. RA, Dec, PM and parallax values all updated from GAIA DR3
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	SOSSFAINT	F480M	NISRAPID	9	1	1	0.475	146470

Template

Subarray	Include Short First Exposure and F277W Exposure?
SUBSTRIP256	true

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	NISRAPID	2	632	1	632	10429.567	146470
2	NISRAPID	12	10	1	10	714.425	141037

Special Requirements

Phase 0.993368542225205 to 0.996769289802023 with period 12.252208 Days and zero-phase 2458608.11003 HJD
Aperture PA Range 84 to 92 Degrees (V3 83.43873283 to 91.43873283)
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 5: G395H

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRSpec Bright Object Time Series

Diagnostics

(G395H (Obs 5)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. RA, Dec, PM and parallax values all updated from GAIA DR3
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	4 2MASS10183398 -1143258	WATA	SUB32	F110W	NRSRAPIDD6	3	1	1	0.26	146471

Template

Subarray
SUB2048

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395H/F290LP	NRSRAPID	7	1543	1	1	1543	11165.889	199936

Special Requirements

Phase 0.9931985470355296 to 0.9965992735177648 with period 12.252284 Days and zero-phase 2460421.441794 HJD
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 6: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI (Obs 6)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

(MIRI (Obs 6)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. RA, Dec, PM and parallax values all updated from GAIA DR3
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1000W	FAST	4	1	1	0.636	146470

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	0.636		F1000W

Proposal 3557 - Observation 6 - A JWST Search for Missing Methane

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	13	5821	5821	1	1	12960.647	199936

Special Requirements

Phase 0.9916682201185237 to 0.995068946600759 with period 12.252284 Days and zero-phase 2460421.441794 HJD
Time Series Observation
No Parallel Attachments

Sequence Observations 6, 13, Non-interruptible

Observation

Proposal 3557, Observation 13: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI (Obs 13)) Warning (Form): Groups/Int cannot be 1, Groups/Int = 2 requires permission and Groups/Int of 3-4 is allowed but not recommended.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(3)	LTT-3780	RA: 10 18 34.7652 (154.6448550d) Dec: -11 43 4.21 (-11.71784d) Equinox: J2000	Proper Motion RA: -341.5372660862644 mas/yr Proper Motion Dec: -247.74725247160802 mas/yr Parallax: 0.04539719520705794" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. RA, Dec, PM and parallax values all updated from GAIA DR3
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	3 LTT-3780	F1000W	FAST	4	1	1	0.636	146470

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	4	1	1	1	1	0.636		F1000W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	13	30	30	1	1	66.638	199936

Special Requirements

Offset -35.0 arcsec, 30.0 arcsec
Time Series Observation
No Parallel Attachments

Sequence Observations 6, 13, Non-interruptible

Observation

Proposal 3557, Observation 7: NIRISS

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRISS Single-Object Slitless Spectroscopy

Diagnostics

(NIRISS (Obs 7)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

(Exposure) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390716" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Values updated from GAIA DR3.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	SOSSFAINT	F480M	NISRAPID	11	1	1	0.566	146472

Template

Subarray	Include Short First Exposure and F277W Exposure?
SUBSTRIP256	true

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	NISRAPID	3	578	1	578	12713.965	146472
2	NISRAPID	14	10	1	10	824.305	141045

Special Requirements

Phase 0.9939240232179248 to 0.9966065736735872 with period 15.532482 Days and zero-phase 2458766.9269 HJD
Aperture PA Range 62 to 75 Degrees (V3 61.43873283 to 74.43873283)
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 8: G395H

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRSpec Bright Object Time Series

Diagnostics

(G395H (Obs 8)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390716" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Values updated from GAIA DR3.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	6 2MASS01063708 +1914087	WATA	SUB32	F140X	NRSRAPIDD6	3	1	1	0.26	146473

Template

Subarray
SUB2048

Spectral Elements

#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	G395H/F290LP	NRSRAPID	10	1278	1	1	1278	12706.489	146472

Special Requirements

Phase 0.9939240232179248 to 0.9966065736735872 with period 15.532482 Days and zero-phase 2458766.9269 HJD
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 9: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Diagnostics

(MIRI (Obs 9)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(5)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390716" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Values updated from GAIA DR3.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1000W	FAST	10	1	1	1.59	146472

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	10	1	1	1	1	1.59		F1000W

Proposal 3557 - Observation 9 - A JWST Search for Missing Methane

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	22	4456	4456	1	1	16299.532	146472

Special Requirements

Phase 0.991710919092003 to 0.994393469547665 with period 15.532482 Days and zero-phase 2458766.9269 HJD
Time Series Observation
No Parallel Attachments

Sequence Observations 9, 16, Non-interruptible

Observation

Proposal 3557, Observation 16: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

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
(5)	TOI-1468	RA: 01 06 36.9279 (16.6538663d) Dec: +19 13 29.60 (19.22489d) Equinox: J2000	Proper Motion RA: -42.06666583479145 mas/yr Proper Motion Dec: -222.79007012357297 mas/yr Parallax: 0.040451580634390716" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Values updated from GAIA DR3.
Category=Star
Description=[M dwarfs]
Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	5 TOI-1468	F1000W	FAST	10	1	1	1.59	146472

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	10	1	1	1	1	1.59		F1000W

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	22	30	30	1	1	109.579	146472

Special Requirements

Offset 40.0 arcsec, 30.0 arcsec
Time Series Observation
No Parallel Attachments

Sequence Observations 9, 16, Non-interruptible

Observation

Proposal 3557, Observation 10: NIRISS

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: NIRISS Single-Object Slitless Spectroscopy

Background Observations:[]

Diagnostics

(NIRISS (Obs 10)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

(NIRISS (Obs 10)) Warning (Form): Target requiring background exposure selected for template that doesn't require background exposure

(Exposure) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	TOI-270	RA: 04 33 39.8638 (68.4160992d) Dec: -51 57 26.75 (-51.95743d) Equinox: J2000	Proper Motion RA: 83.08204378717042 mas/yr Proper Motion Dec: -269.8034870673143 mas/yr Parallax: 0.044489913488441964" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[M dwarfs]

Acquisition

#	Target	Acquisition Mode	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	SOSSFAINT	F480M	NISRAPID	9	1	1	0.475	146474

Template

Subarray	Include Short First Exposure and F277W Exposure?
SUBSTRIP256	true

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	NISRAPID	2	937	1	937	15462.824	146474
2	NISRAPID	14	10	1	10	824.305	141055

Special Requirements

Phase 0.9900333108573874 to 0.9936948425041959 with period 11.379573 Days and zero-phase 2458389.68186 HJD
Time Series Observation
No Parallel Attachments

Observation

Proposal 3557, Observation 12: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Background Observations:[MIRI (Obs 15)]

Diagnostics

(MIRI (Obs 12)) Warning (Form): Exposure Duration exceeds the limit of 10000.0 seconds. Above this limit it is possible that a High Gain Antenna move may occur during the exposure.

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

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(7)	TOI-270	RA: 04 33 39.8638 (68.4160992d) Dec: -51 57 26.75 (-51.95743d) Equinox: J2000	Proper Motion RA: 83.08204378717042 mas/yr Proper Motion Dec: -269.8034870673143 mas/yr Parallax: 0.044489913488441964" Epoch of Position: 2016	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[M dwarfs]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1000W	FAST	8	1	1	1.272	197714

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	8	1	1	1	1	1.272		F1000W

Proposal 3557 - Observation 12 - A JWST Search for Missing Methane

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	17	5403	5403	1	1	15467.117	197714

Special Requirements

Phase 0.9900333108573874 to 0.9936948425041959 with period 11.379573 Days and zero-phase 2460346.977984 HJD
Time Series Observation
No Parallel Attachments

Sequence Observations 12, 15, Non-interruptible

Observation

Proposal 3557, Observation 15: MIRI

Tue Aug 13 17:00:19 GMT 2024

Diagnostic Status: Warning

Observing Template: MIRI Low Resolution Spectroscopy

Background Observation For: [MIRI (Obs 12)]

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
(8)	TOI-270-BKG	RA: 04 33 36.7000 (68.4029167d) Dec: -51 57 14.50 (-51.95403d) Equinox: J2000		

Comments:
Category=Unidentified
Description=[Blank field]

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	7 TOI-270	F1000W	FAST	8	1	1	1.272	197714

Template

Subarray	Obtain Verification Image?
SLITLESSPRISM	true

Dithers

#	Dither Type	No. Spectral Steps	Spectral Step Offset	No. Spatial Steps	Spatial Step Offset
1	NONE				

Pointing Verification

#	PV Readout Pattern	PV Groups/Int	PV Integrations/Exp	PV Total Integrations	PV Exposures/Dith	PV Total Dithers	PV Total Exposure Time	PV ETC Wkbk.Calc ID	Filter
1	FASTR1	8	1	1	1	1	1.272		F1000W

Proposal 3557 - Observation 15 - A JWST Search for Missing Methane

Spectral Elements

#	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Exposures/Dith	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	FASTR1	17	30	30	1	1	85.723	197714

Special Requirements

Time Series Observation
No Parallel Attachments

Sequence Observations 12, 15, Non-interruptible