



10786 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temperature Regime

Cycle: 5, Proposal Category: GO

INVESTIGATORS

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Dr. Mercedes Lopez-Morales (CoI)	Space Telescope Science Institute

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
HAT-P-1b Eclipse				
	1		NIRSpec Bright Object Time Series	(1) HAT-P-1
WASP-94A b Eclipse				
	2		NIRSpec Bright Object Time Series	(3) WASP-94A
WASP-127 b Eclipse				
	3		NIRSpec Bright Object Time Series	(5) WASP-127
HAT-P-13 b Eclipse				
	4		NIRSpec Bright Object Time Series	(6) HAT-P-13

JWST Proposal 10786 (Created: Wednesday, May 27, 2026, 1:00:12PM Eastern Standard Time) - Overview

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
HAT-P-30 b Eclipse				
	5		NIRSpec Bright Object Time Series	(7) HAT-P-30
HAT-P-32 b Eclipse				
	6		NIRSpec Bright Object Time Series	(8) HAT-P-32
KELT-7 b Eclipse				
	7		NIRSpec Bright Object Time Series	(9) KELT-7
WASP-178 b Eclipse				
	8		NIRSpec Bright Object Time Series	(10) WASP-178
WASP-12 b Eclipse				
	9		NIRSpec Bright Object Time Series	(11) WASP-12

ABSTRACT

We propose a uniform JWST/NIRSpec G395M survey of nine hot Jupiters, spanning equilibrium temperatures from 1350 K to 2550 K, to map the diversity of their dayside emission spectra. This program will nearly double the number of available JWST eclipse spectra, enabling the first population-level comparison of thermal structure, chemical composition, and atmospheric dynamics across the hot Jupiter regime. By targeting planets with existing transmission spectra, this survey will enable the first limb-to-dayside population study, directly testing predictions of horizontal quenching, 3D atmospheric circulation, and breaking degeneracies which exist in transmission observations. Our sample spans three distinct regimes: the cloud-free daysides, the temperature transition, and the ultra-hot regimes, allowing us to probe the onset of thermal inversions, molecular dissociation, and refractory species such as SiO. Additionally, six of our targets are amenable to eclipse mapping, enabling the first uniform test of heat redistribution efficiency as a function of temperature. This program will deliver a legacy dataset linking atmospheric chemistry, dynamics, and formation pathways across the hot Jupiter population.

OBSERVING DESCRIPTION

For all targets, groups per integration are calculated with ETC to remain below 80% saturation and optimize the duty cycle. We use a default 2.4:1 + 1hr baseline for all targets (such as was successfully implemented for WASP-17b in GTO 1353). We use NIRSpec to probe the peak of the thermal emission continuum for these hot-Jupiters and also gain sensitivity to molecular absorption from e.g., H₂O, CO, CO₂. We use G395M instead of H to avoid the detector gap which is known to cause offsets in atmosphere spectra and will complicate the analysis of these emission observations. However, we use H for KELT-7b as it is too bright for M.

For HAT-P-1 b we use 9 groups resulting in 76% saturation. The star itself is too bright for TA, so we use a nearby source with well-constrained

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proper motion. It is slightly outside the splitting distance, but the visit planner verifies that there should be no issues with schedulability. The binary companion (separation $\sim 10''$) should not affect the observations given the $\sim 1''$ NIRSpec slit size.

For WASP-94A b we use 9 groups resulting in 78% saturation. The star itself is too bright for TA, so we use a nearby source with well-constrained proper motion (same TA star as for GO 3154). The binary companion should not affect the observations given the $\sim 1''$ NIRSpec slit size (also verified by GO 3154).

For WASP-127b, we use 7 groups resulting in 73% saturation. The target is too bright for TA and there are no suitable stars in the field. So we will forgo TA for this observation. The pointing of JWST (\sim mas precision) should be sufficient to get the target within the target within the $\sim 1''$ slit. But this can also be revisited on advice from STScI instrument scientists if necessary.

For HAT-P-13b, we use 10 groups resulting in 76% saturation. The target is too bright for TA and there are no suitable stars in the field. So we will forgo TA for this observation. The pointing of JWST (\sim mas precision) should be sufficient to get the target within the target within the $\sim 1''$ slit. We incorporate published $e=0.013$ into phase constraint calculations.

For HAT-P-30b, we use 12 groups resulting in 77% saturation. The target is too bright for TA and there are no suitable stars in the field. So we will forgo TA for this observation. The pointing of JWST (\sim mas precision) should be sufficient to get the target within the target within the $\sim 1''$ slit. We incorporate the published $e=0.04$ eccentricity in the phase constraint calculations.

For HAT-P-32b, we use 26 groups resulting in 77% saturation. We perform TA on the target, which saturates the central pixel. But this has been demonstrated to not affect the success of NIRSpec TA in multiple programs. We incorporate the published $e=0.15$ eccentricity in the phase constraint calculations.

For KELT-7b, we use 7 groups resulting in 78% saturation. We use the H grating for this target as it is too bright for M. The target is too bright for TA and there are no suitable stars in the field. So we will forgo TA for this observation. The pointing of JWST (\sim mas precision) should be sufficient to get the target within the target within the $\sim 1''$ slit.

For WASP-178b, we use 9 groups resulting in 76% saturation. We perform TA on the target itself which saturates the central pixel. But this has been demonstrated to not affect the success of NIRSpec TA in multiple programs.

For WASP-12b, we use 32 groups resulting in 79% saturation. We perform TA on the target itself which saturates the central pixel. But this has been demonstrated to not affect the success of NIRSpec TA in multiple programs. We incorporate published $e=0.0447$ into phase constraint calculations.

Proposal 10786 - Targets - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temperature ...

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	HAT-P-1	RA: 22 57 46.8442 (344.4451842d) Dec: +38 40 30.36 (38.67510d) Equinox: J2000	Proper Motion RA: 32.422 mas/yr Proper Motion Dec: -41.94900002403301 mas/yr Parallax: 0.0062438" Epoch of Position: 2000	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Verified that this is the correct planet host star (BD+37 4734B and not A) and that we won't fall into the same trap as the NEAT GTO.</i></p> <p><i>Category=Star</i> <i>Description=[Exoplanet Systems]</i> <i>Extended=NO</i></p>				
(2)	HAT-P-1_TA_Star	RA: 22 57 51.8330 (344.4659708d) Dec: +38 39 45.21 (38.66256d) Equinox: J2000	Proper Motion RA: -1.393 mas/yr Proper Motion Dec: -2.9540000014094403 mas/yr Parallax: 3.130999999999997E-4" Epoch of Position: 2000	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>There is a closer TA star (within 30") but it does not have any listed proper motion.</i></p> <p><i>Category=Star</i> <i>Description=[K dwarfs]</i> <i>Extended=NO</i></p>				
(3)	WASP-94A	RA: 20 55 7.9444 (313.7831017d) Dec: -34 08 8.01 (-34.13556d) Equinox: J2000	Proper Motion RA: 26.5 mas/yr Proper Motion Dec: -44.971000056648336 mas/yr Parallax: 0.004749799999999999" Epoch of Position: 2000	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Star</i> <i>Description=[Exoplanet Systems]</i> <i>Extended=NO</i></p>				
(4)	WASP-94A_TA_Star	RA: 20 55 8.9711 (313.7873796d) Dec: -34 08 31.50 (-34.14208d) Equinox: J2000	Proper Motion RA: 5.948 mas/yr Proper Motion Dec: -2.83299985002971 mas/yr Parallax: 5.108000000000001E-4" Epoch of Position: 2000	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Star</i> <i>Description=[K dwarfs]</i> <i>Extended=NO</i></p>				

Fixed Targets

Proposal 10786 - Targets - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temperature ...

(5)	WASP-127	RA: 10 42 14.0837 (160.5586821d) Dec: -03 50 6.26 (-3.83507d) Equinox: J2000	Proper Motion RA: 19.133 mas/yr Proper Motion Dec: 17.058 mas/yr Parallax: 0.0062241" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p>Category=Star Description=[Exoplanet Systems] Extended=NO</p>			
(6)	HAT-P-13	RA: 08 39 31.8072 (129.8825300d) Dec: +47 21 7.27 (47.35202d) Equinox: J2000	Proper Motion RA: -24.06 mas/yr Proper Motion Dec: -26.21800008455466 mas/yr Parallax: 0.004075000000000005" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p>Category=Star Description=[Exoplanet Systems] Extended=NO</p>			
(7)	HAT-P-30	RA: 08 15 47.9802 (123.9499175d) Dec: +05 50 12.35 (5.83676d) Equinox: J2000	Proper Motion RA: -17.231 mas/yr Proper Motion Dec: 23.875 mas/yr Parallax: 0.0048037" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p>Category=Star Description=[Exoplanet Systems] Extended=NO</p>			
(8)	HAT-P-32	RA: 02 04 10.2774 (31.0428225d) Dec: +46 41 16.21 (46.68784d) Equinox: J2000	Proper Motion RA: -9.763 mas/yr Proper Motion Dec: 3.351 mas/yr Parallax: 0.0034937999999999996" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p>Category=Star Description=[Exoplanet Systems] Extended=NO</p>			
(9)	KELT-7	RA: 05 13 10.9289 (78.2955371d) Dec: +33 19 5.40 (33.31817d) Equinox: J2000	Proper Motion RA: 10.477 mas/yr Proper Motion Dec: -49.619999936112436 mas/yr Parallax: 0.0073792" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p>Category=Star Description=[Exoplanet Systems] Extended=NO</p>			

Proposal 10786 - Targets - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temperature ...

(10)	WASP-178	RA: 15 09 4.8934 (227.2703892d) Dec: -42 42 17.79 (-42.70494d) Equinox: J2000	Proper Motion RA: -10.243 mas/yr Proper Motion Dec: -5.636000082631654 mas/yr Parallax: 0.0024248" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Star</i> <i>Description=[Exoplanet Systems]</i> <i>Extended=NO</i></p>			
(11)	WASP-12	RA: 06 30 32.7966 (97.6366525d) Dec: +29 40 20.26 (29.67229d) Equinox: J2000	Proper Motion RA: -1.519 mas/yr Proper Motion Dec: -6.761000054211763 mas/yr Parallax: 0.0024213" Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Star</i> <i>Description=[Exoplanet Systems]</i> <i>Extended=NO</i></p>			

Proposal 10786 - Observation 1 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 1</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Assuming 2.4:1 + 1hr baseline.</i></p> <p><i>Ephemeris from Kokori+ 22.</i></p> <p><i>Phase constraints assuming a minimum of 3.4hr on target before mid eclipse (2 hr before first contact).</i></p> <p><i>TA star outside of splitting distance but is only star in field with proper motion measurement. Visit planner shows many opportunities for scheduling so this should not be a problem.</i></p> <p><i>05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
Diagnostics	<p>(Observation 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.</p> <p>(Observation 1) Warning (Form): The slew between the acquisition exposure and the farthest science exposure is 72.478 Arcsec (larger than the recommended limit of 65.000 Arcsec) and may result in reduced or no schedulability. See more information in the diagnostic browser.</p> <p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
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Proposal 10786 - Observation 1 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Special Requirements

Phase 0.45194424223639124 to 0.46127545733612113 with period 4.46529913 Days and zero-phase 2456476.03405 HJD
Time Series Observation
No Parallel Attachments

Proposal 10786 - Observation 2 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 2</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Assuming 2.4:1 + 1hr baseline. Ephemeris from Ivshina & Winn 22. Phase constraint gets minimum 5.4hr on target before mid-eclipse (3.2hr before first contact). Same TA star and setup as GO 3154. 05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
	<p>(Observation 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.</p> <p>(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
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Proposal 10786 - Observation 2 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Special Requirements

Phase 0.4245818870660243 to 0.43512987488895793 with period 3.95020049 Days and zero-phase 2458328.29911 HJD
Time Series Observation
No Parallel Attachments

Proposal 10786 - Observation 3 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 3</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Ephemeris from Kokori+ 23. Phase constraints assuming minimum of 5.22hr on target before mid eclipse (3hr before first contact). No suitable TA star so we will blindly point. 05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
Diagnostics	<p>(Observation 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.</p> <p>(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th colspan="4">Targ. Coord. Corrections</th> <th colspan="4">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(5)</td> <td>WASP-127</td> <td>RA: 10 42 14.0837 (160.5586821d) Dec: -03 50 6.26 (-3.83507d) Equinox: J2000</td> <td colspan="4">Proper Motion RA: 19.133 mas/yr Proper Motion Dec: 17.058 mas/yr Parallax: 0.0062241" Epoch of Position: 2000</td> <td colspan="4"></td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Star Description=[Exoplanet Systems] Extended=NO</i></p>										#	Name	Target Coordinates	Targ. Coord. Corrections				Miscellaneous				(5)	WASP-127	RA: 10 42 14.0837 (160.5586821d) Dec: -03 50 6.26 (-3.83507d) Equinox: J2000	Proper Motion RA: 19.133 mas/yr Proper Motion Dec: 17.058 mas/yr Parallax: 0.0062241" Epoch of Position: 2000							
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Template	TA Method					Subarray																										
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Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID																						
1	G395M/F290LP	NRSRAPID	7	6125	1	1	6125	44323.44	275935.7																							
Special Requirements	<p>Phase 0.4304901533053252 to 0.4404628716259385 with period 4.17806513 Days and zero-phase 2458385.175527 HJD</p> <p>Time Series Observation</p> <p>No Parallel Attachments</p>																															

Proposal 10786 - Observation 4 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 4</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Ephemeris from Kokori+ 2023. Phase constraints assuming minimum of 3.88hr on target before mid eclipse and e=0.0133. No suitable TA star so we will blindly point. 05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
Diagnostics	<p>(Observation 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.</p> <p>(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
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Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID																						
	1	G395M/F290LP	NRSRAPID	10	3475	1	1	3475	34550.118	275935.8																						
Special Requirements	<p>Phase 0.4121533545450296 to 0.42644114580205444 with period 2.91624268 Days and zero-phase 2455631.47279 HJD</p> <p>Time Series Observation</p> <p>No Parallel Attachments</p>																															

Proposal 10786 - Observation 5 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 5</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Phase constraints calculated with exoCTK assuming $e=0.04$ and at least 3 hours on target pre mid-eclipse. Ephemeris from Kokori+ 2023. No suitable TA star so we will blindly point. 05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>									
Diagnostics	<p>(Observation 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.</p> <p>(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>									
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous	
	(7)	HAT-P-30	RA: 08 15 47.9802 (123.9499175d) Dec: +05 50 12.35 (5.83676d) Equinox: J2000			Proper Motion RA: -17.231 mas/yr Proper Motion Dec: 23.875 mas/yr Parallax: 0.0048037" Epoch of Position: 2000				
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Star</i> <i>Description=[Exoplanet Systems]</i> <i>Extended=NO</i></p>									
Template	TA Method					Subarray				
	NONE					SUB2048				
Spectral Elements	#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID
	1	G395M/F290LP	NRSRAPID	12	2175	1	1	2175	25548.594	275935.11
Special Requirements	<p>Phase 0.4216577120870891 to 0.43648253678166915 with period 2.81060097 Days and zero-phase 2457825.80333 HJD</p> <p>Time Series Observation</p> <p>No Parallel Attachments</p>									

Proposal 10786 - Observation 6 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 6</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Phase constraints calculated with exoCTK assuming $e=0.0072$ and $w=96$ (Zhao+ 2021 Spitzer eclipse) and a minimum of 3.9hr on target before mid-eclipse.. Ephemeris from Kokori+ 2023. Central pixel in TA image is saturated, but this has been done many times by now without issue. 05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
	<p>(Observation 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.</p> <p>(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
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	#	Target	TA Method	Subarray	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	Optional ETC ID																					
1	SAME	WATA	SUB32	F110W	NRSRAPID	3	1	1	0.08	275935.13																						
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Proposal 10786 - Observation 6 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Special Requirements

Phase 0.3900250696652609 to 0.4094048407399973 with period 2.150008197 Days and zero-phase 2456265.154123 HJD
Time Series Observation
No Parallel Attachments

Proposal 10786 - Observation 7 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 7</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Target is too bright for M so we use the H grating. Ephemeris from Kokori+ 2023. Phase constraints from exoCTK assuming a circular orbit and at least 4.2hr on target before mid eclipse. No suitable TA star so we will blindly point. 05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																			
Diagnostics	<p>(Observation 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.</p> <p>(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																			
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1	G395H/F290LP	NRSRAPID	7	5125	1	1	5125	37086.96	275935.14											
Special Requirements	<p>Phase 0.4093462830354942 to 0.42458220185305817 with period 2.7347656 Days and zero-phase 2459109.138447 HJD</p> <p>Time Series Observation</p> <p>No Parallel Attachments</p>																			

Proposal 10786 - Observation 8 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Wed May 27 18:00:12 GMT 2026

Observation	<p>Proposal 10786, Observation 8</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Ephemeris from Ivshina & Winn 2022.</i></p> <p><i>Central pixel in TA image is saturated, but this has been done many times by now without issue.</i></p> <p><i>Phase constraints calculated with exoCTK assuming a circular orbit and a mimum of 4.4hr on target before mid-eclipse.</i></p> <p><i>05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
Diagnostics	<p>(Observation 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.</p> <p>(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
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1	SAME	WATA	SUB32	F110W	NRSRAPID	3	1	1	0.08	275935.17																						
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#	Grating/Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Total Dithers	Total Integrations	Total Exposure Time	Optional ETC ID																							
1	G395M/F290LP	NRSRAPID	20	1975	1	1	1975	37450.898	275935.21																							

Proposal 10786 - Observation 8 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Special Requirements

Phase 0.4233893885827437 to 0.4358463985692895 with period 3.3448369 Days and zero-phase 2456927.0692 HJD
Time Series Observation
No Parallel Attachments

Observation	<p>Proposal 10786, Observation 9</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec Bright Object Time Series</p> <p><i>Comments: Ephemeris from Kokori+ 2023.</i></p> <p><i>Phase constraints calculated with exoCTK assuming $e=0.0447$ and a minimum of 3.7 hrs on target before mid-eclipse.</i></p> <p><i>Central pixel in TA image is saturated, but this has been done many times by now without issue.</i></p> <p><i>05/27/26 - Added extra 45 minutes of pre-eclipse baseline to aid eclipse mapping.</i></p>																															
Diagnostics	<p>(Observation 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.</p> <p>(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p>																															
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Proposal 10786 - Observation 9 - UNITY: A Uniform JWST/NIRSpec Investigation of Hot-Jupiter Dayside Emission Across the Temper...

Special Requirements

Phase 0.29137930054548256 to 0.32955589434956367 with period 1.091419179 Days and zero-phase 2457036.706177 HJD
Time Series Observation
No Parallel Attachments