



# STScI Town Hall




**Hannah Diamond-Lowe**

on behalf of the Rocky Worlds Core Implementation Team



4 February 2026

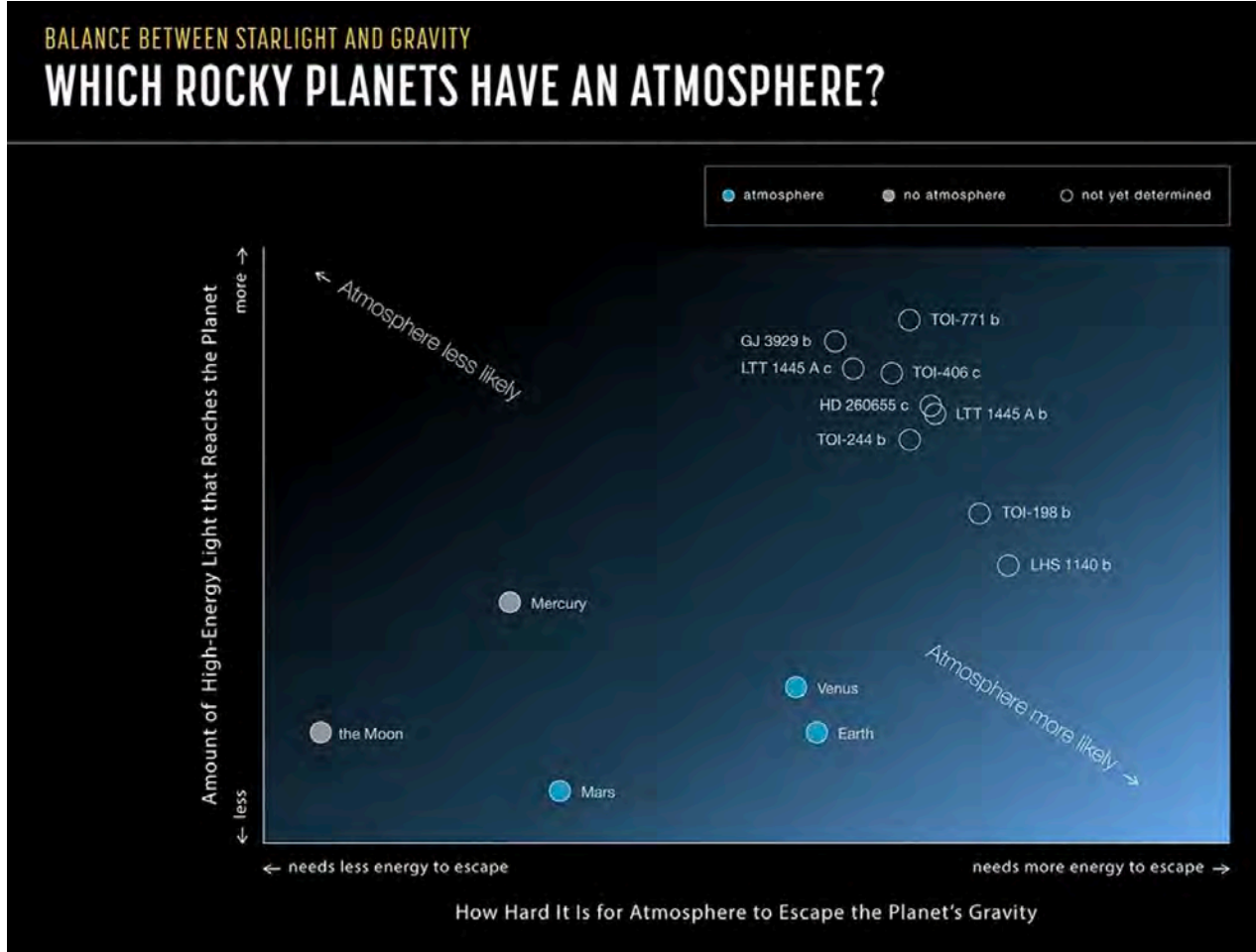
# The Rocky Worlds DDT Overview

-  **Main aim:** look for **evidence of atmospheres** in rocky exoplanets orbiting **M-dwarf stars**.
-  **How?** **500 hours** of JWST for atmospheric characterization + **250 HST/UV** orbits for stellar characterization.
-  **Who?** **Core Implementation Team (CIT)** deals with data + community (at STSCI); **Science Advisory Council (SAC)** advises the CIT.




# The Rocky Worlds DDT Targets

There are **9 targets** in  **ROCKY WORLDS**



 **Final sample announced 6 weeks before JWST Cycle 5 deadline (4 Sept. -- 15 Oct.)**

 **Target selection process shared via information session with the community (see [here](#)).**

 **Currently working towards: scheduling observations for most targets before Cycle 6 Call for Proposals**

[Figure credits:](#) NASA, ESA, CSA, Margaret Carruthers (STScI)

# Website: [rockyworlds.stsci.edu](http://rockyworlds.stsci.edu)

Visit our website for up-to-date information and links to program information, reports, and data products



**Continuous updates:** News, announcements, public presentations



**Program information:** Overview, observation strategy and explanations, links to visit information



**Data resources:** Visualizations, note books, and links to downloadable data from MAST



# Website: [rockyworlds.stsci.edu](http://rockyworlds.stsci.edu) - Status page

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**Status information:** Detailed status for every target and observation



Individual program details, **scheduling timeline & reports.**



Access to **quick-look information & deep-dive data reports.**



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All data lives in MAST — including high-level science data products (HLSP).

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## Rocky Worlds DDT ("ROCKY-WORLDS")

**Primary Investigator:** Nestor Espinoza, Hannah Diamond-Lowe  
**HLSP Authors:** Taylor Bell, Leonardo A. Dos Santos  
**Released:** 2025-09-17  
**Updated:** 2025-10-22  
**Primary Reference(s):** [rockyworlds.stsci.edu](https://rockyworlds.stsci.edu)  
**DOI:** [10.17909/qsyr-ny68](https://doi.org/10.17909/qsyr-ny68)  
[Read Me](#)

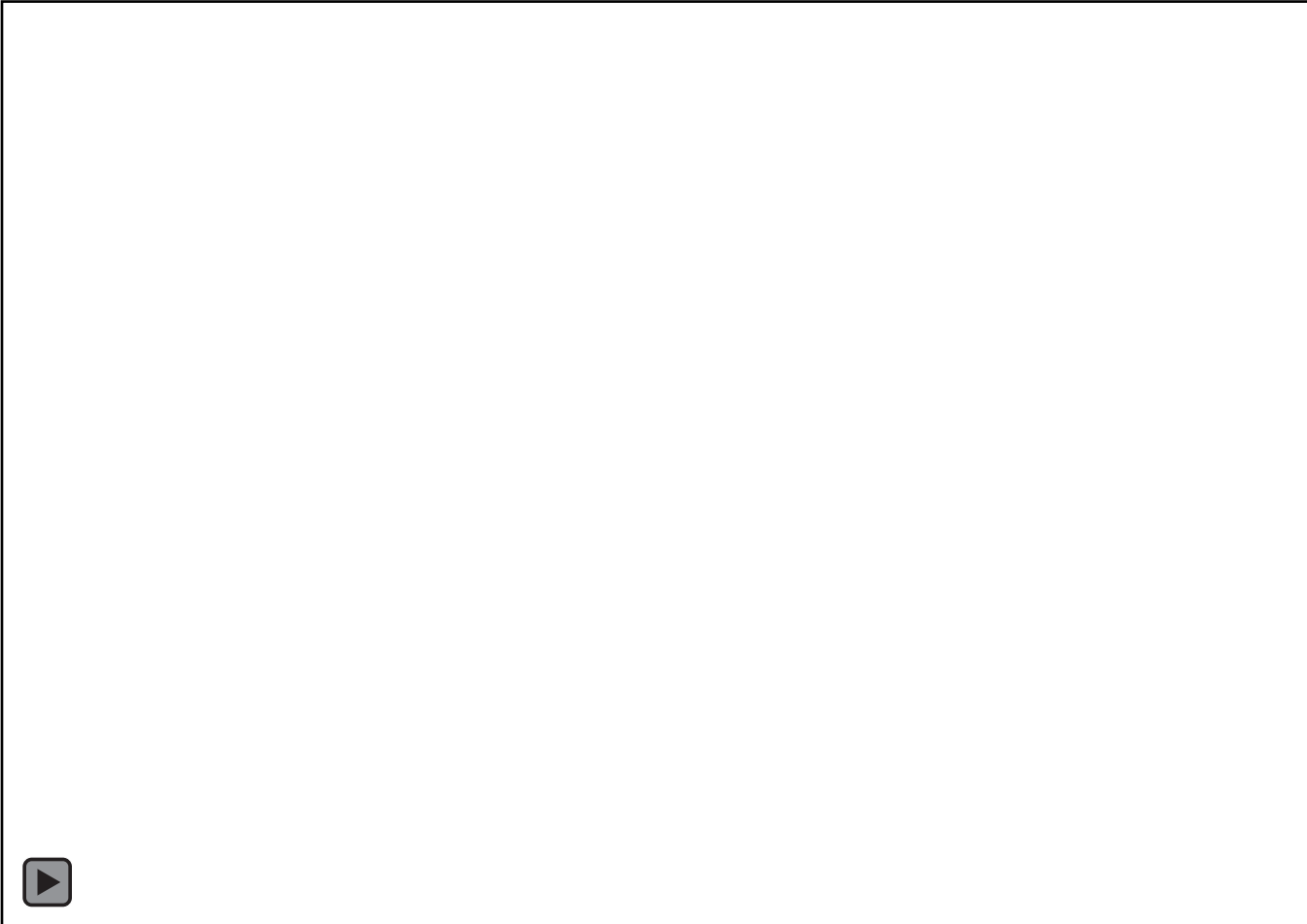
**Source Data:**




- JWST DD [9234](#), [9235](#)
- JWST Source Data DOI: [10.17909/c2|x-a977](https://doi.org/10.17909/c2|x-a977)
- HST DD [17903](#), [17904](#)
- HST Source Data DOI: [10.17909/8pvd-9663](https://doi.org/10.17909/8pvd-9663)

A plot titled 'Gj 3929 b Raw Measurements' showing five stacked time-series plots. The x-axis for all plots is 'Time (BJD\_TDB - 2460888)' ranging from 0.35 to 0.55. The y-axes are labeled 'Flux', 'x', 'y', 'x Width', and 'y Width'. The 'Flux' plot shows a dense band of points between 0.998 and 1.002. The 'x' plot shows points between 69.18 and 69.20. The 'y' plot shows points between 61.44 and 61.48. The 'x Width' plot shows points between 1.88 and 1.89. The 'y Width' plot shows points between 1.93 and 1.94. A navigation bar at the top right of the plot area shows '< 1 / 3 >'.

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-  **All data lives in MAST** — including high-level science data products (HLSP).
-  **Code to download and plot HLSPs** on your own machine.
-  Access to **quick-look information & deep-dive data reports.**

# Rocky Worlds Program Status

Observations in progress

Parent Star	Planet	Radius (R <sub>⊕</sub> )	Mass (M <sub>⊕</sub> )	Period (Days)	Kmag	Teff (K)	a/R <sub>★</sub>	R <sub>p</sub> /R <sub>★</sub>	Teq (K) ↑	Priority Metric <sup>†</sup>
LHS-1140	LHS-1140 b	1.73	5.6	24.74	8.8	2988	94.2	0.073	218	0.0762
TOI-198	TOI-198 b	1.44	3.91	10.22	7.9	3650	49.0	0.03	368	0.1581
LTT-1445 A	LTT-1445 A b	1.32	2.73	5.36	6.5	3340	30.2	0.045	430	-0.0503
TOI-244	TOI-244 b	1.52	2.68	7.4	8.0	3433	28.1	0.033	458	-0.0457
LTT-1445 A	LTT-1445 A c	1.10	1.37	3.12	6.5	3340	21.1	0.036	514	-0.2283
HD 260655	HD 260655 c	1.53	3.09	5.71	5.9	3803	23.4	0.032	556	-0.0687
TOI-771	TOI-771 b	1.42	2.96	2.33	9.7	3201	15.7	0.054	571	-0.2284
TOI-406	TOI-406 c	1.32	2.08	3.31	8.8	3392	17.6	0.03	572	-0.1705
GJ-3929	GJ-3929 b	1.09	1.21	2.62	7.9	3384	16.8	0.033	584	-0.2937

# Rocky Worlds Program Status

Observations in progress  
Scheduling almost complete

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# Rocky Worlds Program Status

Observations in progress

Scheduling almost complete

Scheduling in progress

Scheduling on hold until more data will allow us to better constrain orbit


Parent Star	Planet	Radius ( $R_{\oplus}$ )	Mass ( $M_{\oplus}$ )	Period (Days)	Kmag	Teff (K)	a/ $R_{\star}$	$R_p/R_{\star}$	Teq (K) $\uparrow$	Priority Metric <sup>†</sup>
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# Rocky Worlds Program Status – GJ 3929 b

New (simultaneous) observations from JWST and HST from over the weekend!


SPACE TELESCOPE LIVE

## What is Hubble observing?

 Target: **GJ-3929**  
Target Category: **Not Applicable**  
Research Program: **Rocky Worlds DDT: HST Observations of GJ 3929**

**In Progress** ⓘ Start Time: **Friday, January 30, 2026 at 20:56:25 (UTC)**


Sky Map Details +



Navigation: +, -, [ ]


SPACE TELESCOPE LIVE

## What is Webb observing?

 Target: **GJ3929**  
Target Category: **Star**  
Research Program: **Rocky Worlds DDT: JWST Observations of GJ 3929 b**

**In Progress** ⓘ Start Time: **Friday, January 30, 2026 at 21:35:08 (UTC)**

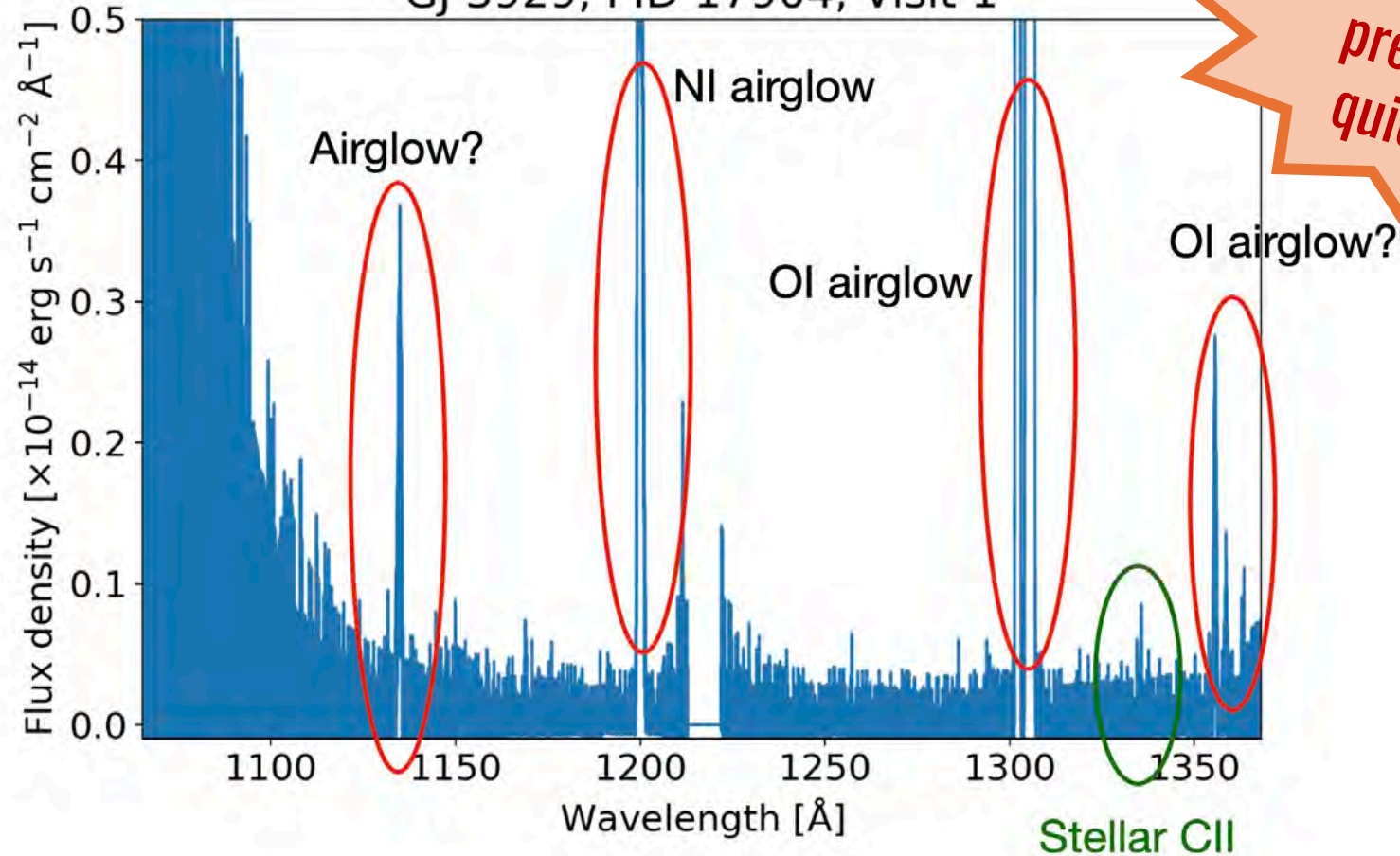
Sky Map Details +



Navigation: +, -, [ ]

# Rocky Worlds Program Status – GJ 3929 b

New (simultaneous) observations from JWST and **HST** from over the weekend!  
GJ 3929, PID 17904, Visit 1



*Super preliminary quick-look*

Visit 1 COS/G130M

PASS

2026

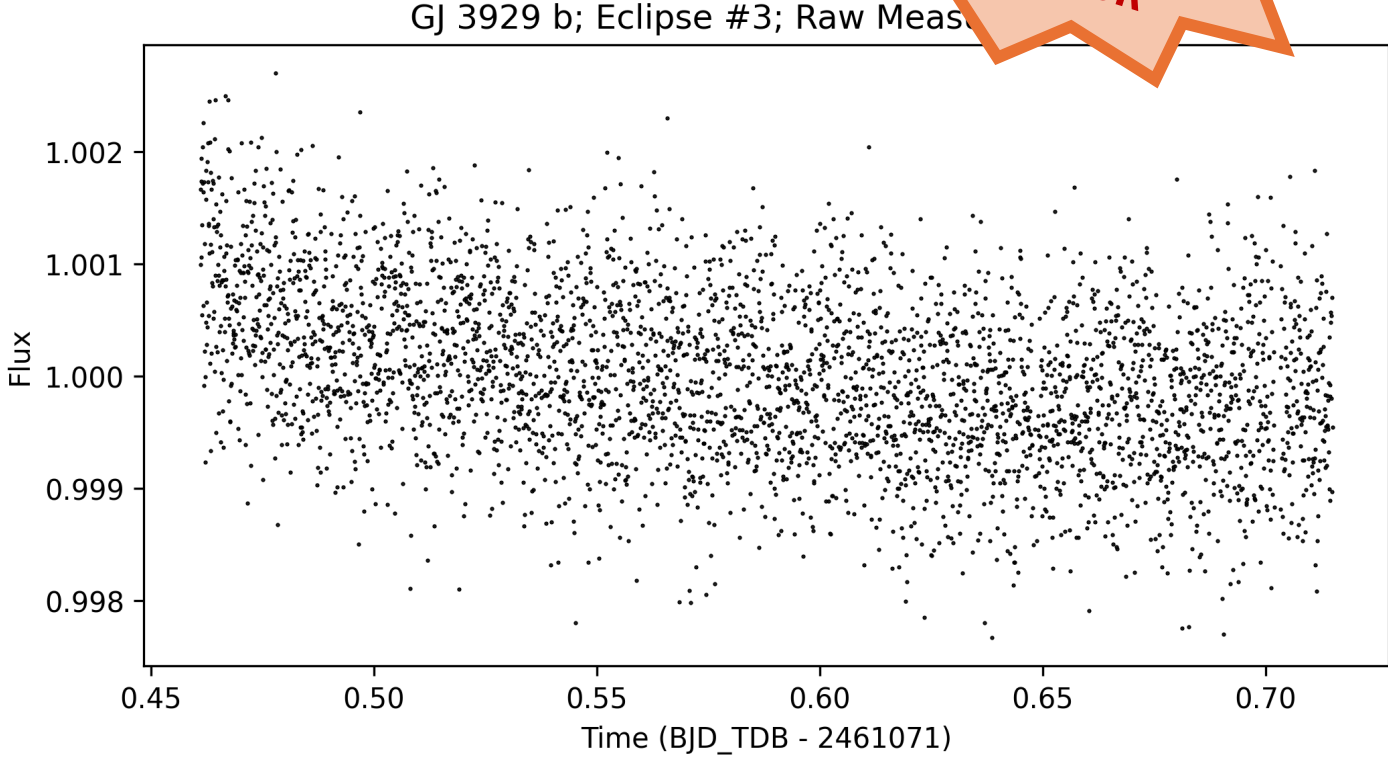
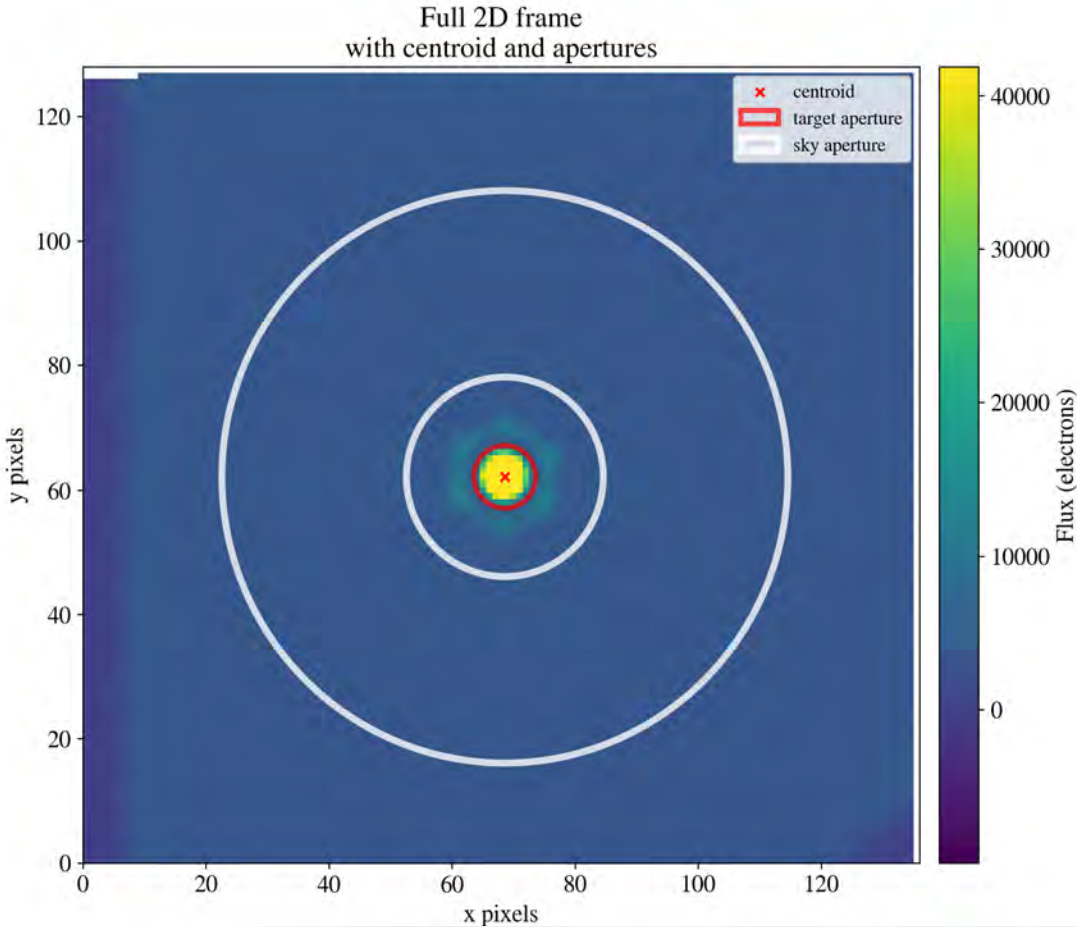
04 FEB

Observations executed normally. Spectrum is low S/N but matches ETC prediction for single visit.

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*Super preliminary quick-look*

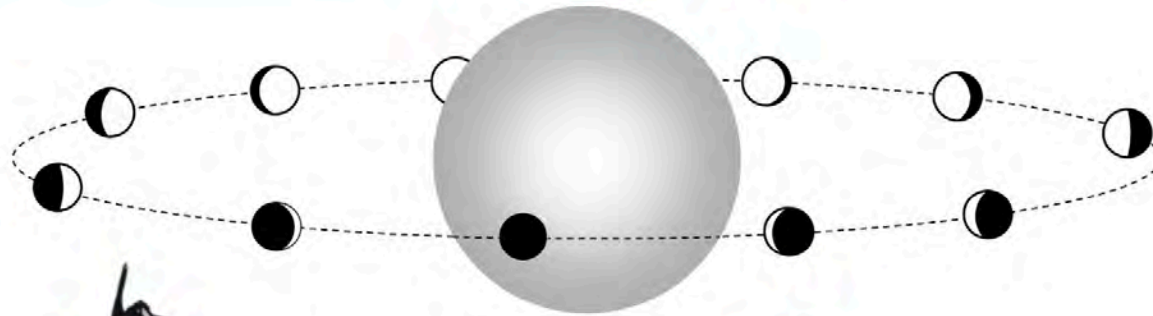


Eclipse 3 PASS 2026 04 FEB Observations executed normally. Good data quality; detailed analyses ongoing.



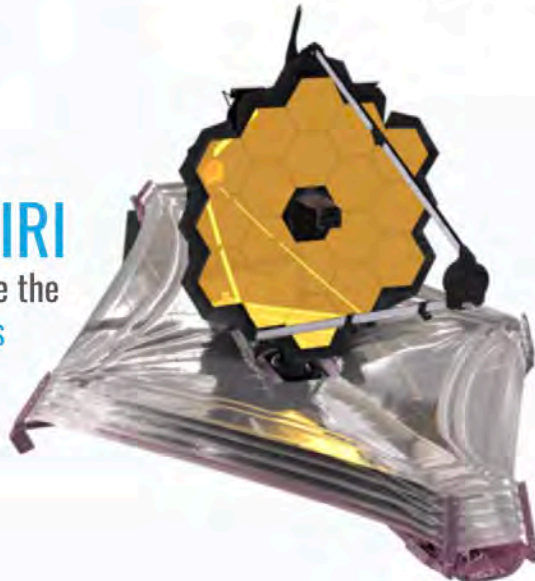
# ROCKY WORLDS

Focus on secondary eclipses  
of **transiting exoplanets**  
orbiting **M dwarfs**



**JWST MIRI**

To characterize the  
exoplanets



**HST UV**

To characterize the  
host stars