

# Dr. Brittany E. Miles

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## Education

- 2022 Ph.D., Astronomy & Astrophysics, University of California, Santa Cruz  
2018 M.S, Astronomy & Astrophysics, University of California, Santa Cruz  
2016 B.S., Physics, Geophysics and Planetary Physics Minor, UCLA

## Research Positions and Fellowships

- 2025 – Assistant Professor, Steward Observatory, University of Arizona  
2022 – 2025 51 Pegasi b Fellow, Steward Observatory, University of Arizona  
2022 – 2025 Presidential Postdoctoral Fellow, University of Arizona  
2022 Presidential Postdoctoral Fellow, University of California, Irvine  
2017 – 2021 NSF Graduate Research Fellowship  
2016 – 2017, 2022 Eugene Cota-Robles Graduate Fellowship  
2016 UCSC Regents Graduate Fellowship  
2016 Other Worlds Laboratory Graduate Fellowship  
2015, 2016 Initiative for Maximizing Student Development Scholar  
2015 CARE Fellow  
2014 CARE Scholar  
2011 – 2015 UCLA Black Alumni Winston C. Doby Legacy Scholar

## Awards and Honors

- 2020 Barbara Walker Best Paper Award (UCSC Astronomy)  
2019 Excellence in Mentoring Award (UCSC Astronomy)  
2018 UCSC Astronomy Department Whitford Prize

## First Author Publications

1. **Miles, B.E.**, Ertel, S., Wagner, K., Apai, D. (2024) “Sensitivity and Performance of LBTI/NOMIC Spectroscopy: Prospects for 10- and 30-meter class Mid-IR Exoplanet Science” SPIE Proceedings 13096-224
2. **Miles, B.E.**, and the High Contrast Imaging of Exoplanets and Exoplanetary Systems with JWST Collaboration (2023) “The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems II: A 1 to 20 Micron Spectrum of the Planetary-Mass Companion VHS 1256-1257 b” ApJL, 946, L6
3. **Miles, B.E.**, Hinz, P. M., Skemer, A. J., Martin, E.C., Stelter, R.D. (2021) “Testing a 10 micron HgCdTe Detector for Ground-Based Exoplanet Science”, SPIE Proceedings Volume 11823
4. **Miles, B. E.**, Skemer, A. J. I., Morley, C. V., Marley, M. S., Fortney, J.J. , Allers, K.N., Faherty, J. K., Geballe, T. R., Visscher, C., Schneider, A. C., Lupu, R., Freedman, R. S. , BJORAKER, G. L. (2020)

“Observations of Disequilibrium CO Chemistry in the Coldest Brown Dwarfs” AJ, 160, 63

5. Miles, B. E., Skemer, A. J., Barman T. S., Allers, K. N., Stone, J. M. (2018) “Methane in Analogs of Young, Directly Imaged Exoplanets”, ApJ, 869, 18
6. Miles, B. E. & Shkolnik, E. L. (2017). “HAZMAT II: Ultraviolet Variability of Low-Mass Stars in the GALEX Archive”, AJ, 154, 67
7. Miles, B. E., Roberge, A., & Welsh, B. (2016). “UV Spectroscopy of Star-Grazing Comets Within the 49 Ceti Debris Disk.”, ApJ, 824, 126

[\*\*Link for First and N-th author publications\*\*](#) (38 publications total)

### **Grants and Research Funds**

- 2025 Habitability in Color: Prototyping a Lenslet Array for Characterizing Earth-like Planets,  
Heising-Simons Foundation, **\$128,333**
- 2023 JWST Cycle 2 Support, Probing the Depths Program, **\$92,229**
- 2023 Steward Observatory Internal Grant for Lab Testing, **\$20,000**
- 2022 51 Pegasi b Fellowship, **\$353,337**
- 2018 Osterbrock Mini-Grant: Supporting Underrepresented Womxn-Identified Students on  
Their Path to Graduate School, **\$3900**

### **Colloquia, Conference Talks, and Seminars**

June 2024	Cool Stars 22 Conference, UC San Diego
May 2024	UC San Diego Astronomy and Astrophysics Colloquium
Apr 2024	<b>Invited Speaker</b> , SEEC Symposium: Pathways to Characterizing Non-Transiting Planets
Apr 2024	<b>Invited Speaker</b> , LBTO Science Conference – EXO24
Nov 2023	Yale Astronomy Department, Colloquium
Jun 2023	<b>Invited Review</b> , Exoclimes VI, University of Exeter
Jun 2023	Exoplanets and Habitability Seminar, ETH Zürich
May 2023	AMNH Astro Seminar, American Museum of Natural History
Apr 2023	<b>Invited Speaker</b> , Planetary Systems and the Origins of Life in the Era of JWST, STSci
Apr 2023	Steward Observatory Colloquium, University of Arizona
Apr 2023	Carnegie Colloquium Series, Carnegie Observatories
Feb 2023	Origins Seminar, University of Arizona
Jan 2023	241 <sup>st</sup> AAS Meeting
Dec 2022	First Science Results from JWST Conference, STSci
Dec 2021	Astronomy and Space Science Seminar, University of Kansas
Sep 2021	Stars and Exoplanets Seminar, University of Hawaii
Aug 2021	SPIE Optics and Photonics
Apr 2021	Graduate Student Postdoc Seminar, UC Berkeley
Apr 2021	Astronomy Lunch Seminar, UC Berkeley
Apr 2021	Astronomy Seminar, University of Connecticut
Dec 2020	Exoplanet Talk Seminar, The Ohio State University

Dec 2020	Planetary Science Seminar, UC Berkeley and UCLA
Dec 2020	Planetary Science Seminar, California Institute of Technology
Oct 2020	Network of Young Researchers in Instrumentation for Astronomy
Aug 2020	Star, Planets, and Formation Summer Speaker Series, University of Michigan
Aug 2020	Exoplanet Journal Club, Jet Propulsion Laboratory
Jun 2020	ExoPAG 22
Feb 2020	Exo-Update Seminar, UT Austin
Oct 2019	BDEXOCON
Sep 2019	Bay Area Exoplanet Science Meeting
Sep 2018	Keck Science Meeting
Mar 2017	Bay Area Exoplanet Science Meeting

## Teaching Experience

### UC Santa Cruz

- Spring 2020 TA - ASTR 3 Introductory Astronomy: Planetary Systems  
 Spring 2019 TA - ASTR 9 Introduction to Research in Physics and Astrophysics

### University of Arizona

- Fall 2023 ASTR 492 Independent Study  
 Spring 2024 ASTR 492 Independent Study  
 Summer 2024 ASTR 492 Independent Study  
 Summer 2025 ASTR 492 Independent Study  
 Fall 2025 PTYS 900 Independent Graduate Research (Fuda Nguyen)  
 Spring 2026. ASTR 302 Introduction to Observational Astronomy

## Research Students

**Animesh Garg** (2023 – 2025) (Undergraduate)  
 Project – ["Jupiter as an Exoplanet seen by HST"](#)

**Ella Butler** (2025) (Undergraduate)  
 Project – ["Using Atmospheric Models for the TEMPO Exposure Time Calculator"](#)

**Ruben Huerta** (2025 –) (Undergraduate)  
 Project – "Assessing the Seek Thermal Mosaic Core for Ground-Based Astronomy"

**Rebekah Boisvert** (2025 –) (NASA Space Grant Intern)  
 Project – "Mid-Infrared Observations of a Brown Dwarf Binary around a Sun-Like Star"

## Observing Programs

- Large Binocular Telescope: LBTI/ALES (PI, 3 nights) 2025B  
 JWST: NIRSpec BOTS (Co-PI, 112 hours) Cycle 4  
 Large Binocular Telescope: LBTI/ALES (PI, 3 nights) 2025A

Large Binocular Telescope: LBTI/LMIRCam (PI, 1 nights) 2024B

JWST: NIRCam Coronography (Co-PI, 7.6 hours) Cycle 3

Large Binocular Telescope: LBTI/NOMIC (PI, 4 nights) technical time 2023B

JWST: NIRSpec FS (PI, 7.6 hours) Cycle 2

JWST: NIRSpec IFU (Co-PI, 11.0 hours) Cycle 2

JWST: NIRSpec BOTS (Co-PI, 14.0 hours) Cycle 1

Keck Observatory: NIRSPEC (4 nights), NIRES (2 nights)

Gemini Observatory: GNIRS, 2018B (PI, 2 hours), 2016B and 2017A (50 queue mode hours)

### **Community Service**

Giant Magellan Telescope Scientific Advisory Committee

Exoclimes Scientific Organizing Committee (Université de Montréal, QC, CA)

TIMESTEP Graduate School Application Reviewer

JWST External TAC Member Cycles 2 and 3

NASA FINESST Exoplanets Panel Reviewer

Referee: The Astrophysical Journal and Astronomy & Astrophysics

### **Media and Art**

Planetarium Show - [Rogue Objects \(in development\)](#), Advisory Board Member

Article - [The People Behind Webb](#)

Article - [NASA's Webb Spots Swirling, Gritty Clouds on Remote Planet](#)

Podcast Episode - [Starts with a Bang Podcast "The Line Between Star and Planet"](#)

### **Other Experience**

Maricopa County Department of Transportation (MCDOT) Lunch & Learn,

Phoenix, AZ, July 2023

Black in Astro Week: Pursuing Careers in Instrumentation Panel

Virtual, June 2023