

Dr. Brittany E. Miles

Email: bemiles@arizona.edu

Website: bemiles.github.io

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](#) (33 publications total)

Grants and Research Funds

2023 JWST Cycle 2 Support, **\$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	Invited Speaker , SEEC Symposium: Pathways to Characterizing Non-Transiting Planets
Apr 2024	Invited Speaker , LBTO Science Conference – EXO24
Nov 2023	Yale Astronomy Department, Colloquium
Jun 2023	Invited Review , Exoclimates VI, University of Exeter
Jun 2023	Exoplanets and Habitability Seminar, ETH Zürich
May 2023	AMNH Astro Seminar, American Museum of Natural History
Apr 2023	Invited Speaker , 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 st 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 Graduate Research

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 "

Observing Experience and Programs

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 Coronagraphy (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

Exoclines 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