

# Brittany E. Miles

Email: [bmiles@ucsc.edu](mailto:bmiles@ucsc.edu)

Website: [bemiles.github.io](http://bemiles.github.io)

## Education

2019 – present PhD, Astronomy & Astrophysics, University of California, Santa Cruz  
2016 – 2018 M.S, Astronomy & Astrophysics, University of California, Santa Cruz  
2011 – 2016 B.S., Physics, Geophysics and Planetary Physics Minor

## Fellowships

2022 – current 51 Pegasi b Fellow, Steward Observatory  
2022 – current Presidential Postdoctoral Fellow, University of Arizona  
2022 Presidential Postdoctoral Fellow, University of California, Irvine  
2018-2021 NSF Graduate Research Fellowship  
2016-2018, 2022 UCSC Eugene Cota-Robles Graduate Fellowship  
2016 UCSC Regents Graduate Fellowship  
2016, 2017 National Association of University Women Graduate Fellowship  
2016 Other Worlds Laboratory Graduate Fellowship  
2015, 2016 Initiative for Maximizing Student Development Scholar  
2014 - 2015 CARE Fellow and 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 Whitford Prize, UCSC Astronomy  
2018 Osterbrock Mini-Grant: Supporting Underrepresented Womxn-Identified Students on Their Path to Graduate School, \$3900

## First Author Publications

1. **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
2. **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. , Bjraker, G. L. (2020) “*Observations of Disequilibrium CO Chemistry in the Coldest Brown Dwarfs*” AJ, 160, 63
3. **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
4. **Miles, B. E.** & Shkolnik, E. L. (2017). “*HAZMAT II: Ultraviolet Variability of Low-Mass Stars in the GALEX Archive*”, AJ, 154, 67
5. **Miles, B. E.**, Roberge, A., & Welsh, B. (2016). “*UV Spectroscopy of Star-Grazing Comets Within the 49 Ceti Debris Disk*”, ApJ, 824, 126

## Selected Co-Author Publications

1. Wang, J.J., Ruffio, J., Morris E., Delorme, J., Jovanovic, N., Pezzato, J., Echeverri, D., Finnerty, L., Hood, C., Zanazzi, J. J., Bryan, M.L., Bond, C.Z., Cetre, S., Martin, E. C., Mawet, D., Skemer, A., Baker, A., Xuan, J.W., Wallace, J.K., Wang, J., Bartos, R., Blake, G.A., Boden, A., Buzard, C., Calvin, B., Chun, M., Doppmann, G., Dupuy, T.J., Duchene, G., Feng, Y.K., Fitzgerald, M.P., Fortney, J., Freedman, R.S., Knutson, H., Konopacky, Q., Lilley, S., Liu, M.C., Lopez, R., Lupu, R., Marley, M.S., Meshkat, T., **Miles, B.E.**, Millar-Blanchaer, M., Ragland, S., Roy, A., Ruane, G., Sappéy, B., Schofield, T., Weiss, L., Wetherell, E., Wizinowich, P., and Ygouf, M. (2021) “*Detection and Bulk Properties of the HR 8799 Planets with High Resolution Spectroscopy*” AJ, 162, 4

2. Deno Stelter, R, Skemer, A.J., Sallum, S., Kupke, R., Hinz, P., Mawet, D., Jensen-Clem, R., Ratliffe, C., MacDonald, N., Deich, W., Kruglikov, G., Kassis, M., Lyke, J., Briesemeister, Z., **Miles, B.**, Gerard, B., Fitzgerald, M., Brandt, T., and Marois, C. (2020) "Update on the preliminary design of SCALES: the Santa Cruz Array of Lenslets for Exoplanet Spectroscopy", SPIE Proceedings Volume 1147
3. Morley, C.V, Skemer, A.J, **Miles, B.E**, Line, M.R., Lopez, E.D., Brogi, M., Freedman, R.S. Marley, M.S. (2019) "Measuring the D/H Ratios of Exoplanets and Brown Dwarfs" ApJL, 882, 2
4. Crossfield, I.J.M., Lothringer, J.D., Flores, B., Mills, E.A.C., Freedman, R., Valverde, J., **Miles, B.E.**, Guo, X, Skemer, A. (2019) "Unusual Isotopic Abundances in a Fully Convective Stellar Binary" ApJL, 871, 1
5. Morley, C.V., Skemer, A.J., Allers, K. N., Marley, M. S., Faherty, J. K., Visscher, C., Beiler, S. A., **Miles, B.E.**, Lupu, R., Freedman, R.S., Fortney, J.J., Geballe, T.R., Bjoraker, G.L. (2018) "An L Band Spectrum of the Coldest Brown Dwarf" AJ, 858, 2

### **Selected Seminar and Conference Talks**

#### Atmospheric Mixing in Cool Exoplanet Analogs

- Sep 2021 Stars and Exoplanets Seminar, University of Hawaii
- 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
- Aug 2020 Star, Planets, and Formation Summer Speaker Series, University of Michigan
- Aug 2020 Exoplanet Journal Club, JPL

#### Testing a 10 micron HgCdTe Detector for Ground-Based Exoplanet Science

- Dec 2021 Astronomy and Space Science Seminar, University of Kansas
- Aug 2021 SPIE Optics and Photonics
- Apr 2021 Lunch Seminar, UC Berkeley
- Oct 2020 Network of Young Researchers in Instrumentation for Astronomy

#### Choosing a Dewar for Mid-IR Detector Testing

- Apr 2021 Graduate Student Postdoc Seminar, UC Berkeley

#### M-band Observations of the Coldest Brown Dwarfs

- Jun 2020 ExoPAG 22

#### Disequilibrium CO Chemistry in the Coldest Brown Dwarfs

- Feb 2020 Exo Update, UT Austin
- Oct 2019 BDEXOCAN, University of Delaware
- Sep 2019 Bay Area Exoplanet Science Meeting

#### Methane in Analogs of Young Directly Imaged Exoplanets

- Sept 2018 Keck Science Meeting

### **Teaching Experience**

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

### **Service and Other Experience**

- Oct 2019 – Mar 2020 Sustainability Graduate Representative
- Oct 2017 – Set 2018 Junior Graduate Representative and Grad Hiring Committee
- Jan 2017 – Jun 2018 Matriculating, Influencing, Networking and Triumphant (M.I.N.T.) Program

May 2015 – Jun 2016 UCLA Physical Sciences Diversity Committee  
How to Thrive in the Sciences at UCLA and Beyond – Invited Speaker and Moderator  
[“Change from Within”](#) by Aylin Woodward and Sarah McQuate - Interview