

# MARTA L. BRYAN

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## APPOINTMENTS

51 Pegasi b Postdoctoral Fellow, UC Berkeley Astronomy Department 2018 - present  
Postdoctoral Scholar, Caltech summer 2018

## EDUCATION

**PhD in Astrophysics, California Institute of Technology** May 2018  
Advisor: Prof. Heather Knutson  
Thesis: *Lurking in the Shadows: Wide-Separation Gas Giants as Tracers of Planet Formation*

**MS in Astrophysics, California Institute of Technology** June 2014

**BA *cum laude* with High Honors in Astrophysics, Harvard University** June 2012  
Undergraduate Thesis Advisor: Prof. David Latham  
Thesis: *Characterizing Qatar-2b: A Hot Jupiter Orbiting a K Dwarf*

## RESEARCH INTERESTS

Exploring the formation, evolution, and architectures of planetary systems  
Characterizing exoplanet atmospheres using high-resolution spectroscopy  
High-contrast AO imaging of exoplanets and brown dwarfs  
Constraining the frequencies of gas giants in systems hosting different populations of terrestrial and ice giant planets  
Bridging the gap between radial velocity and direct imaging survey sensitivities to planets using radial velocity trends

## AWARDS AND HONORS

51 Pegasi b Postdoctoral Fellowship 2018  
NASA Hubble Fellowship Program Sagan Fellowship (declined) 2018  
David and Barbara Groce Grant to attend the Exoplanets I meeting in Davos Switzerland, California Institute of Technology 2016  
AAS 2015 International Travel Grant 2015  
National Science Foundation Graduate Research Fellowship Honorable Mention 2014, 2013  
Chambliss Astronomy Achievement Student Award Honorable Mention, AAS 2014  
Moffet Fellowship, California Institute of Technology 2012-2013  
Origins of Life Research Grant, Harvard University 2011-2012  
Leo Goldberg Prize for outstanding undergraduate thesis work, Harvard University 2011  
U.S. Patent Application published 2008

## PUBLICATIONS (6 first author, 13 total)

**Bryan, M. L.**, Knutson, H. A., Fulton, B. J. et al 2018, *An Excess of Jupiter Analogs in Super-Earth Systems*, *AJ*, 157, 2

**Bryan, M. L.**, Benneke, B., Knutson, H. A. et al 2018, *Constraints on the Spin Evolution of Young Planetary Mass Companions*, *Nature Astronomy*, 2, 138-144.

**Bryan, M. L.**, Bowler, B. P., Knutson, H. A. et al. 2016, *Searching for Scatterers: High-Contrast Imaging of Young Stars Hosting Wide-Separation Planetary-Mass Companions*, *ApJ*, 827, 100

- Bryan, M. L.**, Knutson, H. A., Howard, A. W. et al. 2016, *Statistics of Long Period Gas Giant Planets in Known Planetary Systems*, ApJ, 821, 89
- Bryan, M. L.**, Alsubai, K. A., Latham, D. W. et al. 2012, *Qatar-2: A K Dwarf Orbiting by a Transiting Hot Jupiter and a More Massive Companion in an Outer Orbit*, ApJ, 750, 84.
- Bryan, M. L.**, Chapman, G., Hall, D. N. B. et al., 2012, *Investigation of linear-mode photon-counting HgCdTe APDs for astronomical observations*, SPIE Proceedings, 8453, 84532F
- Meshkat, T., Mawet, D., **Bryan, M. L.** et al 2017, *A Direct Imaging Survey of Spitzer Detected Debris Disks: Occurrence of Giant Planets in Dusty Systems*, ApJ, 154, 245.
- Bowler, B., Kraus, A., **Bryan, M. L.** et al 2017, *The Young Substellar Companion ROXs 12 B: Near-Infrared Spectrum, System Architecture, and Spin-Orbit Misalignment*, AJ, 154, 165.
- Ngo, H., Knutson, H. A., **Bryan, M. L.** et al 2017, *No Difference in Orbital Parameters of RV-detected Giant Planets between 0.1 and 5 au in Single versus Multi-stellar Systems*, AJ, 153, 242
- Becker, J. C., Vanderburg, A., Adams, F. C. & 2 coauthors including **Bryan, M. L.** 2017, *Exterior Companions to Hot Jupiters Orbiting Cool Stars Are Coplanar*, AJ, 154, 230.
- Mawet, D., Hirsch, L., Lee, E. J. & 27 coauthors including **Bryan, M. L.** 2018, *Deep Exploration of epsilon Eridani with Keck Ms-band vortex coronagraphy and radial velocities: mass and orbital parameters of the giant exoplanet*, arXiv:1810.03794
- Piskorz, D., Benneke, B., Crockett, N.R., & 10 coauthors including **Bryan, M. L.**, 2016, *Evidence for the Direct Detection of the Thermal Spectrum of the Non-Transiting Hot Gas Giant HD 88133 b*, ApJ, 832, 131
- Ngo, H., Knutson, H. A., Hinkley, S., & 11 coauthors including **Bryan, M. L.**, 2016, *Friends of Hot Jupiters IV Stellar Companions Beyond 50 AU Might Facilitate Giant Planet Formation, but Most are Unlikely to Cause Kozai-Lidov Migration*, ApJ, 827, 8

## OBSERVING TIME AWARDED

Keck 10m Telescopes (NIRSPEC/NIRC2)

17.5 nights

## INVITED SEMINARS/COLLOQUIA

- UChicago Special Seminar, Chicago, IL, February 26 2019
- UCB CIPS Seminar, Berkeley, CA, October 3 2018
- UCSC FLASH Seminar, Santa Cruz, CA, September 29 2017
- UCB CIPS Seminar, Berkeley, CA, September 27 2017
- University of Arizona Origins Seminar, Tucson, AZ, September 18 2017
- UCLA iPLEX Lunch Seminar, LA, CA, May 12 2017
- IPAC Lunch Seminar, Pasadena, CA, March 15 2017
- JPL Astrophysics Luncheon Seminar, Pasadena, CA, March 6 2017
- Cal State LA Physics Colloquium, LA, CA, September 1 2016
- BU Astronomy Lunch Seminar, Boston, MA, April 26 2016

## CONFERENCE TALKS

- 233rd AAS Meeting, Seattle, WA, January 7 2019
- Bay Area Exoplanet Meeting, NASA Ames, CA, September 7 2018
- 51 Pegasi b Summit, Sausalito, CA, August 15 2018
- Combining high-resolution spectroscopy and high-contrast imaging for exoplanet characterization (invited speaker), Pasadena, CA, June 18 2018
- 231st AAS Meeting, dissertation talk, National Harbor, MD, January 9 2018
- Keck Science Meeting, Santa Cruz, CA, September 14 2017
- Inner Solar Systems (invited speaker), 230th AAS Meeting, Austin, TX, June 7 2017
- 229th AAS Meeting, Grapevine, TX, January 6 2017
- ExSoCal, Pasadena, CA, September 22 2016

Exoplanets I, Davos, Switzerland, July 8 2016  
Extreme Solar Systems III, Waikoloa, Hawaii, November 30 2015  
From Super-Earths to Brown Dwarfs: Who's Who, Paris, France, July 2 2015

## STUDENT MENTORING

Wenhao Xuan (Caltech SURF program, Pomona College undergraduate) 2018-present

## TEACHING, OUTREACH, AND SERVICE

AAS Chambliss Judge	2019
Guest lecture for C249: Planetary Astrophysics at UC Berkeley	2018
Referee for A&A, ApJ	2018-present
UCB Climate Advisor	2018-present
Mentor, Caltech Women Mentoring Women Program	2012 - 2018
Junior/Full Member, AAS	2012 - present
SpacePod Interview	April 16, 2017
Harvard University Alumni Interviewer	2016-2017, 2018-present
SOC member for ExSoCal 2016	2016
Teaching Assistant, AY 123: Structure and Evolution of Stars	Fall 2013
AY 126: Interstellar and Intergalactic Medium	Winter 2014
AY 21: Galaxies and Cosmology	Spring 2014