

Aida Behmard

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RESEARCH INTERESTS Chemistry of star and planet formation; origins of life; exoplanet demographics; planet formation and evolution; radial velocities; precision stellar astrophysics, machine learning

EDUCATION **California Institute of Technology**, Pasadena, CA Sept. 2017 – June 2022
Ph.D. Planetary Science

Yale University, New Haven, CT Aug. 2011 – May 2015
B.S. Physics

HONORS AND AWARDS

National Science Foundation Graduate Research Fellowship	2018-2021
Keck Institute for Space Studies Affiliate	2019
Princeton Dept. of Astrophysical Sciences Post-Baccalaureate Fellowship	2015
Harvard Origins Summer Undergraduate Research Prize	2015
Science, Technology, and Research Scholars (STARS II) Fellowship	2014
George J. Schulz Fellowship for the Physical Sciences	2013
Yale College Dean's Undergraduate Research Fellowship	2012

PUBLICATIONS *First-author:*

A. Behmard, E. Petigura, A. Howard (2019), "Data-Driven Spectroscopy of Cool Stars at High Spectral Resolution", *The Astrophysical Journal*, 876, 68

A. Behmard, D. Graninger, E. Fayolle, J. Bergner, K. Öberg (2019), "Desorption Kinetics and Binding Energies of Small Hydrocarbons", *The Astrophysical Journal*, 875, 73

Nth-author:

L. Rosenthal et al. [including **A. Behmard**] (2020), "California Legacy Survey I: The Catalog", *in review*

M. Kosiarek et al. [including **A. Behmard**] (2020), "Physical Parameters of the Multi-Planet Systems HD 106315 and GJ 9827", *in review*

L. Weiss et al. [including **A. Behmard**] (2020), "The TESS-Keck Survey II: Masses of Three Sub-Neptunes Transiting the Galactic Thick-Disk Star TOI-561", *in review*

F. Dai et al. [including **A. Behmard**] (2020), "The TESS-Keck Survey III: An aligned orbit for TOI-1726 c", *The Astronomical Journal*, 160, 4

R. Cloutier et al. [including **A. Behmard**] (2020), "TOI-1235 b: a keystone super-Earth for testing radius valley emergence models around early M dwarfs", *The Astronomical Journal*, 160, 22

P. Dalba et al. [including **A. Behmard**] (2020), "The TESS-Keck Survey I: A Warm Sub-Saturn-mass Planet and a Caution about Stray Light in TESS Cameras", *The Astronomical Journal*, 159, 5

E. Gaidos et al. [including **A. Behmard**] (2019), "Planetesimals Around Stars with TESS (PAST): I. Transient Dimming of a Binary Solar Analog at the End of the

Planet Accretion Era", *MNRAS*, 488, 4465

M.C.Y. Lau, R. Harris, Y. Oh, M. Joo Yi, **A. Behmard**, T.C. Onstott (2018), "Taxonomic and functional compositions impacted by the quality of metatranscriptomic assemblies", *FEMS Microbiology Ecology*, 9, 1235

**INVITED
SEMINARS &
COLLOQUIA**

UC Santa Cruz FLASH Seminar, Santa Cruz, CA (*remote*), Dec. 2020
How Common is Planet Engulfment?

Dix Planetary Science Seminar, Pasadena, CA, May 2020
How Common is Planet Engulfment?

NorCal/Nevada American Association of Physics Teachers Section Meeting,
Sacramento, CA, April 2019
Invited speaker, *postponed due to COVID-19*

Dix Planetary Science Seminar, Pasadena, CA, June 2019
*Drawing Correlations Between Star and Hosted Planet Properties
with the California-Kepler Survey*

Carnegie Observatories Tea Talk, Pasadena, CA, Dec. 2018
Data-Driven Spectroscopy of Cool Stars at High Spectral Resolution

Harvard Origins of Life Summer Research Symposium, Cambridge, MA, Aug. 2015
Desorption Kinetics and Binding Energies of Small Hydrocarbons

Nat'l Optical Astronomy Observatory REU Symposium, Tucson, AZ, Aug. 2013
RESOLVE'd AGN: Refining Nearby Active Galactic Nuclei Classification Techniques

**CONFERENCE
TALKS**

Exoplanet Demographics, Pasadena, CA (*remote*), Nov. 2020
How Common is Planet Engulfment?

Extreme Precision Radial Velocity (EPRV) IV, Grindelwald, Switzerland, Mar. 2019
Data-Driven Spectroscopy of Cool Stars at High Spectral Resolution

Keck Science Meeting, Pasadena, CA, Sept. 2018
Data-Driven Spectroscopy of Cool Stars at High Spectral Resolution

ExSoCal, Pasadena, CA, Sept. 2018
Data-Driven Spectroscopy of Cool Stars at High Spectral Resolution

**TELESCOPE
PROPOSALS**

Keck Observatory (HIRES) – 1 night awarded (Co-I), 2021A
Hot Jupiters: Nature or Nurture?

Keck Observatory (HIRES) – 1 night awarded (Co-I), 2020B
How Common is Planet Engulfment?

Hubble Space Telescope – 12 months awarded (Co-I), 2016
*High spatial resolution imaging of AGN-driven super-bubbles in two low-redshift
quasars*

TEACHING

Teaching Assistant

- Held office hours, wrote problem set solutions, graded homework and exams, and substituted for instructor on multiple occasions
 - Ay/Ge 117: Bayesian Statistics and Data Analysis Winter 2020, 2021
 - Ay/Ge 133: Formation and Evolution of Planetary Systems Spring 2019

K-2 Volunteer Science Teacher, Pasadena, CA

Dec. 2017 - present

- Planned and taught bi-weekly science lessons for K-2 students at Cleveland and Madison Elementary through the Caltech Center for Teaching Learning and Outreach (CTLO) Visiting Scientists program
- Lessons are designed to fit Pasadena Unified School District science curriculum standards
- Transitioned to planning and teaching Zoom lessons for the 2020-2021 academic year

PROFESSIONAL SERVICE Dix Caltech Planetary Science Co-Organizer Oct. 2020 - present
 Caltech Stars and Planets Astro-ph Co-Organizer Oct. 2019 - present
 Referee for *ApJ* Sept. 2019 - present

OUTREACH & SERVICE Caltech

- Title IX Council Member May 2019 - present
- WAVE Program Mentor and Council Member June 2019 - present
- Women in GPS (WinGS) Planetary Science Rep. May 2019 - present
- Graduate Student Council (GSC) Diversity Chair May 2018 - present
- Women Mentoring Women Program, Mentor Nov. 2017 - present

Princeton University

- Princeton Prison Teaching Initiative, Tutor Nov. 2015 - May 2017
- Princeton Open Labs, Founder and Director Nov. 2015 - May 2017

Yale University

- Yale Alumni Interviewer Feb. 2017 - present
- Yale Women in Physics, member Sept. 2011 - May 2015
- Volunteer Teacher at Yale Splash Mar. 2014 - May 2015
- Tutor at New Haven Reads May 2012 - May 2015
- Undergraduate Women in Science at Yale, Treasurer Sept. 2012 - 2014

OUTREACH-RELATED MEDIA Articles written / featured in:

- "Feynman, Harassment, and the Culture of Science", *Caltech Letters*, 2019
<https://caltechletters.org/viewpoints/feynman-harassment-science>
- "Many Pathways to STEM", *Yale Daily News*, 2013
<https://yaledailynews.com/blog/2013/11/21/many-pathways-to-stem/>

Podcast interviews:

- "Three Ways to be a Planetary Scientist", *Strange New Worlds: A Science & Star Trek Podcast*, 2019
- "These Vibes are Too Cosmic", *WPRB Princeton 103.3*, 2016