

PAUL A. DALBA
51 Pegasi b Postdoctoral Fellow & Research Scientist

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University of California Santa Cruz
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Education history

- PhD, Astronomy, Boston University 07/2018
Thesis: *On the Atmospheres of Saturn and Cold Gas Giant Extrasolar Planets*
- MA, Astronomy, Boston University 05/2015
- BA, Astrophysics, University of California Berkeley 05/2012

Recent employment

- Heising-Simons 51 Pegasi b Postdoctoral Fellow 06/2022 – Present
UC Santa Cruz
- Research Scientist 06/2022 – Present
SETI Institute

Publication summary (full record begins on page 12)

- 15 first-author publications in *AJ*, *ApJ*, *ApJ Letters*, *JGR*, *PASP*, and *MNRAS* with 193 citations as of Mar. 2023. See [ADS Library](#).
- 1199 citations across all articles, *h*-index=20 as of Mar. 2023. See [Google Scholar](#).

Summary of grants awarded

- 8 grants awarded as PI (totaling \$1.25M). 4 awarded as Collaborator (totaling \$1.2M)

Presentations summary

- 19 invited lectures and colloquia, 28 contributed conference talks
- 3 invited panels, 2 press briefings

Teaching and mentoring summary

- 2 undergraduate courses taught as Course Instructor (Computer Science)
- 3 undergraduate courses taught as Graduate Teaching Fellow (Astronomy)
- 7 graduate students mentored in Astronomy, Earth & Planetary Science (1 currently)
- 6 undergraduate students mentored in Astronomy (1 currently)

Summary of telescope time awarded

- 118 nights awarded as PI or Science PI on Keck, APF, *Spitzer*, WIYN, LDT, and others
- Over 140 nights awarded as Co-I on Keck, APF, *Hubble*, *Spitzer*, NEOSat and others

Professional service summary

- Peer-reviewed 7 articles, served 6 years on TACs, served on 8 NASA/NSF proposal reviews, judged student poster competitions, organized departmental seminars

Full employment record

- Heising-Simons 51 Pegasi b Postdoctoral Fellow 06/2022 – Present
University of California Santa Cruz
- Research Scientist 06/2022 – Present
SETI Institute
- Affiliate, Asteroid Science Lead 07/2021 – 05/2022
SETI Institute
- Research Fellow 07/2021 – 05/2022
University of California Santa Cruz
- NSF Astronomy & Astrophysics Postdoctoral Fellow 06/2019 – 05/2022
University of California Riverside
- Course Instructor in Computer Information Systems 01/2020 – 06/2021
Riverside City College
- Postdoctoral Scholar 08/2018 – 05/2019
University of California Riverside, Dr. Stephen Kane
- Graduate Research Assistant 08/2013 – 07/2018
Boston University, Dr. Philip Muirhead
- Project Specialist 09/2012 – 07/2013
NASA Jet Propulsion Laboratory, Dr. Bonnie Buratti
- Research Intern 06/2012 – 08/2012
NASA JPL Summer Internship Program (JPLSIP), Dr. Bonnie Buratti
- Undergraduate Research Assistant 09/2010 – 05/2012
University of California Berkeley, Dr. Franck Marchis, Dr. Steven Stahler
- Undergraduate Research Intern 06/2011 – 08/2011
NASA JPL Undergraduate Student Research Program (USRP), Dr. Bonnie Buratti

Honors, awards, and other recognition

- Outstanding Teaching Fellow Award from the Boston Univ. Astronomy Dept. 2017
- Travel award from the NOAO to observe at Kitt Peak National Observatory 2017
- Travel award from the AAS to attend Transiting Exoplanets Conference, U.K. 2017
- Hartmann travel award from the AAS to attend the DPS Meeting, MD 2015
- Travel award from the BU Grad Student Org. to attend Sagan Workshop, CA 2014
- Travel award from NExSci to attend Sagan Summer Workshop, CA 2014
- Chambliss Student Achievement Award Honorable Mention, AAS Meeting, MA 2014
- Fellowship to participate in NASA JPL Student Internship Program 2012
- Fellowship to participate in NASA JPL Undergraduate Student Research Program 2011
- Alumni Association Leadership Scholarship from UC Berkeley 2008 – 2012

Grants awarded

As PI

- Heising-Simons 51 Pegasi b Postdoctoral Fellowship (\$385,000) 2022
- TESS Cycle 5 GI Program (\$70,000) 2022
- NHFP Sagan Postdoctoral Fellowship, declined (\$297,800) 2022
- NASA Postdoctoral Program (NPP) Fellowship, declined (\$180,940) 2022
- NSF Astronomy & Astrophysics Postdoctoral Fellowship (\$300,000) 2019
- NASA-NSF Exoplanet Observational Research (NN-EXPLORE) Grant (\$7,000) 2017
- Massachusetts Space Grant Consortium Graduate Fellowship (\$5,500) 2016
- Massachusetts Space Grant Consortium Graduate Fellowship (\$5,500) 2014

As Co-I or Collaborator

- TESS Cycle 5 GI Program, PI D. Dragomir (\$750,000) 2022
- TESS Cycle 4 GI Program, PI D. Dragomir (\$70,000) 2021
- TESS Cycle 4 GI Program, PI S. Villanueva Jr. (\$50,000) 2021
- NASA Exoplanets Research Program (XRP), PI D. Dragomir (\$329,262) 2020

Telescope time awarded

As PI or Science PI

- APF Telescope, Lick Observatory (72.5 nights) 2019B – 2023A
- Keck I Telescope, W. M. Keck Observatory, UCO TAC (5.5 nights) 2018B – 2023A
- Keck I Telescope, W. M. Keck Observatory, NOIRLab TAC (0.5 night) 2021B
- WIYN Telescope (NEID), Kitt Peak National Observatory (6 hours) 2021B
- Spitzer Space Telescope (10 hours) Cycle 14
- WIYN Telescope, Kitt Peak National Observatory (3 nights) 2017A
- JAST/T80 Telescope, Observatorio Astrofísico de Javalambre (1 night, DDT) 2017A
- STELLA Telescope, Izana Observatory (1.5 nights) 2017A
- Telescopi Joan Oró, Observatori Astronòmic del Montsec (3 nights) 2017A
- Perkins Telescope, Lowell Observatory (3 nights) 2017 Q3
- Lowell Discovery Telescope, Lowell Observatory (1.5 nights) 2016 Q1
- Lowell Discovery Telescope, Lowell Observatory (6 nights) 2015 Q2 – Q4
- Nickel Telescope, Lick Observatory (10 nights) 2011A – 2012A

As Co-I

- CHEOPS GO & DDT Programs (49 hours, PI N. Scarsdale) AO-3

- Magellan II Telescope, Las Campanas Observatory (10.5 nights, PI K. Collins) 2021A–2023A
- NEOSsat Space Telescope (444 hours, PI C. Mann) Cycle 4
- SMARTS 1.5-m Telescope, CTIO (16 nights, PI J. Rodriguez) 2021B – 2022A
- Minerva-Australis, Mount Kent Observatory (22 nights, PI J. Rodriguez) 2021B – 2022A
- Keck I Telescope, W. M. Keck Observatory (4 nights, PI L. Weiss) 2021B
- Keck I Telescope, W. M. Keck Observatory (0.5 night, PI H. Knutson) 2020B
- APF Telescope, Lick Observatory (34 nights, PI P. Robertson) 2019B – 2020A
- Hubble Space Telescope (24 orbits, PI S. Xu) Cycle 25 – 26
- Perkins Telescope, Lowell Observatory (15+ nights, PI P. Muirhead) 2014 Q2 – 2018 Q2
- Spitzer Space Telescope (106.3 hours, PI A. Mann) Cycle 13
- Perkins Telescope, Lowell Observatory (20+ nights, PI B. Croll) 2014 Q2 – 2016 Q1
- 0.6-m Telescope, Table Mountain Observatory (15 nights, PI. B. Buratti) 2013A – 2013B
- Shane Telescope, Lick Observatory (1 night, PI F. Marchis) 2011A

Courses taught

As Lead Instructor/Professor

- Computer Information Systems 830–832: An Introduction to Python. 2021 (Spring)
Three-part course taught in the Business, Information Systems, and Technology Department of Riverside City College for students pursuing degrees in STEM or business.
~40 students enrolled, 0 teaching assistants.
- Computer Information Systems 830–832: An Introduction to Python. 2020 (Spring)
~30 students enrolled, 0 teaching assistants.

As Teaching Fellow

- Astronomy 107: Life Beyond Earth. Dr. Thomas Bania, Boston Univ. Fall 2016
- Astronomy 100: Cosmic Controversies. Dr. Michael Mendillo, Boston Univ. Spring 2014
- Astronomy 105: Alien Worlds. Dr. Andrew West, Boston Univ. Fall 2013
- Observational Astronomy Techniques, Dr. Franck Marchis, SETI Summer 2011

Invited lectures, colloquia, and presentations

Outside of my home institution

- CIPS Seminar, UC Berkeley 2023
- Home Days Lecture, Heising-Simons Foundation 2023
- Physics & Astronomy Department Seminar, Michigan State University 2022
- Planetary Lunch Seminar, UC Santa Cruz 2022

- Earth & Planets Lab Astronomy Seminar, Carnegie Institution for Science 2022
- Origins Seminar, University of Arizona 2021
- Exoplanets Journal Club, NASA JPL 2021
- IfA Astronomy Colloquium, University of Hawaii 2021
- ExSoCal 2020: Southern CA Regional Exoplanets Meeting 2020
- Planetary Lunch Seminar, UC Santa Cruz 2020
- Physics Department Seminar, University of the Pacific 2019
- Center for Astrophysics & Space Sciences Seminar, UC San Diego 2018
- Center for Exoplanets & Habitable Worlds Seminar, Penn State University 2017
- Exoplanet Pizza Lunch Talk, Harvard-Smithsonian Center for Astrophysics 2017
- SETI-Ames Dynamics Seminar, SETI Institute 2017
- Extrasolar Planets Seminar, NASA Goddard Space Flight Center 2017
- Astronomy Department Seminar, Columbia University 2016
- Exoplanet Tea Talk, Massachusetts Institute of Technology 2015
- Exoplanet Pizza Lunch Talk, Harvard-Smithsonian Center for Astrophysics 2015

At my home institution

- Research in the College of Natural & Agricultural Sciences (CNAS) 2020
NASC91–Freshman Advising Seminar in CNAS (Undergraduate), UC Riverside
- Martian Geology 2019, 2020
GEO80–Astrobiology: The Search For Life in the Universe (Undergraduate), UC Riverside
- Alternative Earths Astrobiology Center Seminar, UC Riverside 2019
- Statistical Hypothesis Testing 2018
AS791–Special Topics: Bayesian Inference (Graduate), Boston University
- Graduate Student Seminar, Astronomy Department, Boston University 2017
- Graduate Student Seminar, Astronomy Department, Boston University 2016
- Exoplanet Detection, Characterization, and History 2016
AS107–Life Beyond Earth (Undergraduate), Boston University
- Graduate Student Seminar, Astronomy Department, Boston University 2015

Professional conference/meeting presentations

Invited Talks

- Dalba, P. A. (09/2020) Measuring the Masses of the Longest-period Transiting Giant Exoplanets, ExSoCal 2020: Southern CA Regional Exoplanet Meeting, Virtual

Press Briefings

- Dalba, P. A. (01/2022) Discovery of a TESS Giant Planet on a 261-day Orbit Enabled by Citizen Science, AAS Press Event, Virtual
- Dalba, P. A. (01/2021) First Results of the Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey, 237th AAS Meeting, Virtual

Contributed Talks

- Dalba, P. A. et al. (01/2023) Different Gas Accretion Pathways for the Two Giant Planets in Kepler-511, 241st AAS Meeting, Seattle, WA, Abstract #322.03
- Dalba, P. A. et al. (01/2023) Research in Astronomy with the Unistellar Network of Citizen Scientists, Seattle, WA, Abstract #246.06
- Dalba, P. A. (10/2022) TESS Single Transit Planet Candidate Working Group Update, TESS Science Team Meeting 29, Virtual
- Dalba, P. A. (08/2022) Extending the Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey to TESS’s Coolest Worlds, Heising-Simons 51 Pegasi b Fellow Summit, Cavallo Point, CA
- Dalba, P. A. et al. (08/2022) Single Transit Giant Planets Within (and Adjacent to) the TKS Science Cases, TESS Keck Survey All Hands Meeting, Santa Cruz, CA
- Dalba, P. A. et al. (06/2022) Lucy Asteroid Occultations from a Coordinated Global Telescope Network, NASA Small Bodies Assessment Group Meeting 27, Virtual
- Dalba, P. A. (01/2022) The Masses and Metallicities of Cool Giant Exoplanets, NSF AAPF Fellows Symposium 2022, Virtual
- Dalba, P. A. (04/2021) The Masses and Radii of Outer Giant Exoplanets as Novel Tests of Planet Formation Theory, 2021 STScI Spring Symposium, Virtual
- Dalba, P. A. (02/2021) Waiting on a World to Move: Progress Toward Measuring the Masses of the Longest-period Giant Transiting Exoplanets, NSF AAPF Fellows Symposium 2021, Virtual
- Dalba, P. A. and 11 colleagues (01/2021) First Results of the Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey: Confirmation of the Eccentric, Cool Jupiter Orbiting Kepler-1514, 237th AAS Meeting, Virtual, Abstract #239.06
- Dalba, P. A. et al. (01/2021) Closing the 260-day Orbit of the Cool Jupiter TOI-2180.01, TESS Science Team Meeting 24, Virtual
- Dalba, P. A. et al. (12/2020) First Results from the Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey, Bay Area Exoplanet Science Meeting 35, Virtual
- Dalba, P. A. (11/2020) Characterizing Possible Exomoon Hosts through the Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey, Exomoon Mini-Meeting, Virtual
- Dalba, P. A. & Tamburo, P. (02/2020) A Transiting Outer Giant Exoplanet Poised for Comparative Planetology with Jupiter and Saturn, Exoplanets in Our Backyard Workshop, LPI, Houston, TX

- Dalba, P. A. & Tamburo, P. (01/2020) Spitzer Detection of Kepler-167e, a cold Jovian exoplanet poised for atmospheric characterization, 235th AAS Meeting, Honolulu, HI, Abstract #349.01
- Dalba, P. A. (01/2020) Cold Giant Worlds at the Frontier of Exoplanetary Science, NSF AAPF Fellows Symposium 2020, Honolulu, HI
- Dalba, P. A. et al. (12/2019) TESS Discovers Transits of a Warm Sub-Saturn Mass Exoplanet Hidden in Stray Light, TESS Science Team Meeting 18, Boston, MA
- Dalba, P. A. (12/2019) Tracking Transits of Long-period Exoplanets in the Era of Short-baseline Transit Surveys, AGU Fall Meeting, San Francisco, CA, Abstract #P52A-09
- Dalba, P. A. (01/2019) Investigations of Giant Worlds on the Cold Frontier of Exoplanet Science, 233rd AAS Meeting, Seattle, WA, Abstract #205.04D
- Dalba, P. A. & Kane, S. R. (09/2018) Currently Known Exoplanets in the Era of New TESS Discoveries, ExSoCal Science Meeting IV, Pasadena, CA
- Dalba, P. A. (01/2018) Refraction in Exoplanet Transit Observations, 231st AAS Meeting, National Harbor, MD, Abstract #128.02
- Dalba, P. A. (12/2017) Refraction and Mirages in Exoplanet Atmospheres, Boston Area Exoplanet Science Meeting 1, Cambridge, MA
- Dalba, P. A. (07/2017) Atmospheric Characterization with Refracted Light, Transiting Exoplanets Conference, Newcastle, UK
- Dalba, P. A. (07/2017) Stellar Mirages Caused by Refracted Light in the Atmospheres of Transiting and Non-Transiting Exoplanets, UCSC OWL Exoplanet Summer Program, Santa Cruz, CA
- Dalba, P. A. & Muirhead, P. S. (06/2016) Keeping Track of Transits: New Challenges in Characterizing Long-Period Transiting Exoplanets, Emerging Researchers in Exoplanet Science Symposium II, Ithaca, NY
- Dalba, P. A., Muirhead, P. S., Fortney, J. J., Hedman, M.M., Nicholson, P.D., & Veyette, M.J. (11/2015) Saturn as a Transiting Exoplanet, 47th AAS DPS Meeting, National Harbor, MD, Abstract #504.01
- Dalba, P. A., Buratti, B. J., Brown, R. H., Barnes, J. W., Baines, K. H., Sotin, C., Clark, R. N., Lawrence, K. J., & Nicholson, P. D. (10/2012) Low-latitude Ethane Rain on Titan, 44th AAS DPS Meeting, Reno, NV, Abstract #400.06
- Dalba, P. A., Buratti, B. J., Banholzer, S., & Edberg, S. (10/2012) “Teachers Touch the Sky”: A Workshop in Astronomy for Teachers in Grades 3-9, 44th AAS DPS Meeting, Reno, NV, Abstract #515.02

Contributed Posters

- Dalba, P. A. (07/2020) A Comparison of Single-Transit Events from TESS and Kepler, or How I Learned to Expect the Unexpected, Exoplanets III, Virtual
- Dalba, P. A. (01/2020) Adding Context to the Exoplanet Case for In Situ Exploration of the Ice Giants, Ice Giant Systems 2020, London, UK

- Dalba, P. A. & Tamburo, P. (08/2019) Spitzer Detection of Kepler-167e, a Cold Jovian Exoplanet Poised for Atmospheric Characterization, Extreme Solar Systems IV, Reykjavík, IS, Abstract #307.02
- Dalba, P. A. and 19 colleagues (03/2019) Transit Ephemeris Refinement of Long-period Exoplanets with Substantial TTVs, Kepler & K2 Science Conference V, Glendale, CA
- Dalba, P. A. & Withers, P. (12/2017) Producing Titan Ionospheric Electron Density Profiles from Cassini Radio Occultation Data, AGU Fall Meeting, New Orleans, LA, Abstract #P13D-2582
- Dalba, P. A., Muirhead, P. S., Croll, B., & Kempton, E. M.-R. (06/2017) Kepler Transit Depths Contaminated by a Phantom Star, Kepler & K2 Science Conference IV, Mountain View, CA
- Dalba, P. A., Withers, P. & Vogt, M. F. (05/2017) Occultations of Astrophysical Radio Sources as Probes of (Exo)Planetary Environments, AASTCS 5: Radio Exploration of Planetary Habitability, Palm Springs, CA, Abstract #202.03
- Dalba, P. A. & Muirhead, P. S. (10/2016) Helium in Cold, Giant Exoplanet Atmospheres, 48th AAS DPS Meeting, Pasadena, CA, Abstract #122.08
- Dalba, P. A., Muirhead, P. S., Fortney, J. J., Hedman, M. M., Nicholson, P. D., & Veyette, M. J (05/2015), The Transit Transmission Spectrum of Saturn Revealed by Cassini-VIMS Solar Occultations, Emerging Researchers in Exoplanet Science Symposium, State College, PA
- Dalba, P. A., Muirhead, P. S., Fortney, J. J., Hedman, M. M., & Nicholson, P. D. (06/2014) Modeling Exoplanet Transmission Spectra with Solar System Objects, 224th AAS Meeting, Boston, MA, Abstract #122.12
- Dalba, P. A. & Buratti, B. J. (12/2011) An IR Analysis of Cryovolcanism at Sotra Facula on Titan, AGU Fall Meeting, San Francisco, CA, Abstract #P33E-1799

Other presenting roles

- Panelist for SETI Talks “Ask Us Anything” Virtual Event, SETI Institute, July 2022 ([Link](#))
- Panelist for “Planetary Atmospheres, Thin and Thick” at the Exoplanets in Our Backyard Workshop, Houston, TX, February 2020
- Panelist for “Strategies for Confirmation and Characterization of Long-Period Planets” in TESS Splinter Session, TESS Science Conference I, Boston, MA, July 2019

Conference organizing activities

- Local Organizing Committee Member, ExSoCal 2020 Meeting 2020

Contributions to diversity, equity, and inclusion

- Computer Information Systems 830–882 at Riverside City College (RCC) 2020 – 2021
I designed and taught a free course in introductory computer at RCC, a Hispanic-Serving Institution Riverside, CA—a county that contains above average populations of several underrepresented groups¹. The course was available to all students, there were no prerequisites, and computers were provided to all students.
- Lowell Observatory Navajo-Hopi Astronomy Outreach Program ([Link](#)) 2014, 2018
The fraction of indigenous people pursuing bachelors degrees in STEM fields falls well below the fraction of the national population that they comprise². This program gets Navajo and Hopi students excited about science and education through astronomy. I participated as a Guest Astronomer.

Professional service

Service within my home institution

- Proposal Reviewer, UC Observatories APF Telescope TAC 2 years
- UC Riverside Alternative Earths Astrobiology Seminar Organizer 2019
- Proposal Reviewer, Boston University Internal TAC 2 years
- Graduate Student Liaison to Faculty, Boston University Astronomy Dept. 2015 – 2016
- Astronomy Dept. Rep., Boston University Graduate Student Org. 2014 – 2015

Service outside of my home institution

- Peer Reviewer (AAS Journals, MNRAS, Nature) 7 Articles
- External Panelist, Hubble Space Telescope TAC 2 years
- Panelist, NSF Astronomy & Astrophysics Grants Program (AAG) Once
- Panelist, NASA Exoplanet Research Program (XRP) Twice
- Panelist, NSF Astronomy & Astrophysics Postdoctoral Fellowship Program (AAPF) Once
- External Reviewer, NASA Exoplanet Research Program (XRP) Once
- Executive Secretary, NASA Exoplanet Research Program (XRP) Once
- Proposal Reviewer, NASA FINESST Program Twice
- Judge, AAS Chambliss Student Poster Competition Once

Membership in professional societies

- American Geophysical Union (AGU), Member 2017 – Present
- AAS Division for Planetary Sciences (DPS), Member 2013 – Present
- American Astronomical Society (AAS), Member 2013 – Present
- American Physical Society (APS), Junior Member 2017 – 2018

¹2017 US Census Bureau QuickFacts (<https://www.census.gov/quickfacts/fact/table/US/PST045219>)

²2019 NSF report on Women, Minorities, and Persons with Disabilities in Science and Engineering (<https://nces.nsf.gov/pubs/nsf19304/>)

Education and public outreach activities

- Scientific Advisor, Exotopia ([Link](#)) 2022 – 2023
- Experiment Instructor, Space Science for Kids ([Link](#)) 06/2018
Boston University Center for Space Physics, Boston, MA
- Guest Astronomer, Navajo-Hopi Astronomy Outreach Program ([Link](#)) 2014, 2018
Lowell Observatory, Flagstaff, AZ
- Graduate Student Organizer, Boston University Public Open Nights ([Link](#)) 2015 – 2018
Boston University Coit Observatory, Boston, MA
- Guest Scientist, Science by the Pint ([Link](#)) 2016, 2018
Harvard Medical School, Cambridge, MA
- Organizer, Judge, Art of Astrophysics Competition ([Link](#)) 02/2016
Boston University, Boston, MA
- Assistant Instructor, “Teachers Touch the Sky” Workshop ([Link](#)) 2011, 2012
NASA Jet Propulsion Laboratory, Pasadena, CA

Media coverage

- “Hubble captures movie of DART asteroid impact debris” 03/2023
Space Daily ([Link](#))
- “The Community Scientists Who Helped Discover A New Planet” 03/2022
NPR Short Wave Podcast ([Link](#))
- “At-Home Astronomers Help Discover a New, Unique Exoplanet” 03/2022
Eos ([Link](#))
- “New Exoplanet Detection Program for Citizen Scientists” 09/2022
SETI News ([Link](#))
- “SETI Live: A Massive Gas Giant Found Circling TOI-2180” 02/2022
SETI Live ([Link](#))
- “Astronomers measure enormous planet lurking far from its star” 01/2021
UC Riverside News ([Link](#))
- “Gas giant exoplanet with weirdly long orbit may bear clues about our solar system” 01/2021
Space.com ([Link](#))
- “Looking for Extraterrestrial Life? Here’s a New Target” 02/2018
Boston University Research ([Link](#))
- “Night Shift” 09/2017
Boston University Research ([Link](#))
- “BU’s Shared Computing Cluster: Results Hundreds of Times Faster” 02/2016
Boston University Today ([Link](#))
- “Looking Like an Alien!” 11/2015
Massachusetts Green High Performance Computing Center News ([Link](#))

- “Puddles on Titan: Alien Rain Puzzles Astronomers” 10/2012
Cosmos Magazine ([Link](#))

Scientific Advising

- Specialty Scientific Advisor 2022 – 2023
Exotopia: An Experimental Sci-fi Storytelling Experience ([Link](#))

Mentoring activities

Graduate students mentored

- Dan Peluso, University of Southern Queensland PhD Student 2020 – Present
Transit ephemeris refinement and radial velocity characterization of long-period exoplanets, jointly mentored with Dr. Franck Marchis (SETI Institute)
- Amaury Perrocheau, ISAE-SUPAERO (Toulouse, FR) MA Student 2022
Long-period exoplanet transit detection via ground-based citizen science telescopes, jointly mentored with Dr. Thomas Esposito (SETI Institute)
- Dorian Cazeneuve, ISAE-SUPAERO (Toulouse, FR) MA Student 2021 – 2022
Asteroid occultation detection via convolutional neural networks, jointly mentored with Dr. Franck Marchis (SETI Institute)
- Michelle Hill, UC Riverside Earth & Planetary Sciences PhD Student 2020 – 2022
Analysis and modeling of exoplanet radial velocity and speckle imaging data, jointly mentored with Dr. Stephen Kane (UC Riverside)
- Zhexing Li, UC Riverside Earth & Planetary Sciences PhD Student 2020 – 2022
Analysis and modeling of exoplanet radial velocity and speckle imaging data, jointly mentored with Dr. Stephen Kane (UC Riverside)
- Colby Ostberg, UC Riverside Earth & Planetary Sciences PhD Student 2019 – 2022
Atmospheric modeling and transmission spectroscopy for Venus-analog exoplanets, jointly mentored with Dr. Stephen Kane (UC Riverside)
- Patrick Tamburo, Boston University Astronomy PhD Student 2018 – 2019
Analysis of transit photometry from *Spitzer Space Telescope*, jointly mentored with Dr. Philip Muirhead (Boston University)

Undergraduate students mentored

- Joel (JT) Earwicker, UC Santa Cruz Astronomy Major 2021 – Present
Advised on a transiting exoplanet ephemeris refinement project using ground-based observations of WASP-135 b. Jointly mentored with Dr. Jonathan Fortney.
- Henry Shum, Chaffey College Student 2021
Advised on a summer research project to investigate exoplanet transit timing variations using Kepler and TESS data
- Corbin Young, Cal Poly Pomona Engineering Major 2020
Taught in my 2020 RCC course then mentored on research paths and career opportunities in astronomy and aerospace engineering.

- Madeleine O’Keefe, Boston University Astronomy Major 2016
Simulations of exoplanet transit surveys of M dwarf stars, jointly mentored with Dr. Philip Muirhead.
- Devin Chu, Dartmouth College Physics Major 2013
Observational astronomy techniques and photometric data analysis, jointly mentored with Dr. Bonnie Buratti
- Ari O’Neill, Caltech Physics Major 2013
Observational astronomy techniques and photometric data analysis, jointly mentored with Dr. Bonnie Buratti

Publication record

- 15 first-author, peer-reviewed publications with 193 citations as of Mar. 2023
- 1199 citations across all articles (*h*-index=20) as of Mar. 2023 (see [Google Scholar](#))
- Entries with my name in **Blue** refer to astrophysics
- Entries with my name in **Yellow** refer to planetary science
- Entries with my name in **Green** refer to interdisciplinary topics
- Underlined names are students I mentored

First-author refereed journal articles ([ADS Library](#))

15. **Dalba, P. A.**, Kane, S. R., Dragomir, D., Villanueva, S., and 71 colleagues (2022) The TESS-Keck Survey. VIII. Confirmation of a Transiting Giant Planet on an Eccentric 261-day Orbit with the Automated Planet Finder Telescope, *AJ*, 163, 61
14. **Dalba, P. A.**, Kane, S. R., Li, Z., MacDougall, M. G., Rosenthal, L. J., Cherubim, C., Isaacson, H., Fulton, B., Howard, A. W., Petigura, E. A., Schwieterman, E., Peluso, D. O., Esposito, T. M., Marchis, F., & Payne, M. J. (2021) Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey. II. Discovery of a Failed Hot Jupiter on a 2.7 Year, Highly Eccentric Orbit, *AJ*, 162, 154
13. **Dalba, P. A.**, Kane, S. R., Howell, S. B., Horch, E. P., Li, Z., Hirsch, L. A., Burt, J., Mocnik, T., Henry, G. W., Everett, M. E., Rosenthal, L. J., & Howard, A. W. (2021) Speckle Imaging Characterization of Radial Velocity Exoplanet Systems, *AJ*, 161, 123
12. **Dalba, P. A.**, Kane, S. R., Isaacson, H., Giacalone, S., Howard, A. W., Vanderburg, A., Rodriguez, J. E., Eastman, J., & Schwieterman, E. (2021) Giant Outer Transiting Exoplanet Mass (GOT ‘EM) Survey. I. Confirmation of an Eccentric, Cool Jupiter with an Interior Earth-sized Planet Orbiting Kepler-1514, *AJ*, 161, 103
11. **Dalba, P. A.**, Fulton, B. J., Isaacson, H., Kane, S. R., & Howard, A. W. (2020) Multiple Explanations for the Single Transit of KIC 5951458 Based on Radial Velocity Measurements Extracted with a Novel Matched-template Technique, *AJ*, 160, 149
10. **Dalba, P. A.**, Gupta, A. F., Rodriguez, J. E., Dragomir, D. and 62 colleagues (2020) The TESS–Keck Survey. I. A Warm Sub-Saturn-mass Planet and a Caution about Stray Light in TESS Cameras, *AJ*, 159, 241

9. **Dalba, P. A.** & Tamburo, P. (2019) Spitzer Detection of the Transiting Jupiter-analog Exoplanet Kepler-167e, *ApJ Letters*, 873, L17
8. **Dalba, P. A.** & Withers, P. (2019) Cassini Radio Occultation Observations of Titan's Ionosphere: The Complete Set of Electron Density Profiles, *JGR Space Physics*, 124, 643
7. **Dalba, P. A.**, Kane, S. R., Barclay, T., Bean, J. L., Campante, T. L., Pepper, J., Ragozzine, D., & Turnbull, M. C. (2019) Predicted Yield of Transits of Known Radial Velocity Exoplanets from the TESS Primary and Extended Missions, *PASP*, 131, 034401
6. **Dalba, P. A.** (2017) Out-of-transit Refracted Light in the Atmospheres of Transiting and Non-transiting Exoplanets, *ApJ*, 848, 91
5. **Dalba, P. A.**, Muirhead, P. S., Croll, B., & Kempton, E. M.-R. (2017) Kepler Transit Depths Contaminated by a Phantom Star, *AJ*, 153, 59
4. **Dalba, P. A.** & Muirhead, P. S. (2016) No Timing Variations Observed in Third Transit of Snow-Line Exoplanet Kepler-421b, *ApJ Letters*, 826, L7
3. **Dalba, P. A.**, Muirhead, P. S., Fortney, J. J., Hedman, M. M., Nicholson, P. D., & Veyette, M. J. (2015) The Transit Transmission Spectrum of a Cold Gas Giant Planet, *ApJ*, 814, 154
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