

Sarah Peacock

Curriculum Vitae

Lunar and Planetary Laboratory
Department of Planetary Sciences
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EDUCATION

- University of Arizona** | Tucson, AZ 2013 – Present
M.Sc. Planetary Sciences, May 2016
Ph.D. Planetary Sciences, Minor: Astrobiology, Expected December 2019
- University of Virginia** | Charlottesville, VA 2009 – 2013
B.A. Astronomy-Physics

RESEARCH AND TEACHING EXPERIENCE

- University of Arizona, Lunar and Planetary Lab** **Tucson, AZ**
Graduate Research Associate | Advisor: Travis Barman 2013 – Present
- Modeling the high energy radiation environment around M stars using PHOENIX
- Graduate Teaching Assistant*
- PTYS206: "Our Golden Age of Planetary Exploration," Dr. Steve Kortenkamp 2014
- Guest Lecture: "Exoplanets"
- PTYS206: "Our Golden Age of Planetary Exploration," Dr. William Hubbard 2013
- Guest Lecture: "Methods of Exoplanet Detection"
- Star-Planet Activity Research CubeSat (SPARCS)** **Tempe, AZ**
Science Team Member | P.I.: Evgenya Shkolnik 2017 – Present
- Computing synthetic ultraviolet spectra of target stars
- University of Virginia** **Charlottesville, VA**
Undergraduate Research Assistant | Advisor: Phil Arras 2011 – 2013
- Modeling the probability and outcomes of Roche Lobe overflow in exoplanetary systems
- SETI Institute** **Mountain View, CA**
REU Intern | Advisor: Jean Chiar 2012 – 2013
- Studying ice, dust, and extinction in the Perseus Molecular Cloud

POLICY EXPERIENCE

- The National Academies of Sciences, Engineering, and Medicine** **Washington, DC**
Lloyd V. Berkner Space Policy Intern | Space Studies Board 2016
- Assisted in writing reviews and organizing a workshop

FELLOWSHIPS AND AWARDS

NASA Earth and Space Science Fellowship	2015 – 2018
UA College of Science Galileo Circle Scholarship	2016
NSF Graduate Research Fellowship Honorable Mention	2015
LPL Graduate Teaching Excellence Award	2015
Arizona Space Grant Graduate Fellowship	2013

CONTRIBUTED PRESENTATIONS

233 rd Meeting of the American Astronomical Society Talk	2019
Cool Stars 20 Poster	2018
231 st Meeting of the American Astronomical Society Talk	2018
Exoclimes 2016 Poster	2016
47 th Meeting of the Division for Planetary Sciences Talk	2015
Star and Planet Formation in the Southwest 1 Talk	2015
225 th Meeting of the American Astronomical Society Poster	2015
Exoplanets, Biosignatures & Instruments Meeting Talk	2014
221 st Meeting of the American Astronomical Society Poster	2014

ACADEMIC SERVICE AND LEADERSHIP

Served on NASA review panels	---
American Astronomical Society Congressional Visit Day Participant	2019
Coordinator for the Graduate Student Colloquium Series (LPL)	2015 – 2018
Co-Organizer for the Searching for Life Across Space and Time Workshop	2016
LPL Representative to the Arizona Graduate & Professional Student Council	2015 – 2017
Coordinator for the Prospective Graduate Students (LPL)	2014 – 2017
Co-Organizer of Benuval: An Evening of Space, Art, and Music	2015
LPL Liaison for the International Dark Skies Association	2014 – 2015
UVA Astronomy Department Representative	2011 – 2013

PUBLIC OUTREACH

Co-Organizer of the Art of Planetary Science Exhibit (LPL)	2014 – Present
Tucson Festival of Books Volunteer	2015 – Present
Arlington Science Focus School, Fourth Grade Guest Speaker	2016
Observe the Moon Night Volunteer (UA)	2013 – 2015
Astronomy Night Volunteer (Catalina Foothills School District)	2015
Arizona Science and Astronomy Expo Volunteer	2014
Dark Skies, Bright Kids! Volunteer (UVA)	2011 – 2013

OBSERVING PROGRAMS

<i>HST</i> General Observer, “HAZMAT: Habitable Zones and M dwarf Activity across Time,” Program 14784 (Co-Investigator)	2016
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ACADEMIC ENHANCEMENT

Software/Data Carpentry Workshop	2018
Exoplanets, Biosignatures & Instruments Astrobiology School	2014

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science, Student Member	2019 – Present
American Astronomical Society, Graduate Student Member	2014 – Present

TECHNICAL SKILLS

Programming Languages	Fortran, IDL, HTML
Operating Systems	Macintosh, Windows, Linux
Software	LaTeX, Microsoft Office, Adobe Creative Suite
Observing Experience	New Technology Telescope (ESO), Keck I, OSIRIS

FIRST AUTHOR PUBLICATIONS

2. **Peacock, S.**, Barman, T., Shkolnik, E., Hauschildt, P., Baron, E. 2019. Predicting the Extreme Ultraviolet Radiation Environment of Exoplanets Around Low-Mass Stars: GJ 832, GJ 176, GJ 436. *The Astrophysical Journal (In Preparation)*
1. **Peacock, S.**, Barman, T., Shkolnik, E., Hauschildt, P., Baron, E. 2019. Predicting the Extreme Ultraviolet Radiation Environment of Exoplanets Around Low-Mass Stars: The TRAPPIST-1 System. *The Astrophysical Journal*, Vol. 871

OTHER REFEREED PUBLICATIONS

5. Parke Loyd, R. O., Shkolnik, E. L., Schneider, A. C., Barman, T. S., Meadows, V. S., Pagano, I., **Peacock, S.** 2018. HAZMAT. IV. Flares and Superflares on Young M Stars in the Far Ultraviolet. *The Astrophysical Journal*, Vol 867
4. Martinez, A., Crossfield, I., Schlieder, J., Dressing, C., Obermeier, C., Livingston, J., Ciceri, S., **Peacock, S.**, Beichman, C., et al. 2017. Stellar and Planetary Parameters for K2's Late-type Dwarf Systems from C1 to C5. *The Astrophysical Journal*, Vol. 837
3. Jackson, B., Arras, P., Penev, K., **Peacock, S.**, Marchant, P. 2017. A New Model of Roche Lobe Overflow for Short-period Gaseous Planets and Binary Stars. *The Astrophysical Journal*, Vol. 835
2. Jackson, B., Jensen, E., **Peacock, S.**, Arras, P., Penev, K. 2016. Tidal Decay and Disruption of Short-Period Gaseous Exoplanets. *Celestial Mechanics*, Vol. 126
1. Shkolnik, E., Rolph, K., **Peacock, S.**, Barman, T. 2014. Predicting Ly α and Mg II Fluxes from K and M dwarfs using Galaxy Evolution Explorer Ultraviolet Photometry. *The Astrophysical Journal Letters*, Vol. 796