

# Kiersten M. Boley

The Ohio State University  
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## RESEARCH INTERESTS

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Planet formation and habitability, Influences of stellar abundances on planet formation, Exoplanet detection and characterization using the transit method, Evolution of terrestrial planet interiors and plate tectonics

## EDUCATION

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<b>The Ohio State University</b> <i>Ph.D. in Astronomy</i> <i>Master's in Astronomy</i> <i>Advisor: Ji Wang &amp; Wendy Panero</i>	Columbus, OH <i>expected May 2024</i> August 2021
<b>Georgia Institute of Technology</b> <i>Bachelor of Science in Physics</i> Concentration in Astrophysics Minor in German	Atlanta, GA <i>May 2019</i>
<b>Georgia Highlands College</b> <i>Associate of Science in Physics</i>	Rome, GA <i>May 2015</i>

## RESEARCH EXPERIENCE

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<b>NSF Graduate Research Fellow</b> , <i>Advisor: Ji Wang &amp; Wendy Panero</i> <i>The Ohio State University</i>	August 2021 – present <i>Columbus, OH</i>
□ Constraining mass and a radius for hydrous magma ocean planets and planet occurrence with respect to metallicity	
<b>Graduate Student Researcher</b> , <i>Advisor: Ji Wang</i> <i>The Ohio State University</i>	August 2019 – August 2021 <i>Columbus, OH</i>
□ Constrained hot Jupiter planet occurrence in the metal-poor regime ( $-2.0 \leq [\text{Fe}/\text{H}] \leq -0.6$ ) using TESS data	
<b>Student Researcher</b> , <i>Advisor: William Dawson</i> <i>Lawrence Livermore National Laboratory</i>	May 2018–August 2019 <i>Livermore, CA</i>
□ Investigated the predicted counter images of a high redshift ( $z \sim 10$ ) lensed galaxy candidate, SPT0615-JD, using a maximum likelihood detection method	
<b>Student Research Intern</b> <i>Georgia Tech Research Institute</i>	January 2018–May 2018 <i>Atlanta, GA</i>
□ Created procedures for radiation and environmental testing of various materials and designed containers for storage radioactive materials	
<b>Research and Development Intern</b> <i>Mohawk Industries</i>	January 2015– May 2015 <i>Lyerly, GA</i>
□ Developed adhesives for carpet backing using various heating methods and machinery to test durability	

## HONORS & AWARDS

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Gaudi-Stanek Award	August 2021
NSF Graduate Research Fellowship	March 2021
Two Sigma PhD Research Grant (\$2000)	March 2021
Two Sigma Diversity Fellowship Finalist	March 2021
Dean's Distinguished Graduate Fellowship	May 2019
National Defense Committee Medal	May 2019
<i>The Nation Society of the Daughters of the American Revolution</i>	
James F. Towers Scholarship	August 2018
Lawrence Livermore National Laboratory, Deputy Director's coin	August 2018
Segal Americorps Educational Award	June 2018
The Armed Forces Communications and Electronics Association, Honor Award	May 2018
Army ROTC Scholarship	September 2016
Hope Scholarship	August 2014

## PRESENTATIONS & POSTERS

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"Hot Jupiter Occurrence around Halo Stars"	July 2021
Sagan Exoplanet Workshop 2021	<i>Virtual due to COVID-19</i>
"Constraining the Metallicity required for Planet Formation"	May 2021
Emerging Researchers in Exoplanet Science 2021	<i>Virtual due to COVID-19</i>
"Hot Jupiter Occurrence within the Metal-Poor Regime revisited by TESS"	April 2021
Space Telescope Science Institute, 2021 Spring Symposium	<i>Virtual due to COVID-19</i>
"Hot Jupiter Occurrence within the Metal-Poor Regime"	February 2021
Two Sigma, Finalist Reception	<i>Virtual due to COVID-19</i>
"The Occurrence of Hot Jupiters in the Metal-Poor Regime revisited by TESS"	January 2021
American Astronomical Society, 237th Meeting	<i>Virtual due to COVID-19</i>
"Raiders of Lost Arcs: Faint Galaxy Detection"	August 2018
Lawrence Livermore National Laboratory, 2018 Summer Symposium	<i>Livermore, CA</i>

## PUBLICATIONS

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1. [Boley, K., Wang, J., Zinn, J., et al., "Searching For Transiting Planets Around Halo Stars. II. Constraining the Occurrence Rate of Hot Jupiters", 2021, AJ, 162, 85](#)

## EMPLOYMENT

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<b>Executive Officer</b>   <i>U.S. Army</i>	May 2019 – Present
<ul style="list-style-type: none"><li>□ Responsible for planning and scheduling all training for the entire 676<sup>th</sup> Ground Ambulance Company (~100 soldiers)</li><li>□ Responsible for ~24 million dollars worth of equipment</li></ul>	
<b>Dance Instructor</b>   <i>Baird Ballet</i>	July 2011 – December 2017
<ul style="list-style-type: none"><li>□ Created and implemented ballet, jazz, and contemporary dance curriculum for students between the ages of 3-16 years old</li></ul>	
<b>Office Manager</b>   <i>Techwood Consulting</i>	July 2015 – December 2015
<ul style="list-style-type: none"><li>□ Performed administrative and office management duties necessary to support corporate officers</li></ul>	
<b>Lead Teller</b>   <i>Suntrust</i>	June 2014 – January 2015
<ul style="list-style-type: none"><li>□ Accurately processed customer cash, check, transfer, and statement transactions, with a balanced or reconciled drawers</li></ul>	

## OUTREACH & SERVICE

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- Invited Speaker** | *NPR-The Short Wave podcast* August 2021  
*Discussed the constellation Canis Major, Sirius, and the summer night sky*
- Academic Facilitator** | *URSA Program* March 2021 – Present  
*Creates Astronomy and Physics Curriculum and teaches incoming undergraduate students from under-represented groups*
- Graduate Representative** | *AIP TEAM-UP Workshop* December 2020 - Present  
*Represented the OSU Astronomy Department at this workshop that educates on strategies to recruit and retain African-American undergraduate students in Astronomy and Physics by creating an inclusive environment*
- Mentor** | *Polaris Mentorship Program* August 2020 – Present  
*Provides mentorship to under-represented undergraduates in Physics and Astronomy*
- Mentor** | *SciAccess Zenith Mentorship Program* February 2021 – April 2021  
*Provides mentorship for blind and visually impaired high-school students that are interested in astronomy*
- Panelist** | *Monthly Movie Nights - Science Fiction vs Science Fact* February 2021  
*Served as a panelist for the Q&A webinar for the movie “2001: A Space Odyssey”*
- Volunteer Coordinator** | *Jumpstart* August 2017 – May 2019  
*Recruited, managed, and trained 190 recruited volunteers to serve 2 preschools for assorted Jumpstart service projects*
- Team Leader** | *Jumpstart* August 2016–August 2017  
*Led 5 peers to provide developmentally appropriate educational activities, with a focus on language and literacy, to young children*
- Corps Member** | *Jumpstart* August 2015–August 2016  
*Implemented early childhood curriculum, supported family involvement, promoted children’s language and literacy skills through ongoing relationships with 20 children, and increased adult support in the learning environment*
- Volunteer** | *Mission is Possible* August 2013–May 2015  
*Served in various roles from working with disabled children to cleaning elderly couple’s homes to improve the community in Rome, GA*

## COMPUTATIONAL SKILLS

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Python, MATLAB, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X

## SCHOLARLY MEMBERSHIPS

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American Astronomical Society	Junior Member
National Society of Black Physicists	Full Member
Phi Theta Kappa	Member