

# Caprice L. Phillips

## *Curriculum Vitae*

The Ohio State University  
Department of Astronomy  
140 W. 18th Ave  
McPherson Laboratory 4036  
Columbus, OH, 43210

Email: [phillips.1622@buckeyemail.osu.edu](mailto:phillips.1622@buckeyemail.osu.edu)  
Phone: +1 (614)-702-7392

## EDUCATION

---

- **The Ohio State University** Columbus, OH  
*Ph.D. Student* *Currently Enrolled*
- **The University of Texas at Austin** Austin, TX  
*M.A. Astronomy* *Spring 2019*  
  
Thesis Title: *2M0443+3723 B: A Young Companion at the Substellar Boundary with Potential Membership in the  $\beta$  Pictoris Moving Group*
- **University of Arkansas at Little Rock** Little Rock, AR  
*B.S. Physics; Minor: Mathematics* *December 2015*

## RESEARCH EXPERIENCE

---

- **Graduate Student Researcher, Advisor: Dr. Ji Wang** Columbus, OH  
*Department of Astronomy, Ohio State University* *2019–Present*
  - Investigating whether biosignatures are detectable with the MIRI LRS instrument on the upcoming *JWST* mission
- **Graduate Student Researcher, Advisor: Dr. Brendan Bowler** Austin, TX  
*Department of Astronomy, The University of Texas at Austin* *2017–2019*
  - Characterized the physical and empirical properties of a candidate benchmark brown dwarf companion in the 23 Myr Beta Pictoris Moving Group
- **Undergraduate Student Researcher, Advisor: Dr. Tony Hall** Little Rock, AR  
*Department of Physics & Astronomy, The University of Arkansas at Little Rock* *2014–2015*
  - Performed a comparative study of meteorites & unknown samples for composition determination using Raman spectroscopy, petrography, and a chemical test for nickel
- **Undergraduate Student Researcher, Advisor: Dr. Alois Adams** Little Rock, AR  
*Department of Physics & Astronomy, The University of Arkansas at Little Rock* *2014*
  - Investigated the probability of intelligent observers on confirmed exoplanets identifying Earth as a confirmed exoplanet through the transit method of detection

## AWARDS AND HONORS

---

- Inclusive Graduate Education Network Travel Award 2019
- LSSTC Data Science Fellowship (Large Synoptic Survey Telescope Corporation) 2018
- Dean's Strategic Fellowship (UT Austin) 2016
- Astronomy Graduate Excellence Fellowship (UT Austin) 2016
- Outstanding Senior Award (McNair Scholars Program) 2016
- Ronald E. McNair Scholars Program (UALR) 2014-2016
- College of Arts, Letters, and Sciences Ambassador (UALR) 2014-2015
- Friday Fellows Scholarship Program for Leadership and Service (UALR) 2012-2014
- Shepherd Poverty Studies Intern (UALR) 2013
- Just Communities of Arkansas Leadership for Social Justice Program (UALR) 2011

# OBSERVING EXPERIENCE

---

Keck II, NIRC2, LGS, Mauna Kea Observatory, (P.I. B. Bowler)

1 night

LBT, MODS/LBC, Mount Graham International Observatory, (Queue Observing)

7 nights

# REFERRED PUBLICATIONS

---

**Phillips, C.**, Bowler, B., Mace, G., Liu, M., Sokal, K ,2020, The Astrophysical Journal, 896, 173, [2MASS J04435686+3723033 B: A Young Companion at the Substellar Boundary with Potential Membership in the  \$\beta\$  Pictoris Moving Group](#)

# PRESENTATIONS

---

2M0443+3723 B: A Young Companion at the Substellar Boundary with Potential Membership in the  $\beta$  Pictoris Moving Group (contributed talk), *National Society of Black Physicists*, November 2019, Providence, RI

2M0443+3723 B: A Young Companion at the Substellar Boundary with Potential Membership in the  $\beta$  Pictoris Moving Group, *Astronomy Students Association*, April 2019, Austin, TX

**Phillips, C.**, Bowler, B., Liu, Michael C., Mace, Gregory N., Sokal, Kimberly, American Astronomical Society Meeting Abstracts, 231, 349.04

Martinez, R, Bozek, B, Drew, P, Manning, S, **Phillips, C**, Equity & Inclusivity Efforts of the Department of Astronomy at The University of Texas at Austin, *Women in Astronomy IV Conference*, July 2017, Austin, TX

Dark Sky Project, *UT Austin Graduate Student Postdoc Seminar*, February 2017, Austin, TX

**Phillips, C**, Exploring Practical Methods for Identifying Potential Meteorites, *McNair Research Symposium*, September 2015, Little Rock, AR

**Phillips, C**, Earth as a Transiting Exoplanet, *American Association of Physics Teachers Arkansas–Oklahoma–Kansas Section Meeting*, September 2014, Arkadelphia, AR

**Phillips, C**, Earth as a Transiting Exoplanet, *McNair Heartland Research Conference*, September 2014, Kansas City, MO

**Phillips, C**, Earth as a Transiting Exoplanet, *McNair Research Symposium*, September 2014, Little Rock, AR

# INVITED TALKS

---

- **Dear Grad Student Podcast** Columbus,OH  
*Invited guest on podcast discussing life as a graduate student and graduate school general experiences* September 2020
- **Movement Consulting** Columbus,OH  
*Invited speaker for discussion of unspoken rules of academia* July 2020

# TEACHING EXPERIENCE

---

- **Teaching Assistant, ASTR 3350, “Astronomical Observation and Data Analysis”** Columbus, OH  
*Department of Astronomy, The Ohio State University* Fall 2020
  - Graduate TA for undergraduate course with focus on modern astronomy with contemporary data analysis methods implemented in the Python programming language
- **Teaching Assistant, ASTR 309N, “Lives and Deaths of Stars”** Austin, TX  
*Department of Astronomy, The University of Texas at Austin* Spring 2019
  - Graduate TA for undergraduate course on supernovas, white dwarfs, neutron stars, and black holes
- **Teaching Assistant, ASTR 321, “The Future of Humanity”** Austin, TX  
*Department of Astronomy, The University of Texas at Austin* Spring & Fall 2018
  - Graduate TA for upper-division undergraduate writing astronomy course based on technological advancement. Graded and provided constructive feedback on written assignments
- **Teaching Assistant, ASTR 309C, “Birth of Stars & Planets”** Austin, TX  
*Department of Astronomy, The University of Texas at Austin* Fall 2017
  - Graduate TA for undergraduate astronomy course focused on star & planet formation
- **Teaching Assistant, ASTR 1301, “Introduction to Astronomy”** Little Rock, AR  
*Department of Physics & Astronomy, The University of Arkansas at Little Rock* Spring 2014 & Fall 2015
  - Undergraduate TA for undergraduate introductory astronomy course
- **Teaching Assistant, PHYS 1122, “Elementary Physics II Laboratory”** Little Rock, AR  
*Department of Physics & Astronomy, The University of Arkansas at Little Rock* Spring 2015
  - Undergraduate TA for laboratory physics section. Provided guidance and assistance to students conducting laboratory exercises
- **Lab Tutor, Student Support Services** Little Rock, AR  
*TRiO Programs, The University of Arkansas at Little Rock* 2013-2014
  - Tutored undergraduate students in calculus, college algebra, pre-core mathematics, and elementary physics

# ADVISING & MENTORING

---

- **TAURUS Summer Research Program** Austin, TX  
*Informal graduate student mentor and developed imposter syndrome graduate student panel seminar* 2017-2018

# PUBLIC OUTREACH AND SERVICE

---

- **Space Draft: Tucson’s Flavor of Astronomy on Tap** Columbus, OH  
*Invited speaker: Virtual public talk: “Super-Earths to Brown Dwarfs: Mysterious In-between Objects”* July 2020
- **Making Space for All Webinar Series** Columbus, OH  
*Invited for talk on exoplanets and habitability for inclusive and accessible astronomy webinar series* May 2020
- **The Columbus Astronomical Society** Columbus, OH  
*Presented a virtual talk with graduate students on the history of women in astronomy* March 2020
- **The Ohio State University Department of Astronomy Diversity Committee** Columbus, OH  
*Graduate student representative* 2019-Present

- **Sequoia and Kings Canyon National Park** Mineral King, CA  
*Designed evening program on natural skies & pop-up activities on natural skies & natural sounds* Summer 2019
- **UT Austin College of Natural Sciences** Austin, TX  
*Presented a poster on Black Women in Astronomy for the Black Excellence in STEM Festival* 2019
- **Capital of Texas Undergraduate Research Conference** Austin, TX  
*Graduate student judge* 2018
- **UT Austin Girls Days Festival** Austin, TX  
*STEM festival for over 8,600 K-8th grade girls with activities and demos* 2017, 2019
- **Sleeping Bear Dunes National Lakeshore** Empire, MI  
*Developed astronomy demonstrations for inaugural Astronomy Day & star parties* Summer 2016
- **Aviators Academy** Little Rock, AR  
*Led an after-school outreach program for 6-11 students focused on STEM activities* 2016
- **Maria Mitchell Association** Nantucket, MA  
*Hosted weekly solar telescope viewing and directed astronomy summer camps for preK-8<sup>th</sup> grade* Summer 2015
- **Arkansas Children's Hospital** Little Rock, AR  
*Led science outreach programs for inpatients* 2015
- **Maker-faire** North Little Rock, AR  
*Maintained STEM focused makers booth* 2015
- **Amazeum Tinkerfest** Bentonville, AR  
*One day STEAM oriented festival* 2014
- **Girls of Promise** Little Rock, AR  
*Led physics demos for 8th grade girls* 2014-2015
- **Discover UALR Day** Little Rock, AR  
*Led physics demonstrations for prospective students* 2014-2015
- **Code/Interactive** Bronx, NY  
*Guided inner-city students through interactive astronomy lesson on two week outdoor excursion* Summer 2013

## PROGRAMMING LANGUAGES & SOFTWARE

---

Python,  $\text{\LaTeX}$

## PROFESSIONAL MEMBERSHIPS

---

American Astronomical Society  
National Society of Black Physicists

Junior Member  
Full Member