

# Caprice L. Phillips

The Ohio State University  
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## Research Interests

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Brown dwarf and exoplanet atmospheric characterization; direct imaging techniques; high resolution spectroscopy of substellar objects; stellar abundance measurements; Planetary formation exploration through atmospheric characterization and retrievals of brown dwarfs and directly imaged exoplanets; cloud properties of substellar objects; detecting biosignatures; habitability of temperature exoplanets.

## Education

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- **The Ohio State University** Columbus, OH  
*Ph.D. Astronomy* *Expected 2025*  
*M.S. Astronomy* *August 2022*  
Thesis Topic: *Searching for Biosignatures in the Atmospheres of Gas Dwarf Planets*  
GRADUATE CERTIFICATE IN COLLEGE AND UNIVERSITY TEACHING — COLLEGE OF EDUCATION AND HUMAN ECOLOGY (EXPECTED MAY 2025)
- **The University of Texas at Austin** Austin, TX  
*M.A. Astronomy* *May 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*

## Appointments

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- **Research Analyst, Advisor: Dr. Megan Bedell** New York, NY  
*Flatiron Institute, Center for Computational Astrophysics* *January 2024 – August 2024*
  - Using iSpec and Korg to determine stellar parameters and abundance measurement for FGK host stars of benchmark brown dwarf companions
- **Graduate Student Researcher & Visiting Scientist, Advisor: Dr. Jackie Faherty** *January 2022 – present*  
*The Ohio State University & American Museum of Natural History*
  - Exploring atmospheric properties of substellar companions to probe planetary formation mechanisms
  - Using *Brewster* to robustly decouple temperature, gravity, composition, and cloud properties for planetary mass companions
- **Graduate Student Researcher, Advisor: Dr. Ji Wang** Columbus, OH  
*Department of Astronomy, The Ohio State University* *January 2022 – present*
  - Exploring atmospheric properties and formation histories of intermediate-mass brown dwarfs with a combination of low and medium resolution data sets
- **Graduate Student Researcher, Advisor: Dr. Ji Wang** Columbus, OH  
*Department of Astronomy, The Ohio State University* *September 2019 – January 2022*
  - Investigated whether biosignatures on gas dwarfs are detectable with the MIRI, NIRSpec, and NIRISS instruments aboard *JWST* mission
  - Investigated whether biosignatures on temperate gas

dwarfs/terrestrial-like planets are detectable with the upcoming *Twinkle* space mission ○ Determined suitable targets for observations for *Twinkle* and *JWST*

Austin, TX

● **Graduate Student Researcher, Advisor: Dr. Brendan Bowler**

Department of Astronomy, The University of Texas at Austin

January 2017 – May 2019

- Characterized the physical and empirical properties of a candidate benchmark brown dwarf companion in the  $\beta$  Pictoris Moving Group

## Publications

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### FIRST AND SECOND AUTHOR:

4. **Phillips, C.**, Faherty, J., Burningham, B., Vos, J., Gonzales, E., et al, *Retrieving Young Cloudy L-Dwarfs: A Nearby Planetary-Mass Companion BD+60 1417B and Its Isolated Red Twin W0047*
3. **Phillips, C.**, Wang, J., Edwards, B., Rodriguez Martinez, R., Pai Asnodkar, A., BS, Gaudi, MNRAS, *Exploring the Potential of Twinkle to Unveil the Nature of LTT 1445 Ab*
2. **Phillips, C.**, Wang, J., Kendrew, S., Greene, T., Hu, R., Valenti, J., Panero, W., Schulze, J., 2021, The Astrophysical Journal, 923, 144. *Detecting Biosignatures in the Atmospheres of Gas Dwarfs Planets with the James Webb Space Telescope*
1. **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*

### OTHER CO-AUTHOR:

8. Xuan, J., Wang, J., Finnerty, L., et al., incl **Phillips, C.**, *Validation of elemental and isotopic abundances in late-M spectral types with the benchmark HIP 55507 AB system*
7. Costes, J.C, Xuan, J., et al., incl **Phillips, C.**, *A Fresh View at the Hot Cloudy Brown Dwarf HD 984B through High-resolution Spectroscopy*, accepted
6. 2030STEM Collaboration, Adams J., Asai, MD, Cohen, R., et al., incl **Phillips, C.**, 2023, *Accelerating and scaling mentoring strategies to build infrastructure that supports underrepresented groups in STEM*
5. Finnerty, L., Scholfield, T., Sappey, B. et al., incl **Phillips, C.**, 2023, *Keck/KPIC Emission Spectroscopy of WASP-33b*
4. Echeverri, D., Xuan, J., Jovanovic., incl **Phillips, C.**, 2023, *Vortex Fiber Nulling for Exoplanet Observations II: Implementation and First Light*
3. Xin, Y, Xuan, J, Mawet, D., et al., incl **Phillips, C.**, 2023, *On-sky speckle nulling through a single-mode fiber with the Keck Planet Imager and Characterizer*
2. Edwards, B., Changeat, Q., Tsiraras, A., incl **Phillips, C.**, 2023, *Characterising a World Within the Hot Neptune Desert: Transit Observations of LTT 9779 b with HST WFC3*
1. Stotesbury, I., Edwards, B., ABB, et al., incl **Phillips, C.**, 2022, *Twinkle - a small satellite spectroscopy mission for the next phase of exoplanet science*

## Grants & Distinctions

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| ● The Edward J. Ray Travel Award for Scholarship and Service (\$1000)              | 2024 |
| ● IGEN Travel Grant (\$1000)   | 2023 |
| ● University of California Santa Cruz Other Worlds Laboratory Mini Grant (\$3150)  | 2023 |
| ● AAS International Travel Grant (\$1900)  | 2022 |
| ● Underrepresented Minority Communities in Planetary Science Travel Grant (\$2200) | 2022 |
| ● Forming and Exploring Habitable Worlds Bursary Award (£500)                      | 2022 |
| ● Sigma Xi Grant-In-Aid of Research (\$3426)                                       | 2022 |
| ● AAS FAMOUS Travel Grant (\$1000)   | 2022 |
| ● Two Sigma Diversity PhD Research Grant (\$2000)                                  | 2021 |

## Professional Service Grants

→ **Heising-Simons Foundation Grant (\$100,000, PI)** #BlackSpaceWeek: A week dedicated to celebrating and amplifying Black scientists and engineers within the space community. Funding to support 2023 and 2024 #BlackSpaceWeek programming.

→ **The Ohio State University, College of Arts & Sciences Graduate Student Success Grant (\$2500, PI)** Funding to support inaugural Black In Astro undergraduate research competition and travel grants to the American Astronomical Society conference

## Awards & Honors

• American Association of University Women American Dissertation Year Fellowship (\$25,000)	2024
• CCA Pre-Doctoral Fellowship Program, Flatiron Institute Center for Computational Astrophysics	2024
• P.E.O. Scholar Award (\$20,000)	2023 - 2024
• College of Arts and Sciences Graduate Student Award for Diversity Enhancement	2023
• Kavli Fellow	2023
• Royal Astronomical Society Annie Maunder Medal for Outreach to #BlackInAstro team	2023
• Beth Brown Memorial Award for Best Oral Presentation (NSBP/AAS)	2022
• Ann S. Tuttle Citizenship, Engagement, and Outreach Prize (OSU)	2022
• Ford Foundation Predoctoral Fellowship – Honorable Mention	2022
• 2 <sup>nd</sup> place BlackInX Interdisciplinary Twitter Research Poster Competition	2021
• Hayes Graduate Research Forum Mathematical and Physical Sciences -Third Place (OSU)	2021
• ExoExplorers Program (ExoPAG Executive Committee/NASA Exoplanet Exploration Program)	2021
• 3 <sup>rd</sup> place BlackInPhysics 3MT competition	2020
• 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

## Workshops & Summer Schools

Open Problems in the Astrophysics of Gas-Giants ( <i>Puerto Natales, Patagonia, Chile</i> )	December 2023
Other Worlds Laboratory Exoplanet Summer Program ( <i>UC Santa Cruz, Santa Cruz, CA</i> )	Summer 2023
Cloud Academy III ( <i>Les Houches, France</i> )	March 2023
Other Worlds Laboratory Exoplanet Summer Program ( <i>UC Santa Cruz, Santa Cruz, CA</i> )	Summer 2022
NYC Gaia DR3 Fête ( <i>Flatiron Institute, NYC</i> )	June 2022
International High Performance Computing Summer School ( <i>Athens, Greece</i> )	June 2022

## Observing Experience

Keck II, KPIC, Mauna Kea Observatory (remote observing)	1 night
LBT, MODS/LBC/PEPSI, Mount Graham International Observatory, (queue observing)	14 nights
Keck II, NIRC2, LGS, Mauna Kea Observatory, (P.I. B. Bowler)	1 night

## Telescope Proposals

→ Large Binocular Telescope (PEPSI), *Wide Orbit FGK Hosts of Ultracool Companions*, 5.5 hours awarded (PI), 2024B

→ TESS Cycle 6 General Investigator Program: Albedo And Atmospheric Variability Of Hot Jupiters (Co-I, PI Anusha Pai Asnodkar, \$70,000)

→ JWST Cycle 2 - 19.0 Hours, (Co-I, PI Ben Burningham), ID. #3670 Sinking silicates: tracing rainout across the LT transition

→ Large Binocular Telescope (PEPSI), *Constraining the Abundances of Solar-Type (FGK) Host Stars of Brown Dwarfs in the Solar Neighborhood*, 10 hours awarded (PI), 2023B

→ Large Binocular Telescope (PEPSI), *Constraining the Abundances of Solar-Type (FGK) Host Stars of Brown Dwarfs in the Solar Neighborhood - Pilot Study*, 5 hours awarded (PI), 2023A

## Seminars & Colloquia

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Carneige EPL, Astronomy Seminar Series (Washington, DC)	November 2024
University of Kansas Astronomy and Space Physics Seminar ( <i>webinar</i> )	April 2024
University of Pittsburgh AstroLunch Seminar Series (Pittsburgh, PA)	October 2023
UK Centre for Astrobiology Earth, Life and Space Seminar Series (Edinburgh, United Kingdom)	July 2023
UC Berkeley Theoretical Astrophysics Center (TAC) Seminar Series ( <i>webinar</i> )	April 2023
UC Santa Cruz PLUNCH Seminar ( <i>webinar</i> )	March 2023
Case Western Reserve University Particle/Astro CERCA Seminar Series ( <i>webinar</i> )	November 2022
NASA GSFC Exoplanet Seminar Series ( <i>webinar</i> )	June 2022
University of Delaware Astro Seminar ( <i>webinar</i> )	May 2022
CCA Astronomical Data Meeting (New York City, New York)	March 2022
University of Kansas Astronomy and Space Physics Seminar ( <i>webinar</i> )	January 2022
STScI Exoplanet, Star, and Planet Formation Seminar Series ( <i>webinar</i> )	January 2022
The Pennsylvania State University CEHW Astronomy Seminar ( <i>webinar</i> )	November 2021
National Society of Black Physicists Innovate Seminar Series ( <i>webinar</i> )	September 2021
American Physical Society: "Quarks to Cosmos" ( <i>webinar</i> )	April 2021
NASA JPL Exoplanet Seminar ( <i>webinar</i> )	March 2021
Exoplanet Explorers (ExoExplorers) Science Series ( <i>webinar</i> )	February 2021
College of Charleston, Department of Physics and Astronomy Colloquium ( <i>webinar</i> )	October 2020

## Research Talks (\*Invited)

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\*Substellar Formation: From Retrievals to Host Star Abundance Determination, *NBSP-Simons Scholars Program*, July 2024, New York, NY

Uniform Abundance Analysis of FGK Host Stars with Benchmark Brown Dwarf Companions with PEPSI, *CCA Predoc Symposium*, June 2024, New York, NY

Substellar Formation: From Retrievals to Host Star Abundance Determination, *Inaugural New York Area Exoplanet Meeting*, May 2024, New York, NY

Atmospheric Characterization of the Dusty Planetary-Mass Companion BD+60 1417B, *Cool Stars Conference 22 – Splinter Session The Buddy System: Utilizing the Wealth of Host Star Data to Inform Substellar Physics*, June 2024, San Diego, CA

Spectral Retrievals on Intermediate-Mass Brown Dwarfs, *American Astronomical Society, AAS Meeting #243*, January 2024, New Orleans, LA

Retrieving Young L-Dwarfs is Hard: A Look into an Approach with Low Resolution Ground Based Data with Brewster, *Other Worlds Laboratory Exoplanet Summer Program*, July 2023, UC Santa Cruz

\*Retrieving Young L-Dwarfs: A Holistic Approach with Low and High Resolution Data, *The University of Edinburgh, School of Physics and Astronomy*, July 2023, Edinburgh, UK

\*A Holistic Retrieval Approach for an Intermediate Mass Brown Dwarf: IRXS J2351+3127B, *University of Leicester, School of Physics and Astronomy*, July 2023, Leicester, UK

\*Astrobiology/JWST Session (Exoplanet Hunters: The Collaborative Search for the Expected Unexpected with JWST), National Academy of Sciences Kavli Frontiers in Science Symposium, March 2023, Irvine, California

The Atmospheric Retrieval of a Planetary-Mass Companion (contributed talk), *Great Lakes Exoplanet Area Meeting (GLEAM)*, November 2022, Columbus, Ohio

Is LTT 1445 Ab a Cold Habitable World or a Hycean World?: An Exploration with Twinkle (contributed talk), *National Society of Black Physicists Meeting*, November 2022, Charlottesville, Virginia

Is LTT 1445 Ab a Cold Habitable World or a Hycean World?: An Exploration with Twinkle (contributed talk), # 54<sup>th</sup> *Division of Planetary Science Meeting*, October 2022, London, Ontario

Is LTT 1445 Ab a Cold Habitable World or a Hycean World?: An Exploration with Twinkle (contributed talk), *Other Worlds Laboratory Exoplanet Summer Program*, June 2022, UC Santa Cruz

Is LTT 1445 Ab a Cold Habitable World or a Hycean World?: An Exploration with Twinkle (contributed talk), *Emerging Researchers in Exoplanet Science (ERES) Conference VII*, August 2022, Pennsylvania State University

\*Detectability of Biosignatures in Temperate Gas Dwarfs with Twinkle (contributed talk), *Twinkle and the Next Generation of Exoplanet Scientists Conference*, September 2021

Detecting Biosignatures in the Atmospheres of Gas Dwarf Planets with the James Webb Space Telescope (contributed talk), *AbGradCon*, September 2021

Constraining Detection Limits for Potential Biosignatures in super-Earth Atmospheres with JWST (contributed talk), *ExoPAG 23*, January 2021, virtual due to COVID-19

Detecting Biosignatures in the Atmospheres of Gas Dwarf Planets with the James Webb Space Telescope (contributed talk), *Bay Area Exoplanet Meeting*, June 2021, virtual due to COVID-19

Constraining Detection Limits for Potential Biosignatures in super-Earth Atmospheres with JWST (contributed talk), *National Society of Black Physicists*, November 2020, virtual due to COVID-19

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

Detecting Biosignatures in the Atmospheres of Gas Dwarf Planets with the James Webb Space Telescope, *Edward F. Hayes Graduate Research Forum*, April 2021

Can We Detect Ammonia in the Atmospheres of super-Earths with the James Webb Space Telescope?, *Black In Physics 3MT Competition*, October 2020

## Research Posters

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**"A Deep Atmospheric Characterization of the Overlooked Red Planetary-Mass Companion BD+60 1417B"** (Christchurch, New Zealand), *Extreme Solar Systems V*, March 2024

**"A Comparative Study of Retrieval Codes and Atmospheric Forward Modeling Analysis to Understand the Intermediate Mass Brown Dwarf: 1RXS J2351+3127B"** (Puerto Natales, Chile), *Open Problems in the Astrophysics of Gas Giants Conference*, December 2023

**"A Holistic Retrieval Approach for an Intermediate Mass Brown Dwarf: 1RXS J2351+3127B"** (University of Exeter, UK), *ExoClimes VI*, June 2023

**"Retrieving Cloudy L-Dwarfs: A Nearby Planetary-Mass Companion BD+60 1417B and Its Red Twin W0047"** (Les Houches, France), *Cloud Academy III*, March 2023

**"Retrieval of the BD+60 1417B system: A nearby planetary-mass companion"** (Seattle, Washington), *American Astronomical Society, AAS Meeting #241*, January 2023



**“Is LTT 1445 Ab a Hycean World or a cold Haber World? Exploring the Potential of Twinkle to Unveil its Nature”, *Black In Physics Poster Session*, October 2022**

**“Exploring the Lower Boundary of the Radius Valley with Twinkle: Studying Atmospheric Composition and Detecting Biosignatures of a Terrestrial-like planet LTT 1445 Ab”, *Forming and Exploring Habitable Worlds*, November 2022 (virtual)**

**“A Data Driven Approach to Unlocking Planet Formation: The Atmospheric Retrieval of the BD+60 1417 System”(Toulouse, France) - Cool Stars Conference, July 2022**

**“A Data Driven Approach to Unlocking Planet Formation: The Atmospheric Retrieval of the BD+60 1417 System” (Athens, Greece) - International High Performance Computing Summer School, June 2022**

**“Detecting Biosignatures in the Atmospheres of Gas Dwarf Planets with the James Webb Space Telescope” (Virtual) - BlackInX Conference, July 2021**

**“Characterizing a New Candidate Benchmark Brown Dwarf Companion in the  $\beta$  Pic Moving Group” (National Harbor, Maryland) - American Astronomical Society, AAS Meeting #231, January 2018**

## DEI & Outreach Conference Contributions (\*Invited)

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**Improving Diversity, Equity and Inclusion One Hashtag at a Time** (Cheyenne Polius, Phillips, C, Ashley Walker) (Capetown, South Africa), XXXII IAU General Assembly, August 2024

**\*Black In Astro: Building the Black Space Community through Social Platforms** (New York, NY), .Astronomy 12 Conference, October 2023

**\*#AbolishQuals: Barriers to Success for Graduate Students of Color in Astronomy** (Seattle, Washington), American Astronomical Society #241<sup>th</sup> Meeting - special session, January 2023

**The ExoExplorers: Early-Career Perspectives on the Intersection of Exoplanet Science and DEIA in Astronomy** (Seattle, Washington), American Astronomical Society #241<sup>th</sup> Meeting - special session, January 2023

**The Impact of Grassroot Organizations: A Tale of the Retention through the Black Space Community** (Ashley L. Walker, Phillips, C, Ronald S. Gamble Jr., Bryne Hadnott, KeShawn Ivory, Dakotah Tyler , Robert Washington III), (Seattle, Washington), American Astronomical Society #241<sup>th</sup> Meeting, iPoster, January 2023

**Black In Astro: A Grassroots Organization to Celebrate and Amplify the Black Experience in Space-Related Fields** (Columbus, Ohio), Great Lakes Exoplanet Area Meeting (GLEAM), November 2022

**“Equity & Inclusivity Efforts of the Department of Astronomy at The University of Texas at Austin”** (Austin,Texas) - Women in Astronomy IV Conference, July 2017

## Teaching Appointments

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- Academic Facilitator, URSA Program** Columbus, OH  
• *Polaris Program, The Ohio State University* Summer 2021 & Summer 2022  
⇒ Created and implemented physics and astronomy curriculum, along with teaching and leading discussions during daily courses focused on exoplanets for incoming underrepresented first-year undergraduates to OSU
- Teaching Assistant, ASTR 1141, “Life in the Universe”** Columbus, OH  
• *Department of Astronomy, The Ohio State University* Fall 2020 & Spring 2021  
⇒ Introductory course with focus on astrobiology and nature of life in the universe

- **Teaching Assistant, ASTR 3350, “Astronomical Observation and Data Analysis”** Columbus, OH  
*Department of Astronomy, The Ohio State University* Fall 2020  
 ⇒ 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  
 ⇒ 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  
 ⇒ 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  
 ⇒ Undergraduate astronomy course focused on star & planet formation

## Research Advising

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- **Phoenix-Avery Sarian - UC Santa Cruz Lamat Institute REU Program/OSU** Santa Cruz, CA  
*Co-advising with Anusha Pai Asnodkar | Project: Revisiting the Nature of 1RXS J2351+3127 B* July 2023 -

## Advising & Mentoring

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- **Ashley Walker**  
*PhD student in Atmospheric Sciences at Howard University* 2023 - present
- **Simons-NSBP Scholars Program** New York, NY  
*Graduate Fellow— informal mentor to undergraduate scholars* Summer 2022, Summer 2023
- **The SciAccess Zenith Mentorship Program** Columbus, OH  
*Informal graduate student mentor for high school student in Space Science Mentoring Program* Fall 2020
- **TAURUS Summer Research Program** Austin, TX  
*Informal graduate student mentor and developed imposter syndrome graduate student panel seminar* 2017-2018

## Professional Service

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- **American Astronomical Society 243rd Meeting** New Orleans, LA  
*Chambliss Judge* January 2024
- **Committee on the Status of Minorities in Astronomy (CSMA)**  
*Selected committee board member to enhance the participation of underrepresented minorities in astronomy* 2024 - 2027
- **Black In Astro**  
*Vice-president of Black In Astro, Black Space Week organizer, Collaborated with National Space Council, NASA* 2020 - Present
- **Executive Secretary**  
*NASA Review Panel* 2021, 2022
- **Black In Physics**  
*Documentation lead for Black In Physics Week* 2021, 2022
- **The Ohio State University Department of Astronomy Diversity Committee**  
*Graduate student representative* 2019 - 2023

## Press/Media Coverage

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NASA Joins National Space Council in Celebration of Black Space Week ( <a href="#">Link</a> )	2024
Black Space Week: From A Hashtag To The White House ( <a href="#">Link</a> )	2024
Black Space Week Celebrates Fifth Anniversary ( <a href="#">Link</a> )	2024
Celebrate Black in Space Week 2024 - Women In Astronomy Blogpost ( <a href="#">Link</a> )	2024
119 Young Scientists Participate in 2023 Kavli Symposia of the National Academy of Sciences ( <a href="#">Link</a> )	2023
2022 – 2023 College of Arts and Sciences Award Winners Announced ( <a href="#">Link</a> )	2023
Caprice Phillips wins P.E.O. Scholar Award ( <a href="#">Link</a> )	2023
Royal Astronomical Society Unveils 2023 Award Winners ( <a href="#">Link</a> )	2023
PhysicsQuest 2022: Physics Together Science Kits for Middle School Classrooms ( <a href="#">Link</a> )	2022
The Representation of Blackness in Astronomy - Nature Astronomy Q&A ( <a href="#">Link</a> )	2022
Beth Brown Memorial Award Winners for 2022 ( <a href="#">Link</a> )	2022
Astrobiters: It's #BlackSpaceWeek 2022 ( <a href="#">Link</a> )	2022
AAS NOVA: Atmospheres of Small Planets Through a Big Telescope ( <a href="#">Link</a> )	2022
Astrobiters: Atmospheres of Small Planets Through a Big Telescope ( <a href="#">Link</a> )	2021
Popular Science Magazine Interview ( <a href="#">Link</a> )	2021
Exploring Potential Biosignatures with Twinkle ( <a href="#">Link</a> )	2021
'Twinkle' satellite to scan for potentially habitable worlds ( <a href="#">Link</a> )	2021
Scientists May Detect Signs of Extraterrestrial Life in the Next 5 to 10 Years ( <a href="#">Link</a> )	2021
Astrobiters: #BlackInAstro Experiences - Caprice Phillips ( <a href="#">Link</a> )	2021
AAS Journal Author Series ( <a href="#">Youtube Video</a> )	2020

## Invited Classroom/Workshop Lectures

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<b>SPINWIP – Stanford Program for Inspiring the Next generation of Women In Physics</b>	Virtual
<i>Lecture: Exoplanets (high school level)</i>	July 2024

## Invited Outreach

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<b>United Palace of Washington Heights</b>	New York, NY
<i>Invited introductory special guest for Juneteenth screening of Hidden Figures film</i>	June 2024
<b>The Tartan Tardigrade Podcast</b>	Edinburgh, UK
<i>Invited guest to discuss research in astrobiology, career, and the prospects for life in the universe</i>	July 2023
<b>California Academy of Sciences NightSchool: Looking Up Episode</b>	Virtual
<i>Invited guest to discuss detecting exoplanets and potential biosignatures in the era of JWST</i>	July 2023
<b>Panelist for Space Balls Monthly Movie Nights - Science Fiction vs Science Fact</b>	Virtual
<i>Invited panelist guest to discuss Space Balls movie and exoplanets</i>	November 2022
<b>Black In Science Podcast</b>	Virtual
<i>Guest on podcast about being Black In Astronomy</i>	November 2022
<b>Friends of Ohio State Astronomy and Astrophysics (FOSAA) event</b>	Virtual
<i>"Detecting Potential Biosignatures in the Atmospheres of Gas Dwarfs with JWST"</i>	October 2021
<b>Columbus School for Girls</b>	Virtual
<i>Speaker on research and journey in astronomy</i>	April 2021
<b>The Big Fib Podcast</b>	Virtual
<i>Podcast featuring stars &amp; planets</i>	June 2021
<b>Science Around Cincy</b>	Columbus, OH
<i>Invited Guest for YouTube series</i>	June 2021



- **Dear Grad Student Podcast** Virtual  
Guest on podcast discussing graduate school general experiences September 2020
- **Space Draft: Tucson's Flavor of Astronomy on Tap** Virtual  
Virtual public talk: "Super-Earths to Brown Dwarfs: Mysterious In-between Objects" July 2020
- **Making Space for All Webinar Series** Virtual  
Talk on exoplanets and habitability for inclusive and accessible astronomy webinar series May 2020
- **Movement Consulting** Virtual  
Invited speaker for discussion of unspoken rules of academia July 2020

## Invited Panels

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- **CHANGES 2.0 ACTION PLAN** Virtual  
Panelist for discussion about X in STEM groups October 2023
- **Simons-NSBP Scholars Program** Virtual  
Panelist for discussion about graduate school journey July 2023
- **Disney STRANGE WORLD Stem and Sci Fi Panel** Virtual  
Panelist on chat about the intersections between science fact and fiction November 2022
- **American Geological Union** Virtual  
Invited panelist for exoplanet science with JWST October 2021
- **APS Public Engagement Webinar Series** Virtual  
Invited panelist for talk on social media July 2021
- **Committee on the Status of Minorities in Astronomy AAS Panel** Columbus, OH  
Virtual Panelist for Anti-Blackness in Astronomy January 2021
- **BlackInPhysics Panel** Columbus, OH  
Virtual panelist for undergraduate discussion: "How to be a Successful Student" October 2020
- **Women in Space Panel** Virtual  
Live Q&A about astronomy careers for elementary, middle and high school students September 2020

## Selected Outreach

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- **Black Space Week Organizer** Virtual  
Developed and helped organize workshops and professional events June 2021 - Present
- **Black In Astro Travel Grants**  
Developed and co-led evaluation for sponsored student travel grants November 2021 - Present
- **The Women+ of Color Project** Virtual  
Assisted with evaluating and selecting applicants for the program August 2023
- **Discover Black In Astro: The Impact of Citizen Astronomy Efforts** Virtual  
Developed and co-moderated panel discussion for Black Space Week 2023 June 2023
- **Astro[sound]bites Podcast** Virtual  
Podcast guest with Black In Astro team to discuss research and Black Space Week 2023 June 2023
- **Black In Astro Undergraduate Research Showcase** Virtual  
Co-organized & co-moderated undergraduate research competition during Black Space Week 2023 June 2023
- **Case Western University - Physics Underrepresented Minority Students Group** Virtual  
Online Q&A for undergraduates and graduate students about graduate school journey and experiences October 2022
- **Black In Astro Undergraduate Research Competition** Virtual  
Co-organized & moderated undergraduate research competition November 2021

- **StriveHigher Inc** Virtual  
*Women's Herstory month: meet an astrophysicist and astronomer* March 2021
- **Girls in STEM Program: Sponsored by the Museum of Discovery** Virtual  
*Presented a mentoring talk with girls aged 12-15* March 2021
- **Q&A Session with JWST** Virtual  
*Instagram outreach for JWST* February 2021
- **Westview High School** Virtual  
*Discussed with high school physics class about astronomy career* February 2021
- **The Women+ of Color Project** Virtual  
*Volunteer statement of purpose reading/feedback for program attendees* October 2020
- **The Columbus Astronomical Society** Virtual  
*Presented a virtual talk with graduate students on the history of women in astronomy* March 2020
- **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

## Scientific Collaborations

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Twinkle Science Consortium, The Keck Planet Imager and Characterizer (KPIC) Team, Backyard Worlds: Planet 9 extended science team

## Professional Societies

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American Astronomical Society  
National Society of Black Physicists

Junior Member  
Full Member

## References

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