

# STEPHEN P. SCHMIDT

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## EDUCATION

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|---|------------------------|
| <b>Johns Hopkins University</b>                             | Expected 2027-2028     |
| Ph.D. Astronomy and Astrophysics                            |                        |
| <i>Doctoral Advisors: Kevin Schlaufman &amp; David Sing</i> |                        |
| <b>Johns Hopkins University</b>                             | May 2024               |
| M.A. Physics  |                        |
| <b>University of North Carolina at Chapel Hill</b>          | August 2018 - May 2022 |
| B.S. With Honors in Physics and Mathematics; 3.954 GPA      |                        |

## PUBLICATIONS

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### First Author

- **Schmidt, S. P.**, Thorngren, D. P., & Schlaufman, K. C. Hot Jupiters are Inflated Primarily by Shallow Heating  
Submitted to AAS Journals; Preprint available at <https://arxiv.org/abs/2512.08932>
- **Schmidt, S. P.** & Schlaufman, K. C. Most Hot Jupiters Were Cool Giant Planets for More Than 1 Gyr  
Under review at AJ
- **Schmidt, S. P.**, MacDonald, R. J., Tsai, S.-M. et al. A Comprehensive Reanalysis of K2-18 b's JWST NIRISS+NIRSpec Transmission Spectrum  
<https://doi.org/10.3847/1538-3881/ae019a>
- **Schmidt, S. P.**, Schlaufman, K. C., & Hamer, J. H. Resonant and Ultra-short-period Planet Systems are at Opposite Ends of the Exoplanet Age Distribution  
<https://doi.org/10.3847/1538-3881/ad5d76>
- **Schmidt, S. P.**, Schlaufman, K. C., Ding, K., et al. Verification of Gaia DR3 Single-lined Spectroscopic Binary Solutions With Three Transiting Low-mass Secondaries  
<https://doi.org/10.3847/1538-3881/ad0135>

### Major Contributions

- Mukherjee, S., Sing, D. K., Fu, G., et al. including **Schmidt, S. P.** Cloudy mornings and clear evenings on a giant extrasolar world  
Submitted to Science; <https://arxiv.org/abs/2505.10910>
- Wang, G., Balmer, W. O., Pueyo, L., et al. including **Schmidt, S. P.** A Revised Density Estimate for the Largest Planet, HAT-P-67 b  
<https://doi.org/10.3847/1538-3881/adce9>
- Mann, A. W., Wood, M. L., **Schmidt, S. P.**, et al. TESS Hunt for Young and Maturing Exoplanets (THYME) VI: an 11 Myr giant planet transiting a very low-mass star in Lower Centaurus Crux  
<https://doi.org/10.3847/1538-3881/ac511d>

### Contributing Author

- Fu, G., Mukherjee, S., Stevenson, K. B., et al. including **Schmidt, S. P.** Overcast mornings and clear evenings in hot Jupiter exoplanet atmospheres  
<https://doi.org/10.3847/2041-8213/adf20f>
- Crumpler, N. R., Chandra, V., Zakamska, N. L., et al. including **Schmidt, S. P.** A Large Catalog of DA White Dwarf Characteristics using SDSS and Gaia Observations  
<https://doi.org/10.3847/1538-4357/ade9a9>

- Crumpler, N. R., Chandra, V., Zakamska, N. L., et al. including **Schmidt, S. P.** Detection of the Temperature Dependence of the White Dwarf Mass-Radius Relation with Gravitational Redshifts  
<https://doi.org/10.3847/1538-4357/ad8ddc>
- Wood, M. L., Mann, A. W., Barber, M. G., et al. including **Schmidt, S. P.** A Lithium Depletion Age for the Carina Association  
<https://doi.org/10.3847/1538-3881/ad03f3>
- Wood, M. L., Mann, A. W., Barber, M. G., et al. including **Schmidt, S. P.** TESS Hunt for Young and Maturing Exoplanets (THYME) IX: a 27 Myr extended population of Lower-Centaurus Crux with a transiting two-planet system  
<https://doi.org/10.3847/1538-3881/aca8fc>
- Rustamkulov, Z., Schlaufman, K. C., Sing, D. K., et al. including **Schmidt, S. P.** The Transit Age: Precise Exoplanet System Ages in the Era of *Gaia* and *JWST*  
Under review to AJ

## PRESENTATIONS

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### Colloquia & Invited Talks

- STScI HotSci, July 30, 2025. *K2-18 b is (Probably) Not a Hycean Biosphere*

### Contributed Conference Talks

- JHU-STScI ExoJamboree #2, Baltimore, Maryland, November 21, 2025. *Most hot jupiters were cool giant planets for more than 1 Gyr*
- OHP 2025–51 Pegasi b: Cool Giant Planets And Their Systems, L’Observatoire de Haute-Provence, France, October 6-10, 2025. *Most Hot Jupiters Were Cool Giant Planets for > 1 Gyr*
- The Solar System in Context, Tucson, Arizona, September 29-October 2, 2025. *Most Hot Jupiters Were Cool Giant Planets for Over a Gyr*
- Know Thy Star, Know Thy Planet II, Pasadena, California, February 2-7 2025. *Time-resolving Hot Jupiter System Evolution with Population-level Stellar Age Inferences*
- Exoplanets V, Leiden, The Netherlands, June 16-21 2024. *The Dynamical Evolution of Exoplanet Systems over Billions of Years*
- Chesapeake Bay Area Exoplanet Meeting #11, Baltimore, Maryland, USA, May 17 2024. *Resonant and Ultra-short-period Planets are at Opposite Ends of the Exoplanet Age Distribution*
- Extreme Solar Systems V, Christchurch, New Zealand, March 16-21 2024. *The Extremes of the Exoplanet Age Distribution*

### Conference Posters

- ExoClimes VII, Montreal, Canada, July 7-11 2025. *A Comprehensive Reanalysis of K2-18 b’s JWST NIRISS + NIRSpec Transmission Spectrum*
- Know Thy Star, Know Thy Planet II, Pasadena, California, February 2-7 2025. *Delayed Cooling in the Hot Jupiter Population Points to Shallow Interior Heating*
- Exoplanets V, Leiden, The Netherlands, June 16-21 2024. *Improving M Dwarf Exoplanet Hosts’ Masses and Radii Through the Combination of Gaia and TESS*
- AAS 243, New Orleans, Louisiana, January 7-11 2024. *Resonant and Ultra-short-period Planet Systems are at Opposite Extremes of the Exoplanet Age Distribution*
- NC Space Symposium, virtual, April 8 2022. *Estimating M Dwarf Metallicities with Wide Binaries and Gaia EDR3 Data*
- AAS 236, virtual, June 1-3 2020. *Improved Methods for Ground-Based Follow-Up of Young Stars and Planets from the ZEIT Survey*

### Other Presentations

- STScI ESPF Science Hour, March 4, 2025. “*A Comprehensive Reanalysis of K2-18 b’s JWST NIRISS + NIRSpec Transmission Spectrum*”
- JHU AstroCoffee, February 17 2025. “*A Comprehensive Reanalysis of K2-18 b’s JWST NIRISS + NIRSpec Transmission Spectrum*”
- Planetary Science Institute, Short Period Planet Group Meeting, October 2, 2024.
- JHU AstroCoffee, September 9, 2024. “*Resonant and Ultra-short-period Planets are at Opposite Ends of the Exoplanet Age Distribution*”
- JHU AstroCoffee, December 11 2023. “*Verification of Gaia DR3 Single-lined Spectroscopic Binary Solutions With Three Transiting Low-mass Secondaries*”

### Public Talks

- Astronomy on Tap Baltimore, October 28 2025, *Your Favorite Exoplanet Doesn’t Have Aliens*
- Astronomy on Tap in the Triangle, April 5 2022, *The Recipe for Another Earth*

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## HONORS, AWARDS AND FELLOWSHIPS

**National Science Foundation Graduate Research Fellowship**, 2024-2027

**MD Space Grant Consortium Observatory Fellowship**, 2023-2024

**NC Space Grant Undergraduate Research Scholarship**, 2021-2022

Project Title: Using Wide Binaries and Gaia Data to Generate a Fit for M Dwarf Parameters

**UNC-Chapel Hill Department of Physics and Astronomy Undergraduate Excellence Award**, 2022

**Phi Beta Kappa**, inducted spring 2021

**Eagle Scout Rank**, Boy Scouts of America

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## MEDIA COVERAGE AND PUBLICITY

Quoted in The New York Times: Astronomers Detect a Possible Signature of Life on a Distant Planet

Quoted in Nature Magazine: Signs of life on a distant planet? Not so fast, say these astronomers

Quoted in Scientific American: Why Astronomers Are Not Sold on New Alien Life Claims

Quoted in PTI (Press Trust of India): New hope of extraterrestrial life? Scientists cautious about celebrating early

Paper mentioned in Ars Technica: Skepticism greets claims of a possible biosignature on a distant world

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## SUCCESSFUL PROPOSALS

### Co-I

- **NASA/Keck 2025A.** “A Measurement of Primordial Stellar Obliquity in a Wide-separation Giant Planet System” (PI: K. C. Schlaufman)
- **NOIRLab/WIYN 2025A.** “A Measurement of Primordial Stellar Obliquity in a Wide-separation Giant Planet System” (PI: K. C. Schlaufman)

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## TEACHING EXPERIENCE

### Teaching Assistant

*AS.171.103: General Physics I for Biological Science Majors*

Fall 2022

- Taught one weekly problem-solving session, held one weekly hour-long office hour, proctored exams, and graded homework for over 250 students. Topics included kinematics, forces and motion, conservation laws, circular motion, and gravitation, and fluids.

### Teaching Assistant

Fall 2022

#### *AS.173.111: General Physics Laboratory I*

- Taught one weekly section of a 3-hour introductory physics lab, facilitating and grading students' lab work, and attending a weekly preparatory meeting. Topics included data analysis with Excel, measurement and uncertainty, and general physics principles such as linear momentum, moment of inertia, and the small angle approximation.

### Learning Assistant

2019-2022

*One section of PHYS 118, Introductory Calculus-based Mechanics and Relativity; two sections of PHYS 114, General Physics I: For Students of the Life Sciences; two sections of PHYS 115, General Physics II: For Students of the Life Sciences; and one section of MATH 383: First Course in Differential Equations*

- Physics: Assisted Teaching Assistant during class, facilitated students' lab work, held weekly office hours, and attended a weekly preparatory meeting;
- Mathematics: Assisted Professor during class, facilitated problem-solving portions of class, and held weekly office hours.
- Topics taught: kinematics, forces and motion, conservation laws, circular motion, gravitation, special relativity, waves, fluids, algebra-based electromagnetism, geometric optics, nuclear physics, biological applications of physics, laboratory practices, error analysis, first order ODEs, second order ODEs, and systems of differential equations.

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## SERVICE AND LEADERSHIP

### Review and Referee Service

- The Planetary Science Journal 2025-Present

### Positions of Responsibility

- **Co-chair**, TRU-UE Local 197 Media and Communications Committee 2024-Present  
*Helped secure over \$30 million total in raises for >3,000 graduate workers at JHU*
- **President**, JHU Physics and Astronomy Graduate Students 2024-Present
- **Steward**, TRU-UE Local 197 2024-Present
- **Institutional Representative**, Astro Grad Congress 2024-Present
- **Senate Member**, Gender Minorities & Women in Physics JHU 2023-Present
- **Observatory Fellow**, Maryland Space Grant Consortium 2023-2024
- **Social Coordinator**, JHU Physics and Astronomy Graduate Students 2023-2024
- **Room Manager**, UNC Society of Physics Students 2021-2022
- **Treasurer**, UNC Visibility in Physics 2021-2022

### Events Organized, Co-organized, or Contributed

- **Local Organizing Committee**, GWiP@JHU Fall Summit #3 09/2025
- **Organizer**, JHU Physics and Astronomy Physics Fair 04/2025
- **Photographer**, GWiP@JHU × Morgan State University Spring Brunch 04/2025
- **Co-organizer**, Astronomy on Tap Baltimore (Totaling 11 events thus far) 11/2022-Present
- **Organizer**, JHU Physics and Astronomy 2025 Department Open House 03/2025
- **Scientific Organizing Committee**, JHU-STScI ExoJamboree 11/2024

- **Local Organizing Committee**, GWiP@JHU Fall Summit #2 09/2024
- **Co-organizer**, JHU Physics and Astronomy PhD Program Orientation 08/2024
- **Photographer**, Chesapeake Bay Area Exoplanet Meeting #11 05/2024
- **Co-organizer**, JHU Physics and Astronomy 2024 Department Open House 03/2024

## COLLABORATION MEMBERSHIPS

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|-------------------------------|--------------|
| JWST Grand Tour Collaboration | 2024-Present |
| STARGATE Collaboration        | 2025-Present |

## TRAININGS

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- UNC Safe Zone Training
- UNC HAVEN (Helping Advocates for Ending Violence Now) Training
- JHU Safe Zone Training