

# Kyle D. Neumann

Astronomy and Astrophysics Graduate Student - PSU

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525 Davey Laboratory

University Park, PA 16802

## Education

**Penn State University (PSU)**, State College, Pennsylvania

Present

*Current Graduate Student in Astronomy and Astrophysics*

**The Ohio State University (OSU)**, Columbus, Ohio

Graduation: May 2022

*Bachelor of Science in Astronomy/Astrophysics and Physics*

*Magna Cum Laude with honors in Arts and Sciences*

**1st Major GPA (Astronomy): 3.87/4.00      2nd Major GPA (Physics): 3.86/4.00**

**Cumulative GPA: 3.89/4.00**

## Research Experience

**Graduate Research Assistant**

April 2024 - Present

Department of Astronomy & Astrophysics at Penn State University

*Dr. Abe Falcone and Dr. Steve Kerby*

Group Website: <https://sites.psu.edu/headilab/>

- Data analyst working with high-energy data from The Neil Gehrels Swift Observatory and The Fermi Gamma-ray Space Telescope

**ASAS-SN Data Analyst**

June 2022 - August 2023

Department of Astronomy at The Ohio State University

*Dr. Krzysztof Stanek, Dr. Christopher Kochanek, and Dr. Michael Tucker*

Group Website: <https://www.astronomy.ohio-state.edu/asassn/>

- Data analyst working for the All-Sky Automated Survey for SuperNovae full-time
- Responsible for analyzing daily photometric data taken by twenty 14 cm telescopes located in the northern and southern hemispheres
- Responsible for daily analyses of potential transient sources continuing into naming and publishing transient candidates including cataclysmic variable stars and supernovae

**Astronomy Undergraduate Research**

August 2020 - June 2022

Department of Astronomy at The Ohio State University

*Dr. Christopher Kochanek and Dr. Wayne Schlingman*

- Research Assistant working for the All-Sky Automated Survey for SuperNovae
- Responsible for analyzing daily photometric data taken by twenty 14 cm telescopes located in the northern and southern hemispheres
- Process and collect data from numerous sources for use in the ASAS-SN 2018-2020 Bright Supernova Catalog
- Continued during Summer of 2021 with the Summer Undergraduate Research Program

## Publications

Neumann, K. D., et al. "Echo Location: Distances to Galactic Supernovae From ASAS-SN Light Echoes and 3D Dust Maps", 2024, arXiv e-prints, p. arXiv:2407.14584

Neumann, K. D., et al. "The ASAS-SN Bright Supernova Catalog – V. 2018-2020.", 2023, MNRAS, 520, 4356

## Coauthored Publications

Necker, Jannis, et al. "ASAS-SN follow-up of IceCube high-energy neutrino alerts." Monthly Notices of the Royal Astronomical Society 516.2 (2022): 2455-2469.

## Teaching Experience

### Undergraduate Astronomy Instructional Assistant

Department of Astronomy at The Ohio State University

*Dr. Krzysztof Stanek*

Spring 2022

Astronomy 1144

- Undergraduate IA for introduction astronomy course: Stars, Galaxies, and the Universe
- Responsible for writing and distributing daily quizzes
- Responsible for taking attendance for in class and online students
- Responsible for grading writing assignments

*Dr. Smita Mathur*

Fall 2021

Astronomy 1102

- Undergraduate IA for introduction astronomy course: From Planets to Cosmos
- Help prepare homework or answers for the homework assignments
- Responsible for grading homework assignments

### Undergraduate Physics Teaching Assistant

Fall 2020 - Spring 2021

Department of Physics at The Ohio State University

*Dr. Gregory Kilcup*

Physics 2300/2301

- Undergraduate TA for Physics 2300 and 2301, Sophomore level Intermediate Mechanics
- Class of over 100 students
- Responsible for grading and commenting on weekly homework assignments
- Responsible for working with several groups of students on weekly group assignments
- Responsible for tutoring students on past and current assignments

## Honors and Awards

### Dr. Robert H. Hasek Graduate Fellowship

August 2023

Fellowship in honor of outstanding academic performance and the strong recommendation of the Department of Astronomy and Astrophysics at Penn State University.

### Dean's List

Fall 2018 - Spring 2022

### Sigma Pi Sigma National Physics Honor Society Member

Spring 2020 - Spring 2022

### L. Earl Slusher Scholarship

December 2021

Scholarship is awarded to an outstanding junior or senior Astronomy major who has shown exceptional promise for going on to graduate work in Astronomy

<https://astronomy.osu.edu/undergraduates/awards-scholarships/slusher-scholarship>

### Edward G. Mayers Scholarship

March 2021

Scholarship for merit in natural and mathematical sciences

### 2019 Helen Cowan Book Award

April 2019

Awarded for high achievement among freshman level undergraduate physics majors

<https://physics.osu.edu/ug-undergraduate-award-winners>

### Indoor Archery Ohio State Tournament 3rd Place

February 2019

3rd place in Indoor Archery Ohio State Tournament for Collegiate Male Barebow

## Talks

Guest Lecturer to ASTRO 530: Stellar Atmospheres

Taught lecture on “Photospheres of Gamma-Ray Burst Jets” to the graduate course of ASTRO 530: Stellar Atmospheres

**Astronomy Lunch Talk at PSU** February 2024

Presentation of “Distances to Galactic Supernovae with Light Echoes and 3D Dust Maps” to the Department of Astronomy & Astrophysics at Penn State University

**AstroPh Talk at UH** October 2022

Presentation of “The ASAS-SN Bright Supernova Catalog – V. 2018-2020” to the Institute of Astronomy at the University of Hawaii

**AstroCoffee at MSU** October 2022

Presentation of “The ASAS-SN Bright Supernova Catalog – V. 2018-2020” to the Department of Physics and Astronomy at Michigan State University

**AstroCoffee at OSU** October 2022

Presentation of “The ASAS-SN Bright Supernova Catalog – V. 2018-2020” to the Department of Astronomy at The Ohio State University

**Summer Undergraduate Research Symposium** July 2021

Presentation of summer research with ASAS-SN focusing on photometry of supernova and host galaxy data acquisition for supernova catalog

## **Skills**

### **Programming Language Experience**

C++, Python, LaTeX, HTML, and Wolfram (Mathematica)

### **Operating System Experience**

Apple (macOS, iOS), Linux, and Microsoft (Windows)

### **Application Experience**

Microsoft Office and their Google counterparts, HEASoft

### **Public Speaking**

Presentation of research papers to students, staff, and faculty and informal talks to the public

## **Work Experience**

**Office Assistant** The Ohio State University October 2019 - October 2020

- Front desk staff member at a university residential dorm
- Assist students and other staff members daily
- Manage dorm postal services including mail and packages
- Train future office assistants at the beginning of the hiring season

## **Leadership and Activities**

**Penn State Eberly College of Science’s popular AstroFest** July 10 - 13 2024

- Large-scale astronomy outreach event that has a nightly attendance of ~500 people
- Volunteered with solar observing (day), star gazing (night), and astronomy activities

**State College Astro on Tap** September 2023 - present

- Leadership role in running the State College branch of the outreach group Astro on Tap
- Roles have involved planning, setting up, and presenting

**Friends of Ohio State Astronomy and Astrophysics Volunteer** October 2022

- Assist in running a planetarium show and public lecture
- Greet and inform attendees about the format and organization of the event

**OSU Archery Team Officer (Website Manager)** Fall 2019 - Spring 2022

- Collegiate archery team member starting in Fall 2018
- Manage and keep the Archery Club’s website up to date
- Aid in the organization and operation of the 2020 Ohio State Indoor Archery Tournament

- Help run weekly practices

**The Astronomical Society at The Ohio State University**

Fall 2018 - Spring 2022

**Society of Physics Students and Sigma Pi Sigma**

Fall 2018 - Spring 2022

**Public Stargazing Parties** 5x

2018 - 2020

- Present information on visible moons, planets, and stars while operating telescopes during The Astronomical Society's public stargazing parties at OSU

**Charter School of Wilmington's Ultimate Frisbee Club and Team** Fall 2017 - Spring 2018

- Create club and team sport at my high school with another student
- Manage weekly club sessions with 30 - 150 students
- Help manage after-school practices and games with other schools for the team

## References

*Dr. Abe Falcone* - Research Advisor

Associate Professor

[adf15@psu.edu](mailto:adf15@psu.edu)

*Dr. Christopher Kochanek* - Former Research Advisor

Professor, Ohio Eminent Scholar

[kochanek.1@osu.edu](mailto:kochanek.1@osu.edu)

*Dr. Krzysztof Stanek* - Former Research Advisor

Professor, University Distinguished Scholar

[stanek.32@osu.edu](mailto:stanek.32@osu.edu)

*Dr. Wayne Schlingman* - Former Undergraduate Astronomy Mentor

Director, Arne Slettebak OSU Planetarium, Director of Undergraduate Studies

[schlingman.4@osu.edu](mailto:schlingman.4@osu.edu)