Paarmita Pandey

PhD Candidate — Department of Astronomy — The Ohio State University

pandey.176@osu.edu github.com/paarmitap Paarmita Pandey ORCID

Research Interests

- **Astro-Particle Physics:** cosmic-ray acceleration and transport in star-forming regions, particle acceleration by shocks, gamma-ray astronomy.
- **Time-Domain Astronomy:** nuclear transients, failed supernovae, AGN variability.

Education

PhD in Astronomy, The Ohio State University 2022–2028 (expected)

Thesis advisors: Laura Lopez, Chris Kochanek

MS in Astronomy, The Ohio State University 2025

BS-MS in Physics 2017–2022

Indian Institute of Science Education and Research Bhopal, India GPA: 3.8/4

Fellowships & Grants

- IAU Travel Grant 2025 (1600 Euro)
- Recipient of University Fellowship provided by the Ohio State University ($30,000 per yr). Fellows are selected based on academic merit.(2022–2025)
- Recipient of INSPIRE Scholarship given to the Top 1% students in Higher Secondary in Basic Sciences by the Government of India ($3750) (2017–2022)

Publications

First-Author Publications (3)

[1] **Pandey, P.**, Kochanek, C., et al. 2025, *The Open Journal of Astrophysics*, doi.org/10.48550/arXiv.2509.03593, *Unraveling the Nature of the Nuclear Transient AT2020adpi.*

[2] **Pandey, P.**, Lenker, S. A.†, Lopez, L. A., et al. 2025, Accepted in ApJ, arXiv:2509.02679. *Investigating the Gamma-ray Emission from Explosive Dispersal Outflows with Fermi-LAT.*

[3] **Pandey, P.**, Lopez, L. A., Rosen, A. L., et al. 2024, ApJ doi:/10.3847/1538-4357/ad83bc. *Gamma-ray Emission from a Young Star Cluster in the Star-Forming Region RCW 38.*
Media Coverage: Highlighted in AAS Nova — *Gamma Rays from Massive Stars*

† Denotes students advised.

Co-Author Publications

[1] Webb, N., Rodriguez, J., et al. (including **Pandey, P.**) 2024, DOI, *ApJ.*

Detection of Diffuse Hot Gas Around the Young Superstar Cluster H72.97−69.39

White Papers

[1] Picture an Astronomer: Best Practices for Retaining Talent in Astrophysics, Polzin et al. (including **Pandey, P.**) 2025, Link.

Research Advising

- Stephen Lenker - OSU Astronomy Summer Internship Program (Summer 2024− Summer 2025). Project: Detection of Gamma-ray emission from the Star-Forming Region DR 21. *The mentoring initiative led to a publication by the student.
- Vaishnavi Yalamanchi - Polaris Mentorship Program (Spring 2025). Project: Analyzing the most recent nearby supernova SN 2023ixf.

Talks & Presentations

Invited Talks

Beyond Standard Model Physics Group Seminar, University of Stockholm	2026
High Energy Astrophysics and Transients (HEAT) Meeting, University of Maryland	2025
Christ University, Bangalore, India	2024

Contributed Oral Presentations

IAU Symposium 406: Future landscape of astrophysical transients, Finland	2026
HEAD Frontier Seminar Series	2026
Rutgers Summer Transient Soirée	2025
TeV Particle Astrophysics Conference, University of Chicago	2024
Multi-messenger Astronomy (EMIT) Summer School, Vanderbilt University	2023
NASA Fermi Summer School, University of Delaware	2023

Poster Presentations

CCAPP Symposium, The Ohio State University	2025
Transients from Space Workshop, Space Telescope Science Institute	2025
TOSCA Workshop, Siena, Italy	2024
SCEECS Summer School, Washington University in St. Louis	2024
20th AAS HEAD Meeting, Hawaii	2023

Teaching Experience

Teaching Assistant – Astro 3350: Observations and Data Analysis

- Led weekly 4−hour laboratory sessions, guiding students through observational and data analysis methods using Python.

- Guest lecturer for 5 classes.
- Graded assignments and lab reports.
- Held regular office hours to mentor students and clarify course material.

Professional Service

- Supernova Foundation– Member of the leadership committee as the Outreach and Mentoring Coordinator. This is a global mentoring program dedicated to empowering young women and gender minorities pursuing careers in Physics. As of October 2025, the Supernova Foundation has more than 400 members from over 50 countries.
- POLARIS Mentorship Program – Academic mentor, supporting undergraduates in physics and astronomy at OSU (Fall 2024– Spring 2025).
- AAS Working Group for International Students and Scholars – Committee Member; Led a panel discussion during a special session dedicated to International Scholars at the AAS 245th meeting (Fall 2024– present).
- CCAPP AstroParticle lunch – Organizer of weekly journal club involving discussions on papers and advancements in astroparticle physics (Fall 2023– Summer 2025).
- Department Journal Club OSU – (1) Summarized AAS 245 Poverty survey results on financial hardship in astronomy and led discussion on next steps (Spring 2025). (2) Led discussion on challenges faced by non-native English speakers in science (Fall 2024).

Outreach

- Panelist for Science Identity discussion, Polaris Mentorship Program. (September 2025).
- COSI Science Festival – Exoplanet exhibition booth host – $10,000+$ attendees (May 2024).
- Total Solar Eclipse (OSU Marion) – Eclipse discussion and solar telescope demo.
- FOSAA Solar Eclipse Event – Planetarium show volunteer (March 2024).
- OSU Python Boot Camp – Python lecture and problem set curator (Summer 2023, 2024).
- OSU Astronomy Summer Program – NASA ADS and ArXiv talk (Summer 2023, 2024).
- Undergraduate Astronomy Seminar Series – Career Pathways in Science lecture (Fall 2023, 2024).