

# Akshat S. Chaturvedi

## Curriculum Vitae

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### Georgia State University Department of Physics and Astronomy

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United States

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### EDUCATION

#### Georgia State University | Atlanta, GA

Expected Ph.D., Astronomy

Fall 2024 - Present

Expected M.S., Physics with Astronomy Concentration

Fall 2024 - Present

#### Pennsylvania State University | University Park, PA

B.S., Astronomy & Astrophysics

Fall 2020 - Spring 2024

B.S., Physics

Fall 2020 - Spring 2024

Minor, Mathematics

Fall 2020 - Spring 2024

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### RESEARCH EXPERIENCE

#### Georgia State University

Fall 2024 - Present

Graduate Research Assistant

Advisor: Dr. Douglas R. Gies

**Project:** Investigating the fundamental properties of Be+sdO binaries

**Research Expertise:** Be Stars, UV and optical spectroscopy, radial velocity analysis, cross correlation function analysis, Doppler tomography, long-baseline optical interferometry

#### Pennsylvania State University

Fall 2023 - Summer 2024

Undergraduate Research Assistant

Advisors: Dr. Robin Ciardullo, Dr. Howard E. Bond

**Project:** A spectroscopic study of the peculiar planetary nebula Abell 57

**Research Expertise:** Planetary nebulae, optical spectroscopy, CLOUDY photoionization modeling software, UV photometry

#### Pennsylvania State University

Fall 2022 - Present

Undergraduate Research Assistant

Advisors: Dr. Howard E. Bond, Dr. Robin Ciardullo, Dr. Gautam Nagaraj

**Project:** A census of blue post-AGB stars in Galactic globular clusters

**Research Expertise:** Post-AGB stars, globular clusters, optical photometry, clustering algorithms, stellar populations, astrometric analysis

#### Pennsylvania State University

Summer 2022

Undergraduate Research Assistant

Advisors: Dr. Kevin Luhman

**Project:** A chrono-kinematic analysis of nearby star associations

**Research Expertise:** Clustering algorithms, stellar populations, kinematic analysis, traceback age analysis

## PUBLICATIONS

### **R-Band Monitoring of Patroclus and Menoetius Mutual Events**

M. C. Bentz, R. Brown, S. Carrazco-Gaxiola, **A. S. Chaturvedi**, et al., 2025  
The Minor Planet Bulletin Vol. 52, No. 1, pp. 79-81

### **Spectroscopic Survey of Faint Planetary-nebula Nuclei. V. The EGB 6-type Central Star of Abell 57**

H. E. Bond, **A. S. Chaturvedi**, R. Ciardullo, K. Werner, G. R. Zeimann, and M. H. Siegel, 2024  
The Astrophysical Journal, Volume 970, Issue 2, id.164

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## CONFERENCE POSTERS

### **Penn State Undergraduate Research Exhibition | University Park, PA**

April 2024

**Poster:** A Spectroscopic Study of the Peculiar Planetary Nebula Abell 57

### **American Physical Society MAS Meeting | University Park, PA**

December 2022

**Poster:** A Census of Blue Post-Horizontal-Branch Stars in Galactic Globular Clusters

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## AWARDS, FUNDING, AND SCHOLARSHIPS

### **Second Century Initiative Fellow**

Fall 2024 - Present

Georgia State University  
Atlanta, GA

### **Faculty Undergraduate Research Support Award**

Spring 2024

*\$1000 to support publication costs*  
Pennsylvania State University  
University Park, PA

### **Induction into Sigma Pi Sigma**

Spring 2024

*National Physics and Astronomy Honors Society*  
Pennsylvania State University  
University Park, PA

### **Induction into Phi Beta Kappa**

Spring 2023

*National Liberal Arts and Sciences Honors Society*  
Pennsylvania State University  
University Park, PA

### **Eberly College of Science Dean's List**

2021, 2022, Fall 2023, and Spring 2024

Pennsylvania State University  
University Park, PA

### **George E., Jr. and Elizabeth S. Sperling Tutorial Endowment Scholarship**

Spring 2022

*\$1000 awarded to learning assistants who excel in tutorial ability*  
Pennsylvania State University  
University Park, PA

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## OUTREACH & LEADERSHIP

### **Department of Physics & Astronomy Observing Nights - Volunteer**

Spring 2025 - Present

Georgia State University  
Atlanta, GA

**OUTREACH &  
LEADERSHIP  
(CONTD.)**

**Hard Labor Creek Observatory Public Open Nights - Volunteer**

Fall 2024 - Present

Hard Labor Creek Observatory  
Rutledge, GA

**Vice President, Society of Physics Students**

Fall 2023 - Spring 2024

Pennsylvania State University  
University Park, PA

**Society of Physics Students CV Building Workshop**

Fall 2023

Pennsylvania State University  
University Park, PA

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**OBSERVING  
EXPERIENCE**

**Hard Labor Creek Observatory Miller 24" Telescope**

Fall 2024 - Spring 2025

Hard Labor Creek Observatory  
Rutledge, GA

Observing Time: 50 hours

- Obtained photometric lightcurves of the asteroids 617 Patroclus, Menoetius, 797 Montana, and 4107 Rufino

**Department of Astronomy & Astrophysics 24" Telescope**

Fall 2022

Pennsylvania State University  
University Park, PA

Observing Time: 20 hours

- Obtained photometric observations and images of a variety of astronomical objects including planetary nebulae, globular clusters, and planets

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**TEACHING  
EXPERIENCE**

**Astronomy 1010 | Astronomy of the Solar System (x1)**

Spring 2025 - Present

Georgia State University  
Atlanta, GA

**Astronomy 1020 | Stellar and Galactic Astronomy (x5)**

Fall 2024 - Present

Georgia State University  
Atlanta, GA

**Astronomy & Astrophysics 292 | Astronomy of the Distant Universe**

Spring 2023

Pennsylvania State University  
University Park, PA

**Astronomy & Astrophysics 291 | Astronomical Methods and the Solar System**

Fall 2022

Pennsylvania State University  
University Park, PA

**Physics 212M | General Physics: Electricity and Magnetism**

Spring 2022

Pennsylvania State University  
University Park, PA

**Physics 211M | General Physics: Mechanics**

Fall 2021

Pennsylvania State University  
University Park, PA

## TECHNICAL SKILLS AND LANGUAGES

### Programming

- Python
- ADQL
- R
- Julia
- Rust

### Software

- TOPCAT
- CLOUDY
- Planewave STI
- Astrolmage J
- SAO DS9
- IDL
- IRAF

### Languages

- English (native)
  - Hindi (native)
  - Marathi (native)
  - French (A2)
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