

# Akshat S. Chaturvedi

Curriculum Vitae

**Georgia State University Department of Physics and Astronomy**  
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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

## RESEARCH EXPERIENCE

### Georgia State University

Graduate Research Assistant Fall 2024 - Present  
*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

Undergraduate Research Assistant Fall 2023 - Summer 2024  
*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

Undergraduate Research Assistant Fall 2022 - Present  
*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

Undergraduate Research Assistant Summer 2022  
*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

### Broad-band Monitoring of 797 Montana

M. C. Bentz, R. Alakhone, L. Azoulay, E. Burns-Kaurin, **A. S. Chaturvedi**, et al., 2025  
The Minor Planet Bulletin Vol. 52, No. 3, pp. 207-208

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

M. C. Bentz, R. Brown, S. Carrazzo-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 & TALKS

### **Georgia Regional Astronomy Meeting | Atlanta, GA**

November 2025

Talk: Be Stars and Beyond: A Legacy of Binary Mass Transfer

### **Staraganza III | Atlanta, GA**

September 2025

Talk: Be Stars and Beyond: A Legacy of Binary Mass Transfer

### **Astronomy on Tap | Atlanta, GA**

August 2025

Talk: Final Destination: The Epic Ends of Stellar Lives Viewed by Next Generation Telescopes

### **Galaxies to Gluons Summer Lunch Talks | Atlanta, GA**

July 2025

Talk: Be Stars and Beyond: A Legacy of Binary Mass Transfer

### **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

<b>AWARDS, FUNDING, AND SCHOLARSHIPS (CONTD.)</b>	<b>Eberly College of Science Dean's List</b> Pennsylvania State University University Park, PA	2021, 2022, Fall 2023, and Spring 2024
	<b>George E., Jr. and Elizabeth S. Sperling Tutorial Endowment Scholarship</b> <i>\$1000 awarded to learning assistants who excel in tutorial ability</i> Pennsylvania State University University Park, PA	Spring 2022
<b>OUTREACH &amp; LEADERSHIP</b>	<b>AsTropaLooza Citizen Science Workshop - Volunteer</b> Georgia State University Atlanta, GA	June 2025
	<b>Department of Physics &amp; Astronomy Observing Nights - Volunteer</b> Georgia State University Atlanta, GA	Spring 2025 - Present
	<b>Hard Labor Creek Observatory Public Open Nights - Volunteer</b> Hard Labor Creek Observatory Rutledge, GA	Fall 2024 - Present
	<b>Vice President, Society of Physics Students</b> Pennsylvania State University University Park, PA	Fall 2023 - Spring 2024
	<b>Society of Physics Students CV Building Workshop</b> Pennsylvania State University University Park, PA	Fall 2023
<b>OBSERVING EXPERIENCE</b>	<b>Astrophysical Research Consortium 3.5m Telescope</b> Apache Point Observatory Sunspot, NM <ul style="list-style-type: none"> <li>Obtained high resolution echelle spectra of high- and intermediate-mass stars using the ARCES instrument</li> </ul>	December 2025 - Present Observing Time: 24 hours
	<b>Center for High Angular Resolution Astronomy (CHARA) Array</b> Mount Wilson Observatory Mount Wilson, CA <ul style="list-style-type: none"> <li>Obtained long-baseline near-infrared interferometric observations of Be+sdOB stars</li> </ul>	July 2025 - Present Observing Time: 24 hours
	<b>Hard Labor Creek Observatory Miller 24" Telescope</b> Hard Labor Creek Observatory Rutledge, GA <ul style="list-style-type: none"> <li>Obtained photometric lightcurves of the asteroids 617 Patroclus, Menoetius, 797 Montana, and 4107 Rufino</li> </ul>	Fall 2024 - Spring 2025 Observing Time: 50 hours
	<b>Department of Astronomy &amp; Astrophysics 24" Telescope</b> Pennsylvania State University University Park, PA <ul style="list-style-type: none"> <li>Obtained photometric observations and images of a variety of astronomical objects including planetary nebulae, globular clusters, and planets</li> </ul>	Fall 2022 Observing Time: 20 hours

<b>TEACHING EXPERIENCE</b>	<b>Astronomy 1020   Stellar and Galactic Astronomy (x7)</b> Georgia State University Atlanta, GA	Fall 2024 - Present
	<b>Astronomy 1010   Astronomy of the Solar System (x1)</b> Georgia State University Atlanta, GA	Spring 2025 - Present
	<b>Astronomy &amp; Astrophysics 292   Astronomy of the Distant Universe</b> Pennsylvania State University University Park, PA	Spring 2023
	<b>Astronomy &amp; Astrophysics 291   Astronomical Methods and the Solar System</b> Pennsylvania State University University Park, PA	Fall 2022
	<b>Physics 212M   General Physics: Electricity and Magnetism</b> Pennsylvania State University University Park, PA	Spring 2022
	<b>Physics 211M   General Physics: Mechanics</b> Pennsylvania State University University Park, PA	Fall 2021

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<b>SOFTWARE</b>	<b><u>CATCH (CHARA Array's Thrifty Calibrator Hunter)</u></b>
A tool to find and verify calibrator stars for interferometry targets at the CHARA Array	

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<b>TECHNICAL SKILLS AND LANGUAGES</b>	<b>Programming</b>	<b>Software</b>	<b>Languages</b>
	<ul style="list-style-type: none"> <li>• Python</li> <li>• ADQL</li> <li>• R</li> <li>• Julia</li> <li>• Rust</li> </ul>	<ul style="list-style-type: none"> <li>• TOPCAT</li> <li>• CLOUDY</li> <li>• Planewave STI</li> <li>• Astrolmage J</li> <li>• SAO DS9</li> <li>• IDL</li> <li>• IRAF</li> </ul>	<ul style="list-style-type: none"> <li>• English (native)</li> <li>• Hindi (native)</li> <li>• Marathi (native)</li> <li>• French (A2)</li> </ul>

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