

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

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

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. Carrasco-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

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

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

**AWARDS,
FUNDING, AND
SCHOLARSHIPS
(CONTD.)**

Eberly College of Science Dean's List

Pennsylvania State University
University Park, PA

2021, 2022, Fall 2023, and Spring 2024

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

\$1000 awarded to learning assistants who excel in tutorial ability

Pennsylvania State University
University Park, PA

Spring 2022

**OUTREACH &
LEADERSHIP**

AsTropalooza Citizen Science Workshop - Volunteer

Georgia State University
Atlanta, GA

June 2025

Department of Physics & Astronomy Observing Nights - Volunteer

Georgia State University
Atlanta, GA

Spring 2025 - Present

Hard Labor Creek Observatory Public Open Nights - Volunteer

Hard Labor Creek Observatory
Rutledge, GA

Fall 2024 - Present

Vice President, Society of Physics Students

Pennsylvania State University
University Park, PA

Fall 2023 - Spring 2024

Society of Physics Students CV Building Workshop

Pennsylvania State University
University Park, PA

Fall 2023

**OBSERVING
EXPERIENCE**

Astrophysical Research Consortium 3.5m Telescope

Apache Point Observatory
Sunspot, NM

December 2025 - Present

- Obtained high resolution echelle spectra of high- and intermediate-mass stars using the ARCES instrument

Observing Time: 24 hours

Center for High Angular Resolution Astronomy (CHARA) Array

Mount Wilson Observatory
Mount Wilson, CA

July 2025 - Present

- Obtained long-baseline near-infrared interferometric observations of Be+sdOB stars

Observing Time: 24 hours

Hard Labor Creek Observatory Miller 24" Telescope

Hard Labor Creek Observatory
Rutledge, GA

Fall 2024 - Spring 2025

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

Observing Time: 50 hours

Department of Astronomy & Astrophysics 24" Telescope

Pennsylvania State University
University Park, PA

Fall 2022

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

Observing Time: 20 hours

TEACHING EXPERIENCE

Astronomy 1020 | Stellar and Galactic Astronomy (x7)

Fall 2024 - Present

Georgia State University
Atlanta, GA

Astronomy 1010 | Astronomy of the Solar System (x1)

Spring 2025 - 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

SOFTWARE

CATCH (CHARA Array's Thrifty Calibrator Hunter)

A tool to find and verify calibrator stars for interferometry targets at the CHARA Array

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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