

# Priyanka Chakraborty

Center for Astrophysics | Harvard & Smithsonian

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## RESEARCH INTERESTS

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High-resolution X-ray Spectroscopy, X-ray binaries, High-redshift galaxies, Galaxy evolution

## EDUCATION

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University of Kentucky, Lexington, Kentucky, USA

Aug 2017 – Sep 2021

- Ph.D. in Physics and Astronomy
- Dissertation title: “Exploring the X-ray Universe in the Microcalorimeter Era”

## CURRENT POSITION

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Postdoctoral Fellow, Center for Astrophysics | Harvard & Smithsonian

Nov 2021 – ongoing

## TEACHING

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- Primary–Instructor, General University Physics (PHY 241), Mechanics Spring 2019
- Primary–Instructor, General University Physics (PHY 211), Mechanics Fall 2018
- Primary–Instructor, General University Physics (PHY 213), Electro–Magnetism Spring 2018
- Primary–Instructor, General University Physics (PHY 213), Electro–Magnetism Fall 2017

## ADVISING

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- REU Summer Intern Program 2022, Center for Astrophysics | Harvard & Smithsonian  
**Student:** Rachel Hemmer, Undergraduate student, Brown University  
**ApJ publication:** <https://ui.adsabs.harvard.edu/abs/2024ApJ...962..192C/abstract>  
**Ads link:** <https://ui.adsabs.harvard.edu/abs/2023AAS...24135306H>
- REU Summer Intern Program 2023, Center for Astrophysics | Harvard & Smithsonian  
**Student:** Brigitte Vazquez Segovia, Undergraduate student, UCSD  
**Ads link:** <https://ui.adsabs.harvard.edu/abs/2024AAS...24317520V/abstract>
- SAO-UMass/Latino Initiative Program 2023  
**Student:** Arthea Valderrama, Undergraduate student, UMass Lowell
- SAO-UMass/Latino Initiative Program 2023  
**Student:** McKenna Blake, Undergraduate student, UMass Lowell

## PRESS AND MEDIA

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- [BBC News Interview](#), *We’re about to witness a once-in-a-lifetime star explosion* May 2024
- [NASA Press Release](#), *XRISM’s First Light*, full member list [here](#) May 2024
- [NASA Press Release](#), *NASA’s Chandra Finds Galaxy Cluster Collision on a “WHIM”* Jul 2023
- [Chandra Observatory press release](#), *Discovery of a Pre-merger Shock Wave in Abell 98* Oct 2022
- [A&S Voices - Priyanka Chakraborty](#), UK College of Arts & Sciences, KY, USA Oct 2021

## OBSERVING GRANTS

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### Won more than \$900,000 as PI and Co-I

- **PI** – *XRISM* Cycle 1, **80 ksec** – Abell 2052 Galaxy Cluster 2024
- **PI** – *Chandra* Cycle 25, **55 ksec** – Multi-targets 2023
- **PI** – *XRISM* guest scientist, **150 ksec** – GX 340+0 X-ray Binary 2023
- **PI** – *Chandra* Cycle 24, **100 ksec** – SWIFT J2037.2+4151 X-ray Binary 2022
- **PI** – *Chandra* Cycle 24, **45 ksec** – Multi-Targets 2022
  
- **Co-I** – *XRISM* Cycle 1, **220 ksec** – Abell 2199 Galaxy Cluster 2024
- **Co-I** – *XRISM* Cycle 1, **85 ksec** – MKW4 Galaxy Group 2024
- **Co-I**, *XRISM* Cycle 1, **100 ksec** – 30 Doradus Tarantula Nebula 2024
- **Co-I** – *NuSTAR* Cycle 9, **30 ksec** – GX 340+0 X-ray Binary 2023
- **Co-I** – *Chandra* Cycle 25, **740 ksec** – 1E2215/2216 Galaxy Cluster 2023
- **Co-I** – *Chandra* Cycle 25, **60 ksec** – Abell 3112 Galaxy Cluster 2023

## INVITED TALKS

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I have delivered 30+ lectures, colloquia, and talks, with **18 invited**. Selected invited talks:

- University of Tennessee, Knoxville, TN, USA Oct 2024
- JAXA ISAS, Sagami-hara campas, Japan Aug 2024
- IAU Hands-On Workshops, Fudan University, China Aug 2024
- CX Universe 2024 meeting, Volos, Greece Jun 2024
- Fundamental Z Workshop, Albuquerque, NM, USA Aug 2023
- *XRISM* Science Team Meeting, Tsukuba, Japan Dec 2022
- Center for Astrophysics High Energy Division Seminar, MA, USA Sep 2022
- High-resolution X-ray and UV spectroscopy (HiXUV) workshop, China Aug 2022
- AtomDB Workshop and Advanced Spectroscopy School, MA, USA, Aug 2020

## LEADERSHIP AND PROFESSIONAL SERVICES

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- **Observing proposal panels-** *GMRT* and *Chandra* Aug 2024, Jun 2022
- **Reviewer** – NASA Astrophysics Research and Analysis (APRA) Apr 2024
- ***XRISM* In-Flight Calibration Team Member** – *RESOLVE* Calibration March 2024 – Present
- ***XRISM* Guest Scientist** – GX 340+0 X-ray Binary – PV target team Nov 2022 – Present
- **Invited Referee** – *Nature*, *ApJ*, and *Astronomy & Astrophysics* Nov 2022 – Present
- **Mission Planning Team member** of *Line Emission Mapper*– proposed next-gen X-ray micro-calorimeter mission Sep 2022 – Present
- SDSS-V compact objects and Black Hole Mapper working groups Feb 2024 – Present
- **X-ray Lead Developer** for the Spectral Synthesis Code *CLOUDY* Aug 2019 – Present
- **Associate-Lead Developer** for the Spectral Synthesis Code *ATOMDB* Aug 2021 – Present
- AURA Member Representative Jun 2023 – Present
- Chambliss Judge, AAS #237, AAS #236

## OUTREACH ACTIVITIES

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- Ask an Astronomer/Scientist , Cambridge Science Festival, Cambridge, MA, USA Sep 2024
- Amateur Telescope Makers of Boston, public lecture, Cambridge, MA, USA Jan 2024
- Latino initiative program mentor, Center for Astrophysics|Harvard & Smithsonian Summer 2023, Summer 2024
- COSPAR Capacity Building Workshop for developing countries, Potchefstroom, South Africa Feb 2023
- Student volunteer at the MacAdam Student Observatory - University of Kentucky, Lexington, KY, USA