

Priyanka Chakraborty

Center for Astrophysics | Harvard & Smithsonian

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RESEARCH INTERESTS

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

EDUCATION

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

Postdoctoral Fellow, Center for Astrophysics | Harvard & Smithsonian

Nov 2021 – ongoing

TEACHING

- 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

• Undergraduate Students

- 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: Brigette 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

• Graduate Students

- **Student:** Yuan Yuan Zhao, Ph.D. student, Shanghai Jiao Tong University
Project title: Effect of AGN feedback on multi-phase gas around BCGs
- **Student:** Siew Hoong Wah, Graduate student, Shanghai Jiao Tong University
- **Student:** Avaneesh Yadav, Graduate student, Veer Bahadur Singh Purvanchal University
Project title: High-resolution Spectral, timing and polarimetric properties of low mass x-ray binaries

PRESS AND MEDIA

- [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 (GO)

Won \$900,000+ as PI and Co-I, including \$400,000+ as PI

- **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

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

- University of Tennessee, Knoxville, TN, USA Oct 2024
- JAXA ISAS, Sagamihara campus, 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

- **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

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| • 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 | |