XIN XIANG (CINDY)

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EDUCATION

University of Michigan - Ann Arbor *2022 - present*
Ph.D. in Astronomy and Astrophysics Overall GPA: 3.9/4.0
Supervised by Dr. Jon M. Miller

Research Interest: X-ray Spectroscopy, Tidal Disruption Events, Outflow winds from black hole accretion disks.

Core Courses: The High-energy Astrophysics, The Structure and Content of Galaxies, Stellar Astrophysics I & II, The Extragalactic Universe, Astrophysics of the Interstellar Medium, Modern Astronomical Techniques.

Georgia Institute of Technology *2019 - 2022*
B.S. in Physics - Astrophysics Concentration (with highest honor) Overall GPA: 4.0/4.0
Minor in Computer Science - Intelligence

Undergraduate Thesis: "Including a Warm Corona in Active Galactic Nucleus Accretion Discs." *Supervised by Prof. David Ballantyne*

Core Courses: Quantum Mechanics I & II, Classical Mechanics, Thermodynamics, ElectroMagnetostatics, Electrodynamics, General Relativity, Fundamental Astrophysics, Stellar Astrophysics, Statistical Mechanics, Data Science for Physicists, Object-Oriented Programming, Data Structures and Algorithms, Artificial Intelligence, Machine Learning, etc.

PUBLICATIONS

6. **Xin Xiang**, Jon M. Miller,...,, inprep. "Five XRISM X-ray Spectroscopy of the Seyfert AGN NGC 4151: Resolving Variable Multi-layer Warm Absorbers and Fast Outflows" ApJ.

5. XRISM Collaboration; Jon M. Miller,...,**Xin Xiang**, et al. 2024. "XRISM Spectroscopy of the Fe K_α Emission Line in the Seyfert AGN NGC 4151 Reveals the Disk, Broad Line Region, and Torus." ApJL.

4. **Xin Xiang**, Jon M. Miller, et al. 2024. "Investigating the Mass of the Black Hole and Possible Wind Outflow of the Accretion Disk in the Tidal Disruption Event AT2021ehb." ApJ doi:10.3847/1538-4357/ad6002

3. Miller, Jon M., Brenna Mockler, Enrico Ramirez-Ruiz, Paul A. Draghis, Jeremy J. Drake, John Raymond, Mark T. Reynolds, **Xin Xiang**, Sol Bin Yun, and Abderahmen Zoghbi. 2023. "Evidence of a Massive Stellar Disruption in the X-Ray Spectrum of ASASSN-14li." ApJL 953(2):L23. doi: 10.3847/2041-8213/ace03c.

2. **Xin Xiang**, David R. Ballantyne, et al. "reXcor: A Model of the X-ray Spectrum of Active Galactic Nuclei that Combines Ionized Reflection and a Warm Corona." MNRAS, vol. 515, no. 1, pp. 353–368, 2022. doi:10.1093/mnras/stac1646.

1. David R. Ballantyne, and **Xin Xiang**. "Sustaining a Warm Corona in Active Galactic Nucleus Accretion Discs." MNRAS, vol. 496, no. 4, 2020, pp. 4255–4265., doi:10.1093/mnras/staa1866.

TALKS

5. **245th Annual Meeting of the American Astronomical Society** National Harbor, MD, "Five XRISM X-ray Spectra of the Seyfert AGN NGC 4151: Resolving Variable Multi-layer Warm Absorbers and Fast Outflows", Oral Presentation, January 12-16, 2025.

4. **XRISM 6th Science Meeting**, Tokyo Metropolitan University, Tokyo, Japan, "NGC 4151 Winds: Warm Absorbers and Fast Outflows", Oral Presentation, Sep 27, 2024

3. **Compact Objects Meeting in Michigan and Ontario**, Wayne State University, MI, "Chandra High-Resolution X-ray Spectroscopy of the Tidal Disruption Event: AT2021ehb", Oral Presentation, May 12, 2023

2. **239th Annual Meeting of the American Astronomical Society***, Salt Palace Convention Center, Salt Lake City, UT, "Including a Warm Corona within the Inner Accretion Disk of Active Galactic Nuclei", Poster.

1. **15th Annual Undergraduate Research Spring Symposium**, Georgia Institute of Technology, GA, "Including a Warm Corona in Active Galactic Nuclei accretion discs", Oral Presentation, April 22, 2021.

HONORS AND AWARDS

Rackham International Student Fellowship ($13,770) *November 2024*
Rackham Graduate Program *University of Michigan*

The 2023 Astronomy Department DEI Champion Award *June 2023*
Department of Astronomy *University of Michigan*

Travel Funding Awards ($1,500) *December 2022*
Center for Relativistic Astrophysics *School of Physics, Georgia Institute of Technology*

President's Undergraduate Research Travel Awards ($1,000) *December 2022*
Undergraduate Research Opportunities Program *Georgia Institute of Technology*

Letson Summer Internship Awards ($7,200) April 2021
The School of Physics *Georgia Institute of Technology*

President's Undergraduate Research Salary Awards ($1,500) April 2020
Undergraduate Research Opportunities Program *Georgia Institute of Technology*

TEACHING EXPERIENCE

Graduate Student Instructor *Jan 2023 - Dec 2023*
Department of Astronomy *University of Michigan*

· Teaching Assistant and Labs Instructor for Astronomy 102 - Stars, Galaxies, and the Universe

Undergraduate Teaching Assistant *January 2022 - May 2022*
The School of Physics *Georgia Institute of Technology*

· Teaching Assistant for PHYS 4347 - Fundamentals of Astrophysics

Mentor / Group Leader / 1-to-1 Tutor *December 2020 - May 2021*
Tutoring and Academic Support, office of undergraduate education *Georgia Institute of Technology*

· Hold small group meetings and provide training for current 1-to-1 tutors
· Conduct evaluations for tutors as general supervision of group members

*Event got canceled due to COVID

· Organize and conduct orientation at the beginning of the semester
· Hold 1-to-1 academic tutor sessions for current students at Georgia Tech

VOLUNTEER/SERVICE/OUTREACH

Graduate Practice Preliminary Exam Coordinator *August 2024 - present*
Department of Astronomy *University of Michigan*

· Support for the second years with the prelim exam

FEMMES coordinator/volunteer *August 2022 - Present*
Department of Astronomy *University of Michigan*

· Developing lesson plans and coordinating with FEMMES outreach events.
· Aiming to inspire local women+ teenagers to pursue STEM careers.

Mid-Autumn Festival Event *Sep 2023, Sep 2024*
Detroit Observatory *University of Michigan*

· Present Chang'e Flying to the Moon for public audience

Science Specialist Camp Counselor *May 2019 - July 2019*
Camp Newaygo *Newaygo, MI*

· Designed and Led 2 science classes per day for campers
· Head counselor for science cabins with a group of Girls from 7-17 years old

MEMBERSHIP

Member *October 2021 - present*
The American Astronomical Society
AAS High Energy Astrophysics Division
Lifetime Member *Inducted in May 2022*
Sigma Pi Sigma

SKILLS

Computer Languages	Python, C/C++, Java, Assembly, Fortran
Software & Tools	Matplotlib, NumPy, SciPy, PyTorch, Scikit-learn HEAsoft, Xspec, SPEX
Music	Music Sheet Transcript, Piano Performance, Guitar Piano level 10 certificate (Central Conservatory of Music)
Language	Chinese: Native, English: Proficient