Qiaoya Wu
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Education

- **University of Illinois Urbana-Champaign** — Champaign, IL
  Graduate student in Astronomy — *Aug 2021 - present*
- **Xiamen University** — Xiamen, China
  Bachelor of Astronomy — *Sep 2017 - Jun 2021*

Selected Honors and Awards

CAPS Graduate Fellowship, Center for AstroPhysical Surveys (CAPS) at UIUC — *2022-2023*
Outstanding Undergraduate Student Awards, Xiamen University — *Jun 2021*
Caiwenzhong Fellowship, College of Physics Science and Technology, Xiamen University — *Apr 2020*
Academic Excellence Scholarship, Department of Astronomy, Xiamen University — *Oct 2019*
Guangqi Fellowship, Shanghai Astronomical Observatory, CAS — *May 2019*
National Scholarship, Ministry of Education of PRC — *Nov 2018*

Research Experience

- **Quasars and Supermassive Black Holes** — University of Illinois Urbana-Champaign
  Prof. Yue Shen — *Aug 2021 - Present*
  - Broad/coronal-line region photoionization modeling
  - Quasar demographics with spectral surveys
- **Multiwavelength Observations of Stellar-mass Black Holes** — Xiamen University
  Prof. Jianfeng Wu — *Oct 2018 - Jul 2021*
  - Dynamical analysis of black hole binary system MAXIJ1820+070 and A0620-00
  - Gamma-Ray Integrated Detectors Project
- **Cosmological N-body Simulation** — Xiamen University
  Prof. Hao-ran Yu — *Nov 2019 - Jul 2021*
  - CUBE cosmological N-body simulation code development
  - Angular momentum of dark matter halos
- **Black Hole Accretion Simulation** — Shanghai Astronomical Observatory
  Prof. Feng Yuan — *May 2019 - Sep 2019*
  - ZEUS MHD simulation of black hole accretion inflow

Approved Proposals

- **Wu, Q. (PI),** Shen, Y. *HST UV Spectroscopy of High-accretion-rate AGNs and the Origin of Offset in the Broad-Line Region Size-Luminosity Relation.* 19 orbits with **HST**. HST-GO-17433.
- **Wu, Q. (PI),** Wu, J., Sai, H. *Long-Term Optical Monitoring on the Black Hole Binary MAXI J1820+070.* 120 hours with **LCOGT**. CTAP2021-A0019.

Outreach

Mentor at the UIUC Society for Equity in Astronomy mentoring program — *2022-2023*
Volunteer at the UIUC girls astronomy summer camp — *2022*
President of Xiamen University astronomy Club — *2018-2019*
Video editor and translator of Mufu astronomy team — *2018-2020*

Lists of Publications

Major contribution papers

- **Wu, Q.**, Shen, Y., Guo, H., et al. (2024). **Understanding the Broad-line Region of Active Galactic Nuclei with Photoionization. I. the Moderate-Accretion Regime**. arXiv preprint arXiv:2407.01737. (submitted to ApJ)
- **Wu, Q.**, & Shen, Y. (2023). **Improved Redshifts for DESI EDR Quasars**. Research Notes of the AAS, 7(9), 190.
- **Wu, Q.**, & Shen, Y (2022). **A Catalog of Quasar Properties from Sloan Digital Sky Survey Data Release 16**. The Astrophysical Journal Supplement Series, 263(2), 42.
- Zheng, W. M., **Wu, Q.**, Wu, J., et al. (2022). **The Disk Veiling Effect of the Black Hole Low-mass X-Ray Binary A0620-00***. The Astrophysical Journal, 925(1), 83.
- **Wu, Q.**, Yu, H. R., Liao, S., Du, M. (2021). **Spin mode reconstruction in Lagrangian space**. Physical Review D, 103(6), 063522.

Other contributing-author papers

- Nandra, K., et al. "The eROSITA Final Equatorial Depth Survey (eFEDS): the hard X-ray selected sample." arXiv preprint arXiv:2401.17300 (2024).
- Musiimenta, B., et al. "A new discovery space opened by eROSITA-Ionised AGN outflows from X-ray selected samples." Astronomy & Astrophysics 679 (2023): A84.
- Waddell, S. GH, et al. "The eROSITA Final Equatorial Depth Survey (eFEDS): Complex absorption and soft excesses in hard X-ray–selected active galactic nuclei." arXiv preprint arXiv:2306.00961 (2023).
- Cheng, S., et al. (2020). "CUBE–Towards an Optimal Scaling of Cosmological N-body Simulations." In 2020 20th IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGRID) (pp. 685-690). IEEE.
- Wen, J., et al. "GRID: a student project to monitor the transient gamma-ray sky in the multi-messenger astronomy era." Experimental Astronomy 48 (2019): 77-95.

Lists of Presentations

- **PyQSOFit: Exploring AGN Demographics** — Simons foundation, NY
  SDSS-V collaboration meeting — *Aug, 2023*
- **Correlations between halo spins and primordial perturbations** — Zhejiang University, China
  The 23rd Guoshoujing Galaxy and Cosmology Academic Conference — *May, 2021*