

YANG SUN

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EDUCATION

University of Arizona

Tucson, USA

Ph.D. in Astronomy and Astrophysics

2021 - Present

Expected Date of Ph.D.: July 2026

Supervisor: Prof. George Rieke

Thesis – *Co-Evolution of SMBH and Galaxies From Cosmic Noon to the Present Day*

Beijing Normal University

Beijing, China

B.S in Astronomy

2016 - 2020

POSITIONS

Graduate Researching Assistant

2021 - Present

Graduate Teaching Assistant

ASTR250 in Fall 2023 and Fall 2025

RESEARCH INTERESTS

Active Galactic Nuclei; Galaxy Evolution; SF&AGN Feedback

- supermassive black hole and galaxy co-evolution across cosmic time
- AGN-driven multiphase outflow and its impact on host galaxy
- star formation and galaxy assembly history, feedback-induced galaxy quenching

PUBLICATIONS

See the full publication list on [arXiv](https://arxiv.org/) ADS

ORCID ID: [ID 0000-0001-6561-9443](https://orcid.org/0000-0001-6561-9443)

Total Publications: 36, with citations of 510 (Oct. 2025)

First Author Publications: 7 (6 refereed and 1 non-refereed), with citations of 88

As First Author:

1. Sun, Y., Ji, Z., Rieke, G. H., et al. (2025), Extreme Neutral Outflow in an Inactive Quenching Galaxy at $z \sim 1.3$, arXiv e-prints, arXiv:2504.14682.
2. Sun, Y., Rieke, G. H., Lyu, J., et al. (2025), Evolution of the $M_* - M_{BH}$ Relation from $z \sim 6$ to the Present Epoch, The Astrophysical Journal, 983, 165.
3. Sun, Y., Lyu, J., Rieke, G. H., et al. (2025), No Evidence for a Significant Evolution of $M_{BH} - M_*$ Relation in Massive Galaxies up to $z \sim 4$, The Astrophysical Journal, 978, 98.
4. Sun, Y., Lee, G.-H., Zabludoff, A. I., et al. (2024), Evolution of gas flows along the starburst to post-starburst to quiescent galaxy sequence, Monthly Notices of the Royal Astronomical Society, 528, 5783.
5. Sun, Y., Lee, G.-H., Zabludoff, A. I., et al. (2023), Evolution of Gas Flows over the Starburst to Post-Starburst to Quiescent Galaxy Sequence, Resolving the Rise and Fall of Star Formation in Galaxies, 373, 193. (non-refereed)
6. Sun, Y., Yuan, H., & Chen, B. (2022), Validations and Corrections of the SFD and Planck

Reddening Maps Based on LAMOST and Gaia Data, *The Astrophysical Journal Supplement Series*, 260, 17.

7. **Sun, Y.**, Deng, D.-S., & Yuan, H.-B. (2021), Precision of the Chinese Space Station Telescope (CSST) stellar radial velocities, *Research in Astronomy and Astrophysics*, 21, 092.

As Significant Contributor:

1. Rieke, G. H., **Sun, Y.**, Lyu, J., et al. (2025), Confirming Near- to Mid-IR Photometrically-Identified Obscured AGNs in the JWST era, arXiv e-prints, arXiv:2510.07303.

2. Zhu, Y., Bonaventura, N., **Sun, Y.**, et al. (2025), SMILES Data Release II: Probing Galaxy Evolution during Cosmic Noon and Beyond with NIRSpec Medium-Resolution Spectra, arXiv e-prints, arXiv:2508.12599.

3. Deng, D., **Sun, Y.**, Wang, T., Wang, Y., & Jiang, B. (2022), Infrared Excess of a Large OB Star Sample, *The Astrophysical Journal*, 935, 175.

4. Yuan, H.-B., Deng, D.-S., & **Sun, Y.** (2021), A star-based method for precise wavelength calibration of the Chinese Space Station Telescope (CSST) slitless spectroscopic survey, *Research in Astronomy and Astrophysics*, 21, 074.

5. Deng, D., **Sun, Y.**, Jian, M., Jiang, B., & Yuan, H. (2020), Intrinsic Color Indices of Early-type Dwarf Stars, *The Astronomical Journal*, 159, 208.

Other Co-author Publications:

1. D'Eugenio, F., Nelson, E. J., Eisenstein, D. J., **including Sun, Y.**, et al. (2025), JADES Dark Horse: demonstrating high-multiplex observations with JWST/NIRSpec dense-shutter spectroscopy in the JADES Origins Field, arXiv e-prints, arXiv:2510.11626.

2. Scholtz, J., Carniani, S., Parlanti, E., **including Sun, Y.**, et al. (2025), JADES Data Release 4 – Paper II: Data reduction, analysis and emission-line fluxes of the complete spectroscopic sample, arXiv e-prints, arXiv:2510.01034.

3. Woodrum, C., Shivaiei, I., Witstok, J., **including Sun, Y.**, et al. (2025), JADES: The Star Formation and Dust Attenuation Properties of Galaxies at $3 < z < 7$, arXiv e-prints, arXiv:2510.00235.

4. Zhu, Y., Egami, E., Fan, X., **including Sun, Y.**, et al. (2025), Quasar Radiative Feedback May Suppress Galaxy Growth on Intergalactic Scales at $z = 6.3$, arXiv e-prints, arXiv:2509.00153.

5. D'Eugenio, F., Helton, J. M., Hainline, K., **including Sun, Y.**, et al. (2025), JADES and SAPPHIRES: galaxy metamorphosis amidst a huge, luminous emission-line region, *Monthly Notices of the Royal Astronomical Society*, 542, 960.

6. Rinaldi, P., Rieke, G. H., Wu, Z., **including Sun, Y.**, et al. (2025), Beyond the Dot: an LRD-like nucleus at the Heart of an IR-Bright Galaxy and its implications for high-redshift LRDs, arXiv e-prints, arXiv:2507.17738.

7. Stone, M. A., Rieke, G. H., Lyu, J., **including Sun, Y.**, et al. (2025), The $z = 7.08$ quasar ULAS J1120+0641 May Never Reach a "Normal" Black Hole to Stellar Mass Ratio, arXiv e-prints, arXiv:2507.13489.

8. Rieke, G. H., Buiten, V. A., Goldberg, C. E., **including Sun, Y.**, et al. (2025), Low Accretion Rates in Black Holes in Late-stage Merger Ultraluminous Infrared Galaxies, *The Astrophysical Journal*, 988, 17.

9. Zhu, Y., Rieke, M. J., Ji, Z., **including Sun, Y.**, et al. (2025), A Systematic Search for Galaxies with Extended Emission Lines and Potential Outflows in JADES Medium-band Images, *The Astrophysical Journal*, 986, 162.

10. Zhu, Y., Alberts, S., Lyu, J., **including Sun, Y.**, et al. (2025), SMILES: Potentially Higher Ionizing Photon Production Efficiency in Overdense Regions, *The Astrophysical Journal*, 986, 18.

11. Lin, X., Fan, X., Sun, F., **including Sun, Y.**, et al. (2025), The Large-scale Environments

of Low-luminosity AGNs at $3.9 < z < 6$ and Implications for Their Host Dark Matter Halos from a Complete NIRCcam Grism Redshift Survey, arXiv e-prints, arXiv:2505.02896.

12. Zhang, J., Egami, E., Sun, F., **including Sun, Y.**, et al. (2025), Abundant Population of Broad H Emitters in the GOODS-N Field Revealed by CONGRESS, FRESCO, and JADES, arXiv e-prints, arXiv:2505.02895.

13. Lin, X., Egami, E., Sun, F., **including Sun, Y.**, et al. (2025), The Luminosity Function and Clustering of H Emitting Galaxies at $z \approx 4 - 6$ from a Complete NIRCcam Grism Redshift Survey, arXiv e-prints, arXiv:2504.08028.

14. Zhu, Y., Rieke, M. J., Ho, L. C., **including Sun, Y.**, et al. (2025), Nuclear Winds Drive Cold Gas Outflows on Kiloparsec Scales in Reionization-Era Quasars, arXiv e-prints, arXiv:2504.02305.

15. D'Eugenio, F., Hainline, K., Arribas, S., **including Sun, Y.**, et al. (2025), Forever Blowing Bubbles: What Powers a 24-kpc Ionized Gas Nebula Around a Normal Galaxy at $z=6$?, JWST Proposal. Cycle 4, 7335.

16. Scholtz, J., Parlanti, E., Carniani, S., **including Sun, Y.**, et al. (2025), Tentative rotation in a galaxy at $z \sim 14$ with ALMA, arXiv e-prints, arXiv:2503.10751.

17. Hainline, K. N., Maiolino, R., Juodžbalis, I., **including Sun, Y.**, et al. (2025), An Investigation into the Selection and Colors of Little Red Dots and Active Galactic Nuclei, The Astrophysical Journal, 979, 138.

18. Alberts, S., Lyu, J., Shivaee, I., **including Sun, Y.**, et al. (2024), SMILES Initial Data Release: Unveiling the Obscured Universe with MIRI Multiband Imaging, The Astrophysical Journal, 976, 224.

19. Rinaldi, P., Bonaventura, N., Rieke, G. H., **including Sun, Y.**, et al. (2024), Not Just a Dot: the complex UV morphology and underlying properties of Little Red Dots, arXiv e-prints, arXiv:2411.14383.

20. Zhu, Y., Bakx, T. J. L. C., Ikeda, R., **including Sun, Y.**, et al. (2024), Discovery of a Unique Close Quasar-DSFG Pair Linked by a [C II] Bridge at $z = 5.63$, Research Notes of the American Astronomical Society, 8, 284.

21. Alberts, S., Williams, C. C., Helton, J. M., **including Sun, Y.**, et al. (2024), To High Redshift and Low Mass: Exploring the Emergence of Quenched Galaxies and Their Environments at $3 < z < 6$ in the Ultra-deep JADES MIRI F770W Parallel, The Astrophysical Journal, 975, 85.

22. Shivaee, I., Alberts, S., Florian, M., **including Sun, Y.**, et al. (2024), A new census of dust and polycyclic aromatic hydrocarbons at $z = 0.7-2$ with JWST MIRI, Astronomy and Astrophysics, 690, A89.

23. Ji, Z., Williams, C. C., Rieke, G. H., **including Sun, Y.**, et al. (2024), Extended hot dust emission around the earliest massive quiescent galaxy, arXiv e-prints, arXiv:2409.17233.

24. Wevers, T., Coughlin, E. R., Pasham, D. R., **including Sun, Y.**, et al. (2023), Live to Die Another Day: The Rebrightening of AT 2018fyk as a Repeating Partial Tidal Disruption Event, The Astrophysical Journal, 942, L33.

OBSERVING PROPOSALS

ALMA Cycle 12	2025.1.01045.S (7.2h)	PI
ALMA Cycle 12	2025.1.01067.S (45.6h)	co-I
JWST Cycle 4	GO 7335 (14.2h)	co-I

TALKS

* for invited talk

- *NOIRLab Flash Talk, Tucson, USA *Sept. 2025*
- CRISOL2025 (flash talk), Toledo, Spain *May 2025*
- JWST/NIRCam Science Team Meeting, Tucson, USA *March 2025*
- Dust and Gas throughout Cosmic Time, Hiroshima, Japan *Dec. 2024*
- JWST/MIRI Meeting, Tucson, USA *Oct. 2024*
- STScI Spring Symposium (flash talk), Baltimore, USA *Apr. 2024*
- Steward Internal Symposium, Tucson, USA *Sept. 2023*
- *Columbia University Seminar, New York, USA *July 2023*
- Galaxy Formation Workshop, Tucson, USA *Apr. 2023*
- IAU Symposium 373, Busan, South Korea *Aug. 2022*

SERVICE AND OUTREACH

- Referee for AAS Journals *2025-present*
- Astronomy Tutoring Offered for Majors and Minors (ATOMM) program in Steward Observatory *2025*
- Teacher for Black Holes Camp in Flandrau Planetarium *2025*
- Co-organizer of Steward Internal Symposium *2025*
- Co-organizer of Perspective Graduate Student Visit in Steward Observatory *2024*
- Member of International Scholars Task Force in Steward Observatory *2021-Present*
- Co-producer of "Numerical Methods" Open Online Course at Beijing Normal University *2018*
- Volunteer at Beijing Astronomy Planetarium *2017-2019*

HONOR

- "Jingshi" First Prize Scholarship for Excellent Academic Performance *2018-2019*
- Excellent Research Projects for Undergraduates *Sept. 2019*
- "Kuangqiao" Scholarship for Excellent Academic Performance *Nov. 2018*
- Honorable Mention for Mathematical Competition in Modeling *April 2018*
- "Jingshi" Second Prize Scholarship for Excellent Academic Performance *2016-2018*

SKILLS

Programming: Python, FORTRAN, MATLAB
Software: CASA, TOPCAT, LATEX, EXCEL
Language: English, Chinese