Zhuyun Zhuang

CIERA Postdoctoral Fellow

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Education

2025 | **Ph.D. in Astrophysics**, California Institute of Technology, USA
Advisors: Charles C. Steidel & Evan N. Kirby (Notre Dame)

2021 | **M.Sc. in Astrophysics**, California Institute of Technology, USA

2019 | **B.Sc. in Astronomy** (National Elite Program), Nanjing University, China
Advisor: Yong Shi

Professional Appointments

2025 - present | **CIERA Postdoctoral Fellow**, Northwestern University, USA

Honors and Awards

2022–2025 NASA FINESST Fellowship
2022 & 2023 David and Barbara Groce Travel Fund, Caltech
2019 Outstanding Graduates, Nanjing University
2015–2018 Elite Program Fellowship for Undergraduate Student, Nanjing University
2017 Zheng Gang Scholarship (Top 1%), Nanjing University
2017 First Prize, The 20^{th} Forum of Sciences and Arts of Nanjing University
2016 The National Astronomical Observatories Scholarship, Chinese Academy of Science
2016 & 2018 National Scholarship (Top 1%), Chinese Ministry of Education

Selected Research Presentations

Seminars:

Nov 2024 Lunch Seminar, Carnegie Observatories, Pasadena, USA
Oct 2024 Astronomy Tuesday Lunch Talks, UCLA, Los Angeles, USA
Oct 2024 Galread, Princeton University, Princeton, USA
Oct 2024 ITC Luncheon, Harvard University, Cambridge, USA
Sep 2024 CIERA Observer Group Meeting, Northwestern University, Evanston, USA
Jan 2024 Astrophysics Seminar, Shanghai Astronomical Observatory, Shanghai, China
Jan 2024 Astrophysics Seminar, National Astronomical Observatories (NAOC), Beijing, China
Aug 2023 **CAS colloquium**, Swinburne, Melbourne, Australia
May 2023 CIERA Observer Group Meeting, Northwestern University, Evanston, USA
Aug 2022 Astrophysics Seminar at University of Notre Dame, South Bend, USA
Feb 2022 Galaxies Group Meeting at the University of Michigan, Ann Arbor, USA

Conferences:

Sep 2024 Highlighted Talk, GALAXIES AT CROSSROADS, Brno, Czech Republic
Sep 2024 Contributed Talk, Keck Science Meeting, Pasadena, USA

Dec 2023	Contributed Talk, Resolving Galaxy Ecosystems Across All Scales, Hong Kong, China
Oct 2023	Contributed Talk, A Life Devoted to Stellar Populations, Tenerife, Spain
Sep 2023	Contributed Talk, GalFRESCA 2023, Riverside, USA
Sep 2023	Contributed Talk, Galaxy Transformation Across Space and Time, Canberra, Australia
Nov 2022	Contributed Talk, Linking the Galactic and Extragalactic (remote), Wollongong, Australia
Jun 2022	Contributed Talk, 240th American Astronomical Society Meeting, Pasadena, USA
Sep 2021	Contributed Talk, Keck Science Meeting, San Diego, USA

Software

As an active user of Keck/KCWI, I contributed to the development of two post-DRP reduction package:

- KSkyWizard (as the lead developer): an interactive GUI refining the sky subtraction, flux calibration, and telluric correction of KCWI-red channel (KCRM).
- KCWIKit: post-processing package of KCWI

Services and Outreach

2023–	Referee for ApJ, ApJL
Jul 2024	Speaker, Astronomy on Tap: Los Angeles
2023–2024	Astronomy Colloquium Czar, Caltech Astronomy
Jun 2022	Chambliss Judge, 240th AAS
Jun 2021	Host, Astronomy on Tap (virtual, in Mandarin)
Jan 2021	Chambliss Judge, 237th AAS
2020–2021	Student Office Czar, Caltech Astronomy
2019–	Member, American Astronomical Society
2016–2017	Head of Public Relations Department at Astronomy Students Union, Nanjing University

Publications

*First-author publications:

1. **Zhuang, Z.** *et al.* Metals in Star-forming Galaxies with KCWI. I. Methodology and First Results on the Abundances of Iron, Magnesium, and Oxygen. *ApJ* **972,** 182. doi:10.3847/1538-4357/ad5ff8 (Sept. 2024).
2. **Zhuang, Z.** *et al.* A Glimpse of the Stellar Populations and Elemental Abundances of Gravitationally Lensed, Quiescent Galaxies at z $\gtrsim$ 1 with Keck Deep Spectroscopy. *ApJ* **948,** 132. doi:10.3847/1538-4357/acc79b (May 2023).
3. **Zhuang, Z.**, Kirby, E. N., Leethochawalit, N. & de los Reyes, M. A. C. NGC 147 Corroborates the Break in the Stellar Mass-Stellar Metallicity Relation for Galaxies. *ApJ* **920,** 63. doi:10.3847/1538-4357/ac1340 (Oct. 2021).

Co-author publications:

1. Malkan, M. A. *et al.* Parallel Application of Slitless Spectroscopy to Analyze Galaxy Evolution (PASSAGE): Survey Overview. *ApJ* **993,** 152. doi:10.3847/1538-4357/ae00bb (Nov. 2025).
2. Peng, Z. *et al.* When Stars Mimic Monsters: Luminous Blue Variables in SBS 0335-052 E. *arXiv e-prints,* arXiv:2508.03912. doi:10.48550/arXiv.2508.03912 (Aug. 2025).
3. Nunez, E. H. *et al.* KBSS-InCLOSE I: Design and First Results from the Inner CGM of QSO Line Of Sight Emitting Galaxies at z$\sim$2-3. *arXiv e-prints,* arXiv:2408.14647. doi:10.48550/arXiv.2408.14647 (Aug. 2024).

4. de los Reyes, M. A. C., Kirby, E. N., **Zhuang, Z.**, Steidel, C. C., Chen, Y. & Wheeler, C. Dwarfs in Void Environments (DIVE): The Stellar Kinematics of Void Dwarf Galaxies Using the Keck Cosmic Web Imager. *ApJ* **951,** 52. doi:10.3847/1538-4357/acd189 (July 2023).

5. Strotjohann, N. L. *et al.* Bright, Months-long Stellar Outbursts Announce the Explosion of Interaction-powered Supernovae. *ApJ* **907,** 99. doi:10.3847/1538-4357/abd032 (Feb. 2021).

6. Burdge, K. B. *et al.* A Systematic Search of Zwicky Transient Facility Data for Ultracompact Binary LISA-detectable Gravitational-wave Sources. *ApJ* **905,** 32. doi:10.3847/1538-4357/abc261 (Dec. 2020).

7. Fremling, C. *et al.* The Zwicky Transient Facility Bright Transient Survey. I. Spectroscopic Classification and the Redshift Completeness of Local Galaxy Catalogs. *ApJ* **895,** 32. doi:10.3847/1538-4357/ab8943 (May 2020).