WEIDA HU

weidahu@tamu.edu
Postdoctoral Researcher
Department of Physics & Astronomy, Texas A&M University, College Station, Texas, 77843

EDUCATION

University of Science and Technology of China *Sep. 2016 - Jul. 2021*
Ph.D. in Astrophysics, supervised by Prof. Junxian Wang
Thesis: *Lyman-Alpha Galaxies in the Epoch of Reionization: Search and Investigation*

University of Science and Technology of China *Sep. 2012 - Jul. 2016*
B.S. in Astrophysics, supervised by Prof. Junxian Wang

EMPLOYMENTS

Texas A&M University *Jun. 2023 - present*
Postdoctoral Researcher, Department of Physics & Astronomy

University of California, Santa Barbara *Feb. 2022 - Jun. 2023*
Postdoctoral Researcher, Department of Physics

University of Science and Technology of China *Jul. 2021 - Jan. 2022*
Mozi Postdoctoral Fellow, Department of Astronomy

HONORS AND AWARDS

CAS Presidential Scholarship (Special Prize), Chinese Academy of Sciences *2021*
CAS Outstanding Doctoral Dissertation, Chinese Academy of Sciences *2021*
National Scholarship, Chinese Ministry of Education *2020*
Postgraduate Fellowship, USTC *2016 - 2020*
Undergraduate Fellowship, USTC *2012 & 2015*

AWARDED OBSERVATIONS

• **Are mergers leakers: A case study of spectacular galaxy merger at redshift 6.7**

PI, *2025*

Gemini South Telescope: 8 hours

• **SPAM: Star-formation from Photometry through the Addition of Medium-bands**

co-I, *2025*

James Webb Space Telescope: 63 hours

• **A Census of Galaxy Kinematics and Outflows to $z \sim 7$**

co-I, *2025*

James Webb Space Telescope: 65 hours

• **The CLASSYIR Treasury: Unveiling the Cosmic Engines Powering Galaxies with JWST/MIRI**

co-I, *2025*

James Webb Space Telescope: 79 hours

• **Resolving Multi-phase Outflow/Inflow via Gas Dynamics and Chemical Abundance Distribution in a Sub-L* Dwarf Galaxy at z=6.1**

co-I, *2025*

James Webb Space Telescope: 61 hours

• **What really are the Physical Properties of Galaxies in the Epoch of Reionization?**

co-PI, *2024*

James Webb Space Telescope: 62 hours

• **Identify the large-scale structure of the most distant DSFG in the cosmic reionization**

PI, *2022*

Blanco 4-meter Telescope: 5 nights

• **Finding and confirming Lyα galaxies in the epoch of reionization (LAGER)**

core member, *2016*

Blanco 4-meter Telescope: $>$ 60 nights; Magellan: $>$ 10 nights; Keck: $>$ 7 nights

• **Galaxy Protoclusters as Drivers of Cosmic Reionization**

co-I, *2022*

James Webb Space Telescope: 35.2/9.7 hours

• **COS Legacy Archive Spectroscopic SurveY: A Treasury of Star-Forming Galaxies**

member, *2022*

COLLABORATIONS

- **MOONS**: Multi-object Optical and Near-IR spectrograph
- **CAPERS**: The CANDELS-Area Prism Epoch of Reionization Survey
- **NGDEEP**: Next Generation Deep Extragalactic Exploratory Public Survey
- **CEERS**: Cosmic Evolution Early Release Science Survey
- **LAGER**: Lyman Alpha Galaxies in the Epoch of Reionization
- **CLASSY**: COS Legacy Archive Spectroscopy SurveY
- **WFST**: Wide Field Survey Telescope

SERVICE AND OUTREACH

- Referee for The Astrophysical Journal, Astronomy & Astrophysics *2021 -*
- Astro Lunch Seminar in UCSB *2022*
- Journal Club and Lunch Talk in USTC *2019 - 2021*

SEMINARS AND COLLOQUIUMS

Genimi-North, Lunch Talk *2025*
UC Davis, Seminar *2025*
Texas A&M University, Seminar *2023*
Princeton, Galread *2022*
Chinese Academy of Sciences South America Center for Astronomy *2021*

CONFERENCE PRESENTATIONS

Santa Cruz Galaxy Workshop, contributed talk *2025*
CFC 2025, poster *2025*
Cosmic Dawn Revealed by JWST: The Physics of the First Stars, Galaxies, and

Black Holes, contributed talk *2024*
Quasars and Galaxies through Cosmic Time Conference, contributed talk *2022*
Sino-French Workshop on Confronting Simulations with Observations of High-redshift Galaxies and (proto)Clusters, contributed talk *2021*
SAZERAC 2.0, contributed talk *2021*
238th Meeting of the American Astronomical Society, contributed talk *2021*
Galaxy Cluster Formation, contributed talk *2021*
23th conference of LAMOST, contributed talk *2021*
Star formation and AGN activity in the Galaxies, contributed talk *2020*
Galaxies: Star formation and nuclei activity, contributed talk *2019*
Sakura CLAW, poster *2018*

PUBLICATIONS

38 total refereed/under-review papers, with total citations of 724 (ADS library). 6 first author papers with citations of 222 (as of July 22 2025):

First-author papers:

• *Extended Enriched Gas in a Multi-Galaxy Merger at Redshift 6.7*
W. Hu, C. Papovich, L. Shen et al.; 2025 **Nature Astronomy** in Press; arXiv:2503.04032

• *Characterizing the Average Interstellar Medium Conditions of Galaxies at $z \sim$5.6–9 with Ultraviolet and Optical Nebular Lines*
W. Hu, C. Papovich, M. Dickinson et al.; 2024 **The Astrophysical Journal**, 971, 21.

• *CLASSY VII Lyα Profiles: The Structure and Kinematics of Neutral Gas and Implications for LyC Escape in Reionization-era Analogs*
W. Hu, C. Martin, M. Gronke et al.; 2023 **The Astrophysical Journal**, 956, 39.

• *A Lyman-α protocluster at redshift 6.9*
W. Hu, J. Wang, L. Infante et al.; 2021 **Nature Astronomy**, 5, 485.

• *The Lyα Luminosity Function and Cosmic Reionization at $z \sim$ 7.0: a Tale of Two LAGER Fields*
W. Hu, J. Wang, Z.-Y. Zheng et al.; 2019, **The Astrophysical Journal**, 886, 90.

• *First Spectroscopic Confirmations of $z \sim$ 7.0 Lyα Emitting Galaxies in the LAGER Survey*
W. Hu, J. Wang, Z.-Y. Zheng et al.; 2017, **The Astrophysical Journal Letters**, 845, L16.

Co-authored papers: (selected)
• *NGDEEP: The Star Formation and Ionization Properties of Galaxies at* $1.7 < z < 3.4$
Shen et al. including **W. Hu**; 2025 The Astrophysical Journal Letters, 980, 45.
• *The Cosmic Evolution Early Release Science Survey (CEERS)*
Finkelstein et al. including **W. Hu**; arXiv:2501.04085
• *Physical Origins of Outflowing Cold Clouds in Local Star-forming Dwarf Galaxies*
Peng et al. including **W. Hu**; arXiv:2412.05371
• *NGDEEP Epoch 1: Spatially Resolved H Observations of Disk and Bulge Growth in Star-forming Galaxies at z $\sim$ 0.6-2.2 from JWST NIRISS Slitless Spectroscopy*
Shen et al. including **W. Hu**; 2024 The Astrophysical Journal Letters, 963, 49.
• *First Results from the Lyman Alpha Galaxies in the Epoch of Reionization (LAGER) Survey: Cosmological Reionization at $z \sim$ 7.*
Zheng et al. including **W. Hu**; 2017, The Astrophysical Journal Letters, 842, L22.
• *Design for the First Narrowband Filter for the Dark Energy Camera: Optimizing the LAGER Survey for $z \sim$ 7 Galaxie*
Zheng et al. including **W. Hu**; 2019, Publications of the Astronomical Society of the Pacific, 131, 4502.
• *LAGER Lyα Luminosity Function at $z \sim 7$, Implications for Reionization*
Wold et al. including **W. Hu**; 2022, The Astrophysical Journal, 927, 36.
• *Correlations between Hα equivalent width and galaxy properties at z = 0.47: Physical or selection-driven?*
Khostovan et al. including **W. Hu**; 2021, MNRAS, 503, 5115.
• *A large, deep 3 deg^2 survey of Hα, [O III], and [O II] emitters from LAGER: constraining luminosity functions*
Khostovan et al. including **W. Hu**; 2020, MNRAS, 493, 3966.

• *Lyman Alpha Galaxies in the Epoch of Reionization (LAGER): Spectroscopic Confirmation of Two Redshift $\sim$ 7.0 Galaxies*
Yang et al. including **W. Hu**, 2019, The Astrophyscial Journal, 876, 123.
• *New Spectroscopic Confirmations of Lyα Emitters at $z \sim 7$ from the LAGER Survey*
Harish et al. including **W. Hu**, 2022, The Astrophyscial Journal, 934, 167.
• *On the Origin of the Strong Optical Variability of Emission-line Galaxies*
Lin et al. including **W. Hu**, 2022, accepted by The Astrophyscial Journal (arXiv: 2209.07087).