WUJI WANG

—Curriculum Vitae—

◇ Caltech/IPAC, M/C 314-6, 1200 E. California Blvd. Pasadena, CA91125, USA

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RESEARCH INTERESTS

I am interested in galaxy evolution and AGN feedback beyond cosmic noon ($z \gtrsim 3$). I study star formation, AGN processes, and their impact on interstellar medium to cirumgalactic medium and stars of high-z galaxies using observations from various instruments.

SKILLS

Expert in the analysis of data from multi-wavelength IFU instruments on both ground-based and space telescopes: MUSE/VLT, ALMA and JWST NIRSpec IFU.

CAREER & EDUCATION & RESEARCH

• **Postdoctoral Researcher, Caltech, Pasadena/CA, USA** Sep. 2024 – 2027
Projects: *Multiwavelength analysis of $z \sim 4-6$ star forming galaxies (JWST+ALMA)*
Supervisors: Andreas Faisst, Kyle Finner

• **PhD, Astronomy, Heidelberg University/IMPRS, DE** Oct. 2020 –Jul. 2024
Thesis: *3D view of the circumgalactic to interstellar medium around distant radio galaxies* – **magna cum laude**
Supervisors: Dominika Wylezalek, Joël Vernet, Carlos De Breuck

• **MSc, Astronomy, Munich University (LMU)/ESO, DE** Apr. 2018 – Jul. 2020
Thesis: *MUSE View of the CGM around a $z \sim 4.5$ Radio Galaxy*
Supervisors: Dominika Wylezalek, Joël Vernet, Carlos De Breuck, Benjamin Moster
Grade: 1.26 – German system

• **BSc, Astronomy, Nanjing University, CN** Sep. 2013 – Jul. 2017
Thesis: *Investigating the high-z tidal disruption event candidate in the Chandra Deep Field*
Supervisor: Bin Luo
Grade: 4.38/5

• **Summer Intern, ESO, DE** Jun. 2016 – Aug. 2016
Project: *Research on White Dwarfs Polluted by Planetary Debris*
Supervisor: Siyi Xu

AWARDED TELESCOPE TIME

• **PI**, **JWST** MIRI MRS+NIRCam, GO-7457, Cycle 4 (11.6h) *Quenching physics and age demographics of stellar populations in a massive radio-loud AGN host galaxy at* $z \sim 3.5$

• **PI**, **JWST** NIRSpec/IFU, GO-1970, Cycle 1 (24.5h) *Zooming into the Monster's Mouth: Tracing Feedback from Their Hosts to Circumgalactic Medium in* $z = 3.5$ *Radio-loud AGN*

• **PI**, **ALMA** Band8, 2021.1.00576.S, Cycle 8 (13.9h) *Pushing the frontier with ALMA: star formation at sub-kpc scale in distant radio-loud AGN hosts*

• **PI**, **VLT/UVES**, 108.21WL.001, P108 (20h) *Spectrally Resolving the Complex CGM of High-redshift Radio-loud AGN using UVES*

• Co-I, JWST/MIRI LRS, GO-7492 (42.2h); Co-I, NOEMA, S23BT (30h)

PUBLICATIONS

ORCiD: 0000-0002-7964-6749

• Link to ADS library of Wuji Wang's publications: https://ui.adsabs.harvard.edu/public-libraries/BRKFteavQGK2qrtljtTo_w

Publication list (refereed papers):

First-author

- **Wang, W.**, De Breuck, and et al. (2025) *ALMA reveals gas-rich companions around gas-poor hosts of* $z \approx 3.5$ *radio AGN: triggers of powerful jets and signatures of feedback*, ApJ submitted.
- **Wang, W.**, De Breuck, C., Wylezalek, D., and et al. (2025) *JWST + ALMA ubiquitously discover companion systems within* $\lesssim 18$ *kpc around four* $z \approx 3.5$ *luminous radio-loud AGN*, A&A, 696, A88.
- **Wang, W.**, Wylezalek, D., De Breuck, C., and et al. (2024) *JWST discovers an AGN ionization cone but only weak radiatively driven feedback in a powerful* $z \approx 3.5$ *radio-loud AGN*, A&A, 683, A169.
- **Wang, W.**, Wylezalek, D., Vernet, J., and et al. (2023) *3D tomography of the giant intrinsic Ly*α *nebulae of* $z \approx 3$*–5 radio-loud AGN*, A&A, 680, A70.
- **Wang, W.**, Wylezalek, D., De Breuck, C., and et al. (2021) *Mapping the "invisible" circumgalactic medium around a* $z \sim 4.5$ *radio galaxy with MUSE*, A&A, 654, A88.

Co-author (selected)

- Solimano, M., ..., **Wang, W.**, ... (2024) A&A, 963, A70.
- Kolwa, S., ..., **Wang, W.**, ... (2023) MNRAS, 525, 5831.
- Zhang, S., ..., **Wang, W.**, ... (2023) ApJ, 952, 124Z.
- Bertemes, C., ..., and **Wang, W.** (2023) MNRAS, 518, 5500.
- Wylezalek, D., ..., **Wang, W.**, ... (2022) MNRAS, 510, 3119.
- Falkendal, T., ..., and **Wang, W.** (2021) A&A, 645, A120.

TEACHING & MENTORING

• **Co-advisor** of Julian Groth, Heidelberg University — Mar. 2024 –
MSc Thesis

• **Co-advisor** of Jelena Ritter, Heidelberg University — Jun. 2023 – Jul. 2024
MSc Thesis/Ritter et al. in prep.

• **Co-advisor** of Yu-Ruei Wang, Heidelberg University — Oct. 2022 – Jun. 2023
BSc Project & Thesis

• **Co-advisor** of Chuanming Mao, Heidelberg University — Mar. 2021 – Jul. 2021
BSc Thesis

• Lab Experiment **tutor**, Heidelberg University — Oct. 2021 – Jun. 2022
CCD photometry in modern astronomy (FP30)

• Lecture **tutor**, Heidelberg University — Mar. 2021 – Jul. 2021
Galactic and Extragalactic Astronomy (MVastro3)

TALKS & MEDIA

Media

- Apr. 20th 2021, ZAH Press release
- Aug. 1st 2021, UNI SPIEGEL

Invited talks & workshops

- Oct. 2023, The importance of jet-induced feedback on galaxy scales, workshop, NL
- Jun. 30th 2021, Group meeting talk at Tsinghua High-z Team, online

Conferences & seminars

- Jun 2025, NA-TW joint ALMA workshop 2025, Contributed talk
- May 2025, COSMOS 2025, Contributed talk, FR
- Apr.16th/2025, Caltech/IPAC lunch talk, Seminar talk, CA USA
- Jun. 2024, ARI Institute Colloquium, Seminar talk, DE
- Dec.4th/2023, Caltech Tea talk, Seminar talk, CA USA
- Dec.1st/2023, Steward Observatory UA EURECA, Seminar talk, AZ USA
- Nov.28th/2023, STScI & JHU Galaxy Journal Club, Seminar talk, MD USA
- Sep.11–15th/2023, AGN on the beach, Contributed talk, IT
- Jul.10–14th/2023, EAS 2023, Contributed talk, PL
- Feb.23rd 2023, MPIA Galaxy Coffee, Seminar talk, DE
- Dec.1st/2022, ARI Institute Colloquium, Seminar talk, DE
- Sep.26–30th/2022, What drives the growth of black holes, Poster, IS

- Sep.12–16th/2022, What matter(s) around galaxies 2022, Contributed talk, IT
- Jan.27th/2022, MPIA Galaxy Coffee, Seminar talk, DE
- Jan.26th/2022, Quasars and Galaxies through Cosmic Time, Contributed talk, online
- Nov.3rd/2021, 1st KooGiG-Junior, Contributed talk, online
- Jun.28th–July.2nd/2021, EAS 2021, ePoster, online
- Jun.17th/2021, ARI Institute Colloquium, Seminar talk, DE

SERVICE & EXPERIENCE

- Referee MNRAS, A&A, and ApJ
- Scientific assistant, ESO Observing Programmes Committee (OPC) 104, 105

LANGUAGES

Native speaker of Mandarin Chinese; Fluent in English (TOEFL 106/120); Basic German

ADDITIONAL INFORMATION

Proficient in Python, Linux/Mac OS programming and data reduction using ESO Recipe Execution Tool, JWST pipeline and CASA; Experienced in reduction of data from Chandra, echelle spectrograph on Magellan telescope and Arizona Radio Observatory (ARO)

REFERENCES AVAILABLE TO CONTACT

Prof. Dr. Dominika Wylezalek PhD supervisor
Full professor, ARI Heidelberg University, Germany
Email: dominika.wylezalek@uni-heidelberg.de

Dr. Andreas Faisst Postdoc supervisor
Associate Scientist, Caltech/IPAC, USA
Email: afaisst@ipac.caltech.edu

Dr. Joël Vernet PhD co-supervisor/collaborator
ELT Instrumentation project scientist, ESO, Germany
Email: jvernet@eso.org

Dr. Carlos De Breuck PhD co-supervisor/collaborator
Full astronomer and ALMA development scientist, ESO, Germany
Email: cdebreuc@eso.org

Dr. Matthew Lehnert collaborator
Director, Centre de Recherche Astrophysique de Lyon - CRAL, France
Email: matthew.lehnert@univ-lyon1.fr