

Lulu Zhang

Curriculum Vitae

Kavli Institute for Astronomy and Astrophysics
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Research Interests

- Characteristics of polycyclic aromatic hydrocarbons in different types of galaxies
- Spatially resolved studies of the interstellar medium in nearby galaxies
- Feedback of star formation & AGN activities on molecular gas
- Multiwavelength diagnostics of galaxy properties

Education

2017–present **PhD candidate, Astrophysics, Peking University**, Beijing, China.

Advisor: Luis C. Ho

2013–2017 **BS, Applied Physics, Shandong University**, Weihai, Weihai, China.

Awards

2017 – 2021 Award for Research Excellents of PKU

Award for Academic Excellents of PKU

2013 – 2017 Award for Outstanding Undergraduate of Shandong Province

Award for Outstanding Undergraduate Thesis of SDU, Weihai (Advisor: Lulu Fan)

Award for 100 Outstanding Undergraduates of SDU, Weihai

Assets

- Experienced in reducing multiband imaging data of GALEX, 2MASS, WISE, AKARI/IRC, Spitzer/IRAC, Spitzer/MIPS, and etc.
- Experienced in reducing spectral data cube of Spitzer/IRS and VLT/MUSE
- Experienced in analyzing BIMA SONG CO J(1-0) data and THINGS HI data
- Experienced in mid-infrared full spectrum fitting using our own code and PAHFIT
- Experienced in optical full spectrum fitting using pPXF
- Experienced in galaxy dynamics and kinematics modeling using JAM and 3DBarolo
- Experienced in galaxy 2-dimensional fitting using MgeFit and GALFIT
- Experienced in Bayesian statistics and Markov Chain Monte Carlo method
- Experienced in Python/C++ programming

Approved Proposal

2021 **3.6m Devasthal Optical Telescope (DOT-2021-C2-P63; Co-I.)**, *Unraveling the Hot Molecular and Ionized Gas in the Inner Kilo-parsecs of Nearby Active Galaxies*, PI: Ravi Joshi.

Conferences & Workshop

- 2021 Dec **Chinese Astronomical Society Annual Meeting**, *Nanchong, China*, (oral talk).
- 2021 Nov **KIAA Forum on Gas in Galaxies: for Early Career Scientists**, *Online*, (oral talk).
- 2021 Oct **East Asia AGN Workshop 2021**, *Chongqing, China*, (poster).
- 2021 June **The 11th C-MaNGA Workshop and the CSST-IFS Science Meeting**, *Zhuhai, China*, (oral talk, session chair).
- 2021 May **The 23th Guoshoujing Workshop and the Galaxy & Cosmology Frontier Workshop 2021**, *Hangzhou, China*, (poster).
- 2020 Oct **Super Massive Black Hole Workshop**, *Lijiang, China*, (oral talk).
- 2019 Sep **KIAA Forum on Gas in Galaxies: Probing the Activities and Power Engines from Local to Distant Universe**, *Beijing, China*, (poster).
- 2019 Sep **Chinese Astronomical Society Annual Meeting**, *Delingha, China*, (oral talk).
- 2019 Jan **East Asia AGN Workshop 2019**, *Taipei, China*, (poster).
- 2018 July **Thirty Meter Telescope-MICHI and China: a Workshop on Thermal-IR Astronomy**, *Beijing, China*, (oral talk).
- 2018 July **The 20th Guoshoujing Workshop and the Galaxy & Cosmology Frontier Workshop 2018**, *Sanmenxia, China*, (poster).

Publications

- 2021 Zhang, L., Ho, L. C., & Xie, Y., "A Method to Extract Spatially Resolved Polycyclic Aromatic Hydrocarbon Emission from Spitzer Spectra: Application to M51", 2021, *The Astronomical Journal*, 161, 29
- 2022 Zhang, L., Ho, L. C., & Li, A., "Evidence that Shocks Destroy Small PAH Molecules in Low-luminosity Active Galactic Nuclei", 2022, submitted
- 2022 Zhang, L., & Ho, L. C., "The Quantification for Contribution of Evolved Stars on Mid-Infrared Aromatic Emission", 2022, to be submitted
- 2022 Zhang, L., & Ho, L. C., "The Mechanism for Tight Correlation between PAH Emission and Molecular Gas", 2022, to be submitted
- 2022 Zhang, L., & Ho, L. C., "The Implication for Feedback from Gas Kinematics", 2022, in preparation

Outreach

- 2022 July Participant of "KIAA JWST Hackathon day"
- 2022 July Volunteer for "CSST Summer School"
- 2020 Spring TA for Graduate Course – "Astrophysics of Diffuse Interstellar Medium"
- 2019 – 2022 Volunteer Cashier for Graduates' Funding (Donated by Graduates) of KIAA
- 2019 – 2020 Volunteer Manager for a Astro-wiki Page of our Biweekly ISM&Galaxy Group Meeting
- 2019 Oct LOC for International Conference – "Cosmic Evolution of Quasars" at KIAA
- 2019 Sep Volunteer for International Conference – "KIAA Forum on Gas in Galaxies" at KIAA
- 2018 – 2019 Volunteer Organizer for Weekly "Happy Hour" of KIAA
- 2018 May Volunteer for the 120th Anniversary of Peking University