

Lulu Zhang

Curriculum Vitae

Kavli Institute for Astronomy and Astrophysics
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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 – 2022 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

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

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, AJ, 161, 29
- 2022 Zhang, L., Ho, L. C., & Li, A., “Evidence that Shocks Destroy Small PAH Molecules in Low-luminosity Active Galactic Nuclei”, ApJ, 2022, 939, 22
- 2023 Zhang, L., & Ho, L. C., “Estimating Molecular Gas Content in Galaxies from Polycyclic Aromatic Hydrocarbon Emission”, ApJ, 2023a, 943, 1
- 2023 Zhang, L., & Ho, L. C., “The Contribution of Evolved Stars to Polycyclic Aromatic Hydrocarbon Heating and Implications for Estimating Star Formation Rates”, ApJ, 2023b, 943, 60
- 2023 Zhang, L., & Ho, L. C., “The Interaction between AGN and Starburst Activities within NGC 7469 Central Region”, 2023c, ApJL, to be submitted
- 2023 Zhang, L., & Ho, L. C., “Resolving the Powering Sources Within Galaxies by the PAH Diagram”, 2023d, ApJL, to be submitted

Approved Proposals

- 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*

Assets

- Experienced in reducing multiband imaging data of GALEX, 2MASS, WISE, AKARI/IRC, Spitzer/IRAC, Spitzer/MIPS, etc.
- Experienced in reducing spectral data cubes from Spitzer/IRS and VLT/MUSE
- Experienced in analyzing BIMA SONG CO J(1-0) data and THINGS HI data
- Experienced in mid-IR full spectrum fitting using custom-designed 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++ programing

Conferences & Workshops

- 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**, *Hangzhou, China* (poster)
- 2020 Oct **Supermassive 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)
- 2019 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)

Outreach

- 2022 July Participant of “KIAA JWST Hackathon days”
- 2022 July Volunteer for “CSST Summer School” at Peking University
- 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
- 2019 June Secretary for Graduate Students Interview of KIAA
- 2018 – 2019 Volunteer Organizer for Weekly “Happy Hour” of KIAA
- 2018 June Secretary for Graduate Students Interview of KIAA
- 2018 May Volunteer for the 120th Anniversary of Peking University