Zhe-Yu Lin (林哲宇)

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ResearchGate

Education

- Ph.D in Astronomy, University of Science and Technology of China, Hefei, China 2020–Present
  Thesis: Investigating Tidal Disruption Events Based on Wide Field Sky Surveys
  Supervisors: Prof. Xu Kong & Dr. Ning Jiang
- B.S in Astronomy, University of Science and Technology of China, Hefei, China 2016–2020
  Thesis: Probing Tidal Disruption Events: Why, How?
  Supervisor: Prof. Xu Kong

Research Interests

My research interests tightly connect with nuclear transients (NTs), especially tidal disruption events (TDEs) and turn-on active galactic nuclei (AGNs).

- Enlarge the sample of NTs by time-domain surveys, and summarize their collective features.
- Unveil the nature of TDEs and turn-on AGNs by monitoring the multiwavelength emission on different timescales.
- Find the clues to how nuclear activities affect the galaxy formation.
- Explore the unknown parameter space, trying to find new kinds or features of transients.

Projects

- Long-term monitoring of nuclear transients 2022-Present
  - Experience in writing Swift/XMM/spectroscopy proposals and reducing data.
  - Expertise in collecting multiwavelength historical data and discovering meaningful features.
- Searching TDEs by Wide-Field Survey Telescope (WFST) 2020-Present

Scholarships

- CASC Scholarship, First Prize, 2023.
- WFST Scholarship, Second Prize, 2023.
- WFST Scholarship, First Prize, 2022.

Publications (till Sept. 6 2024)

Full List on NASA/ADS

3 Papers as First or Corresponding Author:

3. **Lin Zheyu**, Jiang Ning, Wang Tinggui, Kong Xu, et al., The unluckiest star: A spectroscopically confirmed repeated partial tidal disruption event AT 2022dbl, 2024, ApJL, 971, L26. (Cited 5, selected as Nature research highlight)

2. **Lin Zheyu**, Jiang Ning, Kong Xu, et al., The Luminosity Function of Tidal Disruption Flares for the ZTF-I Survey, 2022, ApJL, 939, L33. (Cited 20)

1. **Lin Zheyu**, Jiang Ning, Kong Xu, The prospects of finding tidal disruption events with 2.5-m Wide-Field Survey Telescope based on mock observations, 2022, MNRAS, 513, 2422. (Cited 17)

11 Papers as Co-author:

11. Yao Yao, Wang Enci, He Zhicheng, **Lin Zheyu**, et al., Bipolar blobs as evidence of hidden AGN activities in the low-mass galaxies, 2024, ApJL, 972, L16, to be published. arXiv: 2408.13841

10. Luo Yibin, Fan Lulu, Liang Yongming, et al., Lyα imaging around the hyperluminous dust-obscured quasar W2246−0526 at $z = 4.6$, 2024, ApJ, 972, 51.

9. Wang Yibo, Wang Tinggui, Jiang Ning, et al., ASASSN-18ap: A Dusty Tidal Disruption Event Candidate with an Early Bump in the Light Curve, 2024, ApJ, 966, 136.

8. Huang Shifeng, Jiang Ning, Zhu Jiazheng et al., AT 2023lli: A Tidal Disruption Event with Prominent Optical Early Bump and Delayed Episodic X-Ray Emission, 2024, ApJL, 964, L22.

7. Chen Lijun, Zhang Hong-Xin, Lin Zesen, et al., Dwarf Galaxies with the Highest Concentration Are Not Thicker than Ordinary Dwarf Galaxies, 2023, ApJ, 958, 117.

6. Huang Shifeng, Jiang Ning, **Lin Zheyu**, et al., AT2018dyk revisited: a tidal disruption event candidate with prominent infrared echo and delayed X-ray emission in a LINER galaxy, 2023, MNRAS, 525, 4057.

5. Wang Tinggui, Liu Guilin, Cai Zhenyi, et al., Science with the 2.5-meter Wide Field Survey Telescope (WFST), 2023, SCPMA, 66, 109512.

4. Zhu Jiazheng, Jiang Ning, Wang Tinggui, et al., AT 2023clx: The Faintest and Closest Optical Tidal Disruption Event Discovered in Nearby Star-forming Galaxy NGC 3799, 2023, ApJL, 952, L35.

3. Liu Zheng-Yan, **Lin Zhe-Yu**, Yu Ji-Ming, et al., Target-of-Opportunity Observation Detectability of Kilonovae with WFST, 2023, ApJ, 947, 59.

2. Luo Yibin, Fan Lulu, Zou Hu, et al., An Overdensity of Red Galaxies around the Hyperluminous Dust-obscured Quasar W1835+4355 at $z = 2.3$, 2022, ApJ, 935, 80.

1. Wang Yibo, Jiang Ning, Wang Tinggui, et al., Discovery of ATLAS17jrp as an Optical-, X-Ray-, and Infrared-bright Tidal Disruption Event in a Star-forming Galaxy, 2022, ApJL, 930, L4.

Positions of Responsibility

University of Science and Technology of China (USTC)

- Volunteer for USTC Astronomy Summer Camp — Summer 2022
- Teaching Assistant for Stellar Structure and Evolution (ASTR6003P) — Fall 2021
- Minister of Academy for USTC English Club (EC) — Fall 2017 - Summer 2018
  - The designer and organizer of "The Big Bang Theory" theme party
  - The creator of "USTC Mystery Hunt" – an outdoor mystery solving game. Following the great success, it has been held for six times and imitated by other clubs
  - The creator of the award-winning official account of EC
- Assistant of Study Affairs for Class 2, Grade 2016, School of Physics — Fall 2016 - Summer 2017

Press (in English)

- This unlucky star got mangled by a black hole – twice, *Nature Research Highlights*, **Nature** 632, 957 (2024) — August 2024
- 'Unluckiest star' may be trapped in deadly dance with a black hole, *New Scientist* — May 2024

Talks

- Altay time-domain science seminar, Altay, Xinjiang — August 2024
- Prof. Jane Dai's group seminar, Hong Kong University — August 2024
- Astronomy innovation competition of Jiangsu Province, Nanjing University — November 2023
- EP/WFST time-domain science seminar, Lenghu, Qinghai — August 2023
- Annual conference of Anhui Astronomical Society, Wuhu, Anhui — April 2023
- The 11^{th} academic forum, School of Physics, USTC — May 2022
- TDE and extreme-AGN seminar, Wuhu, Anhui — July 2021

Extra-curricular Awards

- Second place in the 1^{st} popular science article competition, held by the National Astronomical Observatories of the Chinese Academy of Sciences (NAOC), 2024. Awarded article: *Hunting the beasts in the center of galaxies: A story of supermassive black holes.*
- "Gold dolphin" award of 50m breaststroke swimming (finish in 50 seconds), 2023.
- "Outstanding official account" award for the USTC English Club, as the creator and administrator, 2018.