# 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 Thesis: Investigating Tidal Disruption Events Based on Wide Field Sky Surveys Supervisors: Prof. Xu Kong & Dr. Ning Jiang 2020–Present

 $\bullet\,$  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., Ly $\alpha$  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, August 2024

Nature 632, 957 (2024)

• 'Unluckiest star' may be trapped in deadly dance with a black hole, New Scientist

May 2024

# TALKS

• TDEs and NTs: Entering the Data-Rich Era, Heraklion, Crete, Greece	September 2024
• 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 $11^{\rm th}$ 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<sup>st</sup> 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.