

MINGHAO YUE

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EDUCATION

Steward Observatory, the University of Arizona	2016 – 2022 (expected)
Ph. D. in Astronomy and Astrophysics (Advisor: Prof. Xiaohui Fan)	
Thesis title: A Survey for High-Redshift Gravitationally Lensed Quasars (expected)	
School of Physics, Peking University	2012 – 2016
Bachelor of Science, Major: Astronomy	

RESEARCH INTERESTS

- Surveys for high-redshift quasars
- Strong gravitational lensing
- AGN and quasar physics, especially their evolution and environment

SKILLS AND EXPERIENCE

Observational Experiences

- Optical / Near-Infrared Imaging: Bok/90Prime (>30 nights), LBT/LUCI, Magellan-Clay/LDSS3, *HST*/ACS, *HST*/WFC3
- Optical / Near-Infrared Spectroscopy: Magellan-Clay/LDSS3 (>20 nights), MMT/Redchannel (>10 nights), Magellan-Baade/FIRE, LBT/LUCI, MMT/Binospec, Gemini/NIFS, VATT/VATTSpec (14 nights)
- Sub-mm interferometer: ALMA

Data Analysis and Modeling

- Imaging, long-slit spectra, IFU, interferometric analyses
- Lens modeling for imaging and interferometer data

SELECTED APPROVED PROPOSALS AS PI

HST-GO-16460 (Cycle 28): *Confirming a Gravitationally Lensed Quasar Candidate at $z=5.07$*

HST-GO-16507 (Cycle 28): *Identifying a Gravitationally Lensed Quasar or A Close Quasar Pair at $z=5.66$*

ALMA-2021.1.01052.S (Cycle 8 2021): *Confirming a close quasar pair or a gravitationally lensed quasar at $z=5.66$*

Gemini GN-2019B-FT-110: *Confirming a lensed quasar candidate at $z=5.06$*

SELECTED TALKS

ESO Thirty Minutes Talk	03/28/2019
<i>Title: Quasars have fewer companions than normal galaxies</i>	
Steward Early Career Scientist Talk	04/05/2021
<i>Title: Gravitationally Lensed Quasars at High Redshift</i>	
SAZERAC2 Conference	06/17/2021
<i>Title: ALMA Observations of the Sub-kpc Structure of the Host Galaxy of a $z=6.5$ Lensed Quasar</i>	
LSST AGN Science Collaboration Meeting	07/14/2021
<i>Title: Survey for High-Redshift Gravitationally Lensed Quasars in the LSST Era</i>	

TEACHING

Teaching Assistant, ASTR201 (Cosmology)	Fall 2018
Teaching Assistant, ASTR170B1 (The Physical Universe)	Spring 2021

SERVICE AND COMMUNITY CONNECTION

Host of Steward Observatory Science Coffee	2019-Present
Referee of MNRAS	2020-Present
Proposal Reviewer for Gemini	2019-Present
Proposal Reviewer for <i>HST</i> and ALMA	2021-Present
Member, LSST AGN Science Collaboration	2021-Present
Member, LSST Strong Lensing Science Collaboration	2021-Present

PUBLICATIONS

Publications as the First Author (6 in total)

6. *Revisiting the Lensed Fraction of High-Redshift Quasars.*

Yue, M., Fan, X., Yang, J. et al. Submitted to ApJL.

5. *A Mock Catalog of Gravitationally Lensed Quasars for the LSST Survey.*

Yue, M., Fan, X., Yang, J. et al. Submitted to AJ.

4. *A Candidate Kiloparsec-scale Quasar Pair at $z=5.66$.*

Yue, M., Fan, X., Yang, J. et al. Submitted to ApJL.

3. *ALMA Observations of the Sub-kpc Structure of the Host Galaxy of a $z=6.5$ Lensed Quasar: A Rotationally-Supported Hyper-Starburst System at the Epoch of Reionization.*

Yue, M., Yang, J., Fan, X., et al. 2021, ApJ, 917, 99. doi:10.3847/1538-4357/ac0af4

2. *Quasars Have Fewer Close Companions than Normal Galaxies.*

Yue, M., Fan, X., Schindler, J.-T. et al. 2019, ApJ, 883, 141. doi:10.3847/1538-4357/ab3db2

1. *The Sloan Digital Sky Survey Reverberation Mapping Project: Quasar Host Galaxies at $z < 0.8$ from Image Decomposition.*

Yue, M., Jiang, L., Shen, Y., et al. 2018, ApJ, 863, 21. doi:10.3847/1538-4357/aac0f4

Referred Publications as a Co-Author (20 in total)

20. *Probing Early Super-massive Black Hole Growth and Quasar Evolution with Near-infrared Spectroscopy of 37 Reionization-era Quasars at $6.3 < z \leq 7.64$*

Yang, J., Wang, F., Fan, X., et al. 2021, accepted by ApJ. arXiv:2109.13942

19. *A Luminous Quasar at Redshift 7.642.*

Wang, F., Yang, J., Fan, X., et al. 2021, ApJL, 907, L1. doi:10.3847/2041-8213/abd8c6

18. *A Closer Look at Two of the Most Luminous Quasars in the Universe.*

Schindler, J.-T., Fan, X., Novak, M., et al. 2021, ApJ, 906, 12. doi:10.3847/1538-4357/abc554

17. *Measurements of the $z \sim 6$ Intergalactic Medium Optical Depth and Transmission Spikes Using a New $z > 6.3$ Quasar Sample.*

Yang, J., Wang, F., Fan, X., et al. 2020, ApJ, 904, 26. doi:10.3847/1538-4357/abbc1b

16. *Pōniuā'ena: A Luminous $z = 7.5$ Quasar Hosting a 1.5 Billion Solar Mass Black Hole.*

Yang, J., Wang, F., Fan, X., et al. 2020, ApJL, 897, L14. doi:10.3847/2041-8213/ab9c26

15. *A Significantly Neutral Intergalactic Medium Around the Luminous $z = 7$ Quasar J0252-0503.*

Wang, F., Davies, F. B., Yang, J., et al. 2020, ApJ, 896, 23. doi:10.3847/1538-4357/ab8c45

14. *Exploring Reionization-era Quasars. III. Discovery of 16 Quasars at $6.4 \lesssim z \lesssim 6.9$ with DESI Legacy Imaging Surveys and the UKIRT Hemisphere Survey and Quasar Luminosity Function at $z \sim 6.7$.*

Wang, F., Yang, J., Fan, X., et al. 2019, ApJ, 884, 30. doi:10.3847/1538-4357/ab2be5

13. *Far-infrared Properties of the Bright, Gravitationally Lensed Quasar J0439+1634 at $z = 6.5$.*

Yang, J., Venemans, B., Wang, F., et al. 2019, ApJ, 880, 153. doi:10.3847/1538-4357/ab2a02

12. *The Extremely Luminous Quasar Survey in the Pan-STARRS 1 Footprint (PS-ELQS).*

Schindler, J.-T., Fan, X., Huang, Y.-H., et al. 2019, ApJS, 243, 5. doi:10.3847/1538-4365/ab20d0

11. *Spatially Resolved Interstellar Medium and Highly Excited Dense Molecular Gas in the Most Luminous Quasar at $z = 6.327$.*

Wang, F., Wang, R., Fan, X., et al. 2019, ApJ, 880, 2. doi:10.3847/1538-4357/ab2717

10. *Exploring Reionization-era Quasars. IV. Discovery of Six New $z \gtrsim 6.5$ Quasars with DES, VHS, and unWISE Photometry.*

Yang, J., Wang, F., Fan, X., et al. 2019, AJ, 157, 236. doi:10.3847/1538-3881/ab1be1

9. *The Extremely Luminous Quasar Survey in the Sloan Digital Sky Survey Footprint. III. The South Galactic Cap Sample and the Quasar Luminosity Function at Cosmic Noon.*

Schindler, J.-T., Fan, X., McGreer, I. D., et al. 2019, ApJ, 871, 258. doi:10.3847/1538-4357/aaf86c

8. *Filling in the Quasar Redshift Gap at $z \sim 5.5$. II. A Complete Survey of Luminous Quasars in the Post-reionization Universe.*

Yang, J., Wang, F., Fan, X., et al. 2019, ApJ, 871, 199. doi:10.3847/1538-4357/aaf858

7. *The Third Data Release of the Beijing-Arizona Sky Survey.*

Zou, H., Zhou, X., Fan, X., et al. 2019, ApJS, 245, 4. doi:10.3847/1538-4365/ab48e8

6. *The Discovery of a Gravitationally Lensed Quasar at $z = 6.51$.*

Fan, X., Wang, F., Yang, J., et al. 2019, ApJL, 870, L11. doi:10.3847/2041-8213/aaeffe

5. *The Discovery of a Luminous Broad Absorption Line Quasar at a Redshift of 7.02.*
Wang, F., Yang, J., Fan, X., et al. 2018, ApJL, 869, L9. doi:10.3847/2041-8213/aaf1d2
4. *The First Data Release of the Beijing-Arizona Sky Survey.*
Zou, H., Zhang, T., Zhou, Z., et al. 2017, AJ, 153, 276. doi:10.3847/1538-3881/aa72d9
3. *Discovery of 16 New $z \sim 5.5$ Quasars: Filling in the Redshift Gap of Quasar Color Selection.*
Yang, J., Fan, X., Wu, X.-B., et al. 2017, AJ, 153, 184. doi:10.3847/1538-3881/aa6577
2. *A Survey of Luminous High-redshift Quasars with SDSS and WISE. II. the Bright End of the Quasar Luminosity Function at $z \approx 5$.*
Yang, J., Wang, F., Wu, X.-B., et al. 2016, ApJ, 829, 33. doi:10.3847/0004-637X/829/1/33
1. *A Survey of Luminous High-redshift Quasars with SDSS and WISE. I. Target Selection and Optical Spectroscopy.*
Wang, F., Wu, X.-B., Fan, X., et al. 2016, ApJ, 819, 24. doi:10.3847/0004-637X/819/1/24