

VITA

許文韜 (Traditional Chinese)
Wentao Xu (Mandarin, legal)

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Education

Ph. D.	Planetary Sciences, UCLA	2019
M. Sc.	Planetary Sciences, UCLA	2016
B. Sc.	Physics, Wuhan University	2012

Professional Appointments

Assistant Professor	SSI, MUST	2021-present
NEO Follow-up Fellow	IfA, University of Hawaii	2019-2020
Teaching/Research Assistant	EPSS, UCLA	2014-2018

Research Interests

- Active asteroids, comets, and Kuiper-belt objects: dynamics and physical properties
- Dynamics of cometary dust
- Archaeoastronomy and history of astronomy

Honours (Post-undergraduate)

- Asteroid Naming (51166) Huimanto (2021)
- UCLA Dissertation Year Fellowship (2018)
- UCLA Eugene B. Waggoner Prize (2017-2018)
- Harold & Mayla Sullwold Scholarship of UCLA (2016)
- Fellowship of UCLA 2015

Publications

Refereed

1. **Hui, M.-T.** (2023). "Perihelion Activity of (3200) Phaethon is Not Dusty: Evidence from STEREO/COR2 Observations". *AJ*, 165, 94.
2. **Hui, M.-T.**, & Jewitt, D. (2022). "Fragment Dynamics in Active Asteroid 331P/Gibbs". *AJ*, 164, 236.
3. Lister, T., Kelley, M. S. P., Holt, C. E., et al. (2022). "The LCO Outbursting Objects Key Project: Overview and Year 1 Status". *Planetary Science Journal*, 3, 173.
4. **Hui, M.-T.**, Tholen, D. J., Kracht, R., Chang, C.-K., Wiegert, P. A., Ye, Q.-Z., & Mutchler, M. (2022). "The Lingering Death of Periodic Near-Sun Comet 323P/SOHO". *Astronomical Journal*, 164, 1.
5. **Hui, M.-T.**, Jewitt, D., Yu, L.-L., & Mutchler, M. (2022). "Hubble Space Telescope Detection of the Nucleus of Comet C/2014 UN271 (Bernardinelli-Bernstein)". *Astrophysical Journal Letter*, 929, L12.
6. **Hui, M.-T.**, Wiegert, P. A., Tholen, D. J., & Föhring, D. (2021). "The Second Earth Trojan 2020 XL5". *Astrophysical Journal Letter*, 922, L25.
7. Ye, Q.-Z., Jewitt, D., **Hui, M.-T.**, Zhang, Q., Agarwal, J., Kelley, M. S. P., Kim, Y., Li, J., Lister, T., Mutchler, M., & Weaver, H. (2021). "Disintegration of Long-period Comet C/2019 Y4 (ATLAS). I. Hubble Space Telescope Observations". *Astronomical Journal*, 162, 70.
8. **Hui, M.-T.**, Ye, Q.-Z., Föhring, D., Hung, D., & Tholen, D. J. (2020). "Physical Characterization of Interstellar Comet 2I/2019 Q4 (Borisov)". *Astronomical Journal*, 160, 92.
9. **Hui, M.-T.** & Ye, Q.-Z. (2020). "Observations of Disintegrating Long-period Comet C/2019 Y4 (ATLAS): A Sibling of C/1844 Y1 (Great Comet)". *Astronomical Journal*, 160, 91.
10. Jewitt, D., Kim, Y., Mutchler, M., Weaver, H., Agarwal, J., & **Hui, M.-T.** (2020). "Outburst

- and Splitting of Interstellar Comet 2I/Borisov". *Astrophysical Journal*, 896, L39.
11. Kim, Y., Jewitt, D., Mutchler, M., Agarwal, J., **Hui, M.-T.**, & Weaver, H. (2020). "Coma Anisotropy and the Rotation Pole of Interstellar Comet 2I/Borisov". *Astrophysical Journal Letter*, 895, L2.
 12. Jewitt, D., **Hui, M.-T.**, Kim, Y., Mutchler, M., Weaver, H., & Agarwal, J. (2020). "The Nucleus of Interstellar Comet 2I/Borisov". *Astrophysical Journal Letter*, 888, L23.
 13. **Hui, M.-T.**, & Knight, M. (2019). "New Insights into Interstellar Object 1I/2017 U1 ('Oumuamua) from SOHO/STEREO Nondetections". *Astronomical Journal*, 158, 256.
 14. **Hui, M.-T.**, Kim, Y., & Gao, X. (2019). "New Active Asteroid (6478) Gault". *Monthly Notices of the Royal Astronomical Society Letters*, 488, L143.
 15. Tabeshian, M., Wiegert, P., Ye, Q.-Z., **Hui, M.-T.**, Gao, X., & Tan, H.-J. (2019). "Asteroid (3200) Phaethon: Colors, Phase Curve, Limits on Cometary Activity, and Fragmentation". *Astronomical Journal*, 158, 30.
 16. Zhang, X.-L., Jewitt, D., & **Hui, M.-T.** (2019). "Photometric Observations of Comet C/2017 K2 (PANSTARRS) with the Lijiang 2.4 m Telescope". *Monthly Notices of the Royal Astronomical Society*, 487, 2919.
 17. **Hui, M.-T.**, Farnocchia, D., & Micheli, M. (2019). "C/2010 U3 (Boattini): A Bizarre Comet Active at Record Heliocentric Distance". *Astronomical Journal*, 157, 162.
 18. Jewitt, D., Agarwal, J., **Hui, M.-T.**, Li, J., Mutchler, M., & Weaver, H. (2019). "Distant Comet C/2017 K2 and the Cohesion Bottleneck". *Astronomical Journal*, 157, 65.
 19. Ye, Q.-Z., Wiegert, P. A., & **Hui, M.-T.** (2018). "In Search of Recent Disruption of (3200) Phaethon: Model Implication and Hubble Space Telescope Search". *Astrophysical Journal Letters*, 864, L9.
 20. **Hui, M.-T.**, & Li, J.-Y. (2018). "Is the Cometary Nucleus-extraction Technique Reliable?". *Publications of the Astronomical Society of the Pacific*, 130, 104501.
 21. **Hui, M.-T.** (2018). "Two Hyperbolic Baldheads in the Solar System: 2017 U7 and 2018 C2". *Astronomical Journal*, 156, 73.
 22. Ye, Q.-Z., Wiegert, P., & **Hui, M.-T.** (2018). "Finding Long-Lost Lexell's Comet: The Fate of the First Discovered NEO". *Astronomical Journal*, 155, 4.
 23. **Hui, M.-T.**, Jewitt, D., & Clark, D. (2018). "Prediscovery Observations of and Orbit of Comet C/2017 K2 (PANSTARRS)". *Astronomical Journal*, 155, 25.
 24. Snodgrass, C., Agarwal, J., Combi, M., et al. (2017). "The Main Belt Comets and Ice in the Solar System". *Astronomy and Astrophysics Review*, 25, 5.
 25. Jewitt, D., **Hui, M.-T.**, Mutchler, M., Weaver, H., Li, J., & Agarwal, J. (2017). "A Comet Active Beyond the Crystallization Zone". *Astrophysical Journal Letters*, 847, L19.
 26. **Hui, M.-T.**, Jewitt, D., & Du, X. (2017). "The Split Active Asteroid P/2016 J1 (PANSTARRS)". *Astronomical Journal*, 153, 141.
 27. **Hui, M.-T.**, & Jewitt, D. (2017). "Non-gravitational Acceleration of the Active Asteroids". *Astronomical Journal*, 153, 80.
 28. **Hui, M.-T.**, & Li, J. (2017). "Resurrection of (3200) Phaethon in 2016". *Astronomical Journal*, 153, 23.
 29. **Hui, M.-T.**, Ye, Q.-Z., & Wiegert, P. (2017). "Constraints on Comet 332P/Ikeya-Murakami". *Astronomical Journal*, in 153, 4.
 30. Kleyna, J., Ye, Q.-Z., **Hui, M.-T.**, Meech, K., Wainscoat, R., Micheli, M., Keane, J. V., Weaver, H. A., & Weryk, R. (2016). "The Progressive Fragmentation of 332P/Ikeya-Murakami". *Astrophysical Journal Letters*, 827, L26.
 31. Jewitt, D., Mutchler, M., Weaver, H., **Hui, M.-T.**, Agarwal, J., Ishiguro, M., Kleyna, J., Li, J., Meech, K., Micheli, M., Wainscoat, R., & Weryk, R. (2016). "Fragmentation Kinematics in Comet 332P/Ikeya-Murakami". *Astrophysical Journal Letters*, 829, L8.
 32. Ye, Q.-Z., **Hui, M.-T.**, Brown, P. G., Campbell-Brown, M. D., Pokorný, P., Wiegert, P. A., & Gao, X. (2016). "When comets get old: A synthesis of comet and meteor observations of the low activity comet 209P/LINEAR". *Icarus*, 264, 48.
 33. Samarasinha, N. H., Mueller, B. E. A., Knight, M. M., Farnham, T. L., et al. (2015). "Results from the Worldwide Coma Morphology Campaign for Comet ISON (C/2012 S1)". *Planetary and Space Science*, 118, 127.
 34. Ye, Q.-Z., Brown, P. G., Bell, C., Gao, X., Mašek, M., & **Hui, M.-T.** (2015). "Bangs and Meteors from the Quiet Comet 15P/Finlay". *Astrophysical Journal*, 814, 79.
 35. **Hui, M.-T.**, Ye, Q.-Z., Knight, M., Battams, K., & Clark, D. (2015). "Gone in a Blaze of Glory: The Demise of Comet C/2015 D1 (SOHO)". *Astrophysical Journal*, 813, 73.

36. **Hui, M.-T.**, & Jewitt, D. (2015). "Archival Observations of Active Asteroid 313P/Gibbs". *Astronomical Journal*, 2015, 149, 134.
37. Jewitt, D., Agarwal, J., Peixinho, N., Weaver, H., Mutchler, M., **Hui, M.-T.**, Li, J., & Larson, S. (2015). "New Active Asteroid 313P/Gibbs". *Astronomical Journal*, 149, 81.
38. Ye, Q.-Z., **Hui, M.-T.**, Kracht, R., & Wiegert, P. (2014). "Where are the mini Kreutz-family comets?". *Astrophysical Journal*, 2014, 796, 83.
39. Ye, Q.-Z., & **Hui, M.-T.** (2014). "An Early Look of Comet C/2013 A1 (Siding Spring): Breath-taker or Nightmare?". *Astrophysical Journal*, 2014, 787, 115.
40. **Hui, M.-T.** (2013). "Observations of Comet P/2003 T12 = 2012 A3 (SOHO) at Large Phase Angle in STEREO-B". *Monthly Notices of the Royal Astronomical Society*, 436, 1564.

Conference Presentations

1. **Hui, M.-T.**, Farnocchia, D., & Micheli, M. (2021). "A Bizarre Comet at Record Heliocentric Distance". 53rd AAS DPS meeting, virtual (Oral)
2. **Hui, M.-T.**, Farnocchia, D., & Micheli, M. (2021). "A Bizarre Comet at Record Heliocentric Distance". EPSC 2021, virtual (Oral)
3. **Hui, M.-T.** (2018). "Ultra-Distant Activity in Comet C/2017 K2 (PANSTARRS)". 50th AAS DPS meeting, Knoxville, TN, USA (Oral)
4. **Hui, M.-T.**, Jewitt, D., & Du, X.-N. (2017). "The Split Active Asteroid P/2016 J1 (PANSTARRS)". 49th AAS DPS meeting, Provo, UT, USA (Oral)
5. **Hui, M.-T.**, & Li, J., (2017), "Resurrection of (3200) Phaethon in 2016", *Asteroids, Comets, Meteors 2017*, Montevideo, Uruguay
6. **Hui, M.-T.**, Ye, Q.-Z., & Wiegert, P. A. (2016), "Constraints on Comet 332P/Ikeya-Murakami", 48th AAS DPS meeting, Pasadena, CA, USA
7. **Hui, M.-T.**, et al. (2015), "Gone in a Blaze of Glory: the Demise of Comet C/2015 D1 (SOHO)", 47th AAS DPS meeting, National Harbor, MD, USA
8. **Hui, M.-T.** (2014), "Observations of Comet P/2003 T12 = 2012 A3 (SOHO) at Large Phase Angle in STEREO-B", 46th AAS DPS meeting, Tucson, AZ, USA
9. Ye, Q.-Z., P. Wiegert, **Hui, M.-T.**, & Kracht, R (2013), "Where are the small Kreutz-family members?", 45th AAS DPS meeting, Denver, Colorado, USA.

Observing Programmes & Experiences

- PI & Co-I, Gemini North & South (6 programmes, 2017-2022)
- PI, Subaru (Dec 2020)
- PI & Co-I, HST (11 programmes, 2014-2022)
- PI & Co-I, University of Hawai'i 2.2-m (remotely, 3 programmes, Sep 2019-2020)
- PI, WIYN 0.9-m at Kitt Peak National Observatory (6 nights, Dec 2018)
- JCMT, Maunakea Observatory (No obs due to weather, Dec 2017)
- Co-I, WIYN 0.9-m at Kitt Peak National Observatory (6 nights, Nov 2017)
- Co-I, WIYN 0.9-m at Kitt Peak National Observatory (6 nights, Mar 2017)
- Co-I, WIYN 0.9-m at Kitt Peak National Observatory (6 nights, Dec 2016)
- Co-I, VST (remotely, 5 nights, Nov 2015)
- Keck I, with PI David Jewitt (2 nights, Feb 2015)
- Co-I, CFHT at Maunakea Observatory (remotely, Sep-Oct 2012)

Grants

- FDCT No. 0016/2022/A1: Studies of Distant Cometary Activity (MOP \$1.42M; 2022-2025), PI: **Hui**.

Popular Articles

- The Fade-Away of "Comet of the Century". *Newton Science World* (China), Jan 2014, p.66-69.
- S. Murakami (2010). The Discovery Story of Comet P/2010 V1 (Ikeya-Murakami). Translated by me. *Amateur Astronomer* (China), Mar 2011, p.68-69.
- D. E. Machholz (2010). The Discovery and Rediscovery of Comet Machholz (C/2010 F4). Translated by me. *Amateur Astronomer* (China), Jun 2010, p.72-74.

Discoveries

- 10 sungrazing comets discovered in SOHO/LASCO data
- 1 asteroid discovered in archival NEAT data, now permanent-numbered

Public Talks and Outreach

- Remote observations, with Xing Gao, Pooi To Middle School, Macau, China (Sep 2022)
- *A Brief Tour of the Solar System*, Guangzhou Library (virtual, Aug 2022)
- *Our Solar System*, Pui Va Middle School, Macau, China (Apr 2022)
- *A New View of Our Solar System*, Pooi To Middle School, Macau, China (Mar 2022)
- *A Brief Introduction to Our Solar System*, Colégio Mateus Ricci, Macau, China (Apr 2021)
- *A Brief Introduction to Our Solar System*, Patriotic Education Centre, Macau, China (Apr 2021)
- *Active Asteroids*, Beijing Planetarium, Beijing, China (Oct 2020)
- Volunteer, International Moon Night Observing, UCLA (Oct 2018)
- Volunteer, Explore Your Universe, UCLA (Nov 2017)
- Volunteer, International Moon Night Observing, UCLA (Oct 2017)
- *Stories in Nightsky*, Guangzhou Children's Library, Guangzhou, China (Sep 2016)
- *Stories in Nightsky*, Yuexiu Library, Guangzhou, China (Sep 2016)
- Volunteer, Explore Your Universe, UCLA (Nov 2014)
- Astronomy class teacher, Xiamen Shuangshi Middle School (Apr 2014)
- Astronomy class teacher, Guangzhou No.2 Middle School (Nov 2013-Apr 2014)
- *Comet Observations*, Guangzhou Stargazers Association, Guangzhou, China (Nov 2013)
- *Comet Observations*, South China Agricultural University, Guangzhou, China (Oct 2013)
- Short-term astronomy class teacher, Guangzhou No.2 Middle School (Mar 2013)
- *An Introduction to SOHO Kreutz Sungrazing Comets*, Hin Hua High School, Selangor, Malaysia (Feb 2012)
- Volunteer, Roadside Astronomy at Hankou, Wuhan, China (Mar 2010)
- Conventioneer, International Workshop on Cometary Astronomy VI, Shanghai, China (Jul 2009)
- Volunteer, Guangzhou Children Activity Centre Observatory, Guangzhou, China (Aug 2003)

Computer Skills

- Astronomical techniques: data reduction and analysis (optical), image processing, data mining, and orbit determination
- Programming language: IDL (fluent), Python & Fortran (beginner level)
- Word processing: LaTeX, LibreOffice (Linux), Microsoft Word (Win), & Pages (Mac)
- Operating systems (MacOS X, Ubuntu, Windows)

Languages

- Fluent in Cantonese
- Proficient in English, Yuet Lim Chau, Mandarin
- Well comprehensible but incompetent in speaking: Hakka
- Basic conversational: Vietnamese (Tiếng Kinh)

Hobbies

- Chinese calligraphy and painting
- Football (soccer)
- Stargazing & astrophotography
- Classical Chinese poetry
- Archaeology and history, Egyptology in particular