Ya-Lin Wu

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Employment

51 Pegasi b Postdoctoral Fellow, University of Texas at Austin	2018 –

Education

Ph.D., Astronomy and Astrophysics, University of Arizona	2018
M.S., Astrophysics, National Taiwan University	2011
B.S., Physics, National Taiwan University	2009

Areas of Interest

Formation and evolution of extrasolar planets; multi-wavelength observations of exoplanets, brown dwarfs, and protoplanetary disks with optical/infrared adaptive optics and radio interferometry; precision dynamical mass measurements of young stars and brown dwarfs; giant molecular clouds in spiral galaxies; amateur astronomy and public outreach

Honors and Grants

51 Pegasi b Postdoctoral Fellowship in Planetary Astronomy	2018 – 2021
TRIF-Imaging Fellowship, University of Arizona	2016 – 2017
College of Science Award in Teaching, University of Arizona	2016
Government Scholarship to Study Abroad, Ministry of Education, Taiwan	2015 – 2017
College of Science Scholarship, University of Arizona	2012 – 2013

Teaching, Service, Outreach Experiences

Scientific Organizing Committee, Frank N. Bash Symposium	2019
TAURUS REU program mentor, UT Austin	2019
Referee for The Astrophysical Journal, Astronomy & Astrophysics, A&A Letters	2018, 2019
Graduate admission committee, Department of Astronomy, Univ. of Arizona	2017
Tucson Initiative for Minority Engagement in Science and Technology Program	2017
Lecturer, Mount Lemmon Adult Astronomy Camp	2015, 2016
Teaching Assistant, University of Arizona	2013, 2014, 2016
Remote operator, Submillimeter Array	2010 – 2011
Teaching Assistant, National Taiwan University	2009

Undergraduate Student Mentoring

Pranav Premnath (UT Austin)
Ariel Mora (Bennington College)

Publications

Wu, Y.-L., Bowler, B. P., Sheehan, P. D., et al., *"ALMA 0.88 mm Survey of Disks around Planetary-mass Companions"*, The Astronomical Journal, 2020, submitted

Mora, A., **Wu, Y.-L.**, Bowler, B. P., and Sheehan, P. D.,*"Measuring the Mass of the Faint Companion of FW Tau with ALMA"*, Research Notes of the American Astronomical Society, Volume 4, Issue 1, article id. 9, 2020

Isella, A., Ricci, L., Andrews, S.,…, **Wu, Y.-L.**, et al.,*"Observing Planetary Systems in the Making"*, Astro2020: Decadal Survey on Astronomy and Astrophysics, science white papers, no. 174; Bulletin of the American Astronomical Society, Vol. 51, Issue 3, id. 174, 2019

Bowler, B., Sallum, S., Boss, A.,…, and **Wu, Y.-L.**, *"The Demographics and Atmospheres of Giant Planets with the ELTs"*, Astro2020: Decadal Survey on Astronomy and Astrophysics, science white papers, no. 496; Bulletin of the American Astronomical Society, Vol. 51, Issue 3, id. 496, 2019

Sheehan, P. D., **Wu, Y.-L.**, Eisner, J. A., Tobin, J., *"High Precision Dynamical Masses of Pre-Main Sequence Stars with ALMA and Gaia"*, The Astrophysical Journal, 874, 136, 2019

Schindler, J. T., Fan, X., McGreer, I. D.,…, **Wu, Y.-L.**, et al., *"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"*, The Astrophysical Journal, 871, 258, 2019

Wagner, K., Follette, K. B., Close, L. M.,…, **Wu, Y.-L.**, et al., *"Magellan Adaptive Optics Imaging of PDS 70: Measuring the Mass Accretion Rate of a Young Giant Planet with a Gapped Disk"*, The Astrophysical Journal Letters, 863, L8, 2018

Close, L. M., Males, J. R., Morzinski, K. M.,…, **Wu, Y.-L.**, et al., *"Status of MagAO and Review of Astronomical Science with Visible Light Adaptive Optics"*, Proc. SPIE 10703, Adaptive Optics Systems VI, 107030L, 2018

Wu, Y.-L., Close, L. M., Kim, J. S., Males, J. R., Morzinski, K. M., *"The Intricate Structure of HH 508, the Brightest Microjet in the Orion Nebula"*, The Astrophysical Journal, 854, 144, 2018

Wu, Y.-L., Close, L. M., Eisner, J. A., Sheehan, P. D., *"An Explanation of the Very Low Radio Flux of Young Planet-mass Companions"*, The Astronomical Journal, 154, 234, 2017

Wu, Y.-L., Sheehan, P. D., *"An ALMA Dynamical Mass Estimate of the Proposed Planetary-mass Companion FW Tau C"*, The Astrophysical Journal Letters, 846, L26, 2017

Wu, Y.-L., Smith, N., Close, L. M., Males, J. R., Morzinski, K. M., *"Resolving the Hα-emitting Region in the Wind of η Carinae"*, The Astrophysical Journal Letters, 841, L7, 2017

Wu, Y.-L., Sakamoto, K., Pan, H.-A., *"Submillimeter Array ^{12}CO(2–1) Imaging of the NGC 6946 Giant Molecular Clouds"*, The Astrophysical Journal, 839, 6, 2017

Wu, Y.-L., Sheehan, P. D., Males, J. R., et al., *"An ALMA and MagAO Study of the Substellar Companion GQ Lup B"*, The Astrophysical Journal, 836, 223, 2017

Haug-Baltzell, A., Males, J. R., Morzinski, K. M., **Wu, Y.-L.**, et al., *"High-Contrast Imaging in the Cloud with klipReduce and Findr"*, Proc. SPIE 9913, Software and Cyberinfrastructure for Astronomy III, 99130F, 2016

Morzinski, K. M., Close, L. M., Males, J. R.,..., and **Wu, Y.-L.**, *"MagAO: Status and Science"*, Proc. SPIE 9909, Adaptive Optics Systems V, 990901, 2016

Wu, Y.-L., Close, L. M., Bailey, V. P., et al., *"Magellan AO System z', Ys, and L' Observations of the Very Wide 650 AU HD 106906 Planetary System"*, The Astrophysical Journal, 823, 24, 2016

Van Dyk, S. D., Ascenso, J., **Wu, Y.-L.**, et al., *"Possible Identification of the Progenitor of SN 2016adj in NGC 5128 (Centaurus A)"*, The Astronomer's Telegram, No. 8693, 2016

Morzinski, K. M., Males, J. R., Skemer, A. J.,…, and **Wu, Y.-L.**, *"Magellan Adaptive Optics First-light Observations of the Exoplanet β Pic b. II. 3-5 μm Direct Imaging with MagAO+Clio, and the Empirical Bolometric Luminosity of a Self-luminous Giant Planet"*, The Astrophysical

Journal, 815, 108, 2015

Wu, Y.-L., Close, L. M., Males, J. R., et al., *"New Extinction and Mass Estimates of the Low-Mass Companion 1RXS 1609 B with the Magellan AO System: Evidence of an Inclined Dust Disk"*, The Astrophysical Journal Letters, 807, L13, 2015

Wu, Y.-L., Close, L. M., Males, J. R., et al., *"New Extinction and Mass Estimates from Optical Photometry of the Very Low Mass Brown Dwarf Companion CT Chamaeleontis B with the Magellan AO System"*, The Astrophysical Journal, 801, 4, 2015

Rodigas, T. J., Stark, C. C., Weinberger A.,…, **Wu, Y.-L.**, et al., *"On the Morphology and Chemical Composition of the HR 4796A Debris Disk"*, The Astrophysical Journal, 798, 96, 2015

Close, L. M., Males, J. R., Follette, K. B.,..., **Wu, Y.-L.**, et al., *"Into the Blue: AO Science with MagAO in the Visible"*, Proc. SPIE 9148, Adaptive Optics Systems IV, 91481M, 2014

Males, J. R., Close, L. M., Morzinski, K. M.,…, and **Wu, Y.-L.**, *"Magellan Adaptive Optics First-light Observations of the Exoplanet β Pic b. I. Direct Imaging in the Far-red Optical with MagAO+VisAO and in the Near-IR with NICI"*, The Astrophysical Journal, 786, 32, 2014

Follette, K. B., Close, L. M., Males, J. R., Kopon, D., **Wu, Y.-L.**, et al., *"The First Circumstellar Disk Imaged in Silhouette at Visible Wavelengths with Adaptive Optics: MagAO Imaging of Orion 218-354"*, The Astrophysical Journal Letters, 775, 13, 2013

Close, L. M., Males, J. R., Morzinski, K. M.,…, **Wu, Y.-L.**, et al., *"Diffraction-limited Visible Light Images of Orion Trapezium Cluster with the Magellan Adaptive Secondary Adaptive Optics System (MagAO)"*, The Astrophysical Journal, 774, 94, 2013

Wu, Y.-L., Close, L. M., Males, J. R., et al., *"High Resolution Hα Images of the Binary Low-mass Proplyd LV 1 with the Magellan AO System"*, The Astrophysical Journal, 774, 45, 2013

Hsieh, P.-Y., Matsushita, S., Liu, G.,…, and **Wu, Y.-L.**, *"Physical Properties of the Circumnuclear Starburst Ring in the Barred Galaxy NGC 1097"*, The Astrophysical Journal, 736, 129, 2011