Samuel Yee

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Research Interests

Hot Jupiters – formation and evolution
Exoplanet discovery and statistics
Architecture and dynamics of planetary systems

Education

Princeton University — Princeton, NJ
Ph.D., Astrophysics (*expected 2023*); M.Sc., Astrophysics (2020) — 09/2018 – present
Thesis: *The TESS Grand Unified Hot Jupiter Survey*
Advisor: Joshua Winn

California Institute of Technology — Pasadena, CA
B.S., Physics, with Minor in Geological and Planetary Sciences — 09/2014 - 06/2018

Awards

Princeton University Centennial Fellowship — 2018 – 2023
George W. Housner Prize for Academic Excellence and Original Research — 2018
Best Poster, Know Thy Star Conference — 2017

Publications [ADS]

First Author

7. **Yee, S. W.**, Winn, J., Hartman, J., et al. *The TESS Grand Unified Hot Jupiter Survey II. Twenty New Giant Planets.* ApJS, in press (2022).
6. **Yee, S. W.**, Winn, J., Hartman, J., et al. *The TESS Grand Unified Hot Jupiter Survey I. Ten TESS Planets.* AJ, 164, 70 (2022).
5. **Yee, S. W.**, Winn, J., Hartman, J. *How Complete Are Surveys for Nearby Transiting Hot Jupiters?* AJ, 162, 240 (2021).
4. **Yee, S. W.**, Tamayo, D., Hadden, S. & Winn, J. *How Close are Compact Multi-Planet Systems to the Stability Limit?* AJ, 162, 55 (2021).
3. **Yee, S. W.**, Winn, J., et al. *The Orbit of WASP-12b is Decaying.* ApJL, 888, L5 (2020).
2. **Yee, S. W.**, Petigura, E., et al. *HAT-P-11: Discovery of a Second Planet and a Clue to Understanding Exoplanet Obliquities.* AJ, 155, 255 (2018).
1. **Yee, S. W.**, Petigura, E. & von Braun, K. *Precision Stellar Characterization of FGKM Stars using an Empirical Spectral Library.* ApJ, 836, 77 (2017).

Contributing Author

3. Fraizer, R. C. et al., incl. **Yee, S. W.** *NEID Reveals that The Young Warm Neptune TOI 2076b Has a Low Obliquity.* in prep (2022).
2. Essack, Z. E. et al., incl. **Yee, S. W.** *TOI-1075 b: A Dense, Massive, Ultra-Short Period Hot Super-Earth Straddling the Radius Gap.* AJ, in press (2022).
1. Petigura, E. et al., incl **Yee, S. W.** *Planet Candidates from K2 Campaigns 5-8 and Follow-up Optical Spectroscopy.* AJ, 155, 21 (2018).

Observing Programs

The TESS Grand Unified Hot Jupiter Survey (PI) — 2022B
Keck I/HIRES – 1.5 nights (NASA); Magellan/PFS – 2 nights (Princeton)
WIYN/NEID – 2.8 nights (NOIRLab); CTIO1.5m/CHIRON – 6.3 nights (NOIRLab);
MINERVA-Australis – 1.5 nights (NOIRLab);

The TESS Grand Unified Hot Jupiter Survey (PI) — 2022A

Keck I/HIRES – 1.5 nights (NOIRLab); Magellan/PFS – 2 nights (Princeton)
WIYN/NEID – 2.3 nights (NOIRLab); CTIO1.5m/CHIRON – 5.9 nights (NOIRLab);
MINERVA-Australis – 1.5 nights (NOIRLab);

The TESS Grand Unified Hot Jupiter Survey (PI) 2021B
Keck I/HIRES – 0.5 nights (NOIRLab); Magellan/PFS – 2 nights (Princeton)
CTIO1.5m/CHIRON – 5 nights (NOIRLab); WIYN/NEID – 2 nights (NOIRLab);

Presentations

TESS Science Team Meeting #29, Cambridge, MA *(contributed talk)*	Oct 2022
Harvard CfA Seminar, Cambridge, MA *(invited seminar)*	Oct 2022
MIT TESS Science Talk, Cambridge, MA *(invited seminar)*	Oct 2022
ERES VI, State College *(contributed talk)*	Aug 2022
Exoplanets IV, Las Vegas *(contributed plenary session talk)*	May 2022
Yale Exoplanets and Stars Seminar *(invited seminar)*	Apr 2022
AAS Division of Dynamical Astronomy Meeting 52, online *(contributed talk)*	May 2021
AAS General Meeting 235, Honolulu *(poster)*	Jan 2020
Exoplanets & Planet Formation, Shanghai *(poster)*	Dec 2017
Know thy Star, Pasadena *(poster)*	Sep 2017

Teaching

Assistant in Instruction	Princeton
AST 205, Planets in the Universe	Sep 2019 – Jan 2020
Teaching Assistant	Caltech
Ph 12c, Statistical Mechanics	Mar 2018 – Jun 2018
Ph 12b, Quantum Mechanics	Jan 2018 – Mar 2018
Peer Tutor	Caltech, 2016 – 2018

Professional Activities

Referee, *AAS Journals*, *MNRAS*, *A&A* 2020 – present
Virtual Organizing Committee, *Emerging Researchers in Exoplanet Science (ERES) V* 2021

Code

Bhatti, W., Bouma, L., & **Yee, S. W.** `cdips-pipeline`: *difference-imaging photometry pipeline*
Yee, S. W., Petigura, E., von Braun, K. `SpecMatch-Emp`: *stellar characterization using an empirical spectral library*

Outreach & Service

Princeton Public Observing: Organize and host members of the public at observing events using the Princeton department telescope.

Intro2Astro: Gave lectures for Intro2Astro, an online summer course introducing students to astronomy research.

Astro Department Graduate Student Mentorship Program, Princeton University

Graduate Student Buddy Program, Princeton University