

Macy Huston

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Education

- 2018 – ★ **Ph.D., Astronomy & Astrophysics, Pennsylvania State University**
Thesis title: *Needles in the Milky Way Haystack: Searching for Dim Stars, Distant Planets, and Extraterrestrial Technology*
Advisor: Jason Wright
Anticipated graduation: Early 2023
- 2014 – 2018 ★ **B.S., Engineering Physics, Ohio State University**
Thesis title: *Making Microlensing Predictions with a New Galactic Model*
Advisors: Matthew Penny & B. Scott Gaudi

Management Experience

- 2020 – ★ **Penn State Extraterrestrial Intelligence (PSETI) Center Research Assistant**
- Inviting speakers and organizing meetings for the weekly PSETI Seminar and Journal Club
- Developing and maintaining the [PSETI Center website](#)
- Creating and maintaining the [PSETI Twitter account](#)
- 2022 ★ **LOC Chair and SOC Member**, the First Penn State SETI Symposium Local and Science Organizing Committees
- Leading a team to plan and run in-person and virtual conference logistics.
- Assisting in the development and scheduling of a scientific program.
- 2021 ★ **Organizing Committee Member**, the 2021 Assembly of the Order of the Octopus, a virtual conference for early-career SETI researchers
- Establishing a conference program and scheduling appropriate speakers
- Managing online spaces, including Gather Town and Zoom
- Advertising and live-tweeting on social media ([@PSETI_Center](#) and with [#OotO2021](#))

Science Communication

- 2022- ★ **Freelance Astronomy Writer**
- [Breadcrumbs Lead to Baby Planet](#), Sky & Telescope, September 2022
- 2021 – ★ **Science Communication Working Group Member**, Nexus for Exoplanet System Science.
- 2021 ★ **AAS/Astrobites Media Intern**, American Astronomical Society Meeting 239
- Emceeding and moderating Q&A for virtual press conferences
- Coordinating Astrobites' live-tweeting and [blogging](#) of AAS 239-related events
- 2020 – ★ **Astrobites Author**, the astro-ph reader's digest
- Posting [summaries of recent astro-ph papers](#) at a level accessible to undergraduate astronomy students using Wordpress
- Live-blogging and tweeting sessions of AAS meetings: AAS 238, 239 & 240, DPS 53
- Committee participation: hiring; diversity, equity, and inclusion; administrative; editorial; education

Other Professional Activities

Diversity, Equity, & Inclusion

- 2019 – ★ Graduate Student Representative, Climate and Diversity Committee, Department of Astronomy and Astrophysics, Penn State
- 2018 – ★ Leader, Toward A More Inclusive Astronomy (TaMIA): leading meetings about the experiences of marginalized astronomers and working to make our department more inclusive for all, Penn State
- 2017-18 ★ Organizing member, Polaris: a partnership between undergraduate and graduate students in OSU physics and astronomy to make the programs more equitable and inclusive, Ohio State

Outreach

- 2022 ★ *Microlensing with Roman: the Hunt for Cold and Distant Exoplanets* (talk), Astronomy on Tap State College
- ★ *Finding Exoplanets: Direct Imaging and Microlensing* (talk), Astro Society of the Pacific Virtual Astro Cafe
- ★ American Astronomical Society Astronomy Ambassador Workshop
- 2021 ★ *Dyson Spheres and Swarms* (talk), Astronomy on Tap State College
- 2020 ★ ENVISION: STEM Career Day Supporting Young Women, leading comet and crater demonstrations, Eberly College of Science, Penn State
- ★ Developing inclusive AstroFest activities, including tactile and auditory representations of various astronomical objects and datasets
- 2018-19 ★ Pointing telescopes and discussing the department's work with visitors at Penn State Astronomy Department outreach events, including AstroFest and AstroNight

Reviewer

- 2022 ★ Monthly Notices of the Royal Astronomical Society

Research Publications

First and Co-first Author Articles

- 1 Tusay, N., **Huston, M. J.**, Dedrick, C. M., Kerby, S., Palumbo, M. P., Croft, S., Wright, J. T., Roberson, P., Skeikh, S., Duffy, L., Foote, G., Hyde, A., LaFond, J., Mullikin, E., Parts, W., Sandhaus, P., Smith, H. H., Sneed, E. L., Czech, D., & Gajjar, V. (2022). A Search for Radio Technosignatures at the Solar Gravitational Lens Targeting Alpha Centauri. *AJ*, 164(3), 116. <https://doi.org/10.3847/1538-3881/ac8358>
- 2 **Huston, M. J.**, & Wright, J. T. (2022a). SETI in 2021. *Acta Astronautica*, 199, 166–173. <https://doi.org/10.1016/j.actaastro.2022.06.007>
- 3 **Huston, M. J.**, & Wright, J. T. (2022b). Evolutionary and Observational Consequences of Dyson Sphere Feedback. *ApJ*, 924(2), Article 78. <https://doi.org/10.3847/1538-4357/ac3421>
- 4 **Huston, M. J.**, & Luhman, K. L. (2021). The Initial Mass Function of Low-mass Stars and Brown Dwarfs in the W₃ Complex. *AJ*, 161(3), Article 138. <https://doi.org/10.3847/1538-3881/abe044>

Co-author Articles

- 1 Suazo, M., Zackrisson, E., Wright, J. T., Korn, A. J., & **Huston, M. J.** (2022). Project Hephaistos - I. Upper limits on partial Dyson spheres in the Milky Way. *MNRAS*, 512(2), 2988–3000. <https://doi.org/10.1093/mnras/stac280>

- 2 LaFond, J., Wright, J. T., & **Huston, M. J.** (2021). Furthering a Comprehensive SETI Bibliography. *JBIS*, 74, 252–255. <https://doi.org/10.48550/arXiv.2107.02887>
- 3 Shvartzvald, Y., Calchi Novati, S., Gaudi, B. S., Bryden, G., Nataf, D. M., Penny, M. T., Beichman, C., Henderson, C. B., Jacklin, S., Schlafly, E. F., & **Huston, M. J.** (2018). UKIRT-2017-BLG-001Lb: A Giant Planet Detected through the Dust. *ApJL*, 857(1), Article L8. <https://doi.org/10.3847/2041-8213/aab71b>

Invited Talks

- 2022 ★ *Review: Waste Heat & Megastructures*, The First Penn State SETI Symposium

Contributed Talks

- 2022 ★ *The Roman Microlensing Survey in a Galactic Context with SynthPop*, Emerging Researchers in Exoplanet Science VII
- ★ *Earth Detecting Earth: Human Baselines for Technosignatures*, The 240th Meeting of the American Astronomical Society
- ★ *A Search for Radio Technosignatures at the Solar Gravitational Lens Targeting Alpha Centauri*, The Penn State Extraterrestrial Intelligence Center Seminar Series
- ★ *Evolutionary and Observational Consequences of Dyson Sphere Feedback*, CHAMPS Exoplanet ECR Highlight Seminar
- 2021 ★ *Evolutionary and Observational Consequences of Dyson Sphere Feedback*, The Penn State Extraterrestrial Intelligence Center Seminar Series
- ★ *Evolutionary and Observational Consequences of Dyson Sphere Feedback*, The Assembly of the Order of the Octopus, a conference for early-career SETI researchers
- 2020 ★ *Substellar Membership of the W3 Complex*, Lunch Talk, Penn State Astronomy
- 2017 ★ *Galactic Modelling for Microlensing Observables*, WFIRST Microlensing Science Investigation Team Meeting
- 2016 ★ *A New Milky Way Model for Microlensing Predictions*, Summer Undergraduate Research Program Symposium, Ohio State Astronomy

Posters

- 2022 ★ *The Order of the Octopus*, The First Penn State SETI Symposium
- 2018 ★ *Making Microlensing Predictions with a New Galactic Model*, Natural and Mathematical Sciences Undergraduate Research Forum, Ohio State
- ★ *Making Microlensing Predictions with a New Galactic Model*, Conference on Undergraduate Women in Physics, Toledo,
- 2017 ★ *A New Milky Way Model for Microlensing Predictions*, Denman Research Forum, Ohio State

Honors

- 2022-23 ★ NASA Pennsylvania Space Grant Consortium Graduate Fellowship, Penn State
- 2018 ★ Homer F. Braddock and Nellie H. and Oscar L. Roberts Fellowship, Penn State
- ★ Tom and Bunny Clark Scholarship, Department of Physics, Ohio State

Honors (continued)

- ★ Funds for Astronomical Meetings: Outreach to Underrepresented Scientists Travel Grant, American Astronomical Society
- 2017 ★ Undergraduate Research Scholarship, Department of Engineering, Ohio State
- ★ Smith Junior Award, Department of Physics, Ohio State
- 2016 ★ Smith Sophomore Award, Department of Physics, Ohio State
- 2015 ★ Helen Cowan Book Award, Department of Physics, Ohio State
- 2014-18 ★ Honda-OSU Partnership Math Medal Scholarship, Ohio State
- ★ Maximus Scholarship, Ohio State