

Lindsey S. Wiser

◆ *Exoplanetary Astronomy & Science and Technology Policy* ◆

Lindsey.Wiser@jhuapl.edu • lindsey.wiser@spacegeneration.org • lindseywiser.com

Education

Ph.D. in Astrophysics, Arizona State University	2025
B.S. in Engineering Mechanics & Earth and Planetary Science, Johns Hopkins University	2020

Science / Technical Work

Johns Hopkins Applied Physics Lab <i>Post Doctoral Fellow</i>	2025 – Present
<ul style="list-style-type: none"> Exoplanetary astronomy with computer models, space telescopes, and more. 	
Pandora, NASA Pioneers SmallSat Mission <i>Science Team Member</i>	2023 – Present
<ul style="list-style-type: none"> Contributing to the commissioning plan, community outreach, and science team discussions. 	
Arizona State University, School of Earth and Space Exploration <i>Astrophysics Graduate Research Assistant</i>	2020 – 2025
<ul style="list-style-type: none"> Completed my Ph.D. thesis “From Hubble to JWST and Beyond: Revealing Exoplanet Formation and Climate with Space Telescopes” 	
NASA/JPL Astro Mission Design School <i>Exoplanet Science Objective Lead, Telecommunications Chair</i>	2023
<ul style="list-style-type: none"> Formulated an ultraviolet, probe-class, space telescope proposal with mission formulation experts as an educational exercise. 	
Space Telescope Science Institute (STScI) <i>Mechanical Engineering Capstone Student & Exoplanet Intern</i>	2018 – 2019
<ul style="list-style-type: none"> Designed a mechanical mirror for conducting lab research on space telescope designs that can observe Earth-like exoplanets. Studied the James Webb Space Telescope’s capabilities to characterize exoplanet atmospheres, pre-launch of the telescope. 	
Smithsonian National Air and Space Museum <i>Planetary Science Research Intern as a Brooke Owens Fellow</i>	2019
<ul style="list-style-type: none"> Mapped geological features on the surface of Saturn’s moon, Enceladus. 	

Policy Work

American Astronomical Society, Committee for the Protection of Astronomy and the Space Environment (AAS COMPASSE) <i>Committee Member</i>	2025 – Present
<ul style="list-style-type: none"> Advocating for space science policy in Washington, DC. Wrote an invited blog. 	

CURRICULUM VITAE

Space Generation Advisory Council (SGAC)

United States National Point of Contact 2023 – Present

- Serving as a resource and representative for the US SGAC members. Fostering the US community through events.

Lead of the [Space Policy and Advocacy Task Force](#) for North America, Central America, and the Caribbean 2021 – 2024

- Helped found and build the Task Force since 2021. Provided a platform for young space experts to promote their perspectives through webinars, published articles, and conferences.

Other Roles: SGAC Events Organizing Team, Policy Subject Matter Expert for Working Groups, Space Law & Policy Project Group Researcher 2020 – 2023

Arizona State University, Space Governance Lab 2020 – 2024

Graduate Researcher

- Published and presented on the evolving international space governance system with Dr. Timiebi Aganaba.

NASA Headquarters 2020

Astrophysics Division Intern

- Reviewed the Astrophysics Research and Analysis Program (APRA) for project timelines and diverse student engagement.

Aerospace Industries Association 2020

Space Policy Intern

- Wrote background material on space and aviation policy.

Teaching & Mentorship

Brooke Owens Fellowship – Alumni Mentor and 2019 Fellow 2020 – Present

Skype A Scientist – Speaker for classrooms 2020 – Present

Arizona State University – Teaching Assistant, Intro to Solar System Astronomy 2024

Harassment Prevention and Bystander Workshop – Discussion Facilitator 2020 – 2022

Destination Imagination – Mentor for a middle school engineering team 2018 – 2020

Students for the Exploration and Development of Space (SEDS) – 2018 – 2020

Johns Hopkins University Chapter President & Space Policy Team Lead

AIAA Design Build Fly – Johns Hopkins University Chapter President, Technical Advisor, and Member 2016 – 2020

Johns Hopkins University – Teaching Assistant for an intro mechanical engineering lab (2 semesters) and lecture (1 semester). 2018 – 2019

Awards & Honors

Arizona State University Graduate College, Focus on Finishing Your Degree Fellowship – Awarded to select final semester PhD students 2025

SGAC Space Generation Leadership Award & Grant – Awarded to exceptional volunteers and leaderships within SGAC to fund travel to the International Astronautical Congress. 2023

National Science Foundation Graduate Research Fellowship Program (NSF GRFP), Honorable Mention 2022

NASA / International Space Education Board Student Delegate – Grant awarded to attend the International Astronautical Congress. 2021

Summer Exploration Graduate Fellowship Research Award – <i>Awarded for promising scientific research progress.</i>	2021
Robert George Gerstmyer Award – <i>Awarded for outstanding undergraduate achievement in engineering.</i>	2020
Brooke Owens Fellowship Program – <i>Awarded to women and gender minorities with outstanding potential in space and aviation.</i>	2019
Mechanical Engineering Special Achievement Award – <i>Awarded for outstanding leadership through engineering clubs and societies.</i>	2019
Pi Tau Sigma – <i>Mechanical engineering honors society membership.</i>	2018

Publications

Exoplanet Science

Wiser, L., Roth, A., et al., <i>A Comparison of 1D and 3D Exoplanet Atmosphere Model Grids: ScCHIMERA and the SPARC/MiTgcm.</i>	Submitted
Wiser, L., Bell, T., et al., <i>A Precise Metallicity and Carbon-to-Oxygen Ratio for a Warm Giant Exoplanet from its Panchromatic JWST Emission Spectrum.</i>	2025
Wiser, L., Line, M., et al., <i>Lessons from Hubble and Spitzer: 1D Self-Consistent Model Grids for 19 Hot Jupiter Emission Spectra, ApJ.</i>	2024
Mehta, N., ... Wiser, L., et al., <i>How clear are the skies of WASP-80b?: 3D Cloud feedback on the atmosphere and spectra of the warm Jupiter.</i>	Submitted
Ahrer, E.-M., ... Wiser, L., et al., <i>Escaping Helium and a Highly Muted Spectrum Suggest a Metal-Enriched Atmosphere on Sub-Neptune GJ3090b from JWST Transit Spectroscopy, ApJL.</i>	2025
Schlawin, E., ... Wiser, L., et al., <i>Multiple Clues for Dayside Aerosols and Temperature Gradients in WASP-69 b from a Panchromatic JWST Emission Spectrum, AJ.</i>	2024
Beatty, T., ... Wiser, L., <i>Sulfur Dioxide and Other Molecular Species in the Atmosphere of the Sub-Neptune GJ 3470 b, ApJ.</i>	2024
Welbanks, L., ... Wiser, L., <i>A High Internal Heat Flux and Large Core in a Warm Neptune Exoplanet, Nature.</i>	2024
Bell, T., ... Wiser, L., et al., <i>Methane Throughout the Atmosphere of the Warm Exoplanet WASP-80b, Nature.</i>	2023
Coulombe L.-P., ... Wiser, L., et al., <i>A broadband thermal emission spectrum of the ultra-hot Jupiter WASP-18b, Nature.</i>	2023
Glidic, K., ... Wiser, L., et al., <i>Atmospheric Characterization of Hot Jupiter CoRoT-1 b Using the Wide Field Camera 3 on the Hubble Space Telescope, AJ.</i>	2022
Mansfield, M., Wiser, L., et al., <i>Confirmation of Water Absorption in the Thermal Emission Spectrum of Hot Jupiter WASP-77Ab with HST/WFC3, AJ.</i>	2022
Mansfield, ... Wiser, L., et al. <i>A unique hot Jupiter spectral sequence with evidence for compositional diversity. Nature Astronomy.</i>	2021

Solar System Science

Martin, E.S., ..., Wiser, L., et al., <i>Measurements of regolith thicknesses on Enceladus: Uncovering the record of plum activity, Icarus.</i>	2023
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Space Missions

Balakrishnan, M., ... Wiser, L., et al. <i>MAUVE: An Ultraviolet Astrophysics Probe Mission Concept, PASP.</i>	2024
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CURRICULUM VITAE

- Wiser, L.,** Dotson, J., et al., *Commissioning Plans for the Pandora SmallSat, SmallSat 2024 (SSC24-WP1-17)*, 2024
- Quintana, E., ... **Wiser, L., et al.**, *The Pandora SmallSat: multiwavelength characterization of exoplanets and their host stars*, SPIE, 2024

Policy

- Wiser, L.,** Sheppard, A., et al., *An Overview of Space Policy in North America, Central America, and the Caribbean*, (IAC-24,E9,IP,45,x85848), 2024
- Wiser, L.,** Sheppard, A., et al., *An Overview of Space Policy Perspectives from the Young Space Generation*, (IAC-23,E3,2,8,x77227), 2023
- Wiser, L.,** Aganaba, T., *An evolving space governance system: Balancing interests in five policy debates*, Acta Astronautica, 2022
- Wiser, L.,** Bromley, M., Walker, S., *Tracing the Evolving Science and Media Impact of Space Missions*, (IAC-22,A7,1,7,x69117) 2022
- Nasr, M., **Wiser, L.,** et al. *Planetary Protection and Martian ISRU*, GLEX-21-10.2.6x62312 2021
- SGAC Space Law & Policy, Human Rights Sub-Team, *Earth Observation Data, Climate Change, and Human Rights*, Jus Ad Astra, 2022

Select Abstracts

- Wiser, L.,** Benford, D., *A Longitudinal Study of NASA's APRA Suborbital Program*, AAS Meeting Abstracts 2021
- Wiser, L.,** Batalha, N., et al., *Optimizing JWST NIRISS SOSS Order 2 Precision For the Detection of K and Na*, AAS Meeting Abstracts. 2019

Select Presentations & Workshops

AAS Winter Meeting, <i>Speaker</i>	2019 – 2025
ASCEND, <i>Speaker</i>	2024
American Astronomical Society (AAS) Congressional Visit Days	2024
Exoplanets IV & V, <i>Speaker</i>	2022, 2024
OWL at UC Santa Cruz, <i>Speaker</i>	2022 – 2024
Space Generation Fusion Forum, <i>Organizing Team, Policy Subject Matter Expert, and Delegate</i>	2021 – 2023
International Astronautical Congress (IAC), <i>Speaker</i>	2020 – 2023
CHAMPs Early Career Highlight Seminar, <i>Speaker</i>	2022
Emerging Researchers in Exoplanet Science (ERES), <i>Speaker</i>	2021
STScI Spring Symposium, <i>Speaker</i>	2021
NASA HQ Intern Symposium, <i>Speaker</i>	2020
AIAA Young Professionals Conference, <i>Speaker</i>	2020
STScI Space Astronomy Summer Program Symposium, <i>Speaker</i>	2019
Citizens for Space Exploration Congressional Visit Days	2019
