Samuel A. Myers

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EDUCATION

Ph.D. in Planetary Sciences **August 2025 (expected)**
University of Arizona, Tucson, AZ
GPA: 4.0/4.0
Minor in Planetary Sciences (custom minor with science policy focus)

M.S. in Planetary Sciences (en route) **May 2023**
University of Arizona, Tucson, AZ
GPA: 4.0/4.0

B.S. in Physics and Mathematical Modeling **May 2020**
University of Idaho, Moscow, ID
Senior Thesis: Mini-Neptune Orbiting Delta-Scuti KOI-972
GPA: 4.0/4.0, *Summa Cum Laude, Honors Scholar Award with Distinction*

PUBLICATIONS

Published

Myers, Samuel A.; Howell, Ellen S.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R.; Hinkle, Mary L.; Marshall, Sean E. "Inconsistencies in Simple Thermal Model Results for Near-Earth Asteroids between Infrared Telescope Facility SpeX and NEOWISE Data" The Planetary Science Journal, Vol 5. Published 29 October 2024.

Myers, Samuel A.; Howell, Ellen S.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R.; Marshall, Sean E. "Constraining the Limitations of NEATM-like Models: A Case Study with Near-Earth Asteroid (285263) 1998 QE2", The Planetary Science Journal, Vol 4. Published 10 January 2023.

Doole, Fathima T.; Littin, Shelley; *Myers, Samuel A*; Somasekhar, Gowri; Steyaert, Jennie C.; Lansey, Kevin. "Experiential Learning for Training Future Science Policy and Diplomacy Experts", Journal of Science Policy & Governance. Published October 2022.

Myers, Samuel A.; Barnes, Jason W.; Ahlers, John P. "Constraints on Sub-Neptune Planet Candidate KOI-972.01 via Joint Variability / Gravity-darkening Analysis", The Planetary Science Journal, Vol 2. Published 24 February 2021.

Ahlers, John P.; Barnes, Jason W.; *Myers, Samuel A.* "Dealing with δ-Scutis: Transit Light Curve Analysis of Planets Orbiting Rapidly-Rotating, Seismically Active A/F Stars", The Astrophysical Journal, Vol 158. Published 30 July 2019.

Ahlers, John P.; Barnes, Jason W.; Horvath, Sarah A.; *Myers, Samuel A.*; Hedman, Matthew M. "LASR-Guided Stellar Photometric Variability Subtraction: The Linear Algorithm for Significance Reduction", Astronomy and Astrophysics, Vol 615. Published 26 July 2018.

In Preparation

Myers, Samuel A.; Howell, Ellen S.; Fernández, Yan R.; Marshall, Sean E.; Magri, Christopher; Vervack, Ron J. Jr.; Hinkle, Mary L. "NEOWISE Data Processing and Color Corrections for Near-Earth Asteroid Observations" In preparation.

RESEARCH EXPERIENCE

Graduate Research Associate May 2023 - Present
Graduate Research Assistant September 2020 – May 2023
University of Arizona, Tucson, AZ 40 hrs/week
Supervisor: Dr. Ellen Howell

Research and Analysis. Collected, processed, and analyzed data from NASA IRTF and NEOWISE telescopes in order to identify physical characteristics of near-Earth asteroids. Applied and updated computer models to analyze this, including developing new data analysis methods and procedures. Developed custom R software to aid in data visualization and analysis. Converted models between IDL and R. Interpreted results using chi-squared and other objective function analysis to place limits on asteroid physical characteristics. Compared and interpreted results across multiple data types. Designed and implemented research strategy for follow up analysis in light of unexpected results.

Writing and Communication. Published results in peer reviewed literature. Designed data visualization of all results. Presented work at numerous national conferences, including winning student presentation award. Addressed technical questions and communicated work to people of diverse scientific disciplines.

Graduate Research Assistant June 2020 – September 2020
University of Arizona, Tucson, AZ 40 hrs/week
Supervisor: Dr. Daniel Apai

Research and Analysis. Wrote code and performed analysis as part of feasibility study looking at the potential to detect oxygen in the atmospheres of exoplanets.

Undergraduate Research Assistant September 2016 – May 2020
University of Idaho, Moscow, ID 10 hrs/week
Supervisor: Dr. Jason Barnes
Research and Analysis. Processed and analyzed data from Kepler telescope to identify orbits and physical characteristics of exoplanets. Applied and analyzed results of two different physical models to identify unique orbit characteristics. Aided in testing and development of novel data analysis procedures to combine these two methods.

Writing and Communication. Published results in peer reviewed literature and a senior research thesis. Presented work at numerous national conferences, including winning student presentation awards. Presented work in plain language to diverse audiences including middle schoolers and senior citizens and addressed public questions.

SCIENCE POLICY WORK

Arizona Science Policy Fellowship Planning Grant June 2023 – Present

Worked as part of a four-member team at the University of Arizona to compete for and implement planning grant to design a science policy fellowship for the state of Arizona. Performed literature reviews and organized and held interviews with key stakeholders to identify key fellowship elements and existing knowledge gaps in the state legislature. Co-led design of fellowship structure and fellow selection process. Developed and gave presentations describing project progress and fellowship structure to diverse stakeholders including members of state legislature, legislative staff, program advisory committee members, potential program funders, and members of the academic community. Advocated for project to diverse audiences. Wrote sections of grant proposal. Led writing of final grant report.

Arecibo Science and Advocacy Partnership January 2023 – July 2024

Chaired Advocacy and outreach committee in charge of Congressional outreach to advocate for repair and rebuilding of the Arecibo Radar telescope. Co-developed overall Congressional outreach strategy. Organized and led meetings with Congressional offices in both chambers and parties. Co-led efforts to get H.Res.827 introduced and S.Res.467 introduced and passed in the 117th Congress. Helped with organization restructuring to better suite ongoing needs.

Science Policy and Diplomacy Cats August 2022 – May 2023

Founded science policy and diplomacy student organization at the University of Arizona. Served as Treasurer during first year. Organization morphed into Arizona Science Policy Fellowship planning grant team.

Diplomacy Lab: Investigating Energy Issues in the Mekong River Region Fall 2021

Worked as part of class at University of Arizona on project with US State Department to identify policies to increase climate sustainability in the Mekong River region. Worked in coordination with team from diverse academic backgrounds. Performed literature review and comparative analysis on policies to affect current and future energy usage. Wrote section of final report. Led presentations to State Department officials.

General Congressional Outreach Fall 2020 – Fall 2021

Participated in various Congressional Visit Days organized by professional societies including AAS, AGU, and UCS to discuss space sciences funding and climate issues with the Congressional offices of Sen. Kelly (D-AZ), Sen. Sinema (D-AZ), Sen. McSally (R-AZ), Rep. Kirkpatrick (D-AZ), Rep. O'Halleran (D-AZ), and the Senate Committee on Commerce, Science, and Transportation.

Arizona Science Policy Network Fall 2020
Assisted in outreach campaign and did research to help compile science-focused voter guides for the 2020 general election.

LEADERSHIP EXPERIENCE

Graduate Student Faculty Representative April 2023 – Present
Lunar and Planetary Laboratory, University of Arizona

Served as student liaison between graduate students and department faculty. Developed, administered, and analyzed surveys to solicit student feedback. Led all-student meetings. Represented student concerns to faculty in committee and one-on-one settings as well as through written documentation.

Student Representative October 2022 – October 2024
American Astronomical Society, Division for Planetary Sciences

Elected to national office to represent all student members as member of the executive committee. Developed new virtual townhall structure to better engage with student members. Assisted and participated in committee decisions around conference planning, grant distribution, award selection, and federal advocacy.

Vice President and President May 2017 – May 2018
Residence Hall Association, University of Idaho

Developed and implemented pilot phase of small dollar grant program to support student organizations. Managed Association budget. Assumed duties of President in wake of unexpected ouster of previous President. Led effort to rewrite Association's constitution and bylaws to be more sustainable and responsive to student needs.

TEACHING AND MENTORSHIP EXPERIENCE

Teaching Assistant January 2024 – May 2024
Developed and gave set of lectures on space policy and space law geared towards non-STEM undergraduates. Wrote and graded student quizzes. Addressed student questions in one-on-one and classroom settings.

Math Tutor November 2021 – September 2023
Tutored local middle schooler in algebra and geometry. Student's average grade increased by one and a half letters.

University of Idaho Honors Program Mentor September 2018 – May 2020
Mentored freshman Honors Program students. Met weekly to give advice and guidance on navigating the college experience.

SELECTED GRANTS AND FELLOWSHIPS

Funding Institution: National Science Foundation
Name: Graduate Research Fellowship Program
Award Period: September 2022 – September 2025

Funding Institution: University of Arizona Lunar and Planetary Laboratory
Name: Lieutenant Colonel Kenneth Rondo Carson and Virginia Bryan Carson Graduate Fellowship
Award Period: August 2020 – August 2021

Funding Institution: University of Idaho College of Science
Name: Hill Undergraduate Research Fellowship
Award Period: January 2019 – May 2020

Funding Institution: University of Idaho Office of Undergraduate Research
Name: Summer Undergraduate Research Fellowship
Award Period: June 2019 – August 2019

SELECTED AWARDS AND RECOGNITIONS

Lunar and Planetary Laboratory Leif Erland Andersson Award for Service and Outreach	May 2024
Lunar and Planetary Laboratory Conference Graduate Speaker Award	August 2022
College of Science John B. George Award	May 2020
College of Science Dean's Undergraduate Award	May 2020
Department of Mathematics Chair's Award for Excellence	May 2020
University of Idaho Alumni Award for Excellence	October 2019
Barry M. Goldwater Scholar	April 2019
Outstanding Undergraduate Research Award	October 2018
Archbishop Murphy High School Valedictorian	June 2016
National Merit Scholar	February 2016

SELECTED CONFERENCE PARTICIPATION

American Astronomical Society - Division for Planetary Sciences Meeting, Boise, ID. *Myers, Samuel A.*; Howell, Ellen S.; Fernández, Yan R.; Marshall, Sean E. "Guidance for Using NEOWISE Data for NEA Observations", *Poster*, 9 October 2024.

Small Bodies Assessment Group 30th Meeting, Tucson, AZ. *Myers, Samuel A.*; Howell, Ellen S.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R.; Hinkle, Mary L.; Marshall, Sean E.; McFadden, Kiana D. "Differences in Simple Thermal Model Results for NEAs Based on IRTF SpeX and NEOWISE Data", *Oral*, 30 January 2024.

American Astronomical Society - Division for Planetary Sciences Meeting, San Antonio, TX. *Myers, Samuel A.*; Howell, Ellen S.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R. "Differences in NEA Simple Thermal Model Results Between IRTF SpeX and NEOWISE Data", *Oral*, 6 October 2023.

University of Arizona Lunar and Planetary Laboratory Conference, Tucson AZ. *Myers, Samuel A.* "Exploring the Endless Frontier: Science Policy for the Planetary Scientist", *Oral (Invited)*, 18 August 2023.

American Astronomical Society - Division for Planetary Sciences Meeting, London, Canada. *Myers, Samuel A.*; Howell, Ellen S.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R.; Marshall, Sean E.; Taylor, Patrick A. "Comparison of NEATM-like Models with NASA IRTF and NEOWISE Observations of Near-Earth Asteroid (285263) 1998 QE2", *Oral*, 3 October 2022.

University of Arizona Lunar and Planetary Laboratory Conference, Tucson AZ. *Myers, Samuel A.*; Howell, Ellen S.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R.; Marshall, Sean E.; Taylor, Patrick A. "Comparing NEATM-like Models to IRTF and NEOWISE Data to Constrain Model Results", *Oral*, 19 August 2022.

University of Arizona Legal Empiricism and Discussion Society - Annual Conference, Tucson AZ. Littin, S.; Doole, F.; Steyaert, J.; *Myers, S.* "Policy Recommendations for Sustainable Climate Adaptation Strategies in the Mekong Region", *Oral*, 8 April 2022.

United States Department of State - Diplomacy Lab Demo Day, Virtual. Doole, F.; Littin, S.; *Myers, S.*; Steyaert, J. "Enhancing Mekong River Region Food, Water, and Energy Security in a Changing Climate", *Oral (Invited)*, 11 February 2022.

European Planetary Science Congress - Division for Planetary Sciences Joint Meeting, Geneva, Switzerland. *Myers, Samuel A.*; Barnes, Jason W.; Ahlers, John P. "Using Gravity Darkening and Asteroseismology to Measure the Misalignment of KOI-972.01", *Oral, Presented by second author*, 15-20 September 2019.

Idaho Conference on Undergraduate Research, Boise ID. *Myers, Samuel A.*; Barnes, Jason W.; Ahlers, John P. "Constraining Planetary Formation with Gravity Darkening on Variable Stars", *Poster*, 30-31 July 2019.

Western Regional Honors Council Conference, Bozeman MT. *Myers, Samuel A.*; Barnes, Jason W.; Ahlers, John P. "Constraining Theories of Planetary Formation and Evolution", *Oral*, 29-31 March 2019.

American Astronomical Society Winter Meeting, Seattle WA. *Myers, Samuel A.*; Barnes, Jason W.; Ahlers, John P. "Using Gravity Darkening on Variable Stars to Constrain Planetary Formation Theories", *Poster*, 8 January 2019.

University of Idaho College of Science Student Research Exposition, Moscow ID. *Myers, Samuel A.*; Barnes, Jason W.; Ahlers, John P. "Using Variable Stars to Constrain Planetary Formation Theories", *Poster*, 18 October 2018.

American Astronomical Society - Division for Planetary Sciences Meeting, Provo, UT. Horvath, Sarah A.; *Myers, Samuel A.*; Ahlers, John P.; Barnes, Jason W. "LASR-Guided Variability Subtraction: The Linear Algorithm for Significance Reduction of Stellar Seismic Activity, *Poster*, 19 October 2017.

SELECTED COMMUNITY INVOLVEMENT

Letters to a Pre-Scientist Pen Pal	October 2024 - Present
Prescott Astronomy Club Guest Speaker	July 2024
Huachuca Astronomy Club Guest Speaker	February 2023
Splendido Intellectual Pursuits Program Speaker	February 2022, February 2024
Sonora Astronomical Society Guest Speaker	October 2020
Moscow High School Science Field Day Speaker	October 2019
University of Idaho Apollo 50 Guest Speaker	July 2019
Invent Idaho State Finals Judge	March 2019

SELECTED MEDIA COVERAGE

Cassiopeiabloggen	March 2024
University of Arizona News	March 2022
Guest Blogger, Union of Concerned Scientists Blogs	September 2021
University of Idaho College of Science Lab Report	September 2019
University of Idaho Vandals in Focus	March 2019
The University of Idaho Argonaut	October 2018

SKILLS

Technical skills: Proficient: Windows, Microsoft Word, PowerPoint, Google Docs, Sheets, Slides, Forms, Overleaf, LaTeX, R. Familiar: Linux, Microsoft Excel, Java, C++, IDL, TADS3.

Professional skills: Translating technical information, presentation design, technical and plain language writing, literature research, model application, project and time management, working with multiple responsibilities.