Samuel A. Myers

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EDUCATION

Ph.D. in Planetary Sciences **June 2025**
University of Arizona, Tucson, AZ
Dissertation: Understanding the Limits of Simple Thermal Models for Characterizing Near-Earth Asteroids
Minor in Planetary Sciences (custom minor with science policy focus)
GPA: 4.0/4.0

M.S. in Planetary Sciences **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*

Relevant Courses: Policy Analysis, Intro to Science Policy and Diplomacy, Translating Environmental Science, Science Communication, Writing Across Space Sciences, Spacecraft and Mission Design, Bayesian Statistics, Building our Energy Policy, Probability Theory, Probability and Statistics, Mathematical Modeling, Game Theory, Technical Writing

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SCIENCE POLICY WORK

Arizona Science Policy Fellowship Planning Grant June 2023 – October 2025

- Was awarded and implemented a $100,000 planning grant to design a science policy fellowship for the state of Arizona with a four-member team at the University of Arizona
- Led design of fellowship structure. Communicated with existing programs and stakeholders, and developed fellowship structure for implementation in Arizona
- Advocated for and communicated about the project to diverse stakeholders, including funders, state legislators, university leadership, academics, and industry leaders
- Led writing of final grant report

Arecibo Science and Advocacy Partnership January 2023 – July 2024

- Chaired a Congressional advocacy and outreach committee to advocate for repairing and rebuilding the Arecibo Radar telescope
- Co-developed and led overall bicameral, bipartisan Congressional outreach strategy
- Shepherded introduction of H.Res.827 and passage of S.Res.467 in the 117th Congress

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

- Conducted comparative analysis as part of team and performed literature review on policies to increase climate sustainability and influence energy usage in the Mekong River region with the US State Department
- Wrote section of final report. Led presentations to State Department officials, including invited presentation to broader State Department employees

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 change 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

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LEADERSHIP EXPERIENCE

Graduate Student Faculty Representative April 2023 – June 2025

Lunar and Planetary Laboratory, University of Arizona

- Served as student liaison to represent student concerns to faculty in committee and one-on-one settings as well as through written documentation
- Developed, administered, and analyzed surveys to solicit student feedback
- Led student townhalls.

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, 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 Presidential responsibilities to ensure organizational stability following departure of previous president
- Led effort to rewrite Association's constitution and bylaws to be more sustainable and responsive to student needs

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TEACHING AND MENTORSHIP EXPERIENCE

Letters to a Pre-Scientist Pen Pal October 2024 – April 2025

- Participated in pen pal program that connects middle school science students from underserved communities with practicing STEM professionals to provide mentorship, guidance, and encouragement

Teaching Assistant January 2024 – May 2024

- Developed unit on space policy and space law for non-STEM undergraduates
- 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
- Increased student's average grade by one and a half letters

University of Idaho Honors Program Mentor September 2018 – May 2020

- Mentored freshman Honors Program students
- Coached students on setting and achieving academic and professional goals

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RESEARCH EXPERIENCE

Graduate Research Associate May 2023 – June 2025
Graduate Research Assistant September 2020 – May 2023
University of Arizona, Tucson, AZ
Supervisor: Dr. Ellen Howell

Collected, processed, and analyzed ground-based and space-based telescope data using custom R and IDL software and thermophysical models to identify physical characteristics of near-Earth asteroids, with focus towards impact prevention. Applied MCMC and chi-squared analysis to compare modeling results. Synthesized information from across technical documentation and peer-reviewed literature. Designed novel data visualization of all results using R software packages. Addressed technical questions and communicated work to people from diverse scientific disciplines. Won student research presentation award. Worked as part of broader research team.

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

Wrote Python 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

Supervisor: Dr. Jason Barnes

Processed and analyzed space telescope data to identify orbits and physical characteristics of exoplanets. Aided in development and implementation of novel data analysis procedures using Fourier and chi-squared analysis in C++. Compiled technical information from large databases. Presented work in plain language to diverse audiences including middle schoolers and senior citizens and addressed public questions. Won student research presentation award.

SKILLS

Professional skills: Translating technical information, technical and plain language writing, literature research, presentation design, communicating in one-on-one and group settings, working with small and large teams, model application and development, project and time management, working with multiple responsibilities.
Technical skills: *Proficient* - Windows, Microsoft Office (Word, PowerPoint), Google (Docs, Sheets, Slides, Forms), Overleaf, LaTeX, R. *Familiar* - Linux, Microsoft Excel, Java, C++, Python, IDL, TADS3.
Research skills: Remote sensing, chi-squared and objective function analysis, Bayesian analysis, Fourier analysis.

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 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 COMMUNITY INVOLVEMENT

Phoenix Fan Fusion Volunteer and Panelist	June 2025
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

PUBLICATIONS

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", The Planetary Science Journal, Vol 6. Published 01 April 2025.

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.

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.

Asteroids, Comets, and Meteors Conference, Flagstaff, AZ. *Myers, Samuel A.*; Howell, Ellen S.; McFadden, Kiana D.; Magri, Christopher; Vervack, Ron J. Jr.; Fernández, Yan R. "Comparison of NEA Sizes from SpeX and NEOWISE Data", *Poster*, 20 June 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.

American Astronomical Society - Division for Planetary Sciences Meeting, Virtual. *Myers, Samuel A.*; Howell, Ellen S.; Fernández, Yan R.; Vervack, Ron J. Jr.; Marshall, Sean E.; Taylor, Patrick A. “Comparisons of NEATM-like Models for NEAs with NASA IRTF and NEOWISE Data”, *Poster, Live Q&A session*, 6 October, 2021.

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.

University of Idaho Undergraduate Research Symposium, Moscow ID. *Myers, Samuel A.*; Barnes, Jason W.; Ahlers, John P. “Using Variable Stars to Constrain Planetary Formation Theories”, *Poster*, 29 April 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