

Amanda Claire Stadermann

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Education

The University of Arizona (Tucson, AZ)

PhD, expected December 2021
Planetary Sciences
Minor in Geosciences
Cumulative GPA: 3.53/4.00

The University of Arizona (Tucson, AZ)

MS, August 2019
Planetary Sciences
Minor in Geosciences
Cumulative GPA: 3.58/4.00

Washington University in St. Louis (St. Louis, MO)

BA, May 2016
Earth and Planetary Sciences with a concentration in Geophysics
Minor in Physics and German
Cumulative GPA: 3.53/4.00

Work Experience

University of Arizona Lunar and Planetary Laboratory (Tucson, AZ)

Graduate Research Assistant (August 2016 – present)

Investigating impact melts and basalts on the Moon, creating a geologic map of the impact melt around lunar crater Giordano Bruno, using an electron microprobe to investigate experimental samples, writing papers on research topics. Investigate Apollo impact melt samples to determine the role clast entrainment plays in affecting large-scale morphology.

Graduate Teaching Assistant (August 2016 – December 2019)

Assisting in the teaching of PTYS 170A1 *Planet Earth: Evolution of the Habitable World*, PTYS 170B2 *The Universe and Humanity: Origin and Destiny*, PTYS 214 *Astrobiology* and PTYS 206 *Our Golden Age of Planetary Exploration*. Duties include grading homework, proctoring exams, holding office hours, holding review sessions, and guest lecturing.

Washington University Department of Earth and Planetary Science (St. Louis, MO)

Undergraduate Research Assistant (September 2013 – May 2016)

Identifying and counting craters on the Moon in ArcGIS, assisting in finding the crater density as well as the age of the surface based on crater size and distribution. Determined the age of the youngest mare basalts on the Moon, located south of Aristarchus Plateau.

Undergraduate Teaching Assistant (January 2015 – May 2016)

Assisting in the teaching of EPS 118A *Geology of National Parks* for the Spring 2015 and Spring 2016 semesters, helping grade homework, proctor exams, and held office hours.

Johns Hopkins University Applied Physics Laboratory (Laurel, MD)

NASA Summer Intern (June 2014 – August 2014; June 2015 – August 2015)

Analyzed MESSENGER MDIS images of Mercury's limb on planet's night side in attempt to positively identify Mercury's exosphere. Results were analyzed using USGS' ISIS, IDL, and ENVI. Examined Mercury's surface using MESSENGER images using USGS' ISIS and ReACT to identify hollows. Analyzed results using IDL, ENVI, and MATLAB to see size and location distribution.

Publications

1. **Stadermann, A. C.**, M. Krawczynski, B. L. Jolliff, and C. W. Hamilton (in prep). Analysis and Experimental Investigation of Apollo Sample 12032,366-18, a Chemically Evolved Basalt from the Moon. *Meteoritics and Planetary Science*.
2. **Stadermann, A. C.**, M. R. Zanetti, B. L. Jolliff, H. Hiesinger, C. H. van der Bogert, and C. W. Hamilton (2018). The Age of Lunar Mare Basalts South of the Aristarchus Plateau and Effects of Secondary Craters formed by the Aristarchus Event. *Icarus*, 309 45–60, doi:10.1016/j.icarus.2018.02.030.
3. Zanetti, M., **A. Stadermann**, B. Jolliff, H. Hiesinger, C. H. van der Bogert, and J. Plescia (2017). Evidence for Self-Secondary Cratering of Copernican-Age Continuous Ejecta Deposits on the Moon. *Icarus*, 298 64–77, doi:10.1016/j.icarus.2017.01.030
4. Blewett, D. T., **A. C. Stadermann**, H. C. Susorney, C. M. Ernst, Z. Xiao, N. L. Chabot, B. W. Denevi, S. L. Murchie, F. M. McCubbin, M. J. Kinczyk, J. J. Gillis-Davis, and S. C. Solomon (2016). Analysis of *MESSENGER* high-resolution images of Mercury's hollows and implications for hollow formation. *JGR-Planets*, 121: 9, 1798–1813, doi:10.1002/2016JE005070

Conference Abstracts

1. **Stadermann, A. C.**, B. L. Jolliff, M. J. Krawczynski, and C. W. Hamilton (2018). Experimental Investigation of Fractionation During Solidification of an Incompatible-Element-Rich Lunar Basalt From Apollo 12. 81st Annual Meeting of The Meteoritical Society # 6271.
2. **Stadermann, A. C.**, C. W. Hamilton, and C. D. Neish (2017). Mapping Lunar Impact Melt Around Giordano Bruno Crater. International Association of Volcanology and Chemistry of the Earth's Interior Conference # 1122.
3. **Stadermann, A. C.**, M. Krawczynski, B. L. Jolliff, and C. W. Hamilton (2017). Analysis and Experimental Investigation of Apollo Basalt Sample 12032,366-18. Lunar Planet. Sci. Conf. 48, # 2883.
4. Blewett, D., **A. Stadermann**, N. Chabot, B. Denevi, C. Ernst, Z. Xiao, and S. Solomon (2015). Mercury's Hollows: Depths, Estimation of Formation Rates, and the Nature of the Bright Haloes. AGU Fall Meeting 2015, P53A-2096.
5. **Stadermann, A.**, M. Zanetti, B. Jolliff, and H. Hiesinger (2015). Revisiting the Youngest Mare Basalts on the Moon: Analysis of Primary and Secondary Crater Distributions in the Region South of Aristarchus Crater. Lunar Planet. Sci. Conf. 46, # 1269.
6. Zanetti, M., **A. Stadermann**, B. Jolliff, C. van der Bogert, H. Hiesinger, and J. Plescia (2015). Auto-Secondary Cratering vs. Target Property effects on Ejecta Blankets of Copernican Craters: What are the Implications of Age-Dating using Small-Diameter Crater Statistics? Lunar Planet. Sci. Conf. 46, # 1209.

7. Jolliff, B., S. Lawrence, N. Petro, R. Clegg, **A. Stadermann**, and M. Zanetti (2015). Science Priorities for Lunar Exploration Missions and Value of Continued LRO Operations for Future Lunar Geoscience. *Lunar Planet. Sci. Conf.* 46, # 2616.
8. Zanetti, M., **A. Stadermann**, B. Jolliff, H. Hiesinger, and C. H. van der Bogert (2015). The Case for Auto-Secondary Craters of Ejecta Blankets using Crater Statistics of Young Lunar Craters. Workshop on Issues in Crater Studies and the Dating of Planetary Surfaces # 9041.
9. Blewett, D., **A. Stadermann**, N. Chabot, B. Denevi, C. Ernst, and P. Peplowski (2014). Mercury's Hollows: New Information on Distribution and Morphology from MESSENGER Observations at Low Altitude. AGU Fall Meeting 2014, P13F-07.
10. Zanetti, M., **A. Stadermann**, T. Krüger, C. van der Bogert, H. Hiesinger, and B. Jolliff (2014). Mapping Crater Density Variation on Copernican Ejecta Blankets: Evidence for Auto-Secondary Cratering at Tycho and Aristarchus. *Lunar Planet. Sci. Conf.* 45, # 1528.

Professional Service and Societies

Next-Generation Lunar Scientists and Engineers, Organizing Committee, (2019 – present)
 NASA Planetary Science Division Review Panels, Executive Secretary
The Meteoritical Society, Student Member (2018 – present)
International Association of Volcanology and Chemistry of the Earth's Interior, Young Researcher (2017 – present)

Outreach

Space Drafts 60, Borderlands Brewery, Tucson, AZ. *The Next 50 Years of Lunar Exploration*. (July 2019)
 Arizona-Sonora Desert Museum, Tucson, AZ. *Celebrating 50 years: Apollo 11 Moon Landing: What it's Like to Send a NASA Mission to the Moon, and Where to Go If You Did*. (July 2019)
 Summer Science Saturday, University of Arizona, Tucson, AZ. (July 2019)
 GeoSciTweeps Twitter Account Hosting. (July 2019)
 University of Arizona Special Collections, Tucson, AZ. *Moon*. (July 2019)
 Coronado K-8 School, Tucson, AZ. *Parker Solar Probe: Exploring the Sun* (January 2019)

Awards and Achievements

Bernard Ray Hawke Next Lunar Generation Career Development Award (deferred to 2020)
 To attend the Annual Meeting of the Lunar Exploration Analysis Group
 O. Richard Norton Award, Barringer Crater Company, the Planetary Studies Foundation (2018)
 Attended the Annual Meeting of the Meteoritical Society
 Galileo Circle Scholarship (2018)
 Shirley D. Curson Education Plus Fund in Planetary Sciences and LPL (2017)
 Attended the International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) Conference
 Stephen E. Dwornik Planetary Geosciences Student Paper Award (2015)
 Honorable Mention Undergraduate Poster for Stadermann, A., M. Zanetti, B. Jolliff, and H. Hiesinger (2015) Revisiting the Youngest Mare Basalts on the Moon: Analysis of Primary and Secondary Crater Distributions in the Region South of Aristarchus Crater. *Lunar Planet. Sci. Conf.* 46, # 1269.

Harold Levin Undergraduate Teaching Assistant Award (2015)
Department of Earth and Planetary Sciences, Washington University in St. Louis
Geology of National Parks (Spring 2015)

Washington University Varsity Swim Team (September 2012 – March 2016)
Captain (2015-16 season)
School record holder (200 yard butterfly, 100 yard butterfly)
All-American (100 yard butterfly, 2016; 200 yard butterfly, 2016)
Honorable Mention All-American (200 yard butterfly, 2014; 400 yard medley relay,
2016)
National Champion (200 yard butterfly, 2016)
William H. and Elizabeth Danforth Distinguished Athlete Award (2016)

Washington University Dean's List (Fall 2012, Fall 2013)