

Hannah C.M. Susorney

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hannahsus.github.io

Department of Earth, Atmospheric and Ocean Science
University of British Columbia
Vancouver, BC Canada

EDUCATION

- 2017 Ph.D., **Johns Hopkins University**, Baltimore, Maryland
Earth and Planetary Science
Advisors: Olivier S. Barnouin & Darrell F. Strobel
Thesis: Using Altimetry to Investigate Impact Cratering in the Solar System
- 2015 M.A., **Johns Hopkins University**, Baltimore, Maryland
Earth and Planetary Science
- 2013 B.S., **Montana State University**, Bozeman, Montana
Earth Science: Geology
Minor: Mathematics

PROFESSIONAL EXPERIENCE

- 2017–present Postdoctoral Fellow, **University of British Columbia**, Vancouver, Canada
Advisor: Catherine L. Johnson
- 2013–2017 Graduate Research Assistant, **Johns Hopkins University**, Baltimore, Maryland
and **Johns Hopkins University Applied Physics Laboratory**, Laurel, Maryland
Advisor: Olivier S. Barnouin

RESEARCH INTERESTS

Impact Cratering, Surface Roughness, Laser Altimeters, Surface Geology (asteroids and terrestrial planets), Impact Simulations, Polar Deposits

PUBLICATIONS

6. **Susorney, H.C.M.**, Barnouin, O.S. The Surface Roughness of 433 Eros from the NEAR-Shoemaker Laser Rangefinder (in prep.)
5. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M., Stickle, A.M. The Surface Roughness of Complex Craters on Mercury (in review), *J. Geophys. Res. Planets*
4. **Susorney, H.C.M.**, Barnouin, O.S., Stickle, A.M., Ernst, C.M., Crawford, D.A., and Cintala, M.J. The Role of Target Heterogeneity in Impact Crater Formation: Numerical Results (2017), *Procedia Engineering*, 204, 421-428.
3. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M., and Byrne, P.K. Surface Roughness from the Mercury Laser Altimeter (2017). *J. Geophys. Res. Planets*, 122 (6), 1372-1390.
2. Blewett, D.T., Stadermann, A.C., **Susorney, H.C.**, Ernst, C.M., Xiao, Z., Chabot, N.L., Denevi, B.W., Murchie, S.L., McCubbin, F.M., Kinczyk, M.J., Gillis-Davis, J.J., and Solomon, S.C. Analysis

of MESSENGER high-resolution images of Mercury's hollows and implications for hollow formation (2016). J. Geophys. Res. Planets, 121(9), 1798-1813.

1. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M., Johnson, C.L. Impact Crater Morphology on Mercury from MESSENGER Altimetry and Imaging (2016). Icarus, 271, 180-193.

HONORS

Hopkins Extreme Materials Institute (HEMI) Student Travel Grant	2017
Hypervelocity Impact Society Alex Charters Student Scholar	2017
Asteroids, Comets, and Meteorites 2017 Travel Grant	2017
Johns Hopkins University Earth and Planetary Science Department	2016
Best 60 minute Journal Club Graduate Student Presentation	
Dwornik Award, Best Graduate Student Poster	2015
Johns Hopkins Applied Physics Laboratory Graduate Student Fellowship	2014-2017
Johns Hopkins University Earth and Planetary Science Department	2014
Best 30 minute Journal Club Graduate Student Presentation	
National Science Foundation Graduate Research Fellowship, <i>Honorable Mention</i>	2014
Montana State University Top Geology Undergraduate	2013
Montana Space Grant Consortium Best Undergraduate Poster	2013
Montana State University Undergraduate Scholars Program Research Grant	2011, 2012
Montana State University Earth Science Colloquium Best Undergraduate Poster	2012

PROFESSIONAL SERVICE

Reviewed Papers in: Journal of Geophysical Research-Planets, Advances in Space Research	
NASA Review Panel, <i>Panelist</i>	2017
Small Body Advisory Group, <i>Committee Member</i>	2017-present
NASA Review Panel, <i>Executive Secretary</i>	2015, 2017
Geological Society of America Student Advisory Council, <i>Chair</i>	2015-2016
Geological Society of America Planetary Geology Division, <i>Student Representative</i>	2014-2016
Local Organizing Committee for the Geological Society of America Annual Meeting	2015

RESEARCH ACTIVITIES

Lunar Planetary Institute's Meteor Crater Field Camp, <i>Participant</i>	Meteor Crater, AZ, October 2014
Johns Hopkins University Applied Physics Laboratory NASA Summer Internship, <i>Intern</i>	Laurel, MD, Summer 2012, 2013
NSF International Research Experience for Students (IRES), <i>Participant</i>	Hangzhou, China, October 2014

TEACHING EXPERIENCE

<i>Johns Hopkins University</i>	
Guest Lecture Planetary Surface Processes (1 lecture)	Fall 2015
Guest Lecture Tour of the Solar System (1 lecture)	Spring 2015, 2016, 2017
<i>Montana State University</i>	
Undergraduate Teaching Assistant for Honors Earth System Science	Fall 2011, 2012

OUTREACH ACTIVITIES

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|---|-------------------|
| Roots and Branches Elementary School West Baltimore, MD | May 2015 |
| <ul style="list-style-type: none"> • Presented on asteroids and impact craters to ~ 200 elementary age children. | |
| The Johns Hopkins University Applied Physics Lab Laurel, MD | Summer 2012, 2013 |
| <ul style="list-style-type: none"> • Produced Images of the Day for the MESSENGER Public Website • Assisted in responding to the public's question about Mercury and the MESSENGER mission | |
| Father Marquette Middle School Marquette, MI | May 2012 |
| <ul style="list-style-type: none"> • Presented an hour long talk to two 6th grade classes (~ 30 students each) about my experience study science in college and recent research activities I was involved in | |

SELECTED CONFERENCE ABSTRACTS

- **Susorney, H.C.M.** and Barnouin, O.S., et. al., (2017) The Role of Target Heterogeneity in Impact Crater Formation: Numerical Results. 2017 Hypervelocity Impact Symposium
- ***Susorney, H.C.M.** James, P.B., et al., (2017) Measuring the Thickness of mercury's Water Ice Deposits using the Mercury Laser Altimeter . 48th Lunar and Planetary Science Conference. Abstract 2059.
- ***Susorney, H.C.M.** and Barnouin, O.S. (2016) The Global Surface Roughness of 433 Eros. AAS Division of Planetary Science Annual Meeting
- ***Susorney, H.C.M.** Barnouin, O.S., and Ernst, C.M. (2016) The Distribution of Surface Roughness Around Complex Craters on Mercury. 47th Lunar and Planetary Science Conference. Abstract 1705.
- Barnouin, O.S., Ernst, C.M., **Susorney, H.C.** (2015). The Remarkable Hokusai Crater, Mercury. 46th Lunar and Planetary Science Conference. Abstract 2672.
- Kring, D. A., ... **Susorney, H.C.M.**, et al., (2015) Distribution of Kaibab Ejecta North of Meteor Crater, Arizona. 46th Lunar and Planetary Science Conference. Abstract 1186.
- ***Susorney, H.C.M.**, Barnouin, O.S., and Ernst, C.M. (2014) Investigating the Surface Roughness of Mercury. American Geophysical Union Fall Meeting. Abstract P34C-08
- Ernst, C. M., Chabot, N. L., **Susorney, H.C.M.**, Barnouin, O. S., Harmon, J. K., and Paige, D. A. (2014) Exploring the Morphology of Simple Craters that Host Polar Deposits on Mercury: Implications for the Source and Stability of Water Ice. 45th Lunar and Planetary Science Conference. Abstract 1238.

* denotes oral presentation

COMPUTING SKILLS

Python, Unix, IDL, ISIS, Git, R, GMT, \LaTeX , CTH

MEMBERSHIPS

American Geophysical Union, Planetary Sciences Section, 2011-present
 Geological Society of America, Planetary Geology Division, 2010-present
 AAS Division of Planetary Science, 2015-present