

**Margaret E. Landis**  
Department of Planetary Sciences  
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### **Education**

University of Arizona, Tucson, AZ USA (current)  
PhD candidate, Department of Planetary Sciences  
M.S. Planetary Sciences, Fall 2015

Northern Arizona University, Flagstaff, AZ USA  
B.S. Physics and Astronomy, 2013  
Minors in Mathematics and Biology  
University Honors

### **Research**

Impact Crater Statistics and Modeling for the Polar Layered Deposits, Mars  
Advisor: Shane Byrne  
Lunar and Planetary Laboratory  
University of Arizona, Tucson, AZ

Volatiles on Ceres (Guest Investigator project for Dawn at Ceres)  
Advisor: Shane Byrne  
Lunar and Planetary Laboratory  
University of Arizona, Tucson, AZ

Iceland Volcanism Field Work at Holuhraun  
Supervisors: Stephen Scheidt, Christopher Hamilton  
Lunar and Planetary Laboratory  
University of Arizona, Tucson, AZ

Crater Survey of 0-20N, 0-30E Arabia Terra, Mars  
Advisor: Nadine G. Barlow  
Department of Physics and Astronomy  
Northern Arizona University, Flagstaff, AZ

Exploration of Infrared Variability of Young Disks in Taurus and Chamaeleon  
Research Experience for Undergraduates (REU)  
Advisor: Catherine Espaillat  
Harvard-Smithsonian Center for Astrophysics  
Cambridge, MA

## Mission Participation

High Resolution Imaging Science Experiment (HiRISE)  
Graduate student, University of Arizona (2013-present)

Dawn at Ceres

Guest Investigator Student (2015-present)

## Papers

- Landis, M. E.**, S. Byrne, I. J. Daubar, K. E. Herkenhoff, and C. M. Dundas (2016), A revised surface age for the North Polar Layered Deposits of Mars, *Geophys. Res. Lett.*, 43, 3060–3068, doi:10.1002/2016GL068434.
- Combe, J.-P., T.B. McCord, F. Tosi, E. Ammannito, F.G. Carrozzo, M.C. De Sanctis, A. Raponi, S. Byrne, **M.E. Landis**, K.H.G. Hughson, C.A Raymond, C.T. Russell (2016), Detection of local H<sub>2</sub>O exposed at the surface of Ceres, *Science*, 353:6303, doi:10.1126/science.aaf3010
- Platz, T., A. Nathues, N. Schorghofer, Frank Preusker, E. Mazarico, S. E. Schröder, S. Byrne, T. Kneissl, N. Schmedemann, J.-P. Combe, M. Schafer, G.S. Thangjam, M. Hoffman, P. Gutierrez-Marques, **M.E. Landis**, W. Dietrich, J. Ripken, K.-D. Matz, C. T. Russell (2016) Surface water-ice deposits in the northern shadowed regions of Ceres. *Nature Astronomy* 1 (2016): 0007.
- Robbins, S., W. Waters, J. Chappelow, V. Bray, I.J. Dabuar, R. Craddock, R. Beyer, **M.E. Landis**, L. Ostrach, L. Tornabene, J. Riggs, B. Weaver (in revision) Impact craters: what does crater depth mean?. *Meteoritics and Planetary Science*.
- Sori, M.M., J. Bapst, A. Bramson, S. Byrne, **M.E. Landis** (2017). A Wunda-full world? Carbon dioxide ice deposits on Umbriel and other Uranian moons, *Icarus*, doi: 10.1016/j.icarus.2017.02.029
- Sori, M. M., S. Byrne, C. W. Hamilton, and **M. E. Landis** (2016), Viscous flow rates of icy topography on the north polar layered deposits of Mars, *Geophys. Res. Lett.*, 43, 541–549, doi:10.1002/2015GL067298.

## Workshops and Summer Schools

Planetary Science Summer School, Jet Propulsion Laboratory, Summer 2016

Shadowed the Team X risk chair, served as spacecraft camera team lead

Workshop on Issues in Crater Studies and the Dating of Planetary Surfaces, May 2015

## Fellowships, Awards, Scholarships

- NSF Graduate Research Fellow (Fall 2014-present)
  - 2017 Graduate Research Internship Program grant recipient to develop a South Polar Layered Deposits crater catalog at the US Geological Survey (advisors: Ken Herkenhoff, Colin Dundas)
- Outstanding Service and Outreach award, Department of Planetary Sciences/Lunar and Planetary Laboratory (Spring 2017)
- Best Graduate Student Talk, Lunar and Planetary Laboratory Conference (Fall 2016)
- Mars Exploration Program Student Travel Grant, for attendance at the 6<sup>th</sup> International Conference on Mars Polar Science and Exploration (Summer 2016)
- Curson Travel Award (Spring 2016)

- Galileo Circle Scholar (Spring 2015, Spring 2017)
- Mars Exploration Program Student Travel Grant, for attendance at the Workshop on Issues in Crater Studies and the Dating of Planetary Surfaces (Spring 2015)
- Tom and Rose Bedwell Astronomy Scholarship (Spring 2013)
- Honors Academic Achievement Award (Spring 2013)
- Slipher Scholar (Junior and Senior, 2011 and 2012)
- American Association of University Women Certificate of Excellence for Achievement in Science (2008)

### **Department Service**

- LPL Conference planning committee (2014-present)
- LPL Computer Committee graduate student representative (2014-present)
- LPL Conference planning committee (2014-present)

### **Teaching**

Graduate Teaching Assistant

PTYS170B2 "The Universe & Humanity: Origin & Destiny" (Fall 2015), for Kat Volk

PTYS170A1 "Planet Earth: Evolution of the Habitable World" (Spring 2016), for Isamu Matsuyama

Lunar and Planetary Laboratory/Dept. Planetary Sciences

AST 180L Teaching Assistant (Spring 2012)

Department of Physics and Astronomy

Northern Arizona University

Grader

PHY331 "Electricity and Magnetism I" (Spring 2013)

AST391 "Astrophysics: Stars" (Fall 2012)

Department of Physics and Astronomy

Northern Arizona University

Honors G.U.R.U., Honors 190 (Fall 2010-Fall 2012)

Northern Arizona University Honors Program

### **Outreach**

Washington Aerospace Scholars Virtual Mentor Program

Mentored 5 students during an online space/planetary science course for high school juniors  
January 2016—present

Space Drafts/Astronomy on Tap Tucson

~30 minute public talk at Borderlands Brewery, Tucson, AZ on Mars polar research

American Astronomical Society "Astronomy Ambassador"

Completed training at the November 2014 DPS meeting, Tucson, AZ

Northern Arizona University Astronomy Club  
Flagstaff, AZ

Member (Fall 2009-Spring 2013), President (Spring 2013), Treasurer (Spring 2010-Spring 2011)  
Certified Telescope Operator (Fall 2009-Spring 2013)--weekly public nights at the 0.5m Barry  
Lutz Telescope for Education and Training

Spark Museum of Electrical Invention  
Bellingham, Washington  
Volunteer docent and educator (Summer 2013)

Tucson Festival of Books  
Tucson, AZ  
Volunteer, Science City (March 2014, March 2015, March 2016)

Pima Air and Space Museum  
Tucson, AZ  
Volunteer for NightWings program (Summer 2014, Summer 2015)

Art of Planetary Science (October-December 2013, October 2014, February 2017)  
Tucson, AZ  
Submitted photographs, helped with set-up and night-of duties